Critical Release Notice

Publication number: 297-8021-350
Publication release: Standard 19.05

The content of this customer NTP supports the SN09 (DMS) software release.

Bookmarks used in this NTP highlight the changes between the NA015 baseline and the current release. The bookmarks provided are color-coded to identify release-specific content changes. NTP volumes that do not contain bookmarks indicate that the NA015 baseline remains unchanged and is valid for the current release.

Bookmark Color Legend

Black: Applies to content for the NA015 baseline that is valid through the current release.

Red: Applies to new or modified content for NA017 that is valid through the current release.

Blue: Applies to new or modified content for NA018 (SN05 DMS) that is valid through the current release.

Green: Applies to new or modified content for SN06 (DMS) that is valid through the current release.

Purple: Applies to new or modified content for SN07 (DMS) that is valid through the current release.

Pink: Applies to new or modified content for SN08 (DMS) that is valid through the current release.

Orange: Applies to new or modified content for SN09 (DMS) that is valid through the current release.

Attention!
Adobe® Acrobat® Reader™ 5.0 or higher is required to view bookmarks in color.

Publication History

Note: *Refer to the NA015 baseline document for Publication History prior to the NA017 software release.*

January 2006

Standard release 19.05 for software release SN09 (DMS). Updates made for this release are shown below:

Volume 1-3

No changes

Volume 4

Section Channelized access on LPP/LIS, Datafilling table TRKMEM (Sheet 6 of 6), removed (TBD) from remote unit as required by CR Q01256730.

Volume 5-16

No changes

Volume 17

Section Universal Access to CLASS Features, RESOFC field, note added as required by CR Q01218960.

Section Call Forwarding Remote Activation, Limitations and Restrictions, bullet added as required by CR Q01168869.

Volume 18-25

No changes

September 2005

Standard release 19.04 for software release SN08 (DMS). Updates made for this release are shown below:

Volume 1

Section PRI trunk groups, Datafilling table TRKSGRP, L1Flags description corrected for Q01112597.

Volume 10

Section DMS-100 and Meridian 1 Options 11-81 datafill correlation, Table 15-2, L1Flags description corrected for Q01112597.

Volume 17

Call Forwarding Remote Activation, Speed Calling description corrected for Q01095576.

August 2005

Standard release 19.03 for software release SN08 (DMS). Updates made for this release are shown below:

Volume 9

Documentation correction in Call Forward/Interface Busy. CR Q01038988 was incorrectly referred to as CR Q01038999 in the March 2005 documentation release. This has been corrected in the History section for Call Forward/Interface Busy, and in this Critical Release Notice.

Volume 14

Changes made to Residential Call Hold. "Table flow for Residential Call Hold (RCHD)" amended. (Q01038649)

June 2005

Standard release 19.02 for software release SN08 (DMS). Updates made for this release are shown below:

Volume 14

Changes made to Group Intercom All Call (Q00100917)

Volume 16

Changes made to Automatic Call Distribution (Q01091391)

March 2005

Preliminary release 19.01 for software release SN08 (DMS). Updates made for this release are shown below:

Volume 1-8

No changes

Volume 9

Modified – Call Forward/Interface Busy by CR Q01038988

Volume 10-25

No change

December 2004

Standard release 18.02 for software release SN07 (DMS). Updates made for this release are shown below:

Volume 1-12

No changes

Volume 13
Added Virtual Office Worker (VOW) by A00002011

Volume 14-16
No changes

Volume 17
Universal Access to Call Forwarding (UCFW) changes to AMA billing by CR Q00982215

Volume 18-23
No changes

Volume 24
Added OSSAIN XA-Core Data Messaging Capacity Enhancements by A00005160

Volume 25
No changes

September 2004

Preliminary release 18.01 for software release SN07 (DMS). Updates made for this release are shown below:

Volume 1
Modified – Introduction to trunk tables (ES trunk groups) by CR Q00838215-1

Volume 2-3
No changes

Volume 4
Modified – Datafilling Trunk Signaling (ISUP Hop Counter) by CR Q00760514-10

Volume 5-10
No changes

Volume 11
Modified – Datafilling MDC Minimum (Call Pickup) by CR Q00879738

Volume 12
Modified – Datafilling MDC MSAC (Do Not Disturb) by A00002196

Volume 13-15
No changes

Volume 16
Modified – Datafilling ACD Base (Base automatic call distribution) by CR Q00812364

Volume 17
Modified – Datafilling RES Advanced Custom Calling (900 FP) by CR Q00834222
Modified – Datafilling RES Advanced Custom Calling (CSMI) by CR Q00683891
Modified – Datafilling RES Advanced Custom Calling (CWAS) by CR Q00891675-01
Modified – Datafilling RES Advanced Custom Calling (Enhanced CSMI) by CR Q00683891

Volume 18
No changes

Volume 19
Modified – Datafilling RES Service Enablers (SLE) by CR Q00760256

Volume 20
Modified – Datafilling Emergency Number Services (E911 Wireless ALI Interface) by CR Q00856825

Volume 21-24
No changes

Volume 25
Modified – Datafilling Unbundling (UNBN OPTRANS and EA) by A00002765

March 2004

Standard release 17.03 for software release SN06 (DMS). Updates made for this release are shown below:

Volume 1- 9
No changes

Volume 10
Changes due to CR Q00757372 that clarify the applicability of the AUDTRMT option. The changes are in sections:

- 7 Datafilling NI0 NI-2 PRI, PRI Call Screening
- 8 Datafilling NI0 ISDN PRI Base, Flexible Digit Analysis
- 8 Datafilling NI0 ISDN PRI Base, PRI ISDN Treatments
- 9 Datafilling NI0 ISDN PRI CNAM, PRI SUSP for CNAME

Volume 11-16
No changes

Volume 17
Modified - Call Screening, Monitoring, and Intercept (CSMI) for Q00659151
Modified - RES Simultaneous Ringing for Q00715967
Modified - Usage Sensitive Three-way Calling (U3WC) for Q00703423-03

Volume 18
Changes to Chapter 1 - Datafilling RES Display Functionality and Privacy, Anonymous Caller Rejection (ACRJ) as follows:

- change to description of interaction with Call Forwarding Don't Answer (CFDA) for CR Q00773476
- change to description of interaction with SOC RES00011 for CR Q00735537.

Volume 19
Changes due to CR Q00735537, which shows the interaction of various services with SOC RES00011. The changes are in Chapter 1 – Datafilling RES non-display services, and the affected services are:

- Distinctive Ringing/Call Waiting (DRCW)
- Selective Call Acceptance (SCA)
- Selective Call Forwarding (SCF)
- Selective Call Rejection (SCJ)

Volume 20
Changes due to CR Q00757372, which clarifies the applicability of the AUDTRMT option. The changes are in section:

- 2 Datafilling Emergency Number Services, E911 PRI PSAP Delivery

Volume 21-25
No changes

September 2003

Standard release 17.02 for software release SN06 (DMS). Updates made for this release are shown below:

Volume 1
New - Panther support for third-party RMs
Modified - E911 trunk groups

Volume 2-11
No changes

Volume 12
Modified - Query Functional Station Grouping

Volume 13-14
No changes

Volume 15
Modified - VMX Interface

Volume 16
No changes

Volume 17
Modified - Call Screening, Monitoring, and Intercept (CSMI)
Modified - Enhanced CSMI
Modified - Long Distance Alerting
Modified - Long Distance Alerting Enhancement (LDAE)
Modified - Service Order Simplification for MADN Extension Bridging

Volume 18
Modified - Call Logging (CALLOG) Modified - Universal Voice Messaging
Modified - Voice Mail Easy Access (VMEA)

Volume 19
Modified - CMS AR Screening of Private Calls (CASOP)
Modified - In-Session Activation (ISA)

Volume 20
Modified - DMS Integrated E911 PSAP Functionality
Modified - E911 Incoming Wireless Calls
Modified - E911 Incoming Wireless Calls (MF)
Modified - E911 ISUP Parameter Enhancements
Modified - E911 ISUP Trunking
Modified - E911 Tandem
Modified - E911 Translations Robustness
Modified - VFG Support for E911 (LOC and/or ISUP/ANI Call)

Volume 21-25
No changes

June 2003

Preliminary release 17.01 for software release SN06 (DMS). Updates made for this release are shown below.

Volume 1-25
New Critical Release Notice added. Otherwise, no changes

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DMS-100 Family

North American DMS-100

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Residential Enhanced Services (RES) Part 3 of 3

LET0015 and up Standard 14.02 May 2001

NORTEL NETWORKS™

DMS-100 Family

North American DMS-100

Translations Guide Volume 19 of 25

Residential Enhanced Services (RES) Part 3 of 3

Publication number: 297-8021-350
Product release: LET0015 and up
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Date: May 2001

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NTP Summary Contents

This summarized table of contents defines the category of product information that can be found in each volume of the *Translations Guide*. Each volume of the *Translations Guide* contains a detailed listing of the contents of that volume and a multi-volume contents listing if related subject matter spans multiple volumes.

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TOPS Part 5 of 5

Operator Services Equal Access (continued), Operator Services Information, TOPS Position Controller, Unbundling

1 Datafilling RES Non-Display Services

The following chapter describes the RES Non-Display Services, RES00005, functionality.

Automatic Call Back/Automatic Recall (ACB/AR)

Functionality code

Functional group ordering code: RES00005

Functionality ordering code: not applicable

Release applicability

NA013 and up

Prerequisites

To operate, Automatic Call Back/Automatic Recall (ACB/AR) has the following prerequisites:

- BAS Generic, BAS00003
- MDC Minimum, MDC00001
- MDC Standard, MDC00003
- RES Service Enablers, RES00006

Network configuration

Common Channel Signaling No. 7 (CCS7) connectivity is required for network (interoffice) configuration of Call Setup. The following feature packages are required for CCS7 connectivity:

- ISP70001, Base ISUP
- TEL00008, TEL CCS7 Base

Description

Automatic Call Back (ACB) enables a subscriber to place a call to the last station called by the subscriber. Automatic Recall (AR) enables a subscriber to place a call to the last station that called the subscriber. With ACB, the last station called by the subscriber can be busy or idle, answered or unanswered. With AR, the last call received by the subscriber can be answered or unanswered. The subscriber need only complete the ACB or AR activation procedure, and both the busy or idle status and the class of service of the destination line are checked. If the terminating line is idle and the class of service permits, call setup is attempted. If the call cannot be completed immediately because of a busy line, the call is queued, and call completion is attempted when both stations are idle. As part of the completion attempt, the calling station is given special ringing. When the subscriber answers, the call is set up, and the called station is given regular ringing.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

Operation

With ACB or AR activated, the busy or idle status of the called and calling lines is checked periodically until call setup is attempted or a time-out occurs. Both parties can originate and receive calls without affecting the ACB or AR status. A subscriber can have up to 30 ACB or AR activations in effect at the same time. Multiple ACB or AR activations to the same directory number (DN) from different sources are also permitted.

ACB/AR comparison and contrast

ACB and AR are very similar Custom Local Area Signaling Services (CLASS) features. When ACB and AR are activated as one-level procedures, the activation procedures are identical (with the exception of access codes). AR can also be activated as a two-level procedure. When AR is activated, the subscriber hears an announcement stating the DN, date, and time of the most recent incoming call received by the subscriber. The subscriber is then instructed to dial the digit 1 to activate AR, or to hang up to abort AR.

ACB and AR deactivation procedures are identical, with the exception of the access code.

Universal access

The ACB and AR features can be provided to all RES subscribers in an office through universal access when feature package NTXQ70AA, Universal Access to CLASS Features, is present in the office. For universal access, the value UNIVER instead of SUBSCR should be datafilled in subfield ACCESS in Table RESOFC.

Universal access only changes the *method* of access, not the operation of a CLASS feature. When universal access is available in an office, the subscriber can still have the feature assigned as a line option. Accessing a CLASS feature assigned to the subscriber as a line option or customer group option takes precedence over accessing the feature through universal access.

The Software Optional Control (SOC) allows the operating company to enable the functionality of universal access for CLASS features through a Right to Use (RTU) access code. The subscriber is able to access the CLASS features without assigning the individual features to the line.

The SOC commands enable or disable the universal access for CLASSfeatures. The RTU access code assignment to RES00011 and setting

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

the state to ON enables the universal access for CLASS through SOC. The state is set to IDLE to disable the universal access for CLASS through SOC.

Note 1: Universal access to CLASS features is not applicable to Subscriber Services lines with IBN line class codes (LCC) through NA007.

Note 2: Universal access to CLASS features is not applicable to universal access to display features.

Note 3: Refer to “Universal Access to CLASS Features" for more information on universal access.

Refer to “Universal Access to CLASS Features" for more information on universal access.

Datafill for ACB and AR announcements

The ACB and AR features must have announcements defined in order to work properly. To set up an announcement, the following tables must be datafilled and an announcement recorded. Announcements are recorded using digital recorded announcement machine (DRAM) commands at the MAP (maintenance and administrative position).

The sections that follow show recommended datafill for Tables DRAMS, CLLI, ANNS, ANNMEMS, and DRMUSERS. Refer to *DRAM and EDRAM Guide*, 297-1001-527, for more information on datafilling announcements.

Note: Before datafilling announcements for ACB/AR, read “Appendix Datafilling announcements" for Subscriber Services general announcement information.

Table DRAMS

Table DRAMS (Digital Recorded Announcement Machines) defines the actual ACB/AR cards.

The following example shows sample datafill for the ACB/AR feature in Table DRAMS.

```
DRAMCARD TMTYPE  TMNO   TMCKT     CARDCODE    CARDINFO
_____________________________________________________________
    2  0   MTM    4       0       1X75BA         CTLR
    2  1   MTM    4       2       1X76AJ       PROM 0 1
    2  3   MTM    4       6       1X76AK       PROM 2 3
    2  5   MTM    4      10       1X76AM       PROM 4 5
```

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

Table CLLI

Table CLLI (Common Language Location Identifier) contains the CLASS CLLI definition specifying the maximum number of announcement members for all CLASS applications.

The following example shows sample datafill for the ACB/AR feature in Table CLLI.

```
   CLLI    ADNUM         TRKGRSIZ      ADMININF
_____________________________________________________
  DRAM2 403          10   DRAM_MTM_4
CLASSANN    404          10   CLASS_ANN_CLLI
```

Table ANNS

Table ANNS (Announcements) further refines the announcement specification. The announcement type is specified to be a CLASS custom announcement. Since only one line can be connected to an announcement member at any one time, the maximum number of connections (MAXCONN) is set to 1. The cycle time (CYTIME) is set to 0 and is determined internally. Field MAXCYC is ignored by the ACB and AR features.

The following example shows sample datafill for the ACB/AR feature in Table ANNS.

```
 CLLI       ANTYPE    TRAFSNO MAXCONN CYTIME MAXCYC
_____________________________________________________
CLASSANN  CLASS          30      1      0    1
```

Table ANNMEMS

Table ANNMEMS (Announcement Members) defines the circuits to be assigned to the various members of the CLASS announcement group.

The following example shows sample datafill for the ACB/AR feature in Table ANNMEMS.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

```
 ANNMEM    HDWTYPE     CARD                    MEMINFO
_____________________________________________________
CLASS  1       DRAM      DRA  ( 0 MTM 1 4 ) $
CLASS  2       DRAM      DRA  ( 0 MTM 1 5 ) $
CLASS  3       DRAM      DRA  ( 0 MTM 1 6 ) $
```

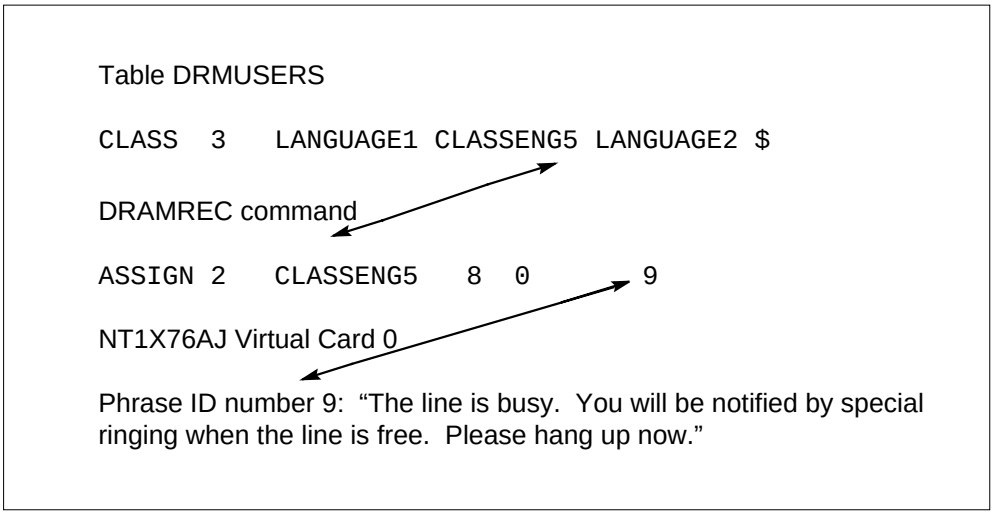
Assigning phrase names using the DRAMREC utility

Once Tables DRAMS, CLLI, ANNS, ANNMEMS have been datafilled, the logical phrase names can be assigned to the physical phrases. To do this, enter the DRAMREC utility and use the ASSIGN command to assign the phrase names to the location on the DRAM. Note that all phrases to be combined into announcements must reside under the same DRAM controller.

Example of CLASS announcements

The following figure shows how phrase names from Table DRMUSERS are assigned to the location in the DRAM. CLASS announcement 3 in Table DRMUSERS is the AR confirmation one-level announcement and is made up of phrases LANGUAGE1, CLASSENG5, and LANGUAGE2. CLASSENG5 is assigned, through the DRAMREC utility, to NT1X76AJ Virtual Card 0 Phrase ID number 9. NT1X76AJ Virtual Card 0 Phrase ID number 9 reads "The line is busy. You will be notified by special ringing when the line is free. Please hang up now."

Example of CLASS announcements



Automatic Call Back/Automatic Recall (ACB/AR) (continued)

Example of phrase assignments

The following example shows sample phrase assignments for DRAMREC.

Example of phrase assignments using DRAMREC

```
DRAMREC:
 <command> <dram> <phrasename> <length> <block> <phraseno>

(for 1X76AJ Virtual Card 0)
 ASSIGN 2  CLASSENG1   9    0     5
 ASSIGN 2  CLASSENG2   9    0     6
 ASSIGN 2  CLASSENG3   5    0     7
 ASSIGN 2  CLASSENG4  10    0     8
 ASSIGN 2  CLASSENG5   8    0     9
 ASSIGN 2  CLASSENG6   5    0    10
 ASSIGN 2  CLASSENG7   6    0    11
 ASSIGN 2  CLASSENG8   5    0    12
 ASSIGN 2  CLASSENG9   9    0    13
 ASSIGN 2  CLASSENG10  1    0    14
 ASSIGN 2  CLASSENG18  1    0     2

(for 1X76AJ Virtual Card 1)
 ASSIGN 2  CLASSENG11  7    1     4
 ASSIGN 2  CLASSENG12  8    1     5
 ASSIGN 2  CLASSENG13  8    1     6
 ASSIGN 2  CLASSENG14 10    1     7

(for 1X76AK Virtual Card 0)
 ASSIGN 2  CLASSENG15 10    2     4
 ASSIGN 2  CLASSENG16  3    2     5
 ASSIGN 2  CLASSENG17  5    2     6
```

Note 1: The block number comes from card information in Table DRAMS.

Note 2: The virtual card slot number and block numbers are the same.

Table DRMUSERS

Table DRMUSERS (Digital Recorded Announcement Machine Users) associates the phrases for each announcement to an announcement member. Each announcement is identified by a CLLI (CLASS in this case) and a number. The number determines the type of the ACB or AR announcement.

Phrases can be built by linking one or more labels (from DRAMREC) together. All phrases start with the system-defined label LANGUAGE1. LANGUAGE2 can be used to specify a secondary language, and SILENCE can be used to insert a 1-s period of silence into a phrase.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

The following example shows datafill for the ACB/AR feature in Table DRMUSERS.

```
USERANN  PHSLIST
_____________________________________________________________
CLASS 3 (LANGUAGE1) (CLASSENG5) $
CLASS 4 (LANGUAGE1) (CLASSENG11) $
CLASS 5     (LANGUAGE1) (CLASSENG8) $
CLASS 6     (LANGUAGE1) (CLASSENG10) (CLASSENG4)
            (CLASSENG10) $
CLASS 7     (LANGUAGE1) (CLASSENG6) $
CLASS 8     (LANGUAGE1) (CLASSENG12) $
CLASS 9     (LANGUAGE1) (CLASSENG7) (CLASSENG8)$
CLASS 10    (LANGUAGE1) (CLASSENG16) (ENGVARDNF)
            (CLASSENG17)$
CLASS 11    (LANGUAGE1) (CLASSENG10) (CLASSENG5)
            (CLASSENG10) $
CLASS 12    (LANGUAGE1) (SILENCE) (CLASSENG11) $
CLASS 13    (LANGUAGE1) (SILENCE) (CLASSENG8) $
CLASS 14    (LANGUAGE1) (CLASSENG10) (CLASSENG2)
            (CLASSENG10) $
CLASS 15    (LANGUAGE1) (CLASSENG15) $
CLASS 16    (LANGUAGE1) (CLASSENG13) $
CLASS 17    (LANGUAGE1) (CLASSENG3) $
```

The following table describes the use of each announcement shown in the previous example.

Descriptions of announcements defined in Table DRMUSERS (Sheet 1 of 2)

Announcement or number	Description of function
CLASS 3	AR confirmation one-level
CLASS 4	AR short-term denial one-level
CLASS 5	AR long-term denial one-level
CLASS 6	Called line busy, scanning will be resumed
CLASS 7	AR deactivation
CLASS 8	AR two-level activation with private DN

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

Descriptions of announcements defined in Table DRMUSERS (Sheet 2 of 2)

Announcement or number	Description of function
CLASS 9	AR two-level activation with invalid DN
CLASS 10	AR two-level activation with voiced DN
CLASS 11	AR confirmation two-level
CLASS 12	AR short-term denial two-level
CLASS 13	AR long-term denial two-level
CLASS 14	ACB confirmation
CLASS 15	ACB short-term denial
CLASS 16	ACB long-term denial
CLASS 17	ACB deactivation

Note: Refer to “Appendix Quick reference for logical phrase ENGDATIME," for date and time datafill for the AR two-level activation announcement.

Announcement scripts

There are a number of custom announcements designed for use with the ACB and AR features. These announcements are PROM-based DRAM recordings. The four DRAM cards that are required to support these announcements are NT1X76AJ, NT1X76AK, NT1X76JA, and NT1X76JB. Standard announcements, supported by 1X76AA cards, are PROM-based DRAM recordings, which are usually provided by Northern Telecom. Customized announcements, supported by 1X77AA cards, are RAM-based recordings, which are generally recorded on-site by the customer. The following tables list the phrase names, phrase IDs, time required (in seconds), and associated

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

scripts contained on each card. The virtual card numbers listed in these tables are the same as block numbers.

Note: When linking phrases that require digit collection, ensure that the total time of the played announcements does not exceed 40 s.

DRAM announcements (NT1X76AJ virtual card 0) (Sheet 1 of 2)

Phrase name	Phrase ID	Time (seconds)	Content
CENG1	000	2	1-s silence
CENG2	001	1	750-Hz test tone
CENG3	002	1	Prompt tone/silence/750-Hz tone/silence/ 750-Hz tone/silence/750-Hz tone/silence
CENG4	003	1	0.25-s silence
CENG5	004	0	NIL
CENG6	005	9	“The line was free, but it has just become busy again. You will be notified by special ringing when the line is free. Please hang up now."
CENG7	006	8	“The last number that you called is busy. You will be notified by special ringing when the line is free. Please hang up now."
CENG8	007	5	“You have canceled all of your requests to call someone back. Please hang up now."
CENG9	008	10	“The line was free, but it has just become busy again. You will be notified by special ringing when the line is free. Please hang up now."
CENG10	009	8	“The line is busy. You will be notified by special ringing when the line is free. Please hang up now."
CENG11	00A	5	“You have canceled all of your requests to return calls. Please hang up now."
CENG12	00B	6	“We're sorry, the last number that called your line is not known. Please hang up now."
CENG13	00C	5	“We're sorry, the number cannot be reached by this method. Please hang up now."

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

DRAM announcements (NT1X76AJ virtual card 0) (Sheet 2 of 2)

Phrase name	Phrase ID	Time (seconds)	Content
CENG14	00D	9	“The last call to your telephone has been traced. If you want to take action, contact your police department. Please hang up now."
CENG15	00E	1	Busy signal

DRAM announcements (NT1X76AJ virtual card 1)

Phrase name	Phrase ID	Time (seconds)	Content
CENG1	000	2	1-s silence
CENG2	001	1	750-Hz test tone
CENG3	002	1	Silence (prompt tone)/750-Hz tone/silence/ 750-Hz tone/silence/750-Hz tone/silence
CENG4	003	1	0.25-s silence
CENG5	004	7	“We're sorry, the number cannot be reached now by this method. Please hang up and try again later."
CENG6	005	8	“The last number that called your line cannot be given out. If you want to call this number, enter one; otherwise, hang up now."
CENG7	006	8	“We're sorry, the last number that you called cannot be reached by this method. Please hang up and call the number directly."
CENG8	007	10	“The last call to your telephone cannot be traced. Please consult the introductory pages of your telephone directory for further instructions. Please hang up now."

DRAM announcements (NT1X76AK virtual card 0) (Sheet 1 of 2)

Phrase name	Phrase ID	Time (seconds)	Content
SILENCE	000	2	1-s silence
CENG2	001	1	750-Hz test tone

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

DRAM announcements (NT1X76AK virtual card 0) (Sheet 2 of 2)

Phrase name	Phrase ID	Time (seconds)	Content
CENG3	002	1	Silence (prompt tone)/750-Hz tone/silence/ 750-Hz tone/silence/750-Hz tone/silence
CENG4	003	1	0.25-s silence
CENG7	004	10	“We're sorry, the last number that you called cannot be reached now by this method. Please hang up and try again later or call the number directly."
CENG16	005	3	“The last number that called your line was . . ."
CENG17	006	5	“To call this number, enter one; otherwise, hang up now."

Note: Phrase numbers 4 to 63 are various intonations of the digits from 0 to 9. These cannot be voiced back using DRAMREC playback.

DRAM announcements (NT1X76AK virtual card 1) (Sheet 1 of 4)

Phrase name	Phrase ID	Time (seconds)	Content
CENG1	000	2	1-s silence
CENG2	001	1	750-Hz test tone
CENG3	002	1	Silence (prompt tone)/750-Hz tone/silence/ 750-Hz tone/silence/750-Hz tone/silence
CENG4	003	1	0.25-s silence
EHIRI0	004	1	Zero (high rising intonation)
EHIRI1	005	1	One
EHIRI2	006	1	Two
EHIRI3	007	1	Three
EHIRI4	008	1	Four
EHIRI5	009	1	Five
EHIRI6	010	1	Six

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

DRAM announcements (NT1X76AK virtual card 1) (Sheet 2 of 4)

Phrase name	Phrase ID	Time (seconds)	Content
EHIRI7	011	1	Seven
EHIRI8	012	1	Eight
EHIRI9	013	1	Nine
ELORI0	014	1	Zero (low rising intonation)
ELORI1	015	1	One
ELORI2	016	1	Two
ELORI3	017	1	Three
ELORI4	018	1	Four
ELORI5	019	1	Five
ELORI6	020	1	Six
ELORI7	021	1	Seven
ELORI8	022	1	Eight
ELORI9	023	1	Nine
EWAVE0	024	1	Zero (wavering tone)
EWAVE1	025	1	One
EWAVE2	026	1	Two
EWAVE3	027	1	Three
EWAVE4	028	1	Four
EWAVE5	029	1	Five
EWAVE6	030	1	Six
EWAVE7	031	1	Seven
EWAVE8	032	1	Eight
EWAVE9	033	1	Nine
EFALL0	034	1	Zero (falling tone)

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

DRAM announcements (NT1X76AK virtual card 1) (Sheet 3 of 4)

Phrase name	Phrase ID	Time (seconds)	Content
EFALL1	035	1	One
EFALL2	036	1	Two
EFALL3	037	1	Three
EFALL4	038	1	Four
EFALL5	039	1	Five
EFALL6	040	1	Six
EFALL7	041	1	Seven
EFALL8	042	1	Eight
EFALL9	043	1	Nine
EFLTA0	044	1	Zero (flat tone)
EFLTA1	045	1	One
EFLTA2	046	1	Two
EFLTA3	047	1	Three
EFLTA4	048	1	Four
EFLTA5	049	1	Five
EFLTA6	050	1	Six
EFLTA7	051	1	Seven
EFLTA8	052	1	Eight
EFLTA9	053	1	Nine
EFLTB0	054	1	Zero (flat B tone)
EFLTB1	055	1	One
EFLTB2	056	1	Two
EFLTB3	057	1	Three
EFLTB4	058	1	Four

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

DRAM announcements (NT1X76AK virtual card 1) (Sheet 4 of 4)

Phrase name	Phrase ID	Time (seconds)	Content
EFLTB5	059	1	Five
EFLTB6	060	1	Six
EFLTB7	061	1	Seven
EFLTB8	062	1	Eight
EFLTB9	063	1	Nine

DRAM announcements (NT1X76JA virtual card 0) (Sheet 1 of 3)

Phrase name	Phrase ID	Time (seconds)	Content
CLASSENG1	000	2	1-s silence
CLASSENG2	001	1	750-Hz test tone
CLASSENG3	002	1	Silence (prompt tone)/750-Hz tone/silence/ 750-Hz tone/silence/750-Hz tone/silence
CLASSENG4	003	1	0.25-s silence
CLASSENG5	004	1	Zero (high rising intonation)
CLASSENG6	005	1	One
CLASSENG7	006	1	Two
CLASSENG8	007	1	Three
CLASSENG9	008	1	Four
CLASSENG10	009	1	Five
CLASSENG11	00A	1	Six
CLASSENG12	00B	1	Seven
CLASSENG13	00C	1	Eight
CLASSENG14	00D	1	Nine
CLASSENG15	00E	1	Zero (low rising intonation)
CLASSENG16	00F	1	One

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

DRAM announcements (NT1X76JA virtual card 0) (Sheet 2 of 3)

Phrase name	Phrase ID	Time (seconds)	Content
CLASSENG17	010	1	Two
CLASSENG18	011	1	Three
CLASSENG19	012	1	Four
CLASSENG20	013	1	Five
CLASSENG21	014	1	Six
CLASSENG22	015	1	Seven
CLASSENG23	016	1	Eight
CLASSENG24	017	1	Nine
CLASSENG25	018	1	Zero (wavering tone)
CLASSENG26	019	1	One
CLASSENG27	01A	1	Two
CLASSENG28	01B	1	Three
CLASSENG29	01C	1	Four
CLASSENG30	01D	1	Five
CLASSENG31	01E	1	Six
CLASSENG32	01F	1	Seven
CLASSENG33	020	1	Eight
CLASSENG34	021	1	Nine
CLASSENG35	022	1	Zero (falling tone)
CLASSENG36	023	1	One
CLASSENG37	024	1	Two
CLASSENG38	025	1	Three
CLASSENG39	026	1	Four
CLASSENG40	027	1	Five

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

DRAM announcements (NT1X76JA virtual card 0) (Sheet 3 of 3)

Phrase name	Phrase ID	Time (seconds)	Content
CLASSENG41	028	1	Six
CLASSENG42	029	1	Seven
CLASSENG43	02A	1	Eight
CLASSENG44	02B	1	Nine
CLASSENG45	02C	1	Zero (flat tone)
CLASSENG46	02D	1	One
CLASSENG47	02E	1	Two
CLASSENG48	02F	1	Three
CLASSENG49	030	1	Four
CLASSENG50	031	1	Five
CLASSENG51	032	1	Six
CLASSENG52	033	1	Seven
CLASSENG53	034	1	Eight
CLASSENG54	035	1	Nine
CLASSENG55	036	1	Zero (flat B tone)
CLASSENG56	037	1	One
CLASSENG57	038	1	Two
CLASSENG58	039	1	Three
CLASSENG59	03A	1	Four
CLASSENG60	03B	1	Five
CLASSENG61	03C	1	Six
CLASSENG62	03D	1	Seven
CLASSENG63	03E	1	Eight
CLASSENG64	03F	1	Nine

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

DRAM announcements (NT1X76JA virtual card 1)

Phrase name	Phrase ID	Time (seconds)	Content
CLASSENG1	000	2	1-s silence
CLASSENG2	001	1	750-Hz test tone
CLASSENG3	002	1	Silence (prompt tone)/750-Hz tone/silence/ 750-Hz tone/silence/750-Hz tone/silence
CLASSENG4	003	1	0.25-s silence
CLASSENG16	004	3	“The last number that called your line was . . ."
CLASSENG22	005	3	“This call was received on: . . ."
CLASSENG12	006	6	“The last number that called your line cannot be given out. This call was received on: . . ."
CLASSENG7	007	6	“We're sorry, the last number that called your line is not known. This call was received on: . . ."
CLASSENG17	008	5	“To call this number, enter one; otherwise hang up now."
CLASSENG23	009	2	“Please hang up now."

DRAM announcements (NT1X76JB virtual card 0) (Sheet 1 of 3)

Phrase name	Phrase ID	Time (seconds)	Content
CLASSENG1	000	2	1-s silence
CLASSENG2	001	1	750-Hz test tone
CLASSENG3	002	1	Silence (prompt tone)/750-Hz tone/silence/ 750-Hz tone/silence/750-Hz tone/silence
CLASSENG4	003	1	0.25-s silence
ENGJANUARY	004	1	January
ENGFEBRUAR	005	1	February
ENGMARCH	006	1	March
ENGAPRIL	007	1	April

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

DRAM announcements (NT1X76JB virtual card 0) (Sheet 2 of 3)

Phrase name	Phrase ID	Time (seconds)	Content
ENGMAY	008	1	May
ENGJUNE	009	1	June
ENGJULY	00A	1	July
ENGAUGUST	00B	1	August
ENGSEPTEMB	00C	1	September
ENGOCTOBER	00D	1	October
ENGNOVEMBE	00E	1	November
ENGDECEMBE	00F	1	December
ENGAM	010	1	AM.
ENGPM	011	1	PM.
ENGAT	012	1	At
ENGNUM01	013	1	Oh-one
ENGNUM02	014	1	Oh-two
ENGNUM03	015	1	Oh-three
ENGNUM04	016	1	Oh-four
ENGNUM05	017	1	Oh-five
ENGNUM06	018	1	Oh-six
ENGNUM07	019	1	Oh-seven
ENGNUM08	01A	1	Oh-eight
ENGNUM09	01B	1	Oh-nine
ENGNUM1	01C	1	One
ENGNUM2	01D	1	Two
ENGNUM3	01E	1	Three
ENGNUM4	01F	1	Four

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

DRAM announcements (NT1X76JB virtual card 0) (Sheet 3 of 3)

Phrase name	Phrase ID	Time (seconds)	Content
ENGNUM5	020	1	Five
ENGNUM6	021	1	Six
ENGNUM7	022	1	Seven
ENGNUM8	023	1	Eight
ENGNUM9	024	1	Nine
ENGNUM10	025	1	Ten
ENGNUM11	026	1	Eleven
ENGNUM12	027	1	Twelve
ENGNUM13	028	1	Thirteen
ENGNUM14	029	1	Fourteen
ENGNUM15	02A	1	Fifteen
ENGNUM16	02B	1	Sixteen
ENGNUM17	02C	1	Seventeen
ENGNUM18	02D	1	Eighteen
ENGNUM19	02E	1	Nineteen
ENGNUM20	02F	1	Twenty
ENGNUM21	030	1	Twenty-one
ENGNUM22	031	1	Twenty-two
ENGNUM23	032	1	Twenty-three

DRAM announcements (NT1X76JB virtual card 1) (Sheet 1 of 3)

Phrase name	Phrase ID	Time (seconds)	Content
CLASSENG1	000	2	1-s silence
CLASSENG2	001	1	750-Hz test tone

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

DRAM announcements (NT1X76JB virtual card 1) (Sheet 2 of 3)

Phrase name	Phrase ID	Time (seconds)	Content
CLASSENG3	002	1	Silence (prompt tone)/750-Hz tone/silence/ 750-Hz tone/silence/750-Hz tone/silence
CLASSENG4	003	1	0.25-s silence
ENGNUM24	004	1	Twenty-four
ENGNUM25	005	1	Twenty-five
ENGNUM26	006	1	Twenty-six
ENGNUM27	007	1	Twenty-seven
ENGNUM28	008	1	Twenty-eight
ENGNUM29	009	1	Twenty-nine
ENGNUM30	00A	1	Thirty
ENGNUM31	00B	1	Thirty-one
ENGNUM32	00C	1	Thirty-two
ENGNUM33	00D	1	Thirty-three
ENGNUM34	00E	1	Thirty-four
ENGNUM35	00F	1	Thirty-five
ENGNUM36	010	1	Thirty-six
ENGNUM37	011	1	Thirty-seven
ENGNUM38	012	1	Thirty-eight
ENGNUM39	013	1	Thirty-nine
ENGNUM40	014	1	Forty
ENGNUM41	015	1	Forty-one
ENGNUM42	016	1	Forty-two
ENGNUM43	017	1	Forty-three
ENGNUM44	018	1	Forty-four

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

DRAM announcements (NT1X76JB virtual card 1) (Sheet 3 of 3)

Phrase name	Phrase ID	Time (seconds)	Content
ENGNUM45	019	1	Forty-five
ENGNUM46	01A	1	Forty-six
ENGNUM47	01B	1	Forty-seven
ENGNUM48	01C	1	Forty-eight
ENGNUM49	01D	1	Forty-nine
ENGNUM50	01E	1	Fifty
ENGNUM51	01F	1	Fifty-one
ENGNUM52	020	1	Fifty-two
ENGNUM53	021	1	Fifty-three
ENGNUM54	022	1	Fifty-four
ENGNUM55	023	1	Fifty-five
ENGNUM56	024	1	Fifty-six
ENGNUM57	025	1	Fifty-seven
ENGNUM58	026	1	Fifty-eight
ENGNUM59	027	1	Fifty-nine

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

ACB/AR application reverse translations

The ACB and AR features convert a DN between the following formats:

- the ten-digit format (NPA-NXX-XXXX) of
  - — the calling number supplied to the call destination by the CLASS base capabilities
  - — the called number required by the CLASS transaction capability application part (TCAP) application used by ACB and AR to monitor a busy destination line
- the 7-digit, 8-digit, 10-digit, and 11-digit formats of
  - — the numbers dialed by the CLASS subscriber to make local, local toll, ten-digit local, and toll calls
  - — the dialable calling numbers displayed to a subscriber using the CLASS Dialable Number Delivery (DDN) feature

Note: The 7-digit, 8-digit, and 11-digit dialing requirements are used by most subscribers using the North American public dial plan. In a few cases, subscribers dial a ten-digit number for local calls. For these calls, no conversion is carried out for AR; AR uses the number as stored in the incoming call memory (ICM).

The process used to convert the ten-digit numbers is called reverse translations. Reverse translations uses two tables:

- Table DNREGION (DN Region) groups DNs into regions.
- Table DNREVXLA (DN Reverse Translations) contains sets of digit manipulation algorithms.

Together, these two tables are used by reverse translations to process the following types of calls:

- AR calls, when conversion is required between the 10-digit format (as held in the ICM) and the 7-digit, 8-digit, or 11-digit dialed format used for call setup
- some ACB calls, when conversion from a seven-digit dialed format into a ten-digit format requires selection of the correct numbering plan area (NPA)

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

The following table shows examples of the conversions required by CLASS applications.

Examples of CLASS applications of reverse translations

Application	DN available	DN required	Manipulation required
Automatic Recall: dial DN within the same local calling area	10-digit DN from the ICM	7-digit DN	Delete area code.
Automatic Recall: dial DN within same area code but outside the local calling area	10-digit DN from the ICM	1 + 7-digit DN	Delete area code. Add prefix of 1.
Automatic Recall: dial DN in another area code	10-digit DN from the ICM	1+ 10-digit DN	Add prefix of 1.
Automatic Call Back/Screening List Editing: monitor a busy DN within same local calling area	7-digit DN from the outgoing call memory (OCM)	10-digit DN (required by CLASS TCAP application)	Add area code.
Automatic Call Back/Screening List Editing: monitor a busy DN in another area code	11-digit DN from the OCM	10-digit DN (for TCAP)	Delete prefix.
Calling Number Display: display dialable calling DN for call from within the same local calling area	10-digit DN (as received from call origin)	7-digit DN	Delete area code.
Calling Number Display: display dialable calling DN for call originating within same area code but outside the local calling area	10-digit DN (as received from call origin)	1 + 7-digit DN	Delete area code. Add prefix of 1.

Applying reverse translations in ACB

When ACB is activated, it immediately checks to determine whether the DN (copied from the OCM) is valid and whether the destination line is busy. Where the destination line is served by another switch, the check is carried out using a initial busy/idle query message. The message is sent using the CLASS TCAP application.

To supply the TCAP application with the destination DN in the required 10-digit fixed format (NPA-NXX-XXXX), ACB must reverse translate a 7-digit, 8-digit, or 11-digit dialed DN.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

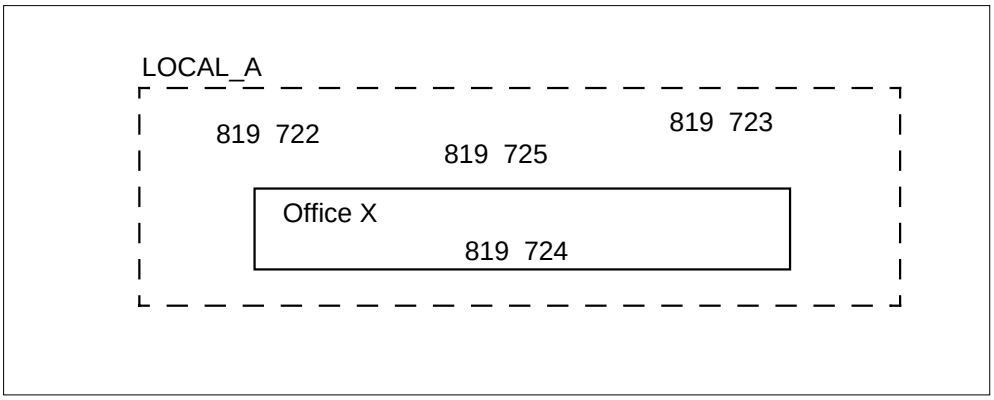
ACB applies reverse translations based on the length of the dialed DN (and, for some seven-digit calls, the DN10DXLA tuple in Table DNREVXLA), as described in the following table.

Reverse translations based on length of dialed DN

Number of digits	Assumed format	Manipulation required
1 to 6, 9, >11	Invalid (only 7, 8, 10, and 11 are valid)	Apply long-term denial tone to the line.
11	P-NPA-NXX-XXXX (P=prefix, usually=1)	Send rightmost 10 digits of the DN to the CLASS TCAP application.
10	NPA-NXX-XXXX	Send DN (unchanged) to the CLASS TCAP application.
8	P-NXX-XXXX (P=prefix, usually=1)	Append the rightmost 7 digits of the dialed DN to the NPA of the ACB subscriber line to form the TCAP 10-digit DN.
7	The NPA of the destination party is ambiguous	To find the NPA, check for a DN10DXLA tuple in Table DNREVXLA. If a DN10DXLA tuple is not found, manipulate the digits as an 8-digit number. If a DN10DXLA tuple is found, manipulate the digits as defined in the DN10DXLA tuple.

The following figure shows the dial plan for a hypothetical office (or node) X. The figure illustrates the reason why ACB reverse translations datafill is *not* required for this hypothetical office X.

public dial plan supported by office X



Automatic Call Back/Automatic Recall (ACB/AR) (continued)

Office X serves DNs in NPA 819. The DNs served by this office are all included in local calling area LOCAL_A.

The office supports the conversion algorithm that conforms to the standard North American dialing plan for local and long-distance calls. The North American dialing plan offers the following:

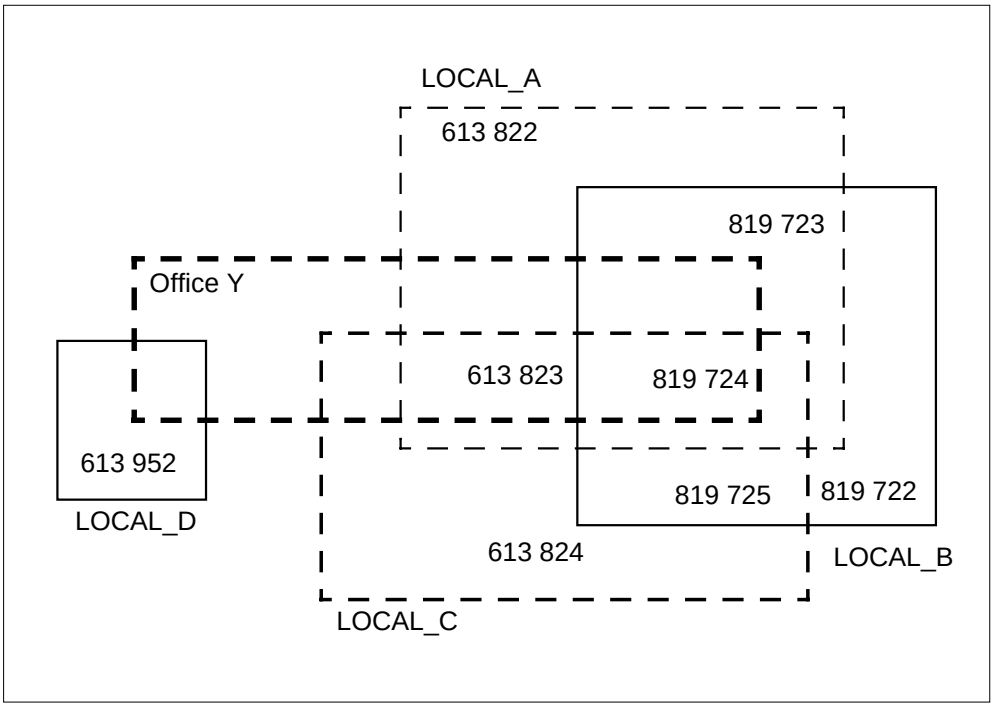
- seven-digit dialing for local calls
- eight-digit (1 + seven-digit) dialing for toll calls in the same NPA
- 11-digit (1 + NPANXX-X-XXX) dialing for calls to other NPAs

The seven-digit dialing for ACB subscribers served by office X is limited to the 819 NPA. ACB can therefore reverse translate all numbers into the ten-digit form required by the CLASS TCAP application based on the number of digits in the DN.

Example scenario for ACB reverse translations datafill

The following figure shows the dial plan for office Y and illustrates the ACB reverse translations datafill required for a hypothetical office Y.

Public dial plan supported by office Y



Automatic Call Back/Automatic Recall (ACB/AR) (continued)

Office Y serves DNs in NPA 613 and NPA 819. Also, the DNs served by this office are included in at least one of four different local calling areas: LOCAL_A, LOCAL_B, LOCAL_C, and LOCAL_D.

The conversion algorithm supported by this office conforms to the standard North American dialing plan for local and long-distance calls, which offers:

- seven-digit dialing for local calls
- eight-digit (1+ seven-digit) dialing for toll calls in the same NPA
- 11-digit (1+ NPA-NXX-XXXX) dialing for toll calls to other NPAs

The detailed processing sequence below shows how Tables DNREVXLA and DNREGION are used to obtain the appropriate digit manipulation result for a given ACB subscriber's DN and called back DN.

Assume the ACB subscriber's DN is 823-1234 and the called back DN is 723-5678. The processing steps to obtain the result are as follows:

- The ACB subscriber's seven-digit DN is used to try to locate an appropriate DN10DXLA tuple in Table DNREVXLA. In this example, the following DN10DXLA tuple is accessed because the range defined by FROMDIGS and TODIGS includes numbers beginning with the digits 823:

  ```
  DN10DXLA 822 824( R613T613 0 613 N )( R613T819 0 819 N ) $
  ```

- Screening tests are then performed using the first algorithm specified in the tuple. This algorithm specifies that the R613T613 region is to be used for DN screening:

  ```
  R613T613 822 824
  ```

  — For the screening test to be successful, both the ACB subscriber's DN and the called back DN must be found in the digit ranges that define the given region. In this case, the ACB subscriber's DN is found in the range 822 to 824, but the called back DN is not found in region R613T613. Therefore, the screening test fails.

- Since screening for the first algorithm failed, the second algorithm in the tuple is examined. This algorithm specifies the R613T819 region:

  ```
  R613T819 822 824 R613T819 723 725
  ```

  — In this case, the ACB subscriber's DN is found in the range 822 to 824, and the called back DN is found in the range 723 to 725 of region R613T819. The screening test is therefore successful.

- The digit manipulation algorithm associated with the successful test is then applied to the called back DN. This algorithm specifies that no leading

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

digits are to be deleted (DELDIGS = 0) and that digits 819 are to be prefixed to the result (PRFXDIGS = 819 and OPTPRFX = N), giving the following result:

```
DIGITS REQUIRED FOR TCAP: 8197235678
```

Alternative method for deriving the ACB TCAP DN

Subscriber Services uses an internally defined ACB DN translator for the seven-digit translations. This translator, along with the corresponding datafill in Tables DNREVXLA and DNREGION, allows conversion of a number in its dialed form to its TCAP form.

As part of the development to support CLASS on MDC, an alternative method has been developed to derive the TCAP DN on seven-digit dialed DNs.

Two customer group options are provided in Table CUSTHEAD: PRITCXLA and PUBTCXLA. These options determine if the existing method of extracting the TCAP DN is used, or if the alternative method is used. However, for the Subscriber Services application, only the PUBTCXLA translator is used. Option PUBTCXLA is used to specify a public network TCAP translator name for the Subscriber Services customer group. Valid TCAP translator names for option PUBTCXLA have the same format as the entries in field RXLANAME in Table DNREVXLA.

Once defined using option PUBTCXLA, a TCAP translator name can then be used to datafill Table DNREVXLA with the customer group specific TCAP translations. The way in which the Table DNREVXLA tuple is datafilled for TCAP translations depends on the value datafilled in field RXLANAME. The following paragraphs describe how Tables CUSTHEAD and DNREVXLA datafill are related for the public network dial plan.

Use of option PUBTCXLA in Table CUSTHEAD

If option PUBTCXLA does not exist against a Subscriber Services customer group, the existing, internally defined ACB translator name (DN10DXLA) must be used in datafilling Table DNREVXLA to derive TCAP numbers from seven-digit dialed numbers. These tuples are based on the calling number digits. If, however, the alternative method is used, TCAP translations are based on the called number, and option PUBTCXLA should be assigned a name other than DN10DXLA. This name would then be used in Table DNREVXLA to define tuples for TCAP translations for seven-digit dialed numbers whose NPA is different from the NPA of the calling line. The existing internal method of deriving TCAP numbers from 8-, 10-, and 11-digit dialed numbers is used regardless of whether option PUBTCXLA is datafilled for the customer group.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

The advantages of using the called number for TCAP translations rather than the calling number are as follows:

- The methods of datafilling POTS TCAP translations and MDC TCAP translations are consistent.
- Less datafill is required for Table DNREVXLA. Tuples are required only for the seven-digit dialed number whose NPA is different from the home NPA.
- Table DNREGION does not require datafill. The DEFAULT region is always specified in the Table DNREVXLA tuples.

The example shown in the following table assume that office Y contains lines having NPA-NXX combinations of 613-763 and 613-765. Examples of numbers dialed by a subscriber from office Y, and the corresponding TCAP numbers, are listed in the table.

TCAP translations of dialed numbers

Number dialed by subscriber	Corresponding TCAP number
765-XXX	613-765-XXXX
764-XXXX	613-764-XXXX
723-XXXX	819-723-XXXX
724-XXXX	819-724-XXXX

The datafill required to translate the seven-digit number to the TCAP DN form required when option PUBTCXLA is not assigned in Table CUSTHEAD is shown in the following figure. Note that Table DNREGION datafill is required to identify the regions.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

```
Table CUSTHEAD:

CUSTNAME CUSTXLA  DGCOLNM  IDIGCOL          OPTIONS
-------------------------------------------------------------
RESGRP   RESXLA    RES      NIL
      (VACTRMT 0) (EXTNCOS 0) (FEATXLA RXCFN) $

Table DNREVXLA:

RXLANAME FROMDIGS  TODIGS                          RESULTS
-------------------------------------------------------------
DN10DXLA  764      765       (  ACBREG1   0    613    N )
                             (  ACBREG2   0    819    N ) $
     range of calling numbers

Table DNREGION:
                REGION   FROMDIGS   TODIGS
                ------------------------------
                ACBREG1      764      765
                ACBREG2      764      765
                ACBREG2      723      724
```

The datafill required to translate the seven-digit number when option PUBTCXLA is assigned in Table CUSTHEAD is shown in the following figure. Since there is only one RESTCXLA tuple, all other seven-digit called numbers are considered to belong to the same NPA as the calling number, and the NPA is appended to the called number internally without the use of datafill.

```
Table CUSTHEAD:

CUSTNAME  CUSTXLA  DGCOLNM  IDIGCOL        OPTIONS
-------------------------------------------------------------
RESGRP    RESXLA   RES      NIL
(VACTRMT 0)(EXTNCOS 0)(FEATXLA RXCFN)(PUBTCXLA RESTCXLA) $

Table DNREVXLA:

RXLANAME FROMDIGS  TODIGS                    RESULTS
-------------------------------------------------------------
RESTCXLA  723      724    (  DEFAULT  0  819  N ) $
     range of called numbers
```

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

Applying reverse translations in AR

AR attempts to set up a call using the DN stored in the ICM. This “recalled" DN is the ten-digit number received as the calling DN for the last incoming call.

To perform call setup, AR must convert the recalled DN to its dialable form, by reverse translating the ten-digit DN into the following:

- a seven-digit DN, required to set up local calls
- an eight-digit (1 + seven-digit) DN, required to set up toll calls within the same NPA
- an 11-digit DN, required to set up calls to other NPAs

AR reverse translations uses dial plan information and conversion algorithms stored in Tables DNREGION and DNREVXLA to do the following:

- determine whether a 7-digit, 8-digit, or 11-digit DN is required to set up a call
- obtain the correct digit manipulation algorithm to reverse translate the ten-digit DN
- append a prefix digit to the 10-digit DN if an 11-digit DN is required
- delete the first three digits of the ten-digit DN, and then append a prefix digit if a eight-digit DN is required
- delete the first three digits of the ten-digit DN if a seven-digit DN is required

Setup of Table DNREVXLA and Table CUSTNTWK for AR reverse translations

The datafill setup for AR is the same as for DDN. Refer to “DDN application of reverse translations" in “Dialable Number Delivery (DDN)" for details on setting up AR. Where you see the term DDN, replace it with AR. Also, the examples of AR datafill processing on the following pages use the example scenarios set up for DDN.

The detailed processing sequence below shows how Tables DNREVXLA and DNREGION are used to obtain the appropriate digit manipulation result for a given set of recalled party digits and an AR subscriber's DN.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

Assume the recalled DN (the calling number stored in the ICM) is 819-820-1234 and the AR subscriber's DN is 819-724-5678. The processing steps to obtain the result are as follows:

- The recalled DN is used to locate the appropriate tuple in Table DNREVXLA. In this example, the following tuple is used since it includes all numbers beginning with the digits 819:

  ```
  RESRX 819 819  ( LOCAL_A  3  N  N ) ( DEFAULT 3  1  N ) $
  ```

- Screening tests are then performed using the first algorithm specified in the tuple. This algorithm specifies that the LOCAL_A region is to be used for DN screening. Table DNREGION is accessed to obtain the group of DNs that comprise the LOCAL_A region:

  ```
  LOCAL_A  819722  819725
  ```

  — For the screening test to be successful, both the recalled DN and the AR subscriber's DN must be found in the digit ranges that define the given region. In this case, the AR subscriber's DN is found in the range 819722 to 819725, but the recalled DN is not found in region LOCAL_A. Therefore, the screening test fails.

- Since screening for the first algorithm failed, the second algorithm in the tuple is examined. This algorithm specifies the DEFAULT region (the DEFAULT region is a group that contains all DNs).

  — The recalled DN and the AR subscriber's DN always exist in the DEFAULT region; therefore, this screening test is successful.

- The digit manipulation algorithm associated with the successful test is then applied to the recalled DN. This algorithm specifies that the leading three digits are to be deleted (DELDIGS = 3) and that digit 1 is to be prefixed to the result (PRFXDIGS = 1 and OPTPRFX = N), giving the following result:

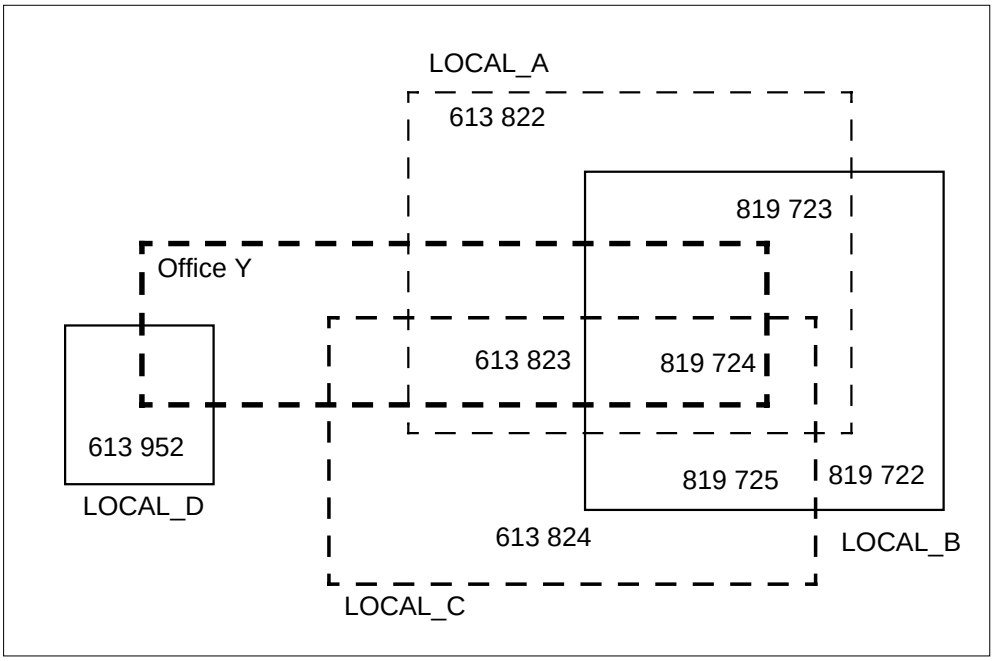
  ```
  DIGITS REQUIRED FOR CALL COMPLETION: 18201234
  ```

Example scenario: AR reverse translations datafill

The following example illustrates the AR reverse translations datafill required for hypothetical office Y. The following figure illustrates the dial plan for office (or node) Y.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

Public dial plan supported by office Y



Office Y serves DNs in NPA 613 and NPA 819. Also, the DNs served by this office are included in at least one of four different local calling areas: LOCAL_A, LOCAL_B, LOCAL_C, and LOCAL_D.

The conversion algorithm supported by this office conforms to the standard North American dialing plan for local and long distance calls, which offers the following

- seven-digit dialing, for local calls
- eight-digit (1 + seven-digit) dialing for toll calls in the same NPA
- 11-digit (1 + NPA-NXX-XXXX) dialing for calls to other NPAs

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

The following table illustrates the results of recalled DN conversion (reverse translations) required for ACB subscribers in office Y.

Note: The recalled DN is the calling DN from the last incoming call, as stored in the CLASS incoming call memory.

Recalled DN conversions for office Y

Heading	Heading	Heading
613- 823-XXXX	613- 824-XXXX	823XXXX
613- 822-XXXX	819-723-XXXX	822XXXX
613- 822-XXXX	613- 824-XXXX	1822XXXX
613- 777-XXXX	613- 824-XXXX	1777XXXX
613- 952-XXXX	819-723-XXXX	1613952XXXX
516-444-XXXX	819-724-XXXX	1516444XXXX

AR can reverse translate most of the AR calls from office Y based on the NPA in the ten-digit recalled DN. The exceptions are as follows:

- recalled DNs with an NPA of 613 requiring
  - — seven digits for call completion, when the AR subscriber's DN and the recalled DN are both in local calling area LOCAL_A, or are both in local calling area LOCAL_C, or are both in local calling area LOCAL_D
  - — 8 digits for call completion, where the AR subscriber's DN and the recalled DN both have an NPA of 613, but are not in the same local calling area
  - — 11 digits for call completion, where the recalled DN does not have an NPA of 613
- Recalled DNs with an NPA of 819 requiring
  - — seven digits for call completion, where the AR subscriber's DN and the recalled DN are both in local calling area LOCAL_A, or are both in

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

local calling area LOCAL_B, or are both in local calling area LOCAL_C

— eight digits for call completion, where the AR subscriber's DN and the recalled DN both have an NPA of 891 but are not in the same local calling area

— 11 digits for call completion, where the AR subscriber's DN does not have an NPA of 819

The detailed processing sequence below shows how Tables DNREVXLA and DNREGION are used to obtain the appropriate digit manipulation result for a given recalled DN and an AR subscriber's DN.

Assume the recalled DN is 613-823-1234 and the AR subscriber's DN is 819-725-5678. The processing steps to obtain the result are as follows:

- The recalled DN is used to locate the appropriate tuple in Table DNREVXLA. The following tuple is used because it includes all numbers beginning with the digits 613:

```
RESRX 613  613   ( LOCAL_A  3  N  N )
                 ( LOCAL_C  3  N   N )
                 ( LOCAL_D  3  N  N )
                 ( TOLL_613  3  1  N )
                 ( DEFAULT  0  1  N ) $
```

- Screening tests are then performed using the first algorithm specified in the tuple. This algorithm specifies that the LOCAL_A region is to be used for DN screening:

```
LOCAL_A   613822  613823  LOCAL_A  819723  819724
```

— For the screening test to be successful, both the recalled DN and the AR subscriber's DN must be found in the digit ranges that define the given region. In this case, the recalled DN is found in the range 613822

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

to 613823, but the AR subscriber's DN is not found in region LOCAL_A. Therefore, the screening test fails.

- Since screening for the first algorithm failed, the second algorithm in the tuple is examined. This algorithm specifies the LOCAL_C region:

```
LOCAL_C  613823  613824 LOCAL_C  819724  819725
```

  — In this case, the recalled DN is found in the range 613823 to 613824, and the AR subscriber's DN is found in the range 819724 to 819725 of region LOCAL_C. The screening test is passed.

- The digit manipulation algorithm associated with the successful test is then applied to the recalled DN digits. This algorithm specifies that the leading three digits are to be deleted (DELDIGS = 3) and that no digits are to be prefixed to the result (PRFXDIGS = N and OPTPRFX = N), giving the following result:

```
DIGITS REQUIRED FOR CALL COMPLETION: 8231234
```

Using REVXLVER to verify reverse translations datafill

REVXLVER (reverse translations verification) is a datafill verification utility, similar to TRAVER (translations verification), that simulates reverse translations from a specified origination to a specified destination. REVXLVER examines and displays translations data for reverse translations call processing. It can also display the reverse translations number result.

Reverse translations tables

Two data tables perform reverse DN translations. The first table, DNREGION, is used to identify groups of DNs belonging to the same region (or community of interest). The second table, DNREVXLA, is used to provide reverse translations algorithms based on the various regions defined in Table DNREGION. Together, these two tables specify the manner in which destination digits are to be manipulated based on whether or not the originator and the destination share a particular region.

For each Subscriber Services and MDC customer group containing lines using the AR feature, a tuple must exist in Table CUSTNTWK. This Table CUSTNTWK tuple identifies the reverse translator to be used by the AR and DDN features. In the case of the ACB feature, the reverse translator name is always ACB.

The tables referenced by each REVXLVER subcommand are discussed below as part of the descriptions of the individual subcommands.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

REVXLVER subcommands

The REVXLVER tool is divided into four subcommands:

- AR: allows the user to analyze AR reverse translations.
- ACB: allows the user to analyze ACB reverse translations.
- DDN: allows the user to analyze DDN reverse translations.

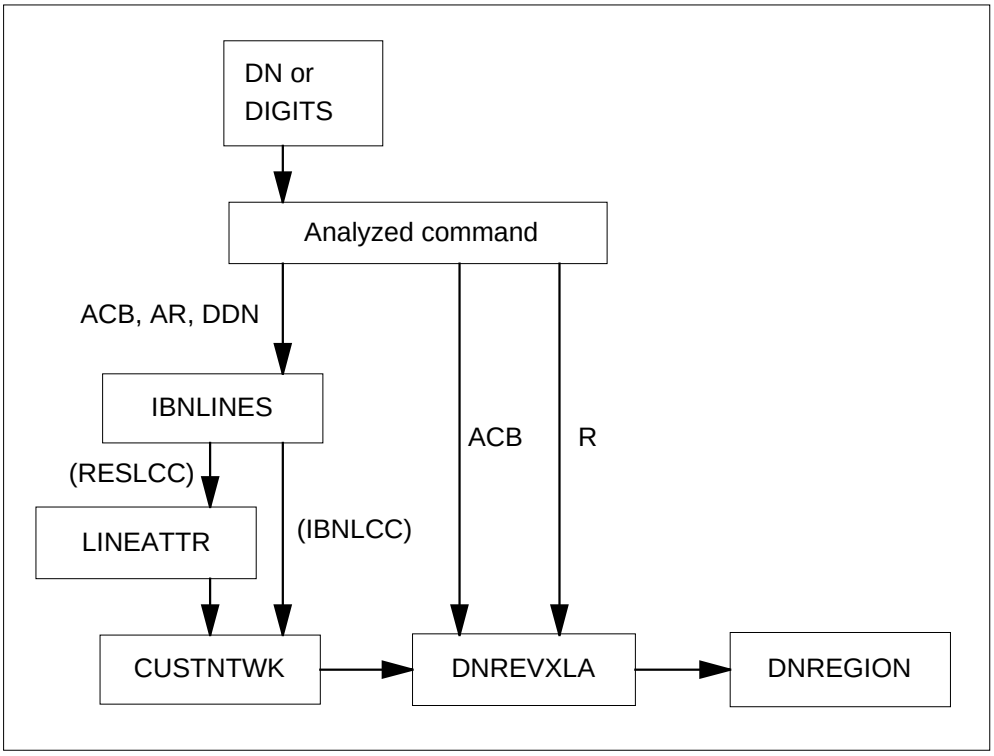
  Note: See "REVXLVER subcommands" in "Dialable Number Delivery (DDN)" for further details on the DDN subcommand.

- R: allows the user to trace datafill in Table DNREGION.

Tables used by REVXLVER subcommands

The following figure shows how the REVXLVER subcommands (AR, ACB, DDN, and R) access the tables used by reverse translations processing.

Tables used by REVXLVER subcommands



REVXLVER AR subcommand

The following command syntax is used to invoke the REVXLVER tool:

```
REVXLVER AR <DN> <DIGITS> <OPTION> <NETNAME>
```

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

where

DN
is the seven- or ten-digit DN of the line originating the call.

DIGITS
consists of the ten-digit sequence identifying the destination.

OPTION
is the type of tracing option.

The tracing options are as follows:

- T (trace) uses parallel software to simulate the reverse translations part of a call and displays sequentially all table entries that are referenced by the call.
- NT (no trace) displays the reverse translations output digits for the associated DN and digits specified in the command line.
- B invokes both options T and NT.

NETNAME
is an optional parameter identifying a valid network name. Network names are listed in Table NETNAMES. The default value is “PUBLIC."

AR uses the specified digits as though they were stored in the AR subscriber's ICM (the digits should be a ten-digit number). These digits must be converted to their dialable form in order to perform call setup. To do this, reverse translations datafill (also known as network datafill plan) is accessed.

The results of reverse translations datafill access are processed as follows to obtain the dialable DN:

- If reverse translations datafill indicates that 11-digit dialing should be used, AR obtains the prefix digit from Table DNREVXLA and appends it to the 10-digit number.
- If reverse translations datafill indicates that ten-digit dialing should be used, AR uses the ten-digit number “as is."
- If reverse translations datafill indicates that eight-digit dialing should be used, AR obtains the prefix digit from Table DNREVXLA and appends it to the rightmost seven digits of the ten-digit number.
- If reverse translations datafill indicates that seven-digit dialing should be used, AR uses the rightmost seven digits of the ten-digit number.

The reverse translations result for the AR subcommand is a 7-digit, 8-digit, 10-digit, or 11-digit number.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

Reverse translations tables used by AR subcommand The AR subcommand uses the following five tables to convert the specified digits into dialable form:

- Table IBNLINES uses the LEN as a key to determine the line attribute index (LNATTIDX) for Subscriber Services lines or the customer group for IBN lines.
- Table LINEATTR uses the LNATTIDX as a key to determine the customer group to which the DN belongs (only for RES lines).
- Table CUSTNTWK uses the customer group to select a reverse translator.
- Table DNREGION identifies the groups of DNs belonging to the same region.
- Table DNREVXLA associates the reverse translator to the reverse translations algorithm based on the various regions defined in Table DNREGION. However, if there is no match between the specified digits and the regions, a default result tuple can be used as an algorithm.

REVXLVER AR output examples

The following example shows the output from the AR subcommand using the trace option.

REVXLVER output example for Automatic Call Back/Automatic Recall (ACB/AR)

```
>REVXLVER AR 8243000 8197251234 T
       TABLE IBNLINES
          HOST 01 0 00 01 DT STN RES 8243000 200
         ( ACB) ( AR) ( DDN)$
       TABLE LINEATTR
          200 1FR NONE NT FR01 0 613 P621 L613 TSPS 10
          NIL NILLATA 0 NIL NIL 00 Y RESG200 0 0
       TABLE CUSTNTWK
          RESG200 PUBLIC 23 (PUBLIC RESRX 10)
       TABLE DNREVXLA
          RESRX 819 819 (LOCAL_A 3 N N)
                        (LOCAL_B 3 N N)
                        (LOCAL_C 3 N N)
                        (TOLL_819 3 1 N)
                        (DEFAULT 0 1 N)
       TABLE DNREGION
          LOCAL_C 613823 613824
          LOCAL_C 819724 819725
       +++ REVXLVER: SUCCESSFUL TRACE +++
```

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

The following example shows the output from the AR subcommand using no trace option.

REVXLVER output example for Automatic Call Back/Automatic Recall (ACB/AR)

```
>REVXLVER AR 8243000 8197251234 NT
       DIGITS USED TO CALL 8197251234 FROM 8243000
       7251234

       +++ REVXLVER: SUCCESSFUL TRACE +++
```

The following example shows the output from the AR subcommand using both trace options.

REVXLVER output example for Automatic Call Back/Automatic Recall (ACB/AR)

```
>REVXLVER AR 8243000 8197251234 B
       TABLE IBNLINES
         HOST 01 0 00 01 DT STN RES 8243000 200
         ( ACB) ( AR) ( DDN)$
       TABLE LINEATTR
         200 1FR NONE NT FR01 0 613 P621 L613 TSPS 10
         NIL NILLATA 0 NIL NIL 00 Y RESG200 0 0
       TABLE CUSTNTWK
          RESG200 PUBLIC 23 (PUBLIC RESRX 10)
       TABLE DNREVXLA
          RESRX 819 819 (LOCAL_A 3 N N)
                        (LOCAL_B 3 N N)
                        (LOCAL_C 3 N N)
                        (TOLL_819 3 1 N)
                        (DEFAULT 0 1 N)
     TABLE DNREGION
          LOCAL_C 613823 613824
          LOCAL_C 819724 819725
       DIGITS USED TO CALL 8197251234 FROM 8243000
       7251234

       +++ REVXLVER: SUCCESSFUL TRACE +++
```

The following example shows the output from the AR subcommand using both trace options with the default digit manipulation result used.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

REVXLVER output example for Automatic Call Back/Automatic Recall (ACB/AR)

```
>REVXLVER AR 8243000 8197251234 B
       TABLE IBNLINES
         HOST 01 0 00 01 DT STN RES 8243000 200
         ( ACB) ( AR) ( DDN)$
       TABLE LINEATTR
         200 1FR NONE NT FR01 0 613 P621 L613 TSPS 10
         NIL NILLATA 0 NIL NIL 00 Y RESG200 0 0
       TABLE CUSTNTWK
          RESG200 PUBLIC 23 (PUBLIC RESRX 10)
       TABLE DNREVXLA
          RESRX 819 819 (LOCAL_A 3 N N)
                        (LOCAL_B 3 N N)
                        (LOCAL_C 3 N N)
                        (TOLL_819 3 1 N)
                        (DEFAULT 0 1 N)
    TABLE DNREGION
       DEFAULT DIGIT MANIPULATION RESULT USED
       DIGITS USED TO CALL 8198261234 FROM 8243000
       18198261234

       +++ REVXLVER: SUCCESSFUL TRACE +++
```

REVXLVER ACB subcommand

The following command syntax is used to invoke the REVXLVER tool:

REVXLVER ACB <DN> <DIGITS> <OPTION>

where

DN
is the seven- or ten-digit DN of the line originating the call.

DIGITS
consists of the ten-digit sequence identifying the destination.

OPTION
is the type of tracing option.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

The tracing options are as follows:

- T (trace) uses parallel software to simulate the reverse translations part of a call and displays sequentially all table entries that are referenced by the call.
- NT (no trace) displays the reverse translations output digits for the associated DN and digits specified in the command line.
- B invokes both options T and NT.

ACB uses the specified digits as though they were stored in the ACB subscriber's outgoing call memory. The digits can be a sequence of 7, 8, 10, or 11 digits. Reverse translations are used to convert these digits to a fixed format (ten digits). ACB uses this fixed format to query the destination DN.

To do this, ACB makes assumptions based on the North American public network dialing plan. These assumptions are as follows:

- A valid public network “digits" (as dialed) can consist of 7, 8, 10, or 11 digits. Any other number of digits is deemed invalid, and the ACB call results in long-term denial.
- If specified digits consist of 11 digits, it is assumed that the digits have the form P + NPA-NXX-XXXX, where P is a prefix (the prefix must be 1 or 0; otherwise, the DN is determined to be invalid). The rightmost ten digits of the digits are used.
- If “digits" consist of ten digits, it is assumed that the digits have the form NPA-NXX-XXXX. The digits are used “as is."
- If “digits" consist of eight digits, it is assumed that the digits have the form P + NXX-XXXX. The NPA of the digits is assumed to be the same as the NPA of the originator (the ACB subscriber). The rightmost seven digits of the dialed digits are appended to the NPA to form a ten-digit DN.
- If “digits" consist of seven digits, the NPA of the destination party is ambiguous. To find the NPA, ACB accesses reverse translations datafill. If no datafill is present for DN10DXLA, the ACB assumes that the NPA of the destination party is the same as the NPA of the originator (as in the eight-digit case described above).

The reverse translations result for the ACB subcommand is a ten-digit number.

Reverse translations tables used by ACB subcommand All ACB subscribers in the switch use the reverse translator name, ACB.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

Accordingly, Table CUSTNTWK does not contain the ACB reverse translator name. ACB uses tables the following two tables:

- Table DNREVXLA associates the reverse translator to the reverse translations algorithm based on the various regions defined in Table DNREGION. However, if no match exists between the DN and the regions, no transformation of “digits" is required.
- Table DNREGION identifies the groups of DNs belonging to the same region.

REVXLVER ACB output examples

The following example shows the output from the ACB subcommand using the trace option.

REVXLVER output example for Automatic Call Back/Automatic Recall (ACB/AR)

```
>REVXLVER ACB 6138231234 7235678 T
       TABLE DNREVXLA
          ACB 822 824 (R613T613 0 613 N)
                      (R613T819 0 819 N)
       TABLE DNREGION
          R613T819 822 824
          R613T819 722 725

       +++ REVXLVER: SUCCESSFUL TRACE +++
```

The following example shows the output from the ACB subcommand using the no trace option.

REVXLVER output example for Automatic Call Back/Automatic Recall (ACB/AR)

```
>REVXLVER ACB 8231234 7235678 NT
       DESTINATION DIGITS
       8197235678

       +++ REVXLVER: SUCCESSFUL TRACE +++
```

The following example shows the output from the ACB subcommand using both trace options.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

REVXLVER output example for Automatic Call Back/Automatic Recall (ACB/AR)

```
>REVXLVER ACB 8231234 7235678 B
       TABLE DNREVXLA
          ACB 822 824 (R613T613 0 613 N)
                      (R613T819 0 819 N)
       TABLE DNREGION
          R613T819 822 824
          R613T819 722 725
       DESTINATION DIGITS
       8197235678

       +++ REVXLVER: SUCCESSFUL TRACE +++
```

The following example shows the output from the ACB subcommand using both trace options with the default NPA of the originator used.

REVXLVER output example for Automatic Call Back/Automatic Recall (ACB/AR)

```
>REVXLVER ACB 8231234 7235678 B
       TABLE DNREVXLA
          ACB 822 824 (R613T613 0 613 N)
                      (R613T819 0 819 N)
       TABLE DNREGION
          R613T613 822 824
          R613T613 722 725
       TABLE DNREGION
       NPA DEFAULTS TO THAT OF THE ORIGINATOR
       DESTINATION DIGITS
       6137235678

       +++ REVXLVER: SUCCESSFUL TRACE +++
```

REVXLVER R subcommand

The following command syntax is used to invoke the REVXLVER tool:

REVXLVER R <DN> <RXLANAME>

where

DN
is the seven- or ten-digit DN of the line originating the call.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

RXLANAME
is the name of a valid reverse translator name. The RXLANAME parameter is valid only in the R subcommand syntax.

The R subcommand uses the specified reverse translator name and digits to locate the Table DNREVXLA logical tuple to which the digits belong. This tuple is then parsed to determine the regions in Table DNREGION that are associated with this tuple. Using these regions and the digits, the R subcommand determines whether or not the digits belong to these regions. If there is a match, the subcommand R displays the matched Table DNREGION logical tuple(s).

To determine a match, both of the following conditions must be met.

- The number of digits in digits must be greater than or equal to the number of digits in fields FROMDIGS and TODIGS in the Table DNREGION logical tuple.
- The specified digits must be included in the range defined by FROMDIGS and TODIGS.

There are no reverse translations results for the R subcommand.

Reverse translations tables used by R subcommand The R subcommand uses the following two tables.

- Table DNREVXLA associates the reverse translator to the reverse translations results to determine the regions used in Table DNREGION.
- Table DNREGION determines whether or not the digits match with these regions.

The following example shows the output from the R subcommand scanning Table DNREGION.

REVXLVER output example for Automatic Call Back/Automatic Recall (ACB/AR)

```
>REVXLVER R 613824 POTSAR
TABLE DNREGION
 LOCAL_C 613823 613824
 TOLL_613 613 613

   ++ REVXLVER: SUCCESSFUL TRACE ++
```

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

Translations table flow

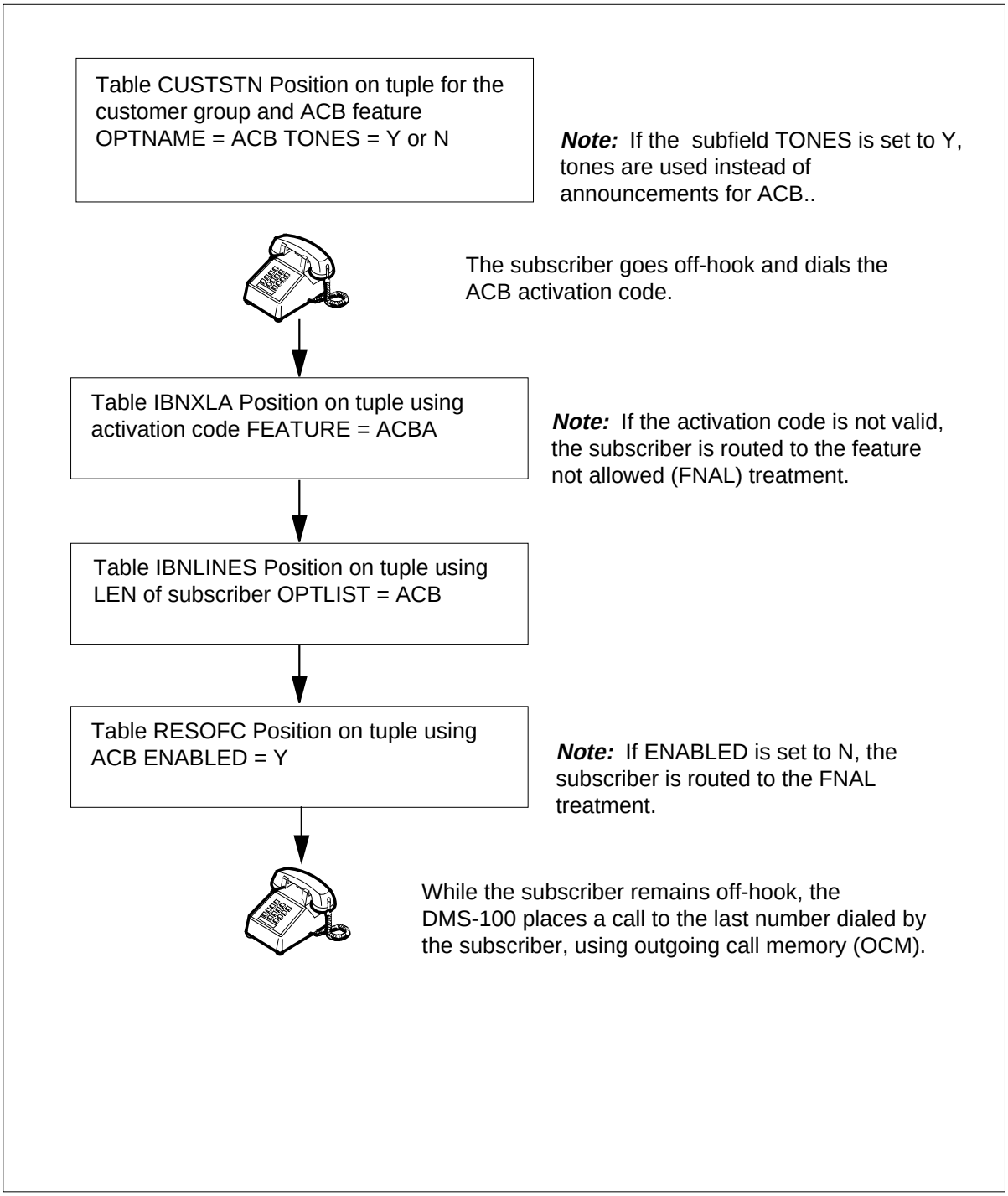
The Automatic Call Back/Automatic Recall (ACB/AR) translations tables are described in the following list:

- Table CUSTSTN specifies the station options assigned to each of the customer groups.
- Table IBNXLA provides the name of the feature associated with an activation code.
- Table IBNLINES lists the features assigned to a line equipment number (LEN).
- Table RESOFC controls the availability of individual CLASS features for an office. For this example, ACB is enabled.

The Automatic Call Back/Automatic Recall (ACB/AR) translation process is shown in the flowchart that follows. The flowchart shows the table flow for ACB activation. The table flow for one-level AR activation is identical, except for the activation code.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

Table flow for Automatic Call Back/Automatic Recall (ACB/AR)



Automatic Call Back/Automatic Recall (ACB/AR) (continued)

The following table lists the datafill content used in the flowchart. The datafill example is for ACB, the activation code is 66, and the LEN of subscriber is HOST 00 02 0 05.

Datafill example for Automatic Call Back/Automatic Recall (ACB/AR)

Datafill table	Example data
CUSTSTN	RES1 ACB 3 4 Y ACBARRP N
IBNXLA	RXCFN 66 FEAT N N N ACBA
IBNLINES	HOST 00 02 0 05 0 DT STN RES 6210011 0 (ACB) (AR) $
RESOFC	ACB Y SUBSCR ACB 5 5 30 180 120 5 5 2 Y DENY DENY DENY Y $

The following figure shows the table flow for AR two-level activation.

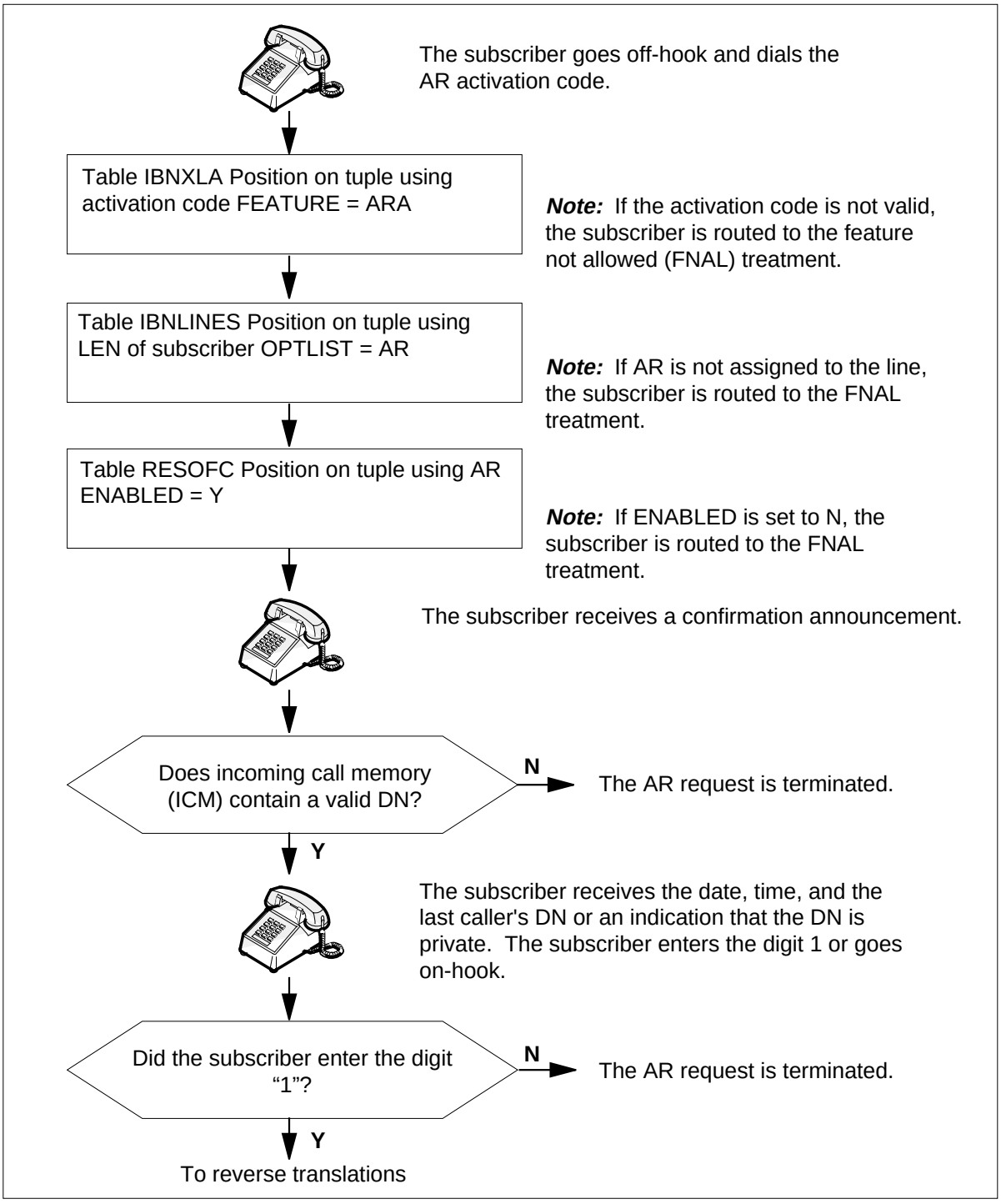
Table IBNXLA provides the name of the feature associated with an activation code.

Table IBNLINES lists the features assigned to a LEN.

Table RESOFC controls the availability of individual CLASS features for an office. For this example, AR is enabled.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

Translations data flow for AR two-level activation



Automatic Call Back/Automatic Recall (ACB/AR) (continued)

The following table lists the datafill content used in the previous flowchart.. The datafill example is AR two-level activation. The AR activation code is 69 and the LEN of subscriber is HOST 00 02 0 05.

Datafill example for Automatic Call Back/Automatic Recall (ACB/AR)

Datafill table	Example data
IBNXLA	RXCFN 69 FEAT N N N ARA
IBNLINES	HOST 00 02 0 05 0 DT STN RES 6210011 0 (ACB) (AR) $
RESOFC	AR Y SUBSCR AR TWOLEVEL 5 5 30 180 120 5 5 2 Y DENY DENY DENY Y 2 2 $

Limitations and restrictions

The following limitations and restrictions apply to Automatic Call Back/Automatic Recall (ACB/AR):

- The originating line must be assigned one or both of the ACB/AR features.
- Both the originating and terminating switches must support the ACB/AR features.
- A subscriber is allowed up to 30 combined ACB/AR requests concurrently (not 30 ACB requests and 30 AR requests).
- This feature cannot query the status of ACB/AR requests outstanding for individual lines or block the use of a set of CLASS features.
- This feature cannot cannot allow or deny ACB/AR to all lines or groups of lines in an office without adding or removing the feature to or from each individual line.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

- For interoffice ACB/AR, CCS7 links must be in operation between the originating and terminating switches:
  - — ISUP (CCS7 call setup used to forward the calling number to AR subscribers)
  - — CLASS TCAP (CCS7 application used to scan the status of busy lines)
  - — SCCP (CCS7 message routing capability used to route TCAP messages)
- Lines with a line class code (LCC) of 1FR or 1MR can be assigned the ACB or AR features if office parameter RES_SO_SIMPLIFICATION has field RES_AS_POTS set to Y.

  Note: For information on how the ACB and AR features can be assigned to lines with an LCC of IBN or PSET, refer to the section, “Datafilling CLASS on MDC," in this document.

The following additional limitations and restrictions apply to the ACB/AR Scans Entire Hunt Group feature:

- The entire multiposition hunt (MPH) group for idle members is not scanned.
- Interactions between PRH members and option SHU are not covered.
- The options LOD and LOR are not considered when determining whether a line is available for termination. If, for example, a hunt group has option LOD and a line with ACB tries to call back the hunt group when all members are busy, the presence of the LOD option is ignored. If, after the ACB line has received and answered distinctive ringing, all members of the hunt group go busy, option LOD is used. It is as if the ACB line phoned the hunt group directly; therefore, the ACB line is routed to the DN specified by option LOD.
- Any interactions between ACB/AR on hunt groups when members that are hunted are assigned the Automatic Call Rejection (ACRJ) feature are not covered.

The following limitations and restrictions apply to the use of ACB/AR with ACD and UCD groups.

- If the called number is the number of an ACD/UCD group, it is possible for the caller to be routed to the overflow route of the ACD/UCD group. If the overflow route sends the end-user to a DN that is busy, they will still be

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

charged for the use of ACB even though the call does not complete and they hear busy tone.

- In the case where ACB blocking is applied to inter-office calls, the terminating End Office (EO) must have ACB blocking enabled.

Interactions

The following paragraphs describe the interactions between Automatic Call Back/Automatic Recall (ACB/AR) and other functionalities.

This section describes the interactions that take place between ACB/AR and other features. The list of interactions covers Subscriber Services features and MDC features.

Attendant console

When ACB/AR attempts to terminate on an attendant console DN, the terminating switch indicates idle if the attendant console or attendant console subgroup (depending on the DN) is in service. For intraoffice ACB/AR, the direct query of the console DN also indicates idle. This causes the originating office to attempt a call setup to that number.

If the attendant console or attendant console subgroup is not in service, ACB/AR attempts to the attendant console result in a long-term denial (LTDENIAL) announcement.

Call Forwarding

When ACB/AR attempts to terminate on a station that has call forwarding activated, the ACB/AR subscriber receives a short-term denial (STDENIAL) announcement.

ACB/AR recall ringing to the ACB/AR subscriber line is not affected by any type of call forwarding that the ACB/AR subscriber may have activated (that is, the ACB or AR recall ringing does not follow the call forwarding feature).

Call Forwarding Busy

When ACB/AR attempts to terminate on a station with Call Forwarding Busy (CFB) active, the initial set up attempt is not affected by CFB processing. If the line is busy, ACB/AR monitors the line until it becomes idle. When the line becomes idle, the call is immediately setup. If the called party becomes busy during the post-monitoring call setup, the new call follows the call forwarding.

If the ACB/AR subscriber line is busy and has CFB active, the recall ringing does not follow the call forward. Recall ringing is provided when the ACB/AR subscriber line becomes free.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

Call Forwarding Don't Answer

When ACB/AR attempts to terminate on a station with Call Forwarding Don't Answer (CFDA) active, the call setup attempt is not affected by CFDA processing.

If the ACB/AR subscriber has CFDA activated, the special recall ringing is not forwarded.

Call Hold and Permanent Hold

When ACB/AR attempts to terminate on a station that has a call on hold, the station is considered to be busy.

Call Pickup and Directed Call Pickup

Once ACB/AR has rung the destination station, the Call Pickup (CPU) or Directed CPU features can be activated.

ACB/AR special ringing to the ACB/AR subscriber is not affected by the CPU or Directed CPU features.

AR cannot be used to reestablish a call that has been answered using CPU or Directed CPU. The CLASS ICM is not updated when a call is picked up by an AR subscriber.

Call Waiting

When ACB/AR attempts to terminate on a line that is active on a call and the line has Call Waiting (CWT), ACB/AR returns an idle indication if the call has not already been waited, unless the line on which the call is to be terminated is the controller of a three-party conference.

If the ACB/AR subscriber has the CWT feature and is busy when special recall ringing is attempted, CWT is not used to convey the special ringing or to alert the subscriber. CWT does not affect the ACB/AR processing.

Calling Name Delivery (CNAMD)

Calling name information during ringback of an ACB activation is supported.

Coin lines

The ACB/AR subscriber can activate ACB to a coin line if the entry for FEATNAME is ACB and option COINLINE is set to ACCEPT in Table RESOFC. If option COINLINE is set to DENY, attempts to use ACB on a coin line result an LTDENIAL announcement.

The calling party can activate AR to a coin line if the entry for FEATNAME is AR and option COINLINE is set to ACCEPT in Table RESOFC. If option

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

COINLINE is set to DENY, attempts to use AR on a coin line result in an LTDENIAL announcement.

Denied Termination

When ACB/AR attempts to terminate on a line that has Denied Termination (DTM), the ACB/AR subscriber receives an (LTDENIAL) announcement.

Hunt groups

A member of a hunt group can be an ACB/AR subscriber. Special recall ringing is only given to the ACB/AR subscriber (that is, hunting does not apply).

The ACB/AR Scans Entire Hunt Group feature (NC0314) allows ACB/AR feature activations to work with multiline hunt (MLH) groups, distributed line hunt (DLH) groups, and directory number hunt (DNH) groups.

MLH groups

In an MLH group, each member has the same DN but different line equipment numbers (LEN). When this DN is dialed, hunting starts with the pilot LEN and continues to the end of the group, where the hunt is complete. The calling station is connected to the first idle line that is found.

DLH groups

In a DLH group, each member has the same DN but different LENs. When this DN is dialed, hunting starts with the LEN following the last idle LEN. A LEN must be idle to receive a call. If it is not idle, the call rolls to the next available LEN.

For DLH groups, hunting can start with any member. Hunting continues through the rest of the group and stops once an idle line is found.

DNH groups

In a DNH group, each member in the group has its own DN. Hunting begins with the number dialed and continues until the end of the group it reached. If the group has option CIR, hunting begins with the number dialed, continues through the rest of the group, and then rolls to the top until an idle line is found.

Implementing ACB/AR with hunt groups

With the implementation of ACB/AR with hunt groups, the originating switch sends a message to the terminating switch requesting that terminating scanning be performed. Terminating scanning requires the terminating switch to monitor the status of the ACB/AR line and to notify the originating switch when the line is available. If there is an idle member of the hunt group (that fits in with the hunting scheme of the group) during this initial query stage,

neither originating nor terminating scanning is required, since the call can immediately complete to this idle member.

If a subscriber tries to use ACB or AR to phone a line in a hunt group and all the lines in the group are busy, the ACB/AR subscriber receives an announcement stating that the number is busy and that the subscriber will be notified with ringback when the number is free. The subscriber then hangs up. The originating switch sends a message to the terminating switch requesting that terminating scanning be performed. The terminating switch refuses by returning an error message of “task refused."

When the originating office receives the reply of “task refused," the originating switch begins originating scanning of the hunt group. Originating scanning involves sending queries to the terminating switch inquiring about the status of the ACB/AR line.

Once a member of the hunt group is idle, the ACB/AR subscriber receives distinctive ringing. If the subscriber answers distinctive ringing and a member of the hunt group is still idle, the idle member of the hunt group begins to ring. The ACB/AR request is now considered complete. If, when the subscriber answers distinctive ringing the final busy/idle query indicates there is now no idle member, the subscriber receives an announcement stating monitoring of the line continues.

Make Set Busy and Do Not Disturb

When ACB/AR attempts to terminate on a line with Make Set Busy (MSB) or Do Not Disturb (DND) active, ACB/AR treats the line as busy, but the terminating switch does not allow ACB/AR “monitor until idle" activation. For interoffice ACB/AR, a reply is sent to the initial query message with an error code of “not queued." The ACB/AR subscriber is given an LTDENIAL announcement.

If the ACB/AR subscriber has MSB or DND active, the ACB/AR recall ringing is not blocked (that is, the ACB/AR subscriber is still recalled and can answer and be connected as usual).

If MSB or DND, or both, are activated while ACB/AR terminating scanning (monitor until idle) is operating against a called party, the party continues to look busy to ACB/AR (see also the next two paragraphs, which describe results when MSB or DND is subsequently deactivated).

If the called party has a Meridian business set and the set deactivates MSB while ACB/AR terminating scanning is operating, the ACB/AR requests queued on this party are not notified of MSB deactivation until either the next

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

time the called party goes on-hook, or the T7 timer on the first ACB/AR entry expires.

If DND is deactivated on the called party while ACB/AR terminating scanning is operating, no ACB/AR request is notified of the DND deactivation, and the ACB/AR requests queued on this party are not notified of the event until either the next time the called party goes on-hook, or the T7 timer on the first ACB/AR entry expires.

Multiparty lines

ACB/AR can terminate on a 2FR line with Automatic Number Identification (ANI). When ACB/AR attempts to terminate on a 2FR operator number identification (ONI), 4FR, 8FR, or 10FR line, the ACB/AR subscriber receives an LTDENIAL announcement.

Multiple Appearance Directory Number

When ACB/AR attempts to terminate on a line in a group with Multiple Appearance Directory Number (MADN) (multiple call arrangement or single call arrangement) the following occurs:

- A MADN multiple call arrangement group is considered busy if all members of the group are busy.
- A MADN single call arrangement group is considered busy when any member of the group is busy.

When ACB/AR terminating scanning is in operation against a MADN multiple call arrangement group, the called number becomes idle when any member of the group becomes idle.

When ACB/AR terminating scanning is in operation against a MADN single call arrangement group, the called number becomes idle when all members of the group become idle.

Speed Calling

ACB can be activated if the previous call was set up using the Speed Calling feature.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

Three-Way Calling

While active on a call, an ACB/AR subscriber with the Three-Way Calling (3WC) feature can cancel an active ACB/AR request by

- using the link button (or flashing the switchhook) to put the active call on hold (dial tone is heard)
- dialing the ACB/AR deactivation code
- using the link button (or flashing the switchhook) again to reconnect to the active call

ACB/AR recall ringing is not provided if the ACB/AR subscriber has a caller on hold.

If an ACB subscriber dials the second leg of a three-way call, ACB can be used to call back the destination station after the three-way call is completed.

If an AR subscriber is called as part of a three-way or conference call, AR can be used to recall the station that dialed the AR subscriber after the three-way call is completed.

Uniform Call Distribution and Automatic Call Distribution

The terminating switch automatically returns idle if an initial query message is received for a Uniform Call Distribution (UCD) DN or an Automatic Call Distribution (ACD) DN. For intraoffice ACB/AR, the direct query of the UCD or ACD DN also indicates idle. This causes the originating office to attempt a call setup to that number.

In case the called number is the number of a Automatic Call Distribution (ACD) or a Uniform Call Distribution (UCD), ACB does not monitor the called station, since it considers the destination as being idle and immediately routes the caller to the called DN.

When the destination DN is associated with a ACD or UCD group, ACB can be blocked through use of the office parameter ACB_BLOCKED_FOR_ACD_UCD located in Table OFCENG. The blocking of ACB for ACD and UCD groups applies to intra-office and inter-office calls. In the case of inter-office calls, the terminating End Office (EO) must have the blocking of ACB to ACD and UCD groups enabled.

The Automatic Call Back Blocking for ACD/UCD groups feature does not introduce any new interactions between the ACD and the UCD features.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

Other special conditions

If the ACB/AR destination party is maintenance busy, system busy, deloaded, or locked out, or has options SUS, PLP, or RSUS assigned, the ACB/AR subscriber receives an LTDENIAL announcement.

If the called party is taken out of service while ACB/AR termination scanning is in operation, the party continues to look busy to ACB/AR.

If the called party is then returned to service, no ACB/AR request is notified of the line's return to service until either the next time the called party goes on-hook, or until T7 timer on the first ACB/AR entry expires.

Feature incompatibilities

The ACB/AR feature has no limitations or restrictions.

Activation/deactivation by the end user

The subscriber can activate ACB/AR using either the one-level activation procedure or the two-level activation procedure.

One-level feature activation

The subscriber can activate ACB/AR at any time (upon going off-hook and receiving dial tone) by dialing the appropriate activation code. The code should consist of XX, *XX, or 11XX format for dual-tone multifrequency (DTMF) lines, and the XX or 11XX format for dial pulse (DP) lines. The value of this can be changed by the operating company for an individual office. The recommended activation codes for ACB and AR are 66 and 69, respectively.

Note 1: 11 can be datafilled as the asterisk (*) equivalent.

Note 2: Flash activation of ACB/AR is not allowed.

Once the activation code is entered, the system responds by checking the subscriber line to ensure that ACB/AR is assigned to that line. A feature not allowed (FNAL) treatment or FNAL announcement, if datafilled, is returned if the feature is not allowed and one of the activation codes is dialed.

The ACB/AR request is refused under any of the following conditions:

- The called line has call forward variable active, POTS call forwarding feature, or the MDC call forwarding features CFU, CFI, or CFF.
- The called line has Selective Call Forwarding (SCF) active for the calling party.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

- The called line terminating restriction indicator is not equal to “unrestricted termination."
- The service type and DN match indicators of the called line (parameters received by the originating office in response to the initial query) are unacceptable. Some service-type DN match combinations are definable as accept or deny, by the operating company.

Two-level feature activation

In addition to one-level activation, AR can also be activated using a two-level procedure. Two-level activation does not apply to ACB.

The system checks the line that is requesting access to AR to determine if access is allowed. If access is not allowed, a denial announcement is given. The line is idled without delay upon completion of the denial announcement. If access is allowed, an announcement informs the subscriber that AR has been accessed. If the number in the ICM is valid, the DN of the last incoming call is announced to the subscriber. With two-level activation, the date and time of the last incoming call can also be provided. Voiceback includes the date, the time, and the calling DN. If the DN in the ICM is designated as private, a private number indication is announced to the subscriber.

In both cases, the subscriber is instructed to dial 1 to invoke AR or to hang up to abort the AR request. If the number in the incoming call memory is invalid (an out-of-area or DN unavailable indicator or only a partial DN exists in the calling number portion), the subscriber is informed that AR cannot be activated for the most recent incoming call. After this announcement, the line is idled without delay. If the number is valid and the subscriber dials 1 to activate the feature, the two-level activation procedure is complete. The system then attempts to call the DN associated with the most recent incoming call.

Note: Flash activation of AR is not allowed.

DN voiceback on AR two-level activation

With two-level AR activation, the subscriber hears the DN and (optionally) the date and time of the last call, in the form of an interruptible announcement. The announcement is interruptible because the subscriber can dial 1 or hang

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

up at any time after the start of the announcement. The recommended wording of this announcement is as follows:

- "The last number that called your line was <DN>. This call was received on <date> at <time>. To call this number, enter "1." Otherwise, hang up now."
- This announcement, DNANN, is a customized announcement requiring datafill in Tables ANNS, ANNMEMS, and DRMUSERS.
- The phrase ENGVARDNF is used by features requiring English DN voiceback to voice a DN. The phrase CLASSENG17 completes the announcement.

  — "To call this number, enter "1." Otherwise, hang up now."

Invalid DN announcement on AR two-level activation

An announcement is provided on two-level AR activations where the ICM is empty or contains an invalid DN. This invalid DN announcement, referred to as INVANN, is also a customized announcement.

"We're sorry, the last number that called your line is not known. This call was received on <date> at <time>. Please hang up now."

Feature processing

When the ACB/AR feature is successfully activated, system processing begins.

Note 1: If the reply to the initial query indicates that immediate processing is to be used, the ACB/AR request is considered complete, and call setup is attempted. If call setup fails, the subscriber hears the appropriate call-failure treatment and can try the ACB/AR activation procedure again.

Note 2: In responding to the initial query, the DMS does not include the optional DN-to-line service type mapping parameter if the requested parameter values cannot be returned and an error component with a "data unavailable" error code is sent.

Note 3: The DMS always performs a final busy or idle query on answer of recall ring before subsequent call setup. If the reply to the busy or idle query is IDLE, the ACB/AR request is considered complete, and call setup is attempted. A failure in call setup results in the normal call-failure treatment. If the reply to the query is BUSY, the system continues to poll the destination line until it returns to an idle state.

If the request is intranodal, feedback to the subscriber is immediate. If the request is internodal, the subscriber hears nothing until a reply to the initial TCAP query is received or until the T5 timer expires. (The T5 timer specifies

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

the number of seconds the originating switch waits for a response from the terminating switch.) The following table lists the possible ACB/AR processing replies heard by the subscriber.

ACB/AR processing replies (Sheet 1 of 2)

Reply	Description
Audible ring	Audible ring indicates the call is being completed immediately. Even if the called party does not answer, the ACB/AR request is considered complete.
Announcement indicating the line is busy	If the called line is busy and the ACB/AR request is accepted, a confirmation announcement (CONFANN) such as the following is given: “The line is busy. You will be notified by special ringing when the line is free. Please hang up now."
Standard DMS failure treatments	These treatments indicate the ACB/AR request cannot be processed for some reason other than those covered by STDENIAL and LTDENIAL announcements. The DMS failure treatments used by ACB/AR are FNAL, NACK, NBLH, NOSR, NOSC, and SYFL.
STDENIAL	This announcement indicates the ACB/AR request cannot be processed at the present time because the called line has call forward variable, or the DMS-equivalent CFU, CFI, CFF, call forwarding, or SCF activated for the calling party. Refer to “Appendix Quick reference for switch timers, announcements, and treatments for ACB/AR," for a complete list of short-term denial announcements.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

ACB/AR processing replies (Sheet 2 of 2)

Reply	Description
LTDENIAL	A long-term denial of the ACB/AR request results from any of the following conditions: A long-term denial of the ACB/AR request results from any of the following conditions: • the call is interoffice and end-to-end CCS7 connectivity does not exist • the called line status cannot be determined by the terminating office (for example, the line is part of a private branch exchange [PBX]) • the called party has a class of service other than “unrestricted termination" or “selective call rejection" • network choking is in effect for the called directory number • the service type and DN match indicators of the called line are unacceptable (acceptability of some values can be datafilled) • the call is inter-LATA or international • the ACB/AR request is made to an 800 or 900 number • the DN to which the request is made is invalid (based on the North American public network dialing plan)
SCRJ announcement	If the called party has included the subscriber in an SCRJ table, the terminating switch includes an SCRJ indication in the response. When the originating switch encounters an SCRJ indication, a call is immediately set up, regardless of the called party's busy/idle status, so that the calling party can hear the correct announcement from the terminating switch.

Immediate processing

If the reply to the initial query message indicates the called party is idle, and the restriction checking is successful, the ACB/AR call setup is attempted.

The call continues as if the subscriber had manually dialed the called DN. The ACB/AR request is treated as complete even if the call setup fails.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

Delayed processing

If the called party is busy, delayed processing is invoked. The originating switch starts the duration timer for the current request.

For interoffice ACB/AR, if the terminating switch has not queued the initial query message request, or if option TERMSCAN is set to N, the originating switch performs originating scanning by periodically sending busy or idle TCAP queries to the terminating switch at a rate datafilled as TSCAN. The maximum time between these busy or idle queries is determined by timer T11 in the terminating switch. If the ACB/AR request is activated and the terminating switch has queued the request, the originating switch sends a request for the terminating switch to perform terminating scanning. The terminating switch either accepts the request and starts monitoring the called party (to detect a “called party going idle" event), or rejects the request, forcing the originating switch to perform originating scanning. As with the initial query message, the T5 timer is started to ensure that a response arrives within a reasonable amount of time. If the T5 timer expires, the originating switch assumes terminating scanning cannot be done and performs originating scanning.

For intraoffice ACB/AR, terminating scanning is always performed.

If terminating scanning is invoked, the terminating switch starts the T7 timer. This timer determines the duration of this request in the terminating switch. The T7 timer is set as the minimum of

- the remaining value of the T10 timer (the duration in minutes that the call stays in queue on both the originating and terminating switches) on the terminating switch
- 1 + the integer number of minutes in the value of the T6 timer (the duration timer for ACB/AR on the originating switch) passed in the terminating scanning request message

Once the ACB/AR service has been activated, originating or terminating scanning continues until one of the timers expires, the called party is found idle, or the request is manually deactivated by the originator.

Recall and call setup

When the originating office has received a message indicating the called line is idle, the status of the calling line is checked to determine whether the call can be set up.

If the calling party's line is busy when the response indicating that the called party is free is received, the originating switch waits for the calling party's line to become idle, then resumes scanning of the called party's status.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

For interoffice ACB/AR to perform terminating scanning, a TCAP message with the duration parameter set to the remaining value of the T6 timer is sent to resume the operation. This causes an updating of the T7 timer.

For originating scanning, the switch resumes sending queries.

When both the calling and called parties are free, special recall ringing is given to the calling party.

If the calling party answers the recall, the originating switch performs a final busy or idle query of the called party. For interoffice ACB/AR, a TCAP message is sent to initiate this query. If the called party is still idle, the switch sets up the call to the called party again, using the digits dialed on the original call (for ACB/AR), and the service is terminated (using a TCAP message in the case of interoffice ACB/AR). This results in an updating of the OCM.

If the reply to the final busy or idle query indicates the called party has once again gone busy, the scanning resumes, and a special announcement (BUSYANN) is given to the calling party.

> ***Note:*** There is no restriction on the facilities used for the final call setup. Call Setup can be performed using either per-trunk signaling or CCS7-type trunks. If the called party is busy or all trunks are busy, or any other call setup failure occurs after the call is set up, the calling party hears the corresponding treatment and must repeat activation.

If the calling party does not answer the special ringback before the maximum number of ring cycles (RINGCYCL), the system starts the T2 timer. (T2 waits a specified number of minutes between unanswered special ringing and reinitiation of service.) When T2 expires, and if T6 (the duration timer) is greater than N (a datafillable time constant), the system resumes scanning of the called party. If the called party is still free, the calling party is given special ringing once again. The duration of time between the recall attempts (T2) and the maximum number of ringback attempts (RINGAPPL) is datafilled by the operating company. If T6 is less than N or the maximum number of recall attempts has been reached, the service is terminated.

If the calling party goes on-hook before a reply to the query is received or the time allowed by the originating switch to receive a response from the terminating switch (T5) expires, the ACB/AR request is canceled.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

System deactivation

A request is automatically deactivated under any of the following conditions:

- Special ringing has been given to the calling party, the ringing is answered, and the reply to the final busy/idle query is IDLE, resulting in a call setup attempt.
- Timer T6 expires at the originating office. This may result in a TCAP message being sent to the terminating office (for interoffice ACB/AR). For intraoffice ACB/AR, the request is deactivated directly.
- Timer T7 expires at the terminating office. For interoffice ACB/AR, this results in a timer expired message being sent to the originating office. At the originating office, if the current value of T6 is less than or equal to N, the ACB/AR request is deactivated. For interoffice ACB/AR, a dequeue message is sent to the terminating office to dequeue the request and cancel T10.

  Note: N is a tolerance value defined by the operating company with a suggested value of 5 min.

  If the current value of T6 is greater than N, either originating or terminating scanning of the called line is resumed for the remainder of T6.
- The maximum number of ringbacks (RINGAPPL) has been given to the calling party's line for this ACB/AR request.
- The calling party abandons the recall before receiving audible ringing when the called party's line is idle.
- T10 expires for either the originator's or terminator's requests.
- The calling party answers the recall, and a final busy or idle query is launched. The request is deactivated if the user abandons the call before the reply to the query is received.
- The ACB/AR user is force-idled by a maintenance action at the exact same moment ACB/AR distinctive ringing starts.
- An ACB/AR TCAP message is returned by the return-on-error option of SCCP.

  Note: No subsequent TCAP messaging takes place with respect to the ACB/AR request.

The subscriber can deactivate the ACB/AR request by going off-hook, receiving dial tone, and dialing the deactivation code. The code format can be XX, *XX or 11XX for DTMF lines and XX or 11XX for rotary lines. XX is defined by the operating company at each ACB/AR originating switch. The recommended deactivation codes are 86 for ACB and 89 for AR. Once the

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

deactivation code is entered, all outstanding ACB/AR requests are deactivated. This is done by sending a TCAP message for each of the interoffice requests.

After deactivation, the deactivation announcement (DEACTANN) is returned to the calling party. If the calling party disconnects before hearing the DEACTANN announcement, the requests are still canceled (DEACTANN is returned even if there are no outstanding ACB/AR requests).

Billing

When subscription usage sensitive pricing (SUSP) is set to ON in Table AMAOPTS (Automatic Message Accounting Options), then the AMA billing option is available for the CLASS SUSP features ACB and AR. See the following for an example of option SUSP in Table AMAOPTS. The AMA billing option is then specified during the addition of options ACB or AR to a subscriber line. This is done through service orders.

Example of option SUSP in Table AMAOPTS

```
TABLE:  AMAOPTS

   OPTION                    SCHEDULE
   SUSP              ON
```

Call code and structure code

ACB and AR are very similar Custom Local Area Signaling Services (CLASS) features. When ACB and AR are activated as one-level procedures, the activation procedures are identical (with the exception of access codes). AR can also be activated as a two-level procedure. When AR is activated, the subscriber hears an announcement stating the DN, date, and time of the most recent incoming call received by the subscriber. The subscriber is then instructed to dial the digit 1 to activate AR, or to hang up to abort AR.

The ACB and AR features generate AMA records under a call code of 330 and a structure code of 1030. When ACB and AR are activated as one-level procedures, one AMA record will result from each use. When AR is activated as a two-level procedure, two AMA records will result from each use. The service feature field of the AMA record indicates various stages of progress of the ACB/AR feature.

No AMA records are generated for ACB or AR requests receiving short- or long-term denial announcements or tones. No AMA records are generated for requests that were not completed due to system failures.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

The fields of the ACB/AR billing record are as follows:

- hexadecimal identifier
- structure code
- call code
- sensor type
- sensor identification
- recording office type
- recording office identification
- date
- service feature
- activating NPA
- activating number
- far-end overseas indicator
- terminating NPA
- terminating number
- time
- elapsed time
- CLASS function
- feature status
- screen list size for SCF
- screen list size for SCRJ
- screen list size for DRCW

The following figure is an example of an AMA record generated for call code <number>. The service feature represented is AR delayed processing.

Example of ACB/AR feature AMA record

```
HEX ID:AA STRUCTURE CODE:01030C CALL CODE:330C SENSOR TYPE:036C
SENSOR ID:0200200C  REC OFFICE TYPE:036C  REC OFFICE ID:0200200C
DATE:92301C SERV FEAT:062C ORIG NPA:613C ORIG NO:6211234C OVERSEAS
IND:1C TERM NPA:00919C TERM NO:5551212C CONNECT TIME:0932061C
ELAPSED TIME:000021635C CLASS FUNCTION:000C FEAT STAT:000C
SCRN LIST SCF:000C SCRN LIST SCR:000C SCRN LIST DRCW:000C
```

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

Service feature code description

032
AR reactivation delayed processing. An AMA record with this code is generated during final setup of an AR reactivated request that received delayed processing. This record is produced regardless of whether or not the call receives busy or idle, or is answered.

033
ACB delayed processing. This is the same as service feature code 032 except that it applies when the ACB activation code is dialed.

034
AR reactivation busy ringback. This service feature code appears in AMA records when an AR reactivation request receives delayed processing resulting in special ringback.

035
ACB reactivation busy ringback. This is the same as service feature code 034 except that it applies when the ACB activation code is dialed.

036
AR reactivation timeout. This service feature code appears in AMA records when an AR reactivation request receives delayed processing resulting in deactivation due to a timeout condition. This includes reaching the maximum number of unanswered special ringbacks.

037
ACB reactivation timeout. This is the same as service feature code 036 except that it applies when the ACB activation code is dialed.

038
AR reactivated deactivation. An AMA record with this service feature code is generated for each AR reactivated request deactivated when the subscriber dials the AR deactivation code.

039
ACB reactivated deactivation. This is the same as service feature code 038 except that it applies when the ACB deactivation code is dialed.

060
AR immediate processing. This service feature code is used whenever the subscriber dials the AR activation code and gets immediate processing. The busy/free indicator in the response to the initial query returned idle and the call is routed immediately. This code is also used when a line is reached having

option SCRJ. This record is produced regardless of whether or not the call receives busy or idle, or is answered.

061
ACB immediate processing. This is the same as service feature code 060 except that it applies when the ACB activation code is dialed.

062
AR delayed processing. An AMA record with this code is generated during final setup of an AR requested call that received delayed processing. This record is produced regardless of whether or not the call receives busy or idle, or is answered.

063
ACB delayed processing. This is the same as service feature code 062 except that it applies when the ACB activation code is dialed.

066
AR timeout. This service feature code appears in AMA records when a request receives delayed processing resulting in deactivation due to a timeout condition. This includes reaching the maximum number of unanswered special ringbacks.

067
ACB timeout. This is the same as service feature code 066 except that it applies when the ACB activation code is dialed.

068
AR deactivation. An AMA record with this service feature code is generated for each AR request deactivated when the subscriber dials the AR deactivation code.

069
ACB deactivation. This is the same as service feature code 068 except that it applies when the ACB deactivation code is dialed.

The service feature codes 032, 033, 034, 035, 036, 037, 038, and 039 apply to reactivated ACB or AR requests. The type of service being reactivated depends on the access code used to reactivate. For instance, an AR request that is reactivated by the ACB key or ACB access code becomes an ACB reactivation request.

Automatic Recall AMA Enhancements-Privacy Indication

The Automatic Recall AMA Enhancements-Privacy Indication feature allows the ACB/AR subscriber to place calls to a private DN without gaining access

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

to that number. The ACB/AR status, as well as the privacy status of the call is marked in the billing record. The private DN also appears in the billing record.

The AR feature does not allow a subscriber to call a private DN with the caller identification blocked.

The feature provides options ACBAR_MOD_CO and ACBAR_STY_IN in Table AMAOPTS. The setting of these options determines where the ACB/AR and privacy information for a call are stored. To have the ACB/AR and privacy status of a call in the module code, set ACBAR_MOD_CO to ON. To have the ACB/AR and privacy status of a call in the study indicator, set ACBAR_STY_IN to ON. Setting both to OFF leaves billing unchanged. See the following figure for an example of option ACBAR_MOD_CO set to ON in Table AMAOPTS.

Example of options ACBAR_MOD_CO and ACBAR_STY_IN in Table AMAOPTS

```
TABLE:  AMAOPTS

   OPTION                    SCHEDULE
  ACBAR_MOD_CO  ON
  ACBAR_STY_IN  OFF
```

Module code 068 is added by this feature. With ACBAR_MOD_CO set to ON in Table AMAOPTS, module code 068 will be appended to any billing record (TOLL or SUSP) produced for this ACB or AR activation. In module code 068, field CALLED DN DESC (called DN descriptor) reflects the ACB/AR and privacy status of the called DN. It can be set to 001, indicating ACB/AR activation to a private number, or 006, indicating ACB/AR activation to a non-private number. An example of the AMA toll record produced using option ACBAR_MOD_CO is shown below.

Example of TOLL 006 record using option ACBAR_MOD_CO

```
HEX ID:AA STRUCTURE CODE:40001C CALL CODE:006C SENSOR TYPE:036C
SENSOR ID:0200200C  REC OFFICE TYPE:036C  REC OFFICE ID:0200200C
DATE:92301C TIMING IND:01000C  STUDY IND:0000000C  ANSWER:0C SERVICE
OBSERVED:0C  OPER ACTION:0C  SERV FEAT:062C ORIG NPA:613C
ORIG NO:6211234C  OVERSEAS IND:1C TERM NPA:00919C TERM NO:5551212C
CONNECT TIME:0932061C  ELAPSED TIME:000021635C MODULE CODE:068C
CALLED DN DESC:001C MODULE CODE:000C
```

Note: AMA records generated under a call code of 330 do not contain the study indicator field; therefore in Table AMAOPTS, option

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

ACBAR_MOD_CO must be set to ON in order to have those records marked.

In field STUDY IND of the billing record, field 5 can be set to 2, indicating ACB/AR activation to a non-private number, or 3, indicating ACB/AR activation to a private number. An example of the AMA TOLL record produced using the ACB/AR feature using option ACBAR_STY_IN is shown below.

Example of TOLL 006 record using option ACBAR_STY_IN

```
HEX ID:AA STRUCTURE CODE:40001C CALL CODE:006C SENSOR TYPE:036C
SENSOR ID:0200200C  REC OFFICE TYPE:036C  REC OFFICE ID:0200200C
DATE:92301C TIMING IND:01000C  STUDY IND:0000300C  ANSWER:0C SERVICE
OBSERVED:0C  OPER ACTION:0C  SERV FEAT:062C ORIG NPA:613C
ORIG NO:6211234C  OVERSEAS IND:1C TERM NPA:00919C TERM NO:5551212C
CONNECT TIME:0932061C  ELAPSED TIME:000021635C MODULE CODE:000C
```

Station Message Detail Recording

Automatic Call Back/Automatic Recall (ACB/AR) does not affect Station Message Detail Recording.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

Datafilling office parameters

The following table shows the office parameters used by Automatic Call Back/Automatic Recall (ACB/AR). For more information about office parameters, refer to *Office Parameters Reference Manual.*

Office parameters used by Automatic Call Back/Automatic Recall (ACB/AR) (Sheet 1 of 2)

Table name	Parameter name	Explanation and action
OFCENG	ACB_BLOCKED_FOR_ACD_UCD	Enables or disables blocking of activation of ACB to return calls to ACD and UCD groups.
	FTRQ16WAREAS	Reserves storage to be allocated as temporary work areas for features, such as ACB and AR, that provide a monitor-until-idle capability. When a change is made to this parameter, the following message is displayed: `WARM RESTART REQUIRED TO ACTIVATE CHANGE TO THE NUMBER OF FTRQ16WAREAS BLOCK`
	FTRQAGENTS	Reserves storage to be allocated as temporary control areas to be used by features, such as ACB and AR that, when activated, can stay active for long periods of time. When a change is made to this parameter, the following message is displayed: `WARM RESTART REQUIRED TO ACTIVATE CHANGE TO THE NUMBER OF FTRQAGENTS BLOCKS`
	NO_OF_FTR_CONTROL_BLKS	Specifies the number of feature control blocks required to allow for sufficient queues for all Automatic Call Distribution (ACD) groups.

Note: ( ) denotes the default value.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

Office parameters used by Automatic Call Back/Automatic Recall (ACB/AR) (Sheet 2 of 2)

Table name	Parameter name	Explanation and action
	NO_OF_MEDIUM_FTR_DATA_BLKS	Specifies the number of MEDIUM feature data blocks required, which allow calls to be distributed evenly across multiple non-data link attendant consoles by the Multiple Position Hunt with Queue feature. The value of this parameter should be changed under the following conditions: • the value of parameter NO_OF_FTR_CONTROL_BLKS is changed • the number of POTS CFDA lines changes • the number of MDC lines increases.
	NO_OF_LARGE_FTR_DATA_BLKS	Specifies the number of LARGE feature data blocks required.
	NO_OF_XLARGE_EXT_BLKS	Specifies the number of EXTRA LARGE extension blocks required for the Network Message Waiting Indicator (MWI) feature.
	OFFICE_LANGUAGE	This parameter contains two fields, PRIMARY and SECONDARY. All lines default to PRIMARY unless option SL is added.
Note: ( ) denotes the default value.		

FTRQ16WAREAS office parameter

FTRQ16WAREAS allocates storage needed for temporary 16-word work areas used by features to provide a monitor-until-idle capability.

Each incoming or outgoing interswitch ACB or AR call requires one 16-word work area. Intraswitch ACB or AR calls require two 16-word work areas. The work area(s) are released when the call setup is completed.

The FTRQ16WAREAS default value of 1 provides 200 words of storage, a FTRQ16WAREAS value of 2 provides 400 words of storage, and so on.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

FTRQAGENTS office parameter

FTRQAGENTS allocates data blocks used as control areas for features that, when activated, can stay active for long periods of time. Such features can:

- intercept an incoming call (for example, Call Forwarding or Call Distribution)
- hold a call (for example, Call Hold or Call Park)
- repeatedly attempt a call (for example, ACB, AR, or Ring Again)

OFFICE_LANGUAGE office parameter

OFFICE_LANGUAGE controls announcement languages. It contains two fields, PRIMARY and SECONDARY. Field PRIMARY can be set to LANG1, LANG2, or BILING. Field SECONDARY can be set to LANG1, LANG2, BILING, or NIL. OFFICE_LANGUAGE provides subscribers with a choice of announcement languages (English and French). Each line in the base station defaults to PRIMARY unless option SL is added to the line.

Refer to “Appendix Quick reference for switch timers, announcements, and treatments for ACB/AR," for a list of ACB/AR announcements.

The following table contains a list of language configurations that can be used.

ACB/AR language configurations (Sheet 1 of 2)

Settings	Area	Field	Value
Recommended settings	Unilingual	PRIMARY	LANG1
		SECONDARY	NIL
	Bilingual	PRIMARY	LANG1
		SECONDARY	LANG2
Other possible settings	Bilingual	PRIMARY	BILING
		SECONDARY	LANG1
	Bilingual	PRIMARY	BILING
		SECONDARY	LANG2
	Bilingual	PRIMARY	LANG1
		SECONDARY	BILING

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

ACB/AR language configurations (Sheet 2 of 2)

Settings	Area	Field	Value
	Bilingual	PRIMARY	LANG2
		SECONDARY	BILING

ACB/AR ringing

The DMS supports various types of ringing. The type of ringing a line receives depends on the configuration of the line concentrating device (LCD) to which it is connected. The distinctive ringing pattern used by ACB/AR depends on the ringing type of the line. The types of ringing available are coded ringing, superimposed ringing, and frequency selective ringing. The following table lists the ringing patterns for each type of ringing.

ACB/AR ringing patterns

Ringing type	Ringing pattern
Coded ringing	0.50 s off
	0.50 s on
	0.50 s off
	0.50 s on
	0.50 s off
	1.00 s on
	2.50 s off
Superimposed ringing	0.46 s on
	0.46 s off
	0.46 s on
	0.46 s off
	0.92 s on
	3.24 s off
Frequency selective ringing	0.60 s on
	0.65 s off
	0.70 s on
	4.05 s off

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

Datafill sequence

The following table lists the tables that require datafill to implement Automatic Call Back/Automatic Recall (ACB/AR). The tables are listed in the order in which they are to be datafilled.

Datafill tables required for Automatic Call Back/Automatic Recall (ACB/AR)

Table	Purpose of table
OFCENG	Office Engineering. This table contains data on engineering parameters for the office. Refer to “Datafilling office parameters" for how ACB/AR affects office parameters.
RESOFC	Residential Line CLASS Office Data. Table RESOFC contains data on the CLASS features and enables ACB/AR for the office.
DNREGION	Directory Number Region. Table DNREGION contains information that groups DNs into regions. Entries in this table are used to reflect the dial plan for areas served by the central office. Each DN region shown in the table has a unique region name and comprises one or more ranges of DNs.
DNREVXLA	Directory Number Reverse Translations. Table DNREVXLA contains tuples defining sets of digit manipulation algorithms.
CUSTNTWK	Customer Group Network. A reverse translator name must be added to Table CUSTNTWK for each customer group that contains lines with the ACB and AR features.
IBNXLA	IBN Translations. Table IBNXLA contains the data for the digit translations of calls from an MDC station, attendant console, incoming trunk group, or incoming side of a two-way MDC trunk group.

Typical steps to set up a DMS-100 for ACB/AR

This list describes the basic steps required to install ACB and AR on a switch. It assumes the switch already has Subscriber Services RES base datafill for the intended ACB/AR subscribers.

Typical steps to set up a DMS-100 for Automatic Call Back/Automatic Recall (ACB/AR)

At the MAP

1 Ensure that adequate values are datafilled in Table OFCENG using the FTRQ16WAREAS FTRQAGENTS, NO_OF_FTR_CONTROL_BLKS,

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

NO_OF_MEDIUM_FTR_DATA_BLKS, and
NO_OF_LARGE_FTR_DATA_BLKS parameters.

Refer to the references listed in the datafill sequence table above.

2 If the previous item requires changing a parameter, perform a cold or reload restart.

3 Add ACBA, ACBD, ARA, and ARD activation and deactivation codes in Table IBNXLA for the appropriate translators.

4 Record and define suitable announcements for ACB/AR in Tables DRAMS, CLLI, ANNS, ANNMEMS, and DRMUSERS.

Note: Tables DRAMS, CLLI, ANNS, ANNMEMS, and DRMUSERS must be datafilled in order for the ACB/AR announcements to function. Refer to "Datafill for ACB and AR announcements" for examples of datafill for announcements, and to "Appendix Datafilling announcements" for Subscriber Services general announcement information. For complete information, refer to *DDRAM and EDRAM Guide*, 297-1001-527.

5 Fill in ACB and AR tuples in Table RESOFC. For now, leave field ENABLED set to N.

6 Add TCAP data to Tables C7LOCSSN, C7NETSSN, C7GTTYPE, and C7GTT to handle the CLASS subsystem

7 Define network dial plan datafill in Tables CUSTNTWK, DNREGION, and DNREVXLA.

8 Add line options ACB and AR to all lines requiring these options.

9 Busy (BSY) and return to service (RTS) the CLASS TCAP subsystem, along with any CCS7 linksets or route sets necessary for its operation.

10 RTS the ACB and AR announcements.

11 Set field ENABLED in tuples ACB and AR to Y in Table RESOFC.

ACB/AR treatments

The DMS treatments used by ACB/AR are no software resource (NOSR), no service circuit (NOSC), system failure (SYFL), network blockage heavy traffic (NBLH), feature not allowed (FNAL), and negative acknowledgement (NACK). Each of these treatments can be datafilled as either a list of tones, a list of announcements, or both. Operating companies should datafill each of these treatments to be reorder tone. In certain cases, ACB/AR forces these treatments to be reorder tone.

Refer to "Appendix Quick reference for switch timers, announcements, and treatments for ACB/AR," for a complete list of ACB/AR treatments.

Network dial plan

ACB/AR requires the network dial plan (NDP) in order to function. More specifically, AR requires NDP datafill to generate a dialable DN from the ten-digit DN stored in the incoming memory slot.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

For ACB, NDP is required on the originating office. If ACB subscribers located in the originating office can use seven-digit dialing to reach a line with a different NPA, extra datafill is needed for ACB in Table DNREGION or Table DNREVXLA.

RES default datafill

Four feature activation and deactivation access codes are required by ACB/AR: ACBA (automatic call back activate), ACBD (automatic call back deactivate), ARA (automatic recall activate), and ARD (automatic recall deactivate). These codes are datafilled in Table IBNXLA.

Tuples must be added in Table IBNXLA for the Subscriber Services feature translator to translate the ACB/AR access codes. The recommended access codes are *66 (ACB activation), *69 (AR activation), *86 (ACB deactivation), and *89 (AR deactivation).

Datafilling table RESOFC

The following table shows the datafill specific to Automatic Call Back/Automatic Recall (ACB/AR) for table RESOFC. Only those fields that apply directly to Automatic Call Back/Automatic Recall (ACB/AR) are shown. Refer to the data schema section of this document for a description of the other fields.

Datafilling table RESOFC (Sheet 1 of 6)

Field	Subfield or refinement	Entry	Explanation and action
KEY		see subfield	KEY. This field consist of the subfield FEATNAME. This subfield is described below.
	FEATNAME	ACB or AR	FEATURE NAME. This subfield is the key to the table. It specifies the name of the feature. Enter ACB or AR.

Note 1: The default value for each CLASS feature included in the load is N (disabled).

Note 2: The value UNIVER is valid only when feature package NTXQ70AA, Universal Access to CLASS Features, is present in the office. Refer to the section, “Universal Access to CLASS Features," in this document for more information on universal access.

Note 3: T11 in the terminating node is set equal to TSCAN + 5 s.

Note 4: If a RES/CLASS line is connected to a tone, it is only given flash supervision if the line is connected to a tone as part of the second leg of a three way call, the RES line is connected to a busy, the RES line has the ACB feature, and the FLASHACT field is set to Y; or the RES line has the Message Wait (MWT) option with call request (CAR) capability.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

Datafilling table RESOFC (Sheet 2 of 6)

Field	Subfield or refinement	Entry	Explanation and action
ENABLED		Y or N	ENABLED. This field specifies whether or not the feature is enabled in the office. Enter Y or N.
FEATDATA		see subfields	FEATURE DATA. This field consists of the subfields ACCESS, FEATNAME, ACTLEVEL, T2, T5, T6, T10, TSCAN, N, RINGCYCL, RINGAPPL, TERMSCAN, COINLINE, HUNTLINE, PBXLINE, and FLASHACT. These subfields are described below.
	ACCESS	SUBSCR or UNIVER	FEATURE ACCESS. This subfield specifies how the feature is accessed. SUBSCR indicates subscription access only and UNIVER indicates universal access for all RES lines. Enter SUBSCR or UNIVER.
	FEATNAME	ACB or AR	FEATURE NAME. This subfield specifies the feature name. Enter the feature name, ACB or AR.
	ACTLEVEL	ONELEVEL or TWOLEVEL	ACTIVATION LEVEL. This subfield specifies whether one- or two-level activation is used on AR calls. One-level activation applies if the value of the field is set to ONELEVEL. Two-level activation applies if the value of the field is set to TWOLEVEL. Enter ONELEVEL or TWOLEVEL (the default is ONELEVEL).

Note 1: The default value for each CLASS feature included in the load is N (disabled).

Note 2: The value UNIVER is valid only when feature package NTXQ70AA, Universal Access to CLASS Features, is present in the office. Refer to the section, “Universal Access to CLASS Features," in this document for more information on universal access.

Note 3: T11 in the terminating node is set equal to TSCAN + 5 s.

Note 4: If a RES/CLASS line is connected to a tone, it is only given flash supervision if the line is connected to a tone as part of the second leg of a three way call, the RES line is connected to a busy, the RES line has the ACB feature, and the FLASHACT field is set to Y; or the RES line has the Message Wait (MWT) option with call request (CAR) capability.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

Datafilling table RESOFC (Sheet 3 of 6)

Field	Subfield or refinement	Entry	Explanation and action
	T2	3 to 12	T2. This subfield specifies the length of time (in minutes) that the originating switch waits between stopping recall ringing and sending out a message to request to reactivate the queue position). Enter a value from 3 to 12 (the the default is 5).
	T5	2 to 10	T5. This subfield specifies the length (in seconds) of time that the originating switch allows for a response from the terminating switch. Enter a value from 2 to 10 (the default is 3).
	T6	5 to 35	T6. This subfield specifies the length of time (in minutes) that the originating switch scans or waits for a free notification message from the terminator switch. Enter a value from 5 to 35 (the default is 30).
	T10	60 to 180	T10. This subfield specifies the queue sanity timer for both originating and terminating switches (in minutes). Enter a value from 60 to 180 (the default is 180).
	TSCAN	30 to 120	TIME SCAN. This subfield specifies the length of time (in seconds) between busy/idle queries when the originator is performing originating scanning. Enter a value from 30 to 120 (the default is 120).

Note 1: The default value for each CLASS feature included in the load is N (disabled).

Note 2: The value UNIVER is valid only when feature package NTXQ70AA, Universal Access to CLASS Features, is present in the office. Refer to the section, “Universal Access to CLASS Features," in this document for more information on universal access.

Note 3: T11 in the terminating node is set equal to TSCAN + 5 s.

Note 4: If a RES/CLASS line is connected to a tone, it is only given flash supervision if the line is connected to a tone as part of the second leg of a three way call, the RES line is connected to a busy, the RES line has the ACB feature, and the FLASHACT field is set to Y; or the RES line has the Message Wait (MWT) option with call request (CAR) capability.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

Datafilling table RESOFC (Sheet 4 of 6)

Field	Subfield or refinement	Entry	Explanation and action
	N	0 to 10	N. This subfield specifies the tolerance timer for aligning the values of the T6 timer and the queue entry timer (T7) at the terminator switch. If T6 is greater than N when the originator receives a service time-out message from the terminator switch, a message is sent to reset T7 to the remaining time of T6. Enter a value from 0 to 10 (the default is 5).
	RINGCYCL	2 to 7	RING CYCLE. This subfield specifies the number of 6-second ring cycles during which recall ringing is given. Enter a value from 2 to 7. Note that T8 on the terminating switch is set equal to RINGCYCL X 6 + 5 s.
	RINGAPPL	1 to 12	RING APPLICATION. This subfield specifies the number of times that unanswered recall ringing is given to a calling party. Enter a value from 1 to 12 (the default is 2).
	TERMSCAN	Y or N	TERMINATING SCANNING. This subfield specifies the flag to control whether the originating switch requests terminating scanning. Enter Y (the default) to request terminating scanning. Enter N to simply send busy/idle queries (never request term scanning).
	COINLINE	ACCEPT or DENY	COIN LINE. This subfield specifies whether an originating switch accepts or denies an ACB or AR request for a returned line type of COINLINE and DN match of match. Enter ACCEPT or DENY (the default is DENY).

Note 1: The default value for each CLASS feature included in the load is N (disabled).

Note 2: The value UNIVER is valid only when feature package NTXQ70AA, Universal Access to CLASS Features, is present in the office. Refer to the section, “Universal Access to CLASS Features," in this document for more information on universal access.

Note 3: T11 in the terminating node is set equal to TSCAN + 5 s.

Note 4: If a RES/CLASS line is connected to a tone, it is only given flash supervision if the line is connected to a tone as part of the second leg of a three way call, the RES line is connected to a busy, the RES line has the ACB feature, and the FLASHACT field is set to Y; or the RES line has the Message Wait (MWT) option with call request (CAR) capability.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

Datafilling table RESOFC (Sheet 5 of 6)

Field	Subfield or refinement	Entry	Explanation and action
	HUNTLINE	ACCEPT or DENY	HUNT LINE. This field specifies whether an originating switch accepts or denies an ACB or AR request for a returned line type of HUNTLINE and DN match of match or no match. Enter ACCEPT or DENY (the default is DENY).
	PBXLINE		
	FLASHACT	Y or N	FLASH ACTIVATION. This subfield specifies whether a line with ACB can flash after receiving a busy tone and dial the respective activation code. Enter Y (the default) if the line can flash, and then dial an activation code. Otherwise, enter N. If a change is required in this field, a restart is not required. This field does not affect the AR feature. ***Note:*** If a RES/CLASS line is connected to a tone, it is only given flash supervision if the line is connected to a tone as part of the second leg of a three way call, the RES line is connected to a busy, the RES line has the ACB feature, and the FLASHACT field is set to Y; or the RES line has the Message Wait (MWT) option with call request (CAR) capability.
Note: If ACTLEVEL is set to TWOLEVEL, the following subfields are prompted for: BADIGITS and TIMEOUT.			

Note 1: The default value for each CLASS feature included in the load is N (disabled).

Note 2: The value UNIVER is valid only when feature package NTXQ70AA, Universal Access to CLASS Features, is present in the office. Refer to the section, “Universal Access to CLASS Features," in this document for more information on universal access.

Note 3: T11 in the terminating node is set equal to TSCAN + 5 s.

Note 4: If a RES/CLASS line is connected to a tone, it is only given flash supervision if the line is connected to a tone as part of the second leg of a three way call, the RES line is connected to a busy, the RES line has the ACB feature, and the FLASHACT field is set to Y; or the RES line has the Message Wait (MWT) option with call request (CAR) capability.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

Datafilling table RESOFC (Sheet 6 of 6)

Field	Subfield or refinement	Entry	Explanation and action
	BADIGITS	0 to 7	BAD DIGITS. This subfield specifies the number of times a subscriber can enter the wrong digit and receive a repeated prompt announcement. If the limit is exceeded, the subscriber is routed to a negative acknowledgement (NACK) treatment. Enter a value from 0 to 7. (Entering 0 disables repeat announcements for invalid input.)
	TIMEOUT	0 to 7	TIME OUT. This subfield specifies the number of times a subscriber can wait too long to enter digits and receive a repeated prompt announcement. If the limit is exceeded, the subscriber is routed to a NACK treatment. Enter a value from 0 to 7. (Entering 0 disables repeat announcements for timed-out input.)
FNALANN		see subfields	FEATURE NOT ALLOWED ANNOUNCEMENT.This field consists of the subfields POTS_ACCESS and FNAL_CLLI. Refer to “Datafill procedure for Table RESOFC" for “Feature not allowed announcement" for details on these subfields.

Note 1: The default value for each CLASS feature included in the load is N (disabled).

Note 2: The value UNIVER is valid only when feature package NTXQ70AA, Universal Access to CLASS Features, is present in the office. Refer to the section, “Universal Access to CLASS Features," in this document for more information on universal access.

Note 3: T11 in the terminating node is set equal to TSCAN + 5 s.

Note 4: If a RES/CLASS line is connected to a tone, it is only given flash supervision if the line is connected to a tone as part of the second leg of a three way call, the RES line is connected to a busy, the RES line has the ACB feature, and the FLASHACT field is set to Y; or the RES line has the Message Wait (MWT) option with call request (CAR) capability.

Datafill example for table RESOFC

The following example shows sample datafill for table RESOFC. Table RESOFC contains the information required for various parameters in the ACB and AR features. The AR tuple contains ACTLEVEL datafilled as TWOLEVEL, indicating that two-level activation is used for AR.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

MAP display example for table RESOFC

```
KEY   ENABLED                                          FEATDATA
         FNALANN
_____________________________________________________________
AR     Y       SUBSCR    AR TWOLEVEL 5 3 30 180 60
5 5 2 Y DENY DENY DENY N 2 7
         $

ACB     Y      SUBSCR    ACB 5 5 30 180 120  5 5 2 Y
DENY DENY DENY Y
         $
```

Datafilling table DNREGION

A tuple in Table DNREGION associates a region name with one range of DNs. A DN region that consists of two or more ranges of DNs is defined using multiple tuples.

The DN regions required for processing AR calls can be

- local calling areas, within which calls are made by dialing seven digits
- local NPAs, each of which includes
  - — all or part of a local calling area
  - — a local toll area, within which calls are made by dialing eight digits (1 + seven digits)
- a group of NPAs (excluding the local NPA), to which calls are made using 11-digit dialing

The DN regions required for processing ACB calls are all local calling areas, within which calls are made by dialing seven digits.

The following table shows the datafill specific to Automatic Call Back/Automatic Recall (ACB/AR) for table DNREGION. Only those fields that apply directly to Automatic Call Back/Automatic Recall (ACB/AR) are

shown. Refer to the data schema section of this document for a description of the other fields.

Datafilling table DNREGION

Field	Subfield or refinement	Entry	Explanation and action
DNRGNKEY		see subfields	Directory Number Region Key. This field contains the subfields REGION, FROMDIGS, and TODIGS. These subfields are described below.
	REGION	1 to 15 alphanumeric characters	DN Region Name. This subfield specifies the DN region that the tuple defines. Enter 1 to 15 alphanumeric characters.
	FROMDIGS	1 to 11 digits	From Digits. This subfield specifies the lower bounds of a range of numbers belonging to the DN region indicated in field REGION. Enter 1 to 11 digits.
	TODIGS	1 to 11 digits	To Digits. This subfield specifies the upper bounds of a range of numbers belonging to the DN region indicated in subfield REGION. Enter a value consisting of 1 to 11 digits, but equal to or greater than the number indicated in subfield FROMDIGS.

Datafill example for table DNREGION (ACB)

The following example shows sample datafill for table DNREGION (ACB). It uses the seven-digit DN format used in ACB calls.

MAP display example for table DNREGION (ACB) (with seven-digit ACB format)

```
REGION      FROMDIGS        TODIGS
_____________________________________________________________
LOCAL_A1          822          823
LOCAL_A1          952          952
```

Datafill example for table DNREGION (AR)

The following example shows sample datafill for the AR feature in Table DNREGION. It shows the Table DNREGION tuples (using the ten-digit DN format used in AR calls) used to define a local calling area, LOCAL_A, that includes all the DNs beginning with digits 613822, 613823, and 613952..

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

MAP display example for table DNREGION (AR) (with ten-digit AR format)

```
REGION      FROMDIGS        TODIGS
_____________________________________________________________________
LOCAL_A       613822         613823
LOCAL_A       613952         613952
```

Datafilling table DNREGION (ACB reverse translations)

When ACB is activated, it immediately checks to determine whether the DN (copied from the OCM) is valid and whether the destination line is busy. Where the destination line is served by another switch, the check is carried out using an initial busy/idle query message. The message is sent using the CLASS TCAP application.

To supply the TCAP application with the destination DN in the required 10-digit fixed format (NPA-NXX-XXXX), ACB must reverse translate a 7-digit, 8-digit, or 11-digit dialed DN.

ACB can reverse translate all 8-digit, 10-digit, and 11-digit numbers into the 10-digit form required by the CLASS TCAP application based solely on the number of digits in the DN.

For example, some subscribers served by office Y (refer to the following figure) can dial numbers in the 613 and 819 NPAs using seven-digit dialing. ACB reverse translations datafill is required so that the seven-digit DNs called by these subscribers can be prefixed with the correct NPA.

ACB reverse translations datafill must define regions in Table DNREGION that include the following:

- all DNs served by office Y where a subscriber can call a DN in another NPA by dialing seven digits
- all DNs that can be called by subscribers using seven-digit dialing

This is achieved by defining four regions as follows:

- R613T819—This region contains all subscribers served by office Y with an NPA of 613 who can dial 819 DNs using seven-digit dialing. This

region also contains all 819 DNs these subscribers can reach using seven-digit dialing.

- R613T613—This region contains the same 613 NPA subscribers identified in the R613T819 region, and all the 613 DNs these subscribers can reach using 7-digit dialing.
- R819T613—This region contains all subscribers served by office Y with an NPA of 819 who can dial 613 DNs using seven-digit dialing. This region also contains all 613 DNs these subscribers can reach using seven-digit dialing.
- R819T819—This region contains the same 819 NPA subscribers identified in the R819T613 region, and all the 819 DNs these subscribers can reach using seven-digit dialing.

The following table shows the datafill specific to Automatic Call Back/Automatic Recall (ACB/AR) for table DNREGION (ACB reverse translations). Only those fields that apply directly to Automatic Call Back/Automatic Recall (ACB/AR) are shown. Refer to the data schema section of this document for a description of the other fields.

Datafill example for table DNREGION (ACB reverse translations)

The following example shows sample datafill for table DNREGION (ACB reverse translations).

MAP display example for table DNREGION (ACB reverse translations)

REGION	FROMDIGS	TODIGS
R613T819	822	824
R613T819	723	725
R613T613	822	824
R819T613	723	724
R819T613	822	824
R819T819	722	725

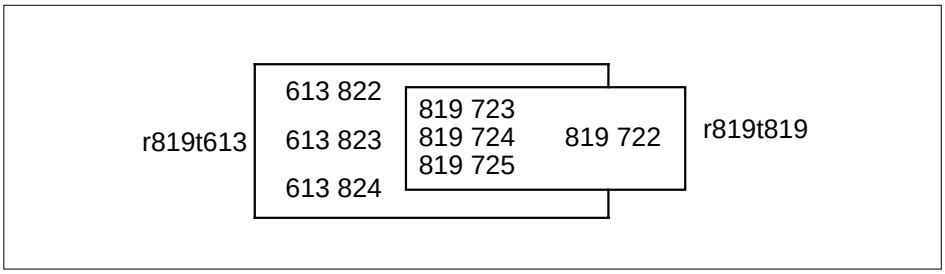
Note 1: The FROMDIGS and TODIGS are based on seven-digit DNs because DN10DXLA entries are accessed using seven-digit DNs.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

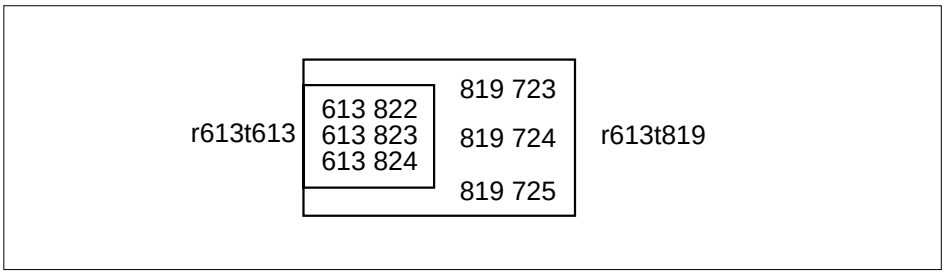
Note 2: The 819 722 DNs are only included in the R819T819 region because the 613 NPA subscribers served by office Y cannot use seven-digit dialing to reach 819 722 DNs.

Note 3: It is not necessary to include 613 952 subscribers in any of the above regions.

Note 4: The R613T613 and R613T819 areas overlap as shown below:



Note: The R819T819 and R819T613 areas overlap as shown below:



Datafilling table DNREGION (AR reverse translations)

AR attempts to set up a call using the DN stored in the CLASS subscriber's ICM. This “recalled" DN is the ten-digit number received as the calling DN for the last incoming call.

To perform call setup, AR must convert the recalled DN to its dialable form by reverse translating the ten-digit DN into one of the following formats:

- a seven-digit DN, required to set up local calls
- an eight-digit (1 + seven-digit) DN, required to set up chargeable calls within the same NPA
- an 11-digit DN, required to set up calls to other NPAs

AR reverse translations for office Y must define all the local calling areas and the toll (NPA) areas that include office Y subscribers in Table DNREGION.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

The following table shows the datafill specific to Automatic Call Back/Automatic Recall (ACB/AR) for table DNREGION (AR reverse translations). Only those fields that apply directly to Automatic Call Back/Automatic Recall (ACB/AR) are shown. Refer to the data schema section of this document for a description of the other fields.

REGION	FROMDIGS	TODIGS
LOCAL_A	613822	613823
LOCAL_A	819723	819724
LOCAL_B	819722	819725
LOCAL_C	613823	613824
LOCAL_C	819724	819725
LOCAL_D	613952	613952
TOLL_613	613	613
TOLL_819	819	819

Note: Two toll regions, TOLL_613 and TOLL_819, must be defined, since this office serves more than one NPA.

Datafilling table DNREVXLA

Add tuples to define how dialed digits for ACB should be manipulated to produce the called number (NPA-NXX-XXXX) if the called number has an NPA different from the originator's NPA. The reverse translator used for this purpose is DN10DXLA. This reverse translator name is hard-coded and need not be defined in any other table. These digits are used to identify the terminator during the ACB service.

Add tuples to define how incoming digits for AR should be manipulated to produce the dialed digits. These digits are used to make the subsequent call when AR is answered.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

Tuples for ACB processing

A single tuple is required for the ACB feature if any of the local calling areas served by the central office include numbers in more than one NPA. Examples of this situation are as follows:

- Ottawa, where a local calling area could include Ottawa (613 area code) and Hull (819 area code) numbers
- New York, where a local calling area could include Long Island (516 area code) and Manhattan (212 area code) numbers

The ACB tuple contains two digit manipulation algorithms. Both prefix the seven-digit destination DN with an NPA.

Tuples for AR processing

Multiple tuples are used by the AR feature. Each tuple applies to a range of recalled DNs. AR is a feature that recalls the calling DN supplied with the last incoming call.

Each tuple can contain several digit manipulation algorithms. Each digit manipulation algorithm within a tuple is associated with a DN region. An algorithm is applied when the recalled DN and the AR subscriber's DN are both with the DN region.

The following table shows the datafill specific to Automatic Call Back/Automatic Recall (ACB/AR) for table DNREVXLA. Only those fields that apply directly to Automatic Call Back/Automatic Recall (ACB/AR) are

shown. Refer to the data schema section of this document for a description of the other fields.

Datafilling table DNREVXLA (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
RVXLAKEY		see subfields	DN Reverse Translations Key. This field contains the subfields RXLANAME, FROMDIGS, and TODIGS. These subfields are described below.
	RXLANAME	1 to 8 alphanumeric characters	Reverse Translator Name. This subfield specifies the DN translator name. A DN translator can have more than one tuple in Table DNREVXLA. All tuples belonging to the same DN translator should have the same DN translator name. Enter 1 to 8 alphanumeric characters.
	FROMDIGS	1 to 11 digits	From Digits. This subfield specifies the lowest DN of a range of calling party DNs to which this tuple applies. Enter 1 to 11 digits.
	TODIGS	1 to 11 digits	To Digits. This subfield contains the highest DN of a range of calling party DNs to which this tuple applies. Enter a value consisting of 1 to 11 digits, but equal to or greater than the number indicated in subfield FROMDIGS.
RESULTS		see subfields	Translations Results. This field consists of the subfields REGION, DELDIGS, PRFXDIGS, and OPTPRFX. These subfields are described below.
	REGION	region name	DN Region Name. This subfield specifies the DN region name, previously defined in Table DNREGION. Enter the region name.
	DELDIGS	0 to 15	Delete Digits. This subfield specifies the number of leading digits to delete from the calling party DN. Digits are deleted starting from the left. Enter a value from 0 to 15.
Note: The DEFAULT region name can be specified in this subfield. DEFAULT specifies a region that includes all possible DNs.			

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

Datafilling table DNREVXLA (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	PRFXDIGS	prefix digits or N	Prefix Digits. This subfield specifies the digits to be added to the destination DN. Enter the prefix digits, or N if no digits are to be prefixed.
	OPTPRFX	N	Optional Prefix. This subfield specifies digits that may optionally be prefixed to the input digit string. Enter N if there are no optional prefix digits.
Note: The DEFAULT region name can be specified in this subfield. DEFAULT specifies a region that includes all possible DNs.			

Datafill example for table DNREVXLA

The following example shows sample datafill for table DNREVXLA. This example shows the Table DNREVXLA tuples (using a ten-digit DN format used in AR calls) for an office serving numbers in the 613 NPA only and where all the numbers served are in the same local calling area.

MAP display example for table DNREVXLA

```
RXLANAME FROMDIGS TODIGS                          RESULTS
_____________________________________________________________
POTS     000      612  (DEFAULT  0     1     N) $
POTS     612     613  (LOCAL_A  3     N     N)
     (DEFAULT  0     1     N) $
POTS     614     999   (DEFAULT  0     1     N) $
```

Datafilling table DNREVXLA (ACB reverse translations)

The next step in creating the necessary ACB reverse translations datafill is to define the digit-manipulation algorithms in Table DNREVXLA.

Two algorithms are required:

- algorithm 1—no leading digits are to be deleted (DELDIGS = 0), add 613 prefix (PRFXDIGS=613 and OPTPRFX = N)
- algorithm 2—no leading digits are to be deleted (DELDIGS = 0), add 819 prefix (PRFXDIGS=613 and OPTPRFX = N)

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

Each algorithm is applied to two call types:

- for calls originated by 613 NPA subscribers who can use seven-digit dialing to dial 819 NPA subscribers, the following occurs:
  - — Calls destined to other 613 NPA subscribers (within region R613T613) have the seven-digit destination DN prefixed with 613 (algorithm 1).
  - — Calls destined to 819 NPA subscribers (within region R613T819 *but not within region R613T613*) have the seven-digit destination DN prefixed with 819 (algorithm 2).
- For calls originated by 819 NPA subscribers who can use seven-digit dialing to dial 613 NPA subscribers, the following occurs:
  - — Calls destined to other 819 NPA subscribers (within region R819T819) have the seven-digit destination DN prefixed with 819 (algorithm 2).
  - — Calls destined to 819 NPA subscribers (within region R819T613 *but not within region R819T819)* have the seven-digit destination DN prefixed with 613 (algorithm 1).

Datafill example for table DNREVXLA (ACB reverse translations)

The following example shows sample datafill for table DNREVXLA (ACB reverse translations). The example illustrates the recommended datafill for the ACB conversion algorithms are datafilled in Table DNREVXLA for office Y.

MAP display example for table DNREVXLA (ACB reverse translations)

```
RXLANAME FROMDIGS TODIGS                          RESULTS
_____________________________________________________________
DN10DXLA   822    824   (R613T613  0    613    N)
                        (R613T819  0    819    N) $
DN10DXLA   723    724   (R819T819  0   819    N)
       (R819T613  0    613    N) $
```

Note 1: As the DN10DXLA tuples in Table DNREVXLA are accessed using the seven-digit ACB subscriber's DN, the first tuple is applied to calls originated by 613 NPA subscribers who can use seven-digit dialing to dial 819 NPA subscribers; the second tuple is applied to calls originated by 819 NPA subscribers who can use seven-digit dialing to dial 613 NPA subscribers.

Note 2: The algorithms are processed in the sequence in which they appear within a tuple. Because the algorithm for the R613T613 region appears before the algorithm for the R613T819 region, calls between 613 NPA DNs will access the 613 prefix digits. Similarly, in the second tuple, calls between 819 NPA DNs will access the 819 prefix digits.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

Datafilling table DNREVXLA (AR reverse translations)

The next step in creating the necessary AR reverse translations datafill for office Y is to define the digit manipulation algorithms in Table DNREVXLA.

Three algorithms are required:

- algorithm 1—no leading digits are to be deleted (DELDIGS = 0), add prefix of 1 (PRFXDIGS = 1 and OPTPRFX = N)
- algorithm 2—three leading digits are to be deleted (DELDIGS = 3), no prefix added (PRFXDIGS = N and OPTPRFX = N)
- algorithm 3—three leading digits are to be deleted (DELDIGS = 3), add prefix of 1 (PRFXDIGS = 1 and OPTPRFX = N)

The algorithms are applied to the following call types:

- For recalled DNs with NPAs not equal to 819 or 613, the following occurs.
  - — The 10-digit recalled DNs are converted to 11 digits by adding a prefix of 1 (algorithm 1).
- For recalled DNs with NPAs equal to 613, the following occurs.
  - — Where the AR subscriber's number and the recalled DN are both in the LOCAL_A region, or are both in the LOCAL_C region, or are both in the LOCAL_D region, the ten-digit recalled DN is converted to seven digits by deleting the three leading digits (algorithm 2).
  - — Where the AR subscriber's number and the recalled DN both have an NPA of 613, the 10-digit recalled DN is converted to 8 digits by deleting the 3 leading digits and adding a prefix of 1 (algorithm 3).
  - — In all other instances, the 10-digit recalled DN is converted to 11 digits by adding a prefix of 1 (algorithm 1).
- For recalled DNs with NPAs equal to 819, the following occurs.
  - — Where the AR subscriber's number and the recalled DN are both in the LOCAL_A region, or are both in the LOCAL_B region, or are both in the LOCAL_C region, the ten-digit recalled DN is converted to seven digits by deleting the three leading digits (algorithm 2).
  - — Where the AR subscriber's number and the recalled DN both have an NPA of 819 NPA, the ten-digit recalled DN is converted to 8 digits by deleting the 3 leading digits and adding a prefix of 1 (algorithm 3).
  - — In all other instances, the 10-digit recalled DN is converted to 11 digits by adding a prefix of 1 (algorithm 1).

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

Datafill example for table DNREVXLA (AR reverse translations)

The following example shows sample datafill for table DNREVXLA (AR reverse translations). The example illustrates the recommended datafill for the conversion algorithms in Table DNREVXLA for office Y.

MAP display example for table DNREVXLA (AR reverse translations)

```
RXLANAME FROMDIGS TODIGS                          RESULTS
_____________________________________________________________________
RESRX      000    612  ( DEFAULT   0     1    N ) $
RESRX      613    613  ( LOCAL_A   3     N    N )
                     ( LOCAL_C   3     N    N )
                  ( LOCAL_D   3     N    N )
                ( TOLL_613    3     1    N )
                  ( DEFAULT   0     1    N ) $
RESRX      614   818   ( DEFAULT   0     1    N ) $
RESRX      819   819   ( LOCAL_A   3     N    N )
                       ( LOCAL_B   3     N    N )
                       ( LOCAL_C   3     N    N )
                     ( TOLL_819    3     1    N )
                       ( DEFAULT   0     1    N ) $
RESRX      820   999   ( DEFAULT   0     1    N ) $
```

Datafilling table CUSTNTWK

A reverse translator name must be added to Table CUSTNTWK (Customer Group Network) for each customer group that contains lines with the ACB and AR features. Refer to the section, “Datafilling Subscriber Services RES Base," in this document for details on datafilling Table CUSTNTWK.

Datafilling table IBNXLA

Table IBNXLA (IBN Translations) contains the data for the digit translations of calls from an MDC station, attendant console, incoming trunk group, or incoming side of a two-way MDC trunk group.

Datafill in Table IBNXLA defines the access codes used to activate and deactivate ACB and AR.

The recommended format of the access codes is 11XX for DP lines and *XX for DTMF lines, where XX is a two-digit code.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

The recommended activation codes for CLASS display features are as follows:

- 1166 for ACB and 1169 for AR for DP lines
- *66 for ACB and *69 for AR for DTMF lines

The recommended deactivation codes for CLASS display features are as follows:

- 1186 for ACB and 1189 for AR for DP lines
- *86 for ACB and *89 for AR for DTMF lines

The following table shows the datafill specific to Automatic Call Back/Automatic Recall (ACB/AR) for table IBNXLA. Only those fields that apply directly to Automatic Call Back/Automatic Recall (ACB/AR) are shown. Refer to the data schema section of this document for a description of the other fields.

Datafilling table IBNXLA (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
KEY		see subfields	Key. This field consists of the subfields XLANAME and DGLIDX. These subfields are described below and must be entered in succession.
	XLANAME	RXCFN	Translator Name. This subfield specifies the 1- to 8-character name assigned to the translator. Enter RXCFN.
	DGLIDX	66 (ACB) or 69 (AR) for the activation code and 86 (ACB) or 89 (AR) for the deactivation code	Digilator Index. This subfield specifies the digit or digits assigned to the index as the access code. Enter 66 (ACB) or 69 (AR) for the activation code and 86 (ACB) or 89 (AR) for the deactivation code.
RESULT		see subfields	Result. This field consists of the subfields TRSEL, ACR, SMDR, and FEATURE. These subfields are discussed below.
	TRSEL	FEAT	Translation Selector. This subfield specifies the translation selector. Enter FEAT.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

Datafilling table IBNXLA (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	ACR	N	Account Entry Code. This subfield specifies whether or not an account entry code is required. Enter N.
	SMDR	N	Station Message Detail Recording. This subfield specifies whether or not SMDR is required. Enter N.
	FEATURE	ACBA or ARA ; or ACBD or ARD	Feature. This subfield specifies the name of the feature to which the code is assigned. Enter ACBA or ARA to indicate the access code for activating ACB or AR, respectively; enter ACBD or ARD to indicate the access code for deactivating ACB or AR, respectively.

Datafill example for table IBNXLA

The following example shows sample datafill for table IBNXLA.

MAP display example for table IBNXLA

```
          KEY                      RESULT
________________________________________________________________________
RXCFN        66       FEAT    N    N    N          ACBA
RXCFN        69       FEAT    N    N    N          ARA
RXCFN        86       FEAT  N      N    N   ACBD
RXCFN        89       FEAT  N      N    N   ARD
```

Translation verification tools

The following example shows the output from the TRAVER command ACB when it is used to verify Automatic Call Back/Automatic Recall (ACB/AR).

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

TRAVER command output example for Automatic Call Back/Automatic Recall (ACB/AR)

```
>TRAVER L 6215004 'B66' B
TABLE IBNLINES
HOST 00 1 09 20 0 DT STN RES 6215004 0 (ACB) $
TABLE LINEATTR
0 1FR NONE NT FRO1 0 613 P621 L613 TSPS 10 NIL NILSFC
LATA1 0 NIL NIL 00 Y RESGRP 0 2
LCABILL OFF – BILLING DONE ON BASIS OF CALLTYPE
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TUPLE NOT FOUND
TABLE NCOS
RESGRP 2 0 0  RNCOS2 ( XLAS RXCMN2 NXLA RES) $
TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA,
VACTRMT, AND DIGCOL
RESGRP NXLA RESXLA RXCFN 0 RES
TABLE DIGCOL
RES SPECIFIED: RES DIGIT COLLECTION
NCOS FEAT XLA NAME IS NIL.  GO TO NEXT XLA NAME.
TABLE IBNXLA: XLANAME RXCFN
RXCFN 66 FEAT N N N ACBA

+++ TRAVER:  SUCCESSFUL CALL TRACE +++
```

The following is an example of the output from the TRAVER command when it is used to verify translations for the AR feature.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

```
>TRAVER L 6215004 'B69' B
TABLE IBNLINES
HOST 00 1 09 20 0 DT STN RES 6215004 0 (AR) $
TABLE LINEATTR
0 1FR NONE NT FRO1 0 613 P621 L613 TSPS 10 NIL NILSFC
LATA1 0 NIL NIL 00 Y RESGRP 0 2
LCABILL OFF – BILLING DONE ON BASIS OF CALLTYPE
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TUPLE NOT FOUND
TABLE NCOS
RESGRP 2 0 0  RNCOS2 ( XLAS RXCMN2 NXLA RES) $
TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA,
VACTRMT, AND DIGCOL
RESGRP NXLA RESXLA RXCFN 0 RES
TABLE DIGCOL
RES SPECIFIED: RES DIGIT COLLECTION
NCOS FEAT XLA NAME IS NIL.  GO TO NEXT XLA NAME.
TABLE IBNXLA: XLANAME RXCFN
RXCFN 69 FEAT N N N ARA

+++ TRAVER:  SUCCESSFUL CALL TRACE +++
```

SERVORD

The service order system (SERVORD) can be used to assign ACB and AR to RES lines.

Note: For information on assigning ACB and AR to lines with an LCC of IBN or PSET, refer to “Datafilling CLASS on MDC."

To assign ACB or AR to an existing line, use the ADO (add option) command. Use the NEW command to add option ACB or AR to a line that is being created. Use the DEO (delete option) command to delete the options from a line. Use the OUT command to delete the options as well as the whole line entry.

ACB and AR are valid options for all SERVORD commands that take an option list as a parameter.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

SERVORD limitations and restrictions

The following SERVORD limitations and restrictions apply to Automatic Call Back/Automatic Recall (ACB/AR):

- AUL—Automatic Line
- DOR—Denied Origination
- DTM—Denied Termination
- MDN—Multiple Appearance Directory Number
- BNN—Bridged Night Number

SERVORD prompts

The following table shows the SERVORD prompts used to assign Automatic Call Back/Automatic Recall (ACB/AR) to a line.

SERVORD prompts for Automatic Call Back/Automatic Recall (ACB/AR)

Prompt	Valid input	Explanation
OPTION	ACB, AR	Assigns the ACB or AR feature to a line
BILLING_ OPTION	AMA, NOAMA	Indicates the billing option to be specified when SUSP is enabled for the office. Enter AMA if an AMA record should be created; enter NOAMA if an AMA record should not be created.

SERVORD example for adding Automatic Call Back/Automatic Recall (ACB/AR)

The following SERVORD example shows how Automatic Call Back/Automatic Recall (ACB/AR) is added to a line using ADO.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

SERVORD example for Automatic Call Back/Automatic Recall (ACB/AR) in prompt mode

```
> SERVORD
SO:
> ADO
SONUMBER:  NOW 88 1 11 PM
>
DN_OR_LEN:
> 6216055
OPTION:
> ACB
OPTION:
> AR
OPTION:
> $
COMMAND AS ENTERED:
ADO NOW 88 1 11 (6216055 ACB AR) $
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
```

SERVORD example for Automatic Call Back/Automatic Recall (ACB/AR) in no-prompt mode

```
> ADO $ 6216055 ACB AR $ Y
```

The following example shows how to delete options ACB and AR from a line using DEO.

Automatic Call Back/Automatic Recall (ACB/AR) (continued)

SERVORD example for Automatic Call Back/Automatic Recall (ACB/AR) in prompt mode

```
> SERVORD
SO:
> DEO
SONUMBER: NOW 88 1 11 PM
>
DN_OR_LEN:
> 6216055
OPTION:
> ACB
OPTION:
> AR
OPTION:
> $
COMMAND AS ENTERED:
DEO NOW 88 1 11 (6216055 ACB AR) $
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
> Y
```

SERVORD example for Automatic Call Back/Automatic Recall (ACB/AR) in no-prompt mode

```
> DEO $ 6216055 ACB AR $ Y
```

Configuring ACB and AR for billing option

If option CLASS SUSP is enabled, two billing options are available for ACB and AR:

- AMA
- NOAMA

NOAMA is the default value for the billing option. When adding ACB or AR to a line, the BILLING_OPTION prompt appears to specify AMA or NOAMA.

The following example shows how to add option ACB to a line when SUSP is enabled for the office. The AMA billing option is specified.

Automatic Call Back/Automatic Recall (ACB/AR) (end)

SERVORD example for Automatic Call Back/Automatic Recall (ACB/AR) in prompt mode

```
> SERVORD
SO:
> ADO
SONUMBER: NOW 88 1 11 PM
>
DN_OR_LEN:
> 6216055
OPTION:
> ACB
OPTION:
> AMA
OPTION:
> $
COMMAND AS ENTERED:
ADO NOW 88 1 11 (6216055 ACB AR) $
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
> Y
```

SERVORD example for Automatic Call Back/Automatic Recall (ACB/AR) in no-prompt mode

```
> ADO $ 6216055 ACB AMA $ Y
```

Automatic Recall Limited to 1

Ordering codes

Functional group ordering code: RES00005

Functionality ordering code: RES00049

Release applicability

NA005 and up

Automatic Recall Limited to 1 was introduced in NA005. For ease of reference, Automatic Recall Limited to 1 is called Automatic Recall Only Once (AROO) throughout this module.

Prerequisites

To operate, AROO has the following prerequisites:

- Automatic Recall (AR), including Common Channel Signaling No. 7 (CCS7) connectivity for interoffice AR support
- Software Optionality Control (SOC)

Description

AR enables subscribers to return the last call to their line, whether or not they answered the call and without needing to know the caller's identity. AROO modifies AR so that it can be used to call back any particular number only once. However, a subscriber can still have up to 30 simultaneous AR and Automatic Call Back (ACB) activations against different numbers.

AROO is activated office wide by SOC. When AROO is activated in an office, all lines provisioned with AR are limited to AROO functionality.

AROO applies to all line class codes (LCC) supported by AR.

AROO ensures that the once-only limitation takes effect only after successful AR calls. The following are examples of calls after which AR and similar features ACB and Last Number Redial (LNR) are disabled:

- The automatically recalled station answers the AR call (either immediately or after queuing).
- The automatically recalled station rings (whether or not the call is answered and whether or not the ringing takes place immediately or after queuing).
- The AR feature software completes successfully, but the call fails due to a reason outside of the control of the feature.

Automatic Recall Limited to 1 (continued)

If a subscriber tries to reactivate AR after a successful AR call, AROO causes AR to behave as if no DN is available to complete the AR call. AR cannot be activated again until another incoming call is received.

The following are examples of incomplete calls, after which AR and similar features ACB and LNR are still available:

- AR calls a busy line, the call is queued, and the line becomes free, but the originator does not answer the distinctive ringback.
- AR calls a busy line and the call is queued, but the AR queue timer times out.
- AR calls a busy line and the call is queued, but then AR is deactivated by the subscriber.
- AR calls a busy line and the call is not queued (this is possible with two-level activation).
- AR is denied because of a lack of resources.
- AR is denied because of feature interactions.

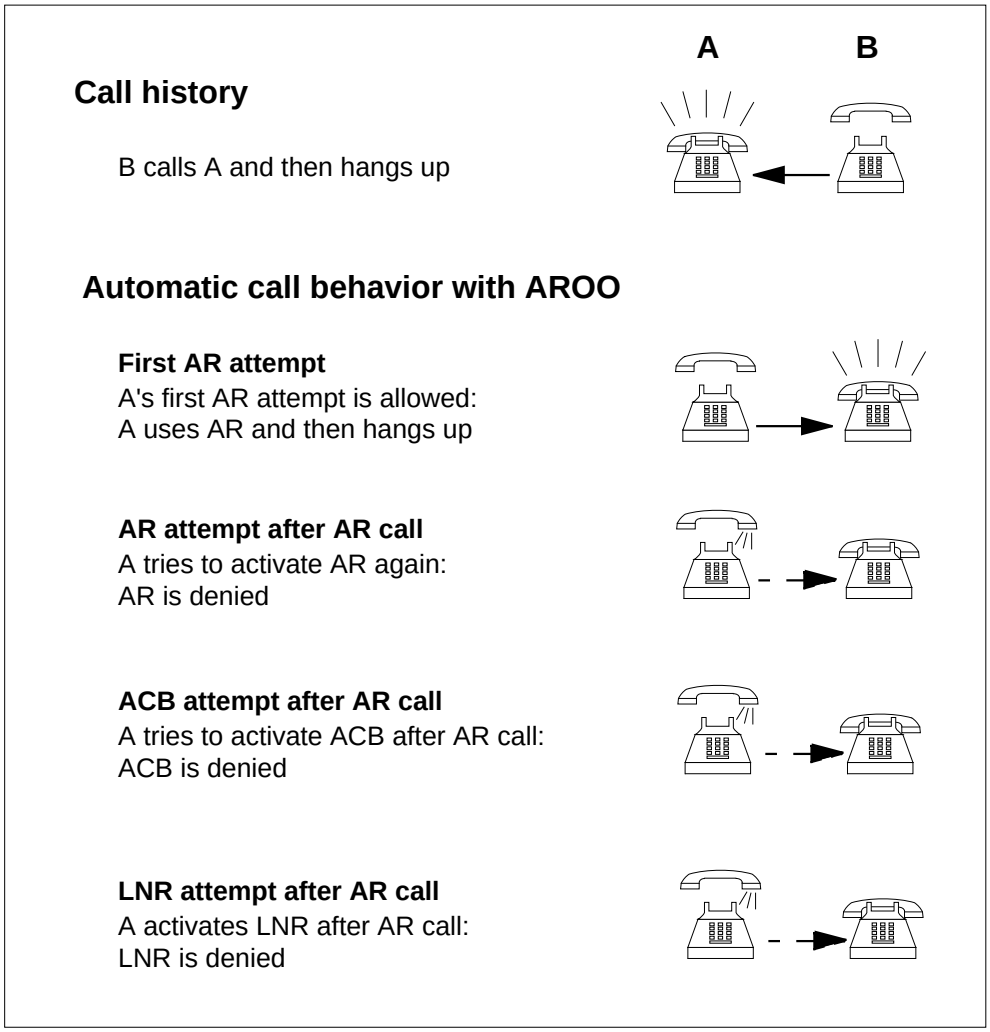
Sample AR scenarios

The following figure illustrates the behavior of some calls when AROO is activated. The call history section sets up the call history of agent A: B is the last agent that reached A. The automatic call behavior section shows the following:

- The first AR attempt shows what happens when A activates AR: the last agent that called A (that is, B) is reached.
- The AR attempt after an AR call shows the impact of AROO on repeated AR attempts: AR behaves as if no DN is available to complete the AR call.
- The ACB attempt after AR and LNR attempt after AR show that ACB and LNR are blocked from reaching the previously automatically recalled DN. Both ACB and LNR behave as if no DN is available to complete the call.

Automatic Recall Limited to 1 (continued)

Sample AROO scenarios



Operation

AR and AROO use a subscriber's Incoming Call Memory (ICM) data block to find the DN of the party to call.

AROO adds the flag “AROO Already Executed" to the ICM data block. This flag is initialized to No every time a DN is recorded in the ICM. Then, when an AR call is set up, the “AROO Already Executed" flag is set to Yes.

Only AROO reads the “AROO Already Executed" flag. When a subscriber invokes AR, the “AROO Already Executed" flag is checked, and if its value is Yes, the AR attempt is denied.

ACB uses Outgoing Call Memory (OCM) to find the DN of the party to call. When AROO is active in an end office and an AR call is made, the OCM data block is updated with the called DN, but AROO also sets the “DN unusable" flag to Yes. Therefore, if a subscriber invokes ACB after an AR call, the ACB attempt is blocked because the “DN unusable" flag is raised.

In standard call processing, the called DN is copied to the subscriber's LNR data block. AROO erases this data block after an AR call, and so LNR is blocked.

Note: ACB and LNR are blocked after unsuccessful AR attempts if the AR attempts failed after the routing stage of the call.

Operational measurements

Operational measurements (OM) group AR counts activation attempts and denials.

Behavior on system restarts

The activation status of AROO survives system restarts.

AR behavior during restarts remains unchanged with AROO; that is, the information stored in the ICM and OCM survives warm and cold restarts but not reload restarts. As a result, AR remembers calls and their corresponding AROO states if they were made before warm or cold restarts, but it does not remember calls that were made before reload restarts.

Translations table flow

The AROO translations tables are the same as for AR.

Limitations and restrictions

The following limitations and restrictions apply to AROO:

- AROO inherits the AR limitations, along with the limitations that AR inherits from the base Call Processing.
- The target DMS platform for the feature is DMS-100 SuperNode and BRISC or DMS-100/200 SuperNode and BRISC.
- AROO is offered over Residential Enhanced Services (RES).
- AROO is an originating office feature. This means that a given switch has no control over incoming interoffice AR call attempts.
- There is no provision made to allow multiple AR calls against out-of-state DNs.

Automatic Recall Limited to 1 (continued)

- There is no provision made to allow privileged end-users to override the AROO limitation.
- AROO has no control over calls that are dropped because of hardware problems.
- AROO does not provide new announcements or tones.
- No provision is made for screening manually dialed DNs against DNs that have been automatically recalled.

Interactions

AROO interacts with Automatic Call Back (ACB) and Last Number Redial (LNR) to prevent these features from enabling subscribers to get around the restriction of calling only once the last number that called them. Customer Originated Trace (COT) is still possible after AROO.

Automatic Call Back

ACB enables a subscriber to call the last number called from the subscriber's line by dialing an activation code. The called line can have been busy or idle, answered or unanswered. ACB is very similar to AR, but it is activated using a one-step procedure only.

AROO ensures that callers cannot use ACB to call back a line that they have called back using AR.

Last Number Redial

LNR enables a subscriber to redial the last number dialed by pressing a key or by dialing a feature activation code.

AROO ensures that callers cannot use LNR to call back a line that they have called back using AR.

Customer Originated Trace

COT enables a subscriber to activate a trace of the last incoming call. The trace results in a report that is generated by the DMS log subsystem and is available to the operating company but not to the subscriber. The description of the traced call includes the calling DN and DN suppression status. The trace also provides information on whether or not the call was out-of-area and the time the call was received.

To assist subscribers who try to resolve annoyance call problems by using AR before resorting to COT, COT is still possible after AROO.

Automatic Recall Limited to 1 (end)

Activation/deactivation by the end user

When AROO is activated in an end office and a subscriber activates AR, the subscriber is given AROO functionality.

Engineering and hardware information

The AR long-term denial announcements or tones should be provisioned to accommodate a slight increase in use, especially in the early stages of AROO deployment.

AR announcements should be checked to verify whether they are still valid with AROO. They might be improved by being changed to the following, for example: “We're sorry, the number cannot be reached by this method. Please hang up now."

Billing

Billing is supported for AR calls. No new type of billing record is associated with AROO. Refer to the “Automatic Call Back/Automatic Recall (ACB/AR)" translations section of this document.

Station Message Detail Recording

AROO does not affect Station Message Detail Recording.

Datafilling office parameters

AROO does not affect office parameters.

Translation verification tools

AROO does not use translation verification tools.

SERVORD

AROO does not use SERVORD.

Call Waiting Conference (CWTC)

Ordering codes

Functional group ordering code: RES00005

Functionality ordering code: RES00092

Release applicability

NA011 and up

Call Waiting Conference (CWTC) was introduced in NA011.

Prerequisites

This document includes all the data table information for this functionality. Complete use of this functionality can require software or hardware not described in this document.

Description

The Call Waiting Conference (CWTC) feature provides conference functionality to Call Waiting (CWT) subscribers. The CWTC feature allows a CWT subscriber to join a calling party into an existing call. The CWTC feature is available to CWT subscribers on either a subscription or pay-per-use (PPU) basis.

The CWTC feature gives CWT subscribers more control over incoming calls. Before the CWTC feature, CWT subscribers can only rotate between calling parties. With the CWTC feature, the called party (CWTC subscriber) can extend the CWT capability to join the original party, the calling party, and the CWTC subscriber into a conference.

Operation

The following sections describe the operation of the CWTC feature.

CWTC terminology

This document uses the following terminology:

- The term *controller* refers to the subscriber who has access to the CWTC service and who receives a new call while talking to another party.
- The term *original party* refers to the party talking to the controller before the controller receives a new call.
- The term *calling party* refers to the party who places a call to the busy controller (CWTC subscriber).

Call Waiting Conference (CWTC) (continued)

- The term *held party* refers to any party that the controller puts on hold by performing a switch-hook flash. The held party hears silence.
- The term *stable call* refers to a call where both parties are in a talking state.

CWTC service description

The CWTC feature is a terminating end-office feature. It allows a CWT subscriber to join a held party into an existing call without calling back the held caller and starting a three-way conference.

For example, a CWT subscriber who has access to CWTC is talking to another party in a stable call. The called party (controller) hears a CWT tone indicating that another caller is trying to call. The controller places the original call on hold and connects immediately to the calling party by performing a switch-hook flash. The controller and the calling party are now in a two-party call. From this point on, when the controller performs a switch-hook flash, a digit detection timer is started. During the time period indicated by parameter digit detection timer, the speech path is cut to detect the dialing of the digit 3. All three parties included in the call hear silence while the speech path is cut.

The controller can dial a digit during the digit detection period. If the controller dials the digit 3 within the time period, the CWTC feature establishes a three-way conference between the controller, the original party, and the calling party.

If the controller decides not to dial a digit following a switch-hook flash, the call toggles back to the held party after the digit detection timer expires.

The digit detection timer stops when the controller dials a digit. If the controller dials an invalid digit, the call toggles back to the held party.

Once a conference has been established between the three parties, the Three-Way Conference (3WC) feature takes over.

Agent support

The CWTC feature is supported on RES (1FR/1MR) and IBN agents.

Office control

The CWTC feature introduces office parameter CALL_WAITING_CONFERENCE in table OFCENG. This office parameter contains the following three fields:

- Field ENABLED controls CWTC feature availability. Setting field ENABLED to Y makes CWTC functionality available to lines that

Call Waiting Conference (CWTC) (continued)

subscribed to the service. Setting field ENABLED to N disables CWTC functionality for the office. The default value for this field is N.

- Field UCWTC controls PPU availability. Setting field UCWTC to Y makes CWTC functionality available on a PPU basis for the office. CWTC is offered to the CWT subscriber on any second and following switch-hook flashes.

  Note: CWTC is not available if the DENYCWTC option is present on the line or on the customer group of the subscriber. Refer to "Provisioning" for more information.

  Setting field UCWTC to N (the default value) disables CWTC PPU made available to the CWT subscriber.

  Setting field ENABLED to N disables feature CWTC office-wide, although UCWTC is set to Y.

- Field CWTC_DETECTION_TIMER sets the amount of time that a subscriber has to enter a digit after a switch-hook flash. The value of the timer can range from 1.0 s to 8.0 s, in increments of 5 tenths of a second. The default value of the timer is 1.5 s. The value of the timer is stored in tenths of a second. The field ranges from 10 to 80 tenths of a second in increment of 5 tenths of a second.

Provisioning

The CWTC feature introduces line options CWTC and DENYCWTC. The CWTC option assigns CWTC functionality to a subscriber line. With this option assigned to a subscriber line, the subscriber can conference a calling party.

The DENYCWTC option prevents CWTC functionality on a separate-line basis. When CWTC is made available office-wide, the operating company can prevent CWTC functionality on a specific line by assigning the DENYCWTC option to that line.

In addition to the CWTC and DENYCWTC line options, the CWTC feature also introduces customer group options CWTC and DENYCWTC. Both customer group options are like line options—they provide the same functionality but on a customer group level. If the CWTC option is assigned to a customer group (through table CUSTSTN) all the compatible lines within the customer group will be subscribed to the CWTC functionality. If the DENYCWTC is assigned to a customer group (through table CUSTSTN), all the lines in the customer group will not have access to the CWTC functionality when CWTC PPU is made available office-wide.

Call Waiting Conference (CWTC) (continued)

The CWTC and DENYCWTC option are incompatible. If a line or customer group has one option, the other cannot be assigned.

The following table shows the relationship between the line options, the customer group options, and the office-wide PPU option. The line option always has precedence over the customer group options and the office-wide PPU option.

CWTC offering based on option

	CWTC (line)	*CWTC (customer group)*	*CWTC (PPU)*
DENYCWTC (customer group)	CWTC made available	N/A	CWTC not made available
DENYCWTC (line)	N/A	CWTC not made available	CWTC not made available

Conferencing

The CWTC feature is started when the CWT subscriber enters a second flash. Once the flash is entered, a digit detection timer is started based on the value stored in the field CWTC_DETECTION_TIMER of the office parameter CALL_WAITING_CONFERENCE. During that time, the speech patch between the caller and the calling party is cut for digit detection. If the subscriber waits for the time-out to occur then the original party will be connected to the controller. If the controller enters a digit different from 3 then the new OM register CWTCINV in the OM group CALLWAIT is marked and the original party is connected to the subscriber. When the subscriber enters the digit 3, digit entry is equal to to a CWTC activation attempt and the new OM register CWTCATT in the OM group CALLWAIT is marked and an attempt to reserve a conference circuit is made. In the event where there is no conference circuit available, the original party will be connected to the subscriber and the OM register CNFOVFL in the OM group CF3P is marked.

In the event there is a conference circuit available, a conference is established between the subscriber, the original party, and the waiting party. All parties are connected together. The new OM register CWTCCONF is marked. The new OM register CWTCPPU is marked when CWTC is activated under PPU.

Call Waiting Conference (CWTC) (continued)

When any one of the parties exits from the conference and CWTC has been activated under PPU, an activation billing record is generated. The call type for this record is 049 and the service feature is set to 213 indicating CWTC.

Data schema

The CWTC feature introduces one new office parameter, CALL_WAITING_CONFERENCE, in table OFCENG. The CWTC feature modifies tables IBNLINES, LCCOPT, OPTOPT, and CUSTSTN.

OM group CALLWAIT

The CWTC feature adds the following four OM registers to the existing OM group CALLWAIT:

- Register CWTCATT increases when the CWTC feature activation is attempted. For example, the digit entered is equal to 3 following a switch-hook flash.
- Register CWTCCONF increases when a CWTC request results in a conference call.
- Register CWTCPPU increases when an end user successfully activates CWTC on a PPU basis. For example, the digit entered is equal to 3 following a switch-hook flash, and the request results in a conference call.
- Register CWTCINV increases when access to the CWTC feature is denied caused by an invalid activation attempt. For example, the digit entered is not equal to 3 following a switch-hook flash.

CWTC attempt failures, caused by a lack of hardware or software resources, mark the same OM register that 3WC increments. The register is TWCOVFL (one for each customer group) in the TWCIBN OM group. The marking is handled by the 3WC feature.

General purpose Operational Measurements (OMs) provided by the CF3P OM group are also marked. CF3P register CNFOVFL increments when a request for a three-port conference circuit cannot be answered immediately because all conference circuits are busy. CF3P register CNFSZRS counts the calls that successfully seize a conference circuit. The marking of CF3P register is handled by the 3WC feature.

Translations table flow

Call Waiting Conference (CWTC) does not change translations table flow.

Limitations and restrictions

The CWTC feature is available to all IBN and RES (1FR/1MR) lines.

Call Waiting Conference (CWTC) (continued)

Interactions

The following paragraphs describe the actions between Call Waiting Conference (CWTC) and other functionalities.

Advanced Intelligent Network (AIN)

CWTC has no interaction with AIN. There is no trigger hit for CWTC.

Call Transfer

When a controller exits a three-way conference previously established by the Call Transfer feature, the two remaining parties are connected together into a normal two-port call. If the three-way conference is not established using the Call Transfer feature and the controller exits, the two remaining parties drop from the call.

The CWTC feature does not effect Call Transfer functionality.

Deluxe Spontaneous Call Waiting Identification (DSCWID)

Deluxe Spontaneous Call Waiting Identification (DSCWID), also called Spontaneous Call Waiting Identification with Disposition (SCWID), allows the end user to receive calling party information during call waiting and provides the subscriber with a set of disposition options to treat incoming calls. The DSCWID feature requires the Analog Display Services Interface (ADSI) protocol to display the disposition options as softkeys on an ADSI set. One disposition option available to the DSCWID subscriber is conference. The conference disposition enables the subscriber to add the waiting party into the existing conversation.

A subscriber with DSCWID cannot invoke CWTC. CWTC and DSCWID are incompatible.

DENYU3WC

DENYU3WC prevents the use of the U3WC feature when it is provisioned on a line. The CWTC feature is activated by a subscriber whose line is provisioned with the DENYU3WC option.

Three-Way Call (3WC)

The 3WC feature enables the subscriber to place an existing call on hold, set up a request to call another subscriber, and connect the two parties in a three-port conference call. Any of the parties can activate CWT, but only the non-controller can activate CWTC.

Call Waiting Conference (CWTC) (continued)

If the end user activates CWTC, then the waited party, controller, and other parties are conferenced together.

Note: There are four parties on the call: the waited party and the three parties in the 3WC.

Activation/deactivation by the end user

Call Waiting Conference (CWTC) requires no activation or deactivation by the end user.

Billing

The CWTC feature introduces a new call type (049) and a new service feature (213) but it reuses an existing structure code (028).

The following fields in the structure have a special CWTC setting:

- Call Type = 049
- Service Feature = 213
- Answer = The waiting party has been added to the call
- Originating Number = Controller invoking CWTC

The following figure is an example of an AMA record generated for call code 049.

Call code 049

```
HEX ID:AA STRUCTURE CODE:00028C CALL CODE:049C SENSOR
TYPE:036C SENSORID:0200200C REC OFFICE TYPE:036C REC
OFFICE ID:0200200C DATE:80910C TIMING IND:00000C STUDY
IND:0000000C CLD PTY OFF-HK:0C SERVICE OBSERVED:0C OPER
ACTION:0C SERVICE FEATURE:213C ORIG NPA:613C
ORIG NUMBER:6236508C CONNECT TIME:1711245C
```

Station Message Detail Recording

Call Waiting Conference (CWTC) does not change Station Message Detail Recording.

Call Waiting Conference (CWTC) (continued)

Datafilling office parameters

The following table shows the office parameter used by Call Waiting Conference (CWTC). Refer to *Office Parameters Reference Manual.*

Office parameter used by Call Waiting Conference (CWTC)

Table name	Parameter name	Explanation and action
OFCENG	CALL_WAITING_CONFERENCE	This parameter determines the availability of the call waiting conference functionality on an office-wide basis. Also the parameter controls the avalability of the feature and the pay-per-use, and specifies the digit detection timer value.

Datafill sequence

The following table lists the tables that require datafill to implement Call Waiting Conference (CWTC). The tables are listed in the order in which they are to be datafilled.

Datafill tables required for Call Waiting Conference (CWTC) (Sheet 1 of 2)

Table	Purpose of table
OFCENG	Office Engineering. This table contains data on engineering parameters for the office. Refer to “Datafilling office parameters" for information on how the CWTC feature affects office parameters.
LCCOPT (Note 1)	Line Class Code Compatible Options. This table contains information on line options that are compatible with each LCC. The CWTC feature adds CWTC and DENYCWTC option compatibility information to this table.
OPTOPT (Note 1)	Incompatible Options. This table contains information about line options that are incompatible with other line options. The CWTC feature adds CWTC and DENYCWTC option incompatibility information to this table.
Note 1: This table is a read-only table that cannot be modified by the operating company; no datafill procedure or example is provided.	
Note 2: This table is datafilled through SERVORD; no datafill procedure or example is provided. Refer to “SERVORD" for an example of using SERVORD to datafill this table.	

Call Waiting Conference (CWTC) (continued)

Datafill tables required for Call Waiting Conference (CWTC) (Sheet 2 of 2)

Table	Purpose of table
IBNLINES (Note 2)	IBN Line Assignment. This table contains line assignments for each 500/2500 set assigned to an IBN, RES, or Multiple Appearance Directory Number (MADN) station number. This table also contains line assignments for IBN attendant consoles (AC). The CWTC feature modifies this table to support the CWTC and DENYCWTC options.
CUSTSTN	Customer Group Station Options. This table lists the station options assigned to customer groups. The CWTC feature modifies this table to add CWTC and DENYCWTC as valid values in subfields OPTNAME and OPTION.
Note 1: This table is a read-only table that cannot be modified by the operating company; no datafill procedure or example is provided.	
Note 2: This table is datafilled through SERVORD; no datafill procedure or example is provided. Refer to “SERVORD" for an example of using SERVORD to datafill this table.	

Datafilling table CUSTSTN

The CWTC feature modifies table CUSTSTN to add CWTC and DENYCWTC as valid values in subfields OPTNAME and OPTION.

Note: Options CWTC and DENYCWTC are incompatible at the same level of provisioning. These options cannot be present on the customer group at the same time.

Datafilling table CUSTSTN

Field	Subfield	Entry	Explanation and action
CUSTNAME		alphanumeric (1 to 16 characters)	Customer group name. Enter the customer group name.
OPTNAME		CWTC, DENYCWTC	Option name. Enter CWTC to assign the CWTC option. Enter DENYCWTC to assign the DENYCWTC option.
OPTION		see subfield	Option. This field includes subfield OPTION.
	OPTION	CWTC, DENYCWTC	Option. Enter CWTC to assign the CWTC option. Enter DENYCWTC to assign the DENYCWTC option.

Datafill example for table CUSTSTN

The following example shows sample datafill for table CUSTSTN.

MAP display example for table CUSTSTN

```
CUSTNAME    OPTNAME                                   OPTION
------------------------------------------------------------
COMKODAK    CWTC                                      CWTC
COMKODAK2   DENYCWTC                                  DENYCWTC
```

Translation verification tools

Call Waiting Conference (CWTC) does not use translation verification tools.

SERVORD

The CWTC feature introduces line options CWTC and DENYCWTC. The operating company must use Service Order System (SERVORD) to add these options to or remove the options from a line.

Supported SERVORD commands

The following SERVORD commands support the CWTC and DENYCWTC options:

- ADO (add option)
- DEO (delete option)
- NEW (establish service)

Supported SERVORD query commands

The following SERVORD query commands support the CWTC and DENYCWTC options:

- QDN (query directory number)
- QLEN (query line equipment number)
- QDNWRK (query working [assigned] DN)
- QLENWRK (query working [hardware and software assigned] LEN)

When the DENYCWTC option is assigned on a line or customer group, the CWTC option on the customer group or UCWTC option office-wide is not displayed on a QDN/QLEN.

Call Waiting Conference (CWTC) (continued)

SERVORD limitations and restrictions

The following SERVORD limitations and restrictions apply to Call Waiting Conference (CWTC):

- The CWTC option is not compatible with line options DENYCWTC and DSCWID.
- The DENYCWTC option is not compatible with the CWTC line option.
- Although there is no option to assign before the CWTC line option, the CWT option needs to be present on the line with the CWTC option to have the CWTC functionality.
- There is no option to assign before the DENYCWTC line option.
- The CWTC and DENYCWTC line options can be assigned on the following LCCs:
  - RES
  - RES/1FR
  - RES/1MR
  - IBN

SERVORD prompts

The following table shows the SERVORD prompts used to add the CWTC and DENYCWTC options to or remove the options from a line.

SERVORD prompts for Call Waiting Conference (CWTC)

Prompt	Valid input	Explanation
DN_OR_LEN	7 or 10 digits entered without spaces or hyphens	Enter the line's DN or LEN. In the example of an MDN/DLH members, if a DN is indicated, the user is asked for for the LEN. If the LEN is entered, the user is not asked for for the DN.
OPTION	CWTC or DENYCWTC	Enter the option CWTC or DENYCWTC.

SERVORD example for adding CWTC option

The following SERVORD example shows how Call Waiting Conference (CWTC) is added to a line using the ADO command.

SERVORD example for Call Waiting Conference (CWTC) in prompt mode

```
> ADO
SONUMBER:   NOW 98 6 25 AM
>
DN_OR_LEN:
> 6216076
OPTION:
> CWTC
OPTION:
> $
```

SERVORD example for Call Waiting Conference (CWTC) in no-prompt mode

```
> ADO $ 6216076 CWTC $
```

SERVORD example for deleting DENYCWTC option

The following SERVORD example shows how CWTC is added to a line using the ADO command.

SERVORD example for Call Waiting Conference (CWTC) in prompt mode

```
> ADO
SONUMBER:   NOW 98 6 25 AM
>
DN_OR_LEN:
> 6216076
OPTION:
> DENYCWTC
OPTION:
> $
```

SERVORD example for Call Waiting Conference (CWTC) in no-prompt mode

```
> ADO $ 6216076 DENYCWTC $
```

CMS AR Screening of Private Calls (CASOP)

Ordering codes

Functional group ordering code: RES00005

Functionality ordering code: CSTU0001

Release applicability

NA007 and up

CMS AR Screening of Private Calls (CASOP) was introduced in NA007.

Prerequisites

To operate, CMS AR Screening of Private Calls requires the following functional packages:

- RES00005 Non-Display Services
- EQA00001 Equal Access Local

Description

The CMS AR Screening of Private Calls (CASOP) NA007 feature enhances the CMS Automatic Recall Blocking of Private Calls (CABOP) feature, which provides the operating company with the capability to block Automatic Recall (AR)-activated calls to private directory numbers (DN).

The blocking capability of CABOP is controlled through office parameters AR_BLOCK_PRIVATE_RES for Residential Enhanced Services (RES) lines, and AR_BLOCK_PRIVATE_CTX for Meridian Digital Centrex (MDC) lines. Each office parameter can be set to either block all AR-activated calls to private DNs, or not block any AR-activated calls to private DNs. As well, office parameter AR_BLOCK_PRIVATE_RES can be set to block only long distance AR-activated calls to private DNs.

The CASOP feature enhances CABOP by allowing some of the calls that are currently blocked by CABOP, to complete. CASOP allows AR-activated calls to private numbers to complete when the carrier is either the local exchange carrier (LEC), the operating telephone company (OTC), which may or may not be the LEC, or an approved equal access (EA) carrier. CASOP only blocks AR-activated calls to private numbers that are routed through unapproved EA carriers.

CMS AR Screening of Private Calls (CASOP) (continued)

The CASOP feature is available from dual tone multi frequency (DTMF) and dial pulse (DP) sets, and is offered to residential and business end users with any one of the following line class codes (LCC):

Line Class Codes supported by CASOP

LCC	Description
RES	Residential Enhanced Services
RES/1FR	Single Party Flate Rate Service
RES/1MR	Single Party Message Rate Service
RES/ZMD	Zero Minus Denied Service
RES/ZMZPA	Zero Minus Zero Plus Allowed
IBN	Integrated Business Network (500/2500)
PSET	Electronic Business Set without Display
M5008	Meridian Set (8 keys)
M5009	Meridian Set (9 keys)
M5112	Meridian Set (12 keys, hands-free)
M5208	Meridian Set (8 keys, built-in display)
M5209	Meridian Set (9 keys, built-in display)
M5212	Meridian Set (12 keys, built-in display, hands-free)
M5216	Meridian Set (16 keys, built-in display, hands-free)
M5312	Meridian Set (12 keys, built-in display, hands-free)
M5316	Meridian Set (16 keys, built-in display, hands-free)

Operation

When CASOP functionality is in effect, carrier screening is performed on EA AR-activated calls from RES or MDC lines to a private number. A call only completes if the carrier is the LEC, the OTC, which may or may not be the LEC, or an approved EA carrier. If the carrier is non-approved, the call is blocked and sent to treatment.

Screening

CASOP carrier screening, which determines whether the carrier is approved or non-approved, occurs in two stages. The first stage occurs after the end user

CMS AR Screening of Private Calls (CASOP) (continued)

has entered the AR activation code, and the second stage occurs when the call is attempting to terminate. The second stage of carrier screening is performed to determine whether the carrier has been changed to a non-approved carrier through features such as AIN 0.1 and VFG.

Note: CASOP functionality is compatible with one-level and two-level AR activation methods. For the two-level activation method, carrier screening occurs before any two-level AR announcements are played to the end user.

Treatments

When the carrier is determined to be non-approved in either screening stage, the call is blocked and sent to treatment. Following the first screening stage, the first treatment is the Long Term Denial treatment used by CABOP. This treatment is either the CLASSANN announcement provisioned in table DRMUSERS, or a tone indicated in table CUSTSTN.

Note 1: The CLASSANN 25 is the correct announcement in table DRMUSERS for the North American market. The CLASSANN 24 is the correct announcement in table DRMUSERS for the European market.

Note 2: When the TONES option in table CUSTSTN is set to N (no), and announcements are not datafilled in table DRMUSERS, the AR-activated call to the private DN is blocked, and sent to the NOSC (No Service Circuit) treatment.

The treatment to which the call is sent following the second screening stage, is the CBFC (CASOP Blocked Final Carrier) treatment. The CBFC treatment is either a tone, or a standard announcement datafilled in tables ANNS, ANNMEMS, and DRAMTRK.

Each time an EA AR-activated call to a private number is blocked, OM register ARPVTBLK in OM group AR is pegged, and each time the call is allowed, OM register ARPVTALW in OM group AR is pegged. When the AR-activated call is sent to the CBFC treatment, OM register TFRCBFC in OM group TRMTFR3 is pegged. For more details on these OM registers, refer to the chapter titled Operational measurements in this document.

Translations table flow

The CMS AR Screening of Private Calls (CASOP) translations tables are described in the following list:

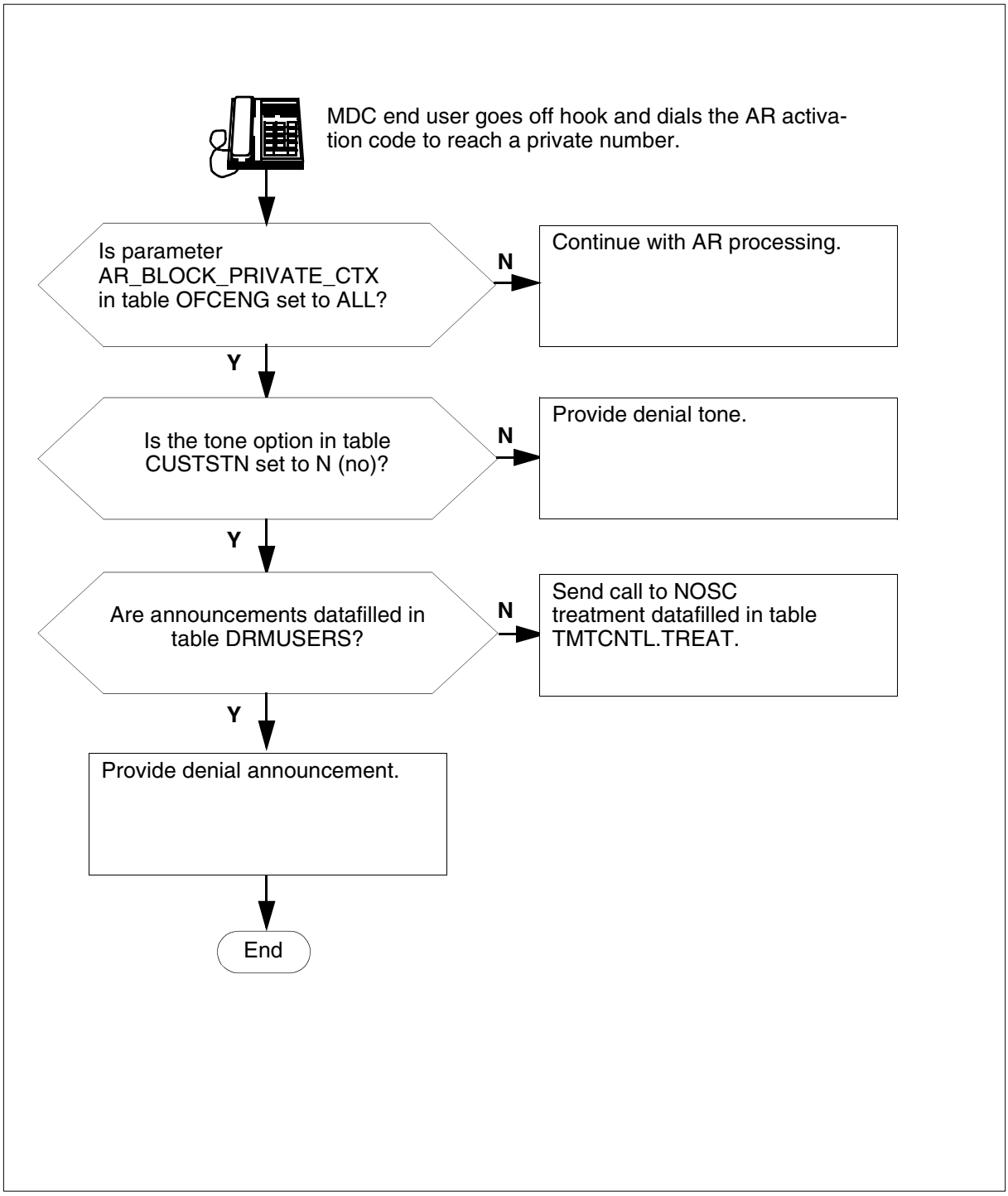
- Table RESOFC contains data relating to Custom Local Area Signaling Services (CLASS) features, such as AR (for RES lines only)
- Table OFCENG specifies the office parameters associated with the CABOP feature.
- Table CUSTSTN provides denial tone (for MDC lines only)

CMS AR Screening of Private Calls (CASOP) (continued)

- Table DRMUSERS provides denial announcements.
- Table TMTCNTL.TREAT defines tones, announcements, and states returned to the calling party.

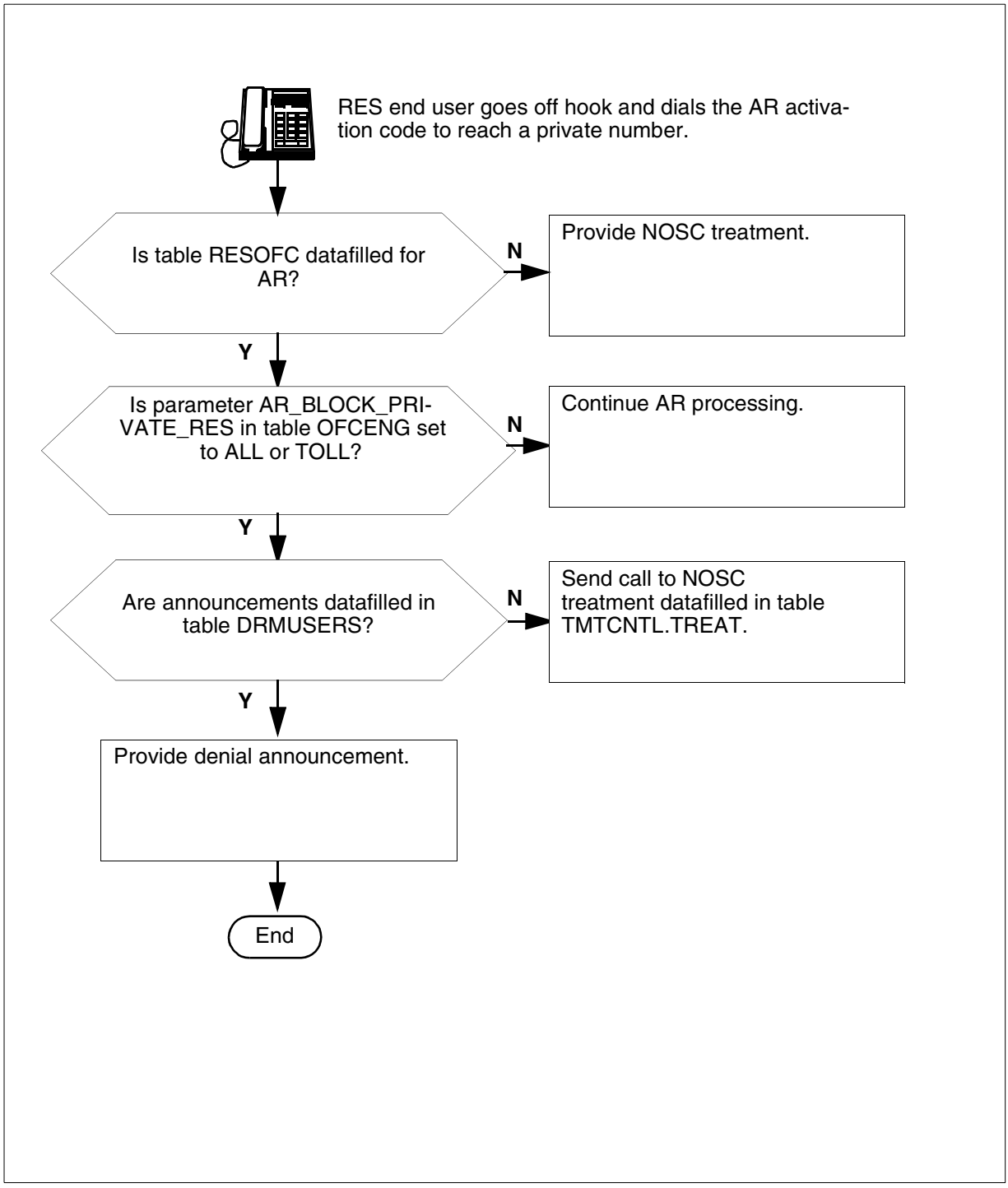
CMS AR Screening of Private Calls (CASOP) (continued)

Translation data flow for CASOP for MDC end users



CMS AR Screening of Private Calls (CASOP) (continued)

Translation data flow for CASOP for RES end users



CMS AR Screening of Private Calls (CASOP) (continued)

Datafill example for CMS AR Screening of Private Calls (CASOP)

Datafill table	Example data
RESOFC	AR Y SUBSCR AR ONELEVEL 5 3 30 180 60 5 5 2 Y DENY DENY DENY Y
OFCENG	AR_BLOCK_PRIVATE_CTX ALL
CUSTSTN	RESG200 AR AR 1 2 Y ACBARRP N ONELEVEL
DRMUSERS	CLASSANN 24 (LANGUAGE1) (LANGUAGE2) $
TMTCNTL.TREAT	NOSC Y T OFRT 55

Limitations and restrictions

The following limitations and restrictions apply to CASOP:

- CASOP is only supported on DMS-100 and DMS-100/200 SuperNode, and BRISC
- CASOP has the same restrictions and limitations that apply to the primary interLATA carrier (PIC), primary intraLATA carrier (LPIC), AR, and CABOP
- CASOP does not support Integrated Services Digital Network (ISDN) sets as they are not supported by AR
- CASOP has the capability to support interLATA calls, however, they are not currently supported by AR
- CASOP does not provide a screening mechanism for AR-activated calls originating from MDC lines that use a system such as SMDR, which generates records that contain the private called DN.

  Note: It is recommended that the operating company be cautious in activating AR on MDC lines that are set up to have records produced by a system such as SMDR, since those records contain the private called DN.

- CASOP carrier screening does not support changes in the EA status or carrier of the AR call caused by AIN 0.0

Interactions

The interaction of CASOP with other DMS-100 features is described in the following section. As a general rule, treaments applied when an AR-activated call is blocked, have priority over the CASOP treatment, and any AR 330

CMS AR Screening of Private Calls (CASOP) (continued)

AMA records are generated for those calls. A list of known treatments that have priority over CASOP is provided below.

Treatment	This treatment is applied when...
ILRS	The call is blocked by Carrier Toll Denied (CTD)
ILRS	The call is blocked by Full Carrier Toll Denied (FCTD)
NACD	AIN_CARRIER is equal to the primary interLATA carrier (PIC), but PIC CHOICE is set to N on the line or for the customer group
NACD	AIN_LCARRIER is equal to the primary intraLATA carrier (LPIC), but PIC CHOICE is set to N on the line or for the customer group
DACD	The PIC is set to NILC and the call is interLATA
DACD	The LPIC is set to NILC and the call is intraLATA
CACE	The ACCESS field in table OCCINFO is set to NONE for the carrier
D950	The ACCESS field in table OCCINFO is set to INTERIM for the carrier
RODR	The number of digits exceeds the digit register capacity
IVCC	The carrier is OTC, and EA call type cannot be completed by the OTC; for example, the call is tagged as an interLATA standard call in table LATAXLA
CACE, VACT, or NACD	The carrier cannot route the call; for example, the call is interLATA, and the carrier cannot handle interLATA traffic as indicated in table OCCINFO in field INTER
TDNB	The call is blocked by Toll Denied (TDN)

Automatic Call Back (ACB)

The ACB feature enables the end user to place a call to the last station called. If the line is busy, the call is queued. When the end user goes off-hook, a special audible ring is provided, and the call is set up.

Without CASOP, an ACB-activated call, following a successful AR-activated call, is routed to the party previously reached through AR, providing the end user does not originate any other calls between the ACB and AR call.

With CASOP, an ACB-activated call following a successful EA AR-activated call to a private number, is blocked by ACB in order to prevent the disclosure of the private number on the ACB end user's billing record.

CMS AR Screening of Private Calls (CASOP) (continued)

An ACB-activated call, following an AR-activated call that is blocked by CASOP (without a VFG involved), is routed to the party that was called prior to making the AR attempt.

An ACB-activated call, following an AR-activated call that is blocked by CASOP during call setup because of a feature, such as VFG where the carrier gets changed to an unapproved carrier, is blocked.

Advanced Intelligent Network (AIN)

The AIN functionality enables end office call processing to use centralized service logic programs located at Service Control Points (SCP), which determine how AIN calls proceed for further call processing. Queries and responses are exchanged between the DMS SuperNode end office equipped with AIN functionality and the SCP using CCS7.

AIN 0.0

CASOP carrier screening is not performed on calls that invoke AIN 0.0 due to an existing AR/AIN limitation.

AIN 0.1

With the ACB/AR Premium feature, all applicable triggers are encountered and processed. CASOP carrier screening is performed on the original carrier for the call and then on the carrier returned in the SCP response.

Without the ACB/AR Premium feature, AIN 0.1 triggers are either not encountered, or are encountered, but sent to treatment due to an existing AR/AIN limitation. CASOP carrier screening is not performed on calls that invoke AIN 0.1 when the ACB/AR Premium feature is not present.

Carrier Toll Denied (CTD), Full Carrier Toll Denied (FCTD)

The CTD and FCTD features deny toll access through a number of specified carriers for a designated line.

Without CASOP nor CABOP, the behavior of AR with CTD, is to play an AR announcement, if applicable, before CTD blocks the call and applies a tone to the line.

The behavior of CABOP with CTD is to play the CABOP announcement when the call is blocked by CABOP and not have the CTD treatment, if applicable, applied.

With CASOP and CABOP, the CTD treatment, if applicable, is applied before any AR, CABOP, or CASOP announcement is played.

CMS AR Screening of Private Calls (CASOP) (continued)

Equal Access

CASOP interacts with the existing EA environment. Equal Access calls currently routed by the LEC or the OTC, continue to be routed by the LEC or the OTC, when they are activated by AR.

The capability of routing intraLATA privilege calls, which was introduced by the Primary IntraLATA carrier (LPIC) Enhancements feature (AN1811), and patched back by the FPA80 patch, is supported by CASOP.

Last Number Redial (LNR) and Last Number Redial Assigned (LNRA)

The LNR and LNRA features enable an end user to redial the last number dialed using a single key instead of dialing the full directory number.

The interaction between CASOP and LNR or LNRA is similar to the interaction between CASOP and ACB, which is described on page 1-9 in this document.

Subscriber Activated Call Blocking (SACB)

The SACB feature enables the end user to block certain call classes, such as toll calls, 900+ calls, 976+ calls, and 611 maintenance calls, from originating on the line.

The interaction between CASOP and SACB is similar to the interaction between CASOP and CTD, which is described on page 1-9 in this document.

Three-Way Call (3WC)

Three-Way Call allows an end user to add another party to an existing connection for a three-way conference.

When the VFG changes the carrier from an approved carrier to an unapproved carrier on the second leg of a three-way call, the call is sent to the CFBC treatment, and OM register TFRCBFC in OM group TRMTFR3 is pegged.

Toll Denied (TDN)

The TDN feature denies toll access to a designated line, regardless of the carrier.

The interaction between CASOP and TDN is similar to the interaction between CASOP and CTD, which is described on page 1-9 in this document.

Virtual Facility Group (VFG)

A VFG is a software structure that emulates a trunk. The translation for calls that route through VFGs is first done from the originating line or trunk to the

CMS AR Screening of Private Calls (CASOP) (continued)

incoming side of the VFG, and then from the outgoing side of the VFG to the terminating line or trunk.

AR-activated calls to private DNs that originate from a line with an approved carrier that gets changed to an unapproved carrier by a VFG, are blocked by CASOP, and sent to the CBFC treatment.

Note 1: If the VFG changes the carrier from an approved carrier to an unapproved carrier on the second leg of a three-way call, the call is sent to the CFBC treatment, and OM register TFRCBFC in OM group TRMTFR3 is pegged.

Note 2: The call is only blocked during call setup and not during AR activation. Therefore, during a one-level delayed AR activation, or any two-level AR activation., the AR announcement is played, indicating to the end user that AR is proceeding. Once the call setup is attempted, the CASOP announcement is played to the end user indicating that the call cannot complete.

Activation/deactivation by the end user

CASOP requires no activation or deactivation by the end user.

Billing

The CASOP feature does not affect billing. However, if pay-per-use is turned on in an office and an AR activation attempt is blocked by CABOP, no AMA record is generated.

Operational measurements

The CASOP feature introduces two new registers; ARPVTALW (AR Private Allowed) in the AR (Automatic Recall) OM group, and TFRCBFC (Treatment Feature CASOP Blocked Final Carrier) in the TRMTFR3 (Treatment Feature 3) OM group.

The CASOP feature also uses register ARPVTBLK (AR Private Blocked) in the AR OM group.

CMS AR Screening of Private Calls (CASOP) (continued)

Datafilling office parameters

The following table shows the office parameters used by CMS AR Screening of Private Calls (CASOP).

Office parameters used by CMS AR Screening of Private Calls (CASOP)

Table name	Parameter name	Explanation and action
OFCENG	AR_BLOCK_PRIVATE_CTX	This parameter controls the blocking of AR activation attempts to a private directory number (DN) for Meridian Digital Centrex (MDC) lines within an end office. Enter ALL to indicate that all AR-activated calls to a private DN be blocked, or enter NOBLK to indicate that no AR-activated calls to private DNs be blocked. The default value is NOBLK. ***Note:*** If either patch FPA32 or RPG89 is active in the software load prior to performing an upgrade, this parameter is set to ALL. If neither patch is active, the default value of NOBLK is in effect.
OFCENG	AR_BLOCK_PRIVATE_RES	This parameter controls the blocking of AR activation attempts to a private DN for Residential Enhanced Services (RES) lines within an end office. Enter ALL to indicate that all AR-activated calls to a private DN be blocked, NOBLK to indicate that no AR-activated calls to private DNs be blocked, or TOLL to indicate that only long distance AR-activated calls to private DNs be blocked. The default value is NOBLK. ***Note:*** If patch FPA32 is active in the software load prior to performing an upgrade, this parameter is set to TOLL. If patch RPG89 is active in the software load prior to performing an upgrade, this parameter is set to ALL. If neither patch is active, the default value of NOBLK is in effect.
OFCENG	AR_BLOCK_PRIVATE_TOLL_METHOD	This parameter enables the operating company to select a toll detection method. Enter LCASCR to indicate that local calling area screening be used as the toll detection method, or enter REVXLA to indicate that reverse translation be used as the toll detection method. The default value is REVXLA.

CMS AR Screening of Private Calls (CASOP) (continued)

Datafill sequence

The following table lists the tables that require datafill to provide CASOP functionality.

Datafill tables required for CMS AR Screening of Private Calls (CASOP)

Table	Purpose of table
OFCENG	OFCENG contains office parameters used by CASOP to set carrier screening, and the toll detection method.
OCCINFO	OCCINFO controls whether a carrier is allowed to complete EA AR calls to private DNs. CASOP adds field ARBLKPVT (AR block private), which is used to specify whether a carrier is allowed to complete AR calls to private DNs.
TMTCNTL.TREAT	TMTCNTL.TREAT defines the CBFC treatment used by CASOP. CASOP adds treatment CBFC (CASOP Blocked Final Carrier) to field TREATMT.

Datafilling table OFCENG

The following table shows the office parameters used by CASOP.

Datafilling table OFCENG

Field	Entry	Explanation and action
AR_BLOCK_PRIVATE_CTX	ALL, CARSCRN, or NOBLK	This parameter is used to control the blocking of AR activation attempts to a private directory number (DN) for Meridian Digital Centrex (MDC) lines within an end office. Enter CARSCRN to indicate that all Equal Access (EA) AR activation attempts from MDC lines to private numbers complete when the carrier for the call is the LEC, the OTC, or an approved EA carrier.

CMS AR Screening of Private Calls (CASOP) (continued)

Datafilling table OFCENG

Field	Entry	Explanation and action
AR_BLOCK_PRIVATE_RES	ALL, TOLL, CARSCRN, or NOBLK	This parameter is used to control the blocking of AR activation attempts to a private directory number (DN) for Residential Enhanced Services (RES) lines within an end office. Enter CARSCRN to indicate that all Equal Access (EA) AR activation attempts from RES lines to private numbers complete when the carrier for the call is the LEC, the OTC, or an approved EA carrier.
AR_BLOCK_PRIVATE_TOLL_METHOD	REVXLA or LCASCR	This office parameter is used to set the toll detection method for CASOP. Enter REVXLA to indicate that CASOP use the reverse translation toll detection method.

Datafilling table OCCINFO

The following table shows the datafill specific to table OCCINFO.

Datafilling table OFCENG

Field	Entry	Explanation and action
CARRNAME	1 through 16 alphanumeric characters	Carrier name. Enter the carrier name or an abbreviation of the carrier name as it appears in table OCCNAME, or leave empty if the generic recursive pretranslator associated with the reserved carrier name USE_PREVIOUS is to be used.
CARRNUM	0000 through 9999	Carrier number. Enter the carrier access code (CAC). The CAC is equal to the XXXX digits in the equal access (EA) prefixes (10XXXX or 950YXXXX).

CMS AR Screening of Private Calls (CASOP) (continued)

Datafilling table OFCENG

Field	Entry	Explanation and action
ACCESS	EAP, FGC, INTERIM, OTC, TRANS, or NONE	Access arrangement. Enter one of the following access types accepted by the carrier to handle the call: • EAP (equal access plan 10XXXX calls using feature group D (FGD) signaling) • FGC (10XXXX calls using feature group C (FGC) signaling • INTERIM (950YXXXX calls using FGD signaling) • OTC (10XXXX calls using FGD signaling) • TRANS (both 950YXXXX and 10XXXX calls using FGD signaling) • NONE (no access)
ORIGCARR	Y or N	Original carrier. Enter Y (yes) to define this carrier name as the original carrier, otherwise, enter N (no). ***Note:*** One carrier name must be defined as the original carrier for each unique carrier number. If two or more carrier names are datafilled with the same carrier number, then only one carrier must be defined as the original carrier by entering Y in this field.
INTER	Y or N	InterLATA. Enter Y if the carrier can handle traffic between local access and transport areas (LATA), otherwise, enter N.
INTNTL	Y or N	International. Enter Y if the carrier can handle international traffic, otherwise, enter N.
INTRA	Y or N	IntraLATA. Enter Y if the carrier can handle traffic within the same LATA, otherwise, enter N.
ANI	Y or N	Automatic number identfication. Enter Y if the carrier requires that ANI digits be sent with the called number, otherwise, enter N.
FANI	Y or N	Flexible automatic number identification. Enter Y if the carrier can receive FANI information digits in the place of ANI information digits, otherwise, enter N.

CMS AR Screening of Private Calls (CASOP) (continued)

Datafilling table OFCENG

Field	Entry	Explanation and action
ONISCRN	Y or N	Operator number identification screening. Enter Y if ONI traffic requires screening by an operator or centralized automatic message accounting (CAMA) position before outpulsing to the carrier, otherwise, enter N.
AD1	Y or N	Abbreviated dialing number one. Enter Y if the carrier can be accessed using abbreviated dialing, otherwise, enter N.
OVERLAP	Y or N	Overlap. Enter Y if the carrier receives digits from the access trandem (AT) or the equal access end office (EAEO) using overlap outpulsing, otherwise, enter N.
INTERS	Y or N	Interstate. Enter Y if the carrier can handle traffic between states, otherwise, enter N.
INTRAS	Y or N	Intrastate. Enter Y if the carrier can handle traffic within the same state, otherwise, enter N.
TERMREC	LONG or SHORT	Terminating access record. Enter the length of the terminating access record produced for the carrier.
OCCSEPNO	0 through 127	Other common carrier seperation number. Enter the OCC separation number used for the carrier in the traffic separation measurement system (TSMS).
OPSIG	FGRPC, FGRPD, or NONE	Operator signaling. Enter the type of operator signaling provided by the carrier. ***Note:*** The availability of this field eliminates the need to establish two carriers with the same access code in table OCCINFO in order to enable transitional or EAP carriers for FGC operator signaling.
PICIND	Y or N	Presubscription indicator. Enter Y if the carrier receives the presubscription indicator, otherwise, enter N. ***Note:*** This field must be datafilled for every entry in table OCCINFO.

CMS AR Screening of Private Calls (CASOP) (continued)

Datafilling table OFCENG

Field	Entry	Explanation and action
NOA950	Y or N	Nature of address indicator. Enter Y to specify that the nature of address indicator in the calling party number parameter is set to a binary value of 11111110 (network specific: 950+call from public station, hotel/motel line, or non-equal access end office). The default value is N.
INCCPN	Y or N	Include calling party number. Enter Y if no change in the existing operation of the switch is required. Enter N to indicate that the calling party number parameter be removed from any initial address message (IAM) sent to this carrier. The default value is Y
DTMFIND	Y or N	Dual tone multifrequency (DTMF) indicator. Enter Y if the carrier receives the DTMF indicator on operator services calls routed directly to the carrier, otherwise, enter N.
OPSERV	Y or N	Operator services. Enter Y if the carrier accepts EAOSS and does not require the operating company to process 10XXX+0 and 00 calls to the carrier, otherwise, enter N.
CACBLOCK	Y or N	Carrier access code blocking. Enter Y if the carrier blocks all calls dialed with a CAC, otherwise, enter N.
CTDOA	Y or N	Carrier toll deny operator assisted. Enter Y to block operator assisted (OA) calls to this carrier if the end user has the carrier toll denied (CTD) line option enabled for this particular carrier. The default value is N.
CMCMON	Y or N	Cellular mobile carrier (CMC) monitor. Enter Y to monitor the connection between the CMC and the interLATA or international carrier (IC/INC), and to place the called DN in the originating IC/INC and terminating CMC billing records, otherwise, enter N.
SCRNWATS	Y or N	Enhanced wide area telephone service (WATS) screening.. Enter Y if the carrier requires band screening on digits dialed from an enhanced WATS line, otherwise, enter N.

CMS AR Screening of Private Calls (CASOP) (continued)

Datafilling table OFCENG

Field	Entry	Explanation and action
CRMCRA	Y or N	Circuit reservation and acknowledgement messages. Enter Y if a circuit reservation message (CRM) is sent out from an access tandem (AT) to an interexchange (IXC) on FGD calls outgoing over CCS7 access to carrier (ATC) trunks, and if subsequent circuit reservation acknowledgement (CRA) message is received at the AT from the IXC on FGD calls incoming to the AT on either multifrequency (MF) intertoll (IT) or superCAMA (SC) trunks
ATPINCL	Y or N	Access transport parameter (ATP) included. Enter Y if the ATP is included in the outgoing ISDN user part (ISUP) IAM. Enter N if the ATP is discarded. ***Note:*** This field is only applicable to TR444 calls (basic rate access [BRA] to ISUP calls).
INTRAOPR	Y or N	IntraLATA operator. Enter Y if the carrier is capable of handling 0- intraLATA operator calls. The default value is N.
ARBLKPVT	Y or N	Automatic Recall (AR) blocking of private calls. Enter Y to have AR activation attempts from RES or Centrex lines routed by the carrier, blocked and sent to treatment, otherwise, enter N. ***Note 1:*** In order for the calls to be blocked, the applicable office parameter, AR_BLOCK_PRIVATE_RES or AR_BLOCK_PRIVATE_CTX in table OFCENG, must be set to CARSCRN. ***Note 2:*** If field ACCESS is set to OTC, all AR activation attempts to a private DN are allowed to complete regardless of the value set in this field.

Datafill example for table OCCINFO

The following example shows sample datafill for table OCCINFO.

CMS AR Screening of Private Calls (CASOP) (continued)

MAP display example for table OCCINFO

```
CARRNAME CARRNUM ACCESS ORIGCARR INTER INTNTL INTRA ANI FANI ONISCRN
AD1 OVERLAP INTERS INTRAS TERMREC OCCSEPNO OPSIG PICIND NOA950 INCCPN
DTMFIND OPSERV CACBLOCK CTDOA CMCMON SCRNWATS CRMCRA ATPINCL INTRAOPR
ARBLKPVT
_____________________________________________________________________
BCR0143  0018    TRANS   Y        Y     Y     Y      Y  N     N      N
N       Y      Y      LONG    1        NONE   Y     Y      Y      Y
N       N        N     Y       N        Y      N        N        Y
```

Datafilling table TMTCNTL.TREAT

The following table shows the datafill specific to the CASOP CBFC treatment in table TMTCNTL.TREAT.

Datafilling table TMTCNTL.TREAT

Field	Subfield or refinement	Entry	Explanation and action
TREATMT		1 through 4 alphanumeric characters	Treatment. This field specifies the name of the treatment, which in this case is CBFC (CASOP Blocked Final Carrier).
LOG		Y or N	Log. Enter Y (yes) for a trunk or line message 138 printout each time the call is routed to the CBFC treatment, otherwise, enter N (no).
FSTRTE		see subfields	First route. This field consists of subfields FSTRTSEL and CLLI, which are described below.
	FSTRTSEL	S	First route selector. Enter the first route selector S.
	CLLI	1 through 16 alphanumeric characters	Common language location identifier. Enter the CLLI code of the tone to which translation routes.

Datafill example for table TMTCNTL.TREAT

The following example shows sample datafill for table TMTCNTL.TREAT.

CMS AR Screening of Private Calls (CASOP) (end)

MAP display example for table TMTCNTL.TREAT

```
TREATMT      LOG              FSTRTE

------------------------------------------------------------
CBFC          Y               S      ARLTD
```

Translation verification tools

CASOP does not modify translation verification tools.

CASOP uses the reverse translation (REVXLA) toll detection method as specified through office parameter AR_BLOCK_PRIVATE_TOLL_METHOD. (For details on this office parameter, refer to CMS Automatic Recall Blocking of Private Calls (CABOP) Feature Service Guide, 297-9401-340).

SERVORD

CASOP does not affect service orders.

CMS Auto Recall Blocking of Private Calls (CABOP)

Ordering codes

Functional group ordering code: RES00005

Functionality ordering code: RES00036

Release applicability

NA004 and up

Prerequisites

All the datafill information for this particular functionality is included in this document. However, prerequisite software or hardware may be required for complete implementation.

Description

The CMS (Calling Management Services) Auto Recall Blocking of Private Calls (CABOP) feature blocks the disclosure of a private directory number auto recall (AR) activation attempt. All AR feature-activated calls that generate a record of the private number on the AR feature end user's AMA (Automatic Message Accounting) Billing record terminate to treatment. This feature applies to both RES and MDC lines.

For an MDC MBS line (with a line class code of PSET, M5009, M5112, M5209, or M5312) an AR feature-activated call can disclose the calling number through several sources; for example, a billing record of a long distance call or through a Station Message Detailed Recorded (SMDR) record.

The long distance status of a call cannot be determined in the MDC environment. An SMDR record can be generated by a variety of sources, some of which are known only after the final routing of the call. Therefore, the blocking of AR feature-activated calls to a private number is controlled by office parameter AR_BLOCK_PRIVATE_RES with one of the following values:

- blocking all AR feature-activated calls to a private number
- not blocking AR feature-activated calls to a private number
- blocking only AR activated-long distance calls to a private number

Office parameter AR_BLOCK_PRIVATE_CTX controls the blocking of local calls only and has the following values:

- blocking all AR feature-activated calls to a private number
- not blocking AR feature-activated calls to a private number

CMS Auto Recall Blocking of Private Calls (CABOP) (continued)

The Standard CMS Long Term Denial phrase can be used to inform the end user when an AR-activated call to a private number is blocked. Alternatively, new digital recorded announcement machine (DRAM) phrases can be recorded or an existing DRAM phrase can be used.

This feature provides two toll detection mechanisms for long distance AR activated calls from RES lines to private directory numbers (DN).

Office parameter AR_BLOCK_PRIVATE_TOLL_METHOD allows the operating company to choose between the following toll detection methods:

- analysis of the DN obtained by reverse translations (REVXLA)
- analysis of the DN obtained by local calling area screening (LCASCR)

The LCASCR method enables operating companies to block AR activated long distance calls from RES lines in markets where the public network dial plan does not use a prefixed DN with a fixed format for all long distance calls.

Operation

The AR feature allows an end user to place a call to the last answered or unanswered incoming call. This feature is implemented with either one-level or two-level activation.

For one-level activation, the call setup is attempted immediately if the terminating line is idle and the class of service permits. If the called line is busy, the call is queued and call completion is attempted when both lines become idle.

Two-level activation is similar, with the exception that the AR end user receives an announcement stating the called number (for a non-private number) and optionally the date and time of the preceding call before call setup is attempted. The end user then has the option of completing the call setup or cancelling the feature request.

In either case, if the terminating line is busy, a special ringing informs the end user when call completion is possible.

The AR feature can be activated for intra-office (same switch) and inter-office (between switches) calls. End-to-end CCS7 (Common Channel Signaling 7) connectivity between the originating office and the terminating office is required for inter-office calls because AR requires the exchange of Transaction Capability Application Part (TCAP) messaging. In this case, the DN and privacy status of the last incoming call are extracted from the ISUP (integrated services digital network user part) Initial Address Message (IAM). The use of AR requires the reverse translation tables DNREGION and DNREVXLA.

CMS Auto Recall Blocking of Private Calls (CABOP) (continued)

Two toll detection methods are available to detect AR activated long distance calls from RES lines to private directory numbers. Both methods use the DN resulting from reverse translations to determine the long distance status of the AR call. The toll detection methods operate as follows.

Reverse Translations

The reverse translations toll detection method uses datafill in tables DNREVXLA and DNREGION. The long distance status of the AR calls from RES lines is evaluated using the result of reverse translations on the ten-digit calling DN extracted from the incoming call memory (ICM).

The call is considered to be long distance if the length of the reverse translated DN is eleven and the prefix is 1.

A reverse translated DN of eight digits with a prefix of 1 is no longer considered a long distance call. The evaluation of the long distance status is straightforward if the network dial plan always uses a DN with the format described above for all long distance calls.

LCASCR

The LCASCR toll detection method uses table LCASCRCN.LCASCR to determine if an AR call from a RES line to a private DN is a long distance call.

If the reverse translated DN consists of ten digits, the call is considered to be long distance if:

- the destination numbering plan area (NPA) is not found in table LCASCRCN.LCASCR when table LCASCRCN is indexed with the originator serving translation scheme (STS) and the originator local calling area name (LCANAME).

  or

- the destination NXX is not found in table LCASCRCN.LCASCR when table LCASCRCN is indexed with the destination STS and the originator LCANAME.

A check for the destination NPA is performed and if the call is not determined to be a long distance call then a check for the NXX is performed.

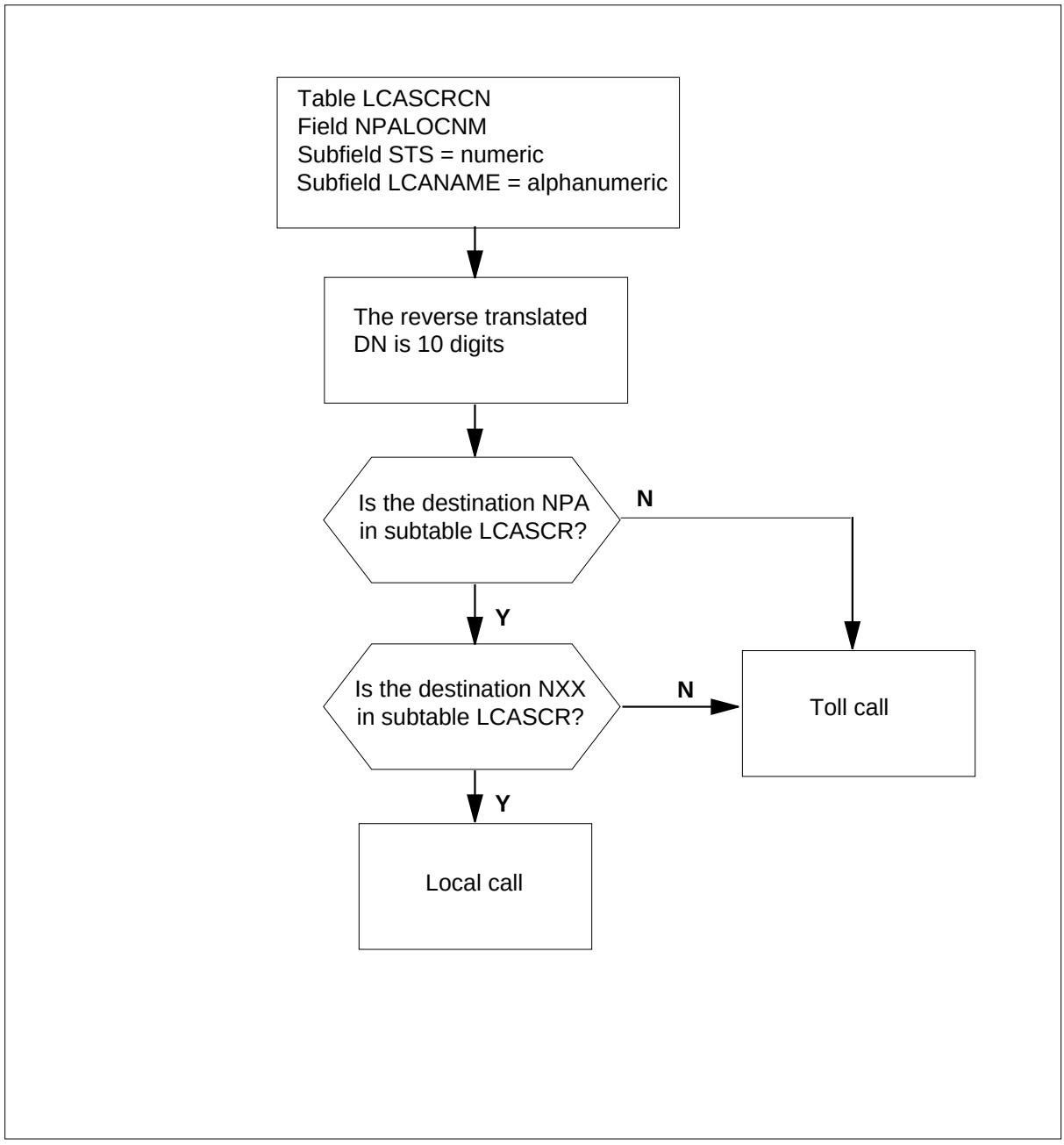
If the reverse translation DN consists of seven digits, the call is considered to be long distance if the destination NXX is not found in table LCASCRCN.LCASCR when table LCASCRCN is indexed with the originator STS and LCANAME.

CMS Auto Recall Blocking of Private Calls (CABOP) (continued)

If reverse translations return 8 or 11 digits, the prefix digit is removed and LCASCR is performed on 7 or 10 digits respectively.

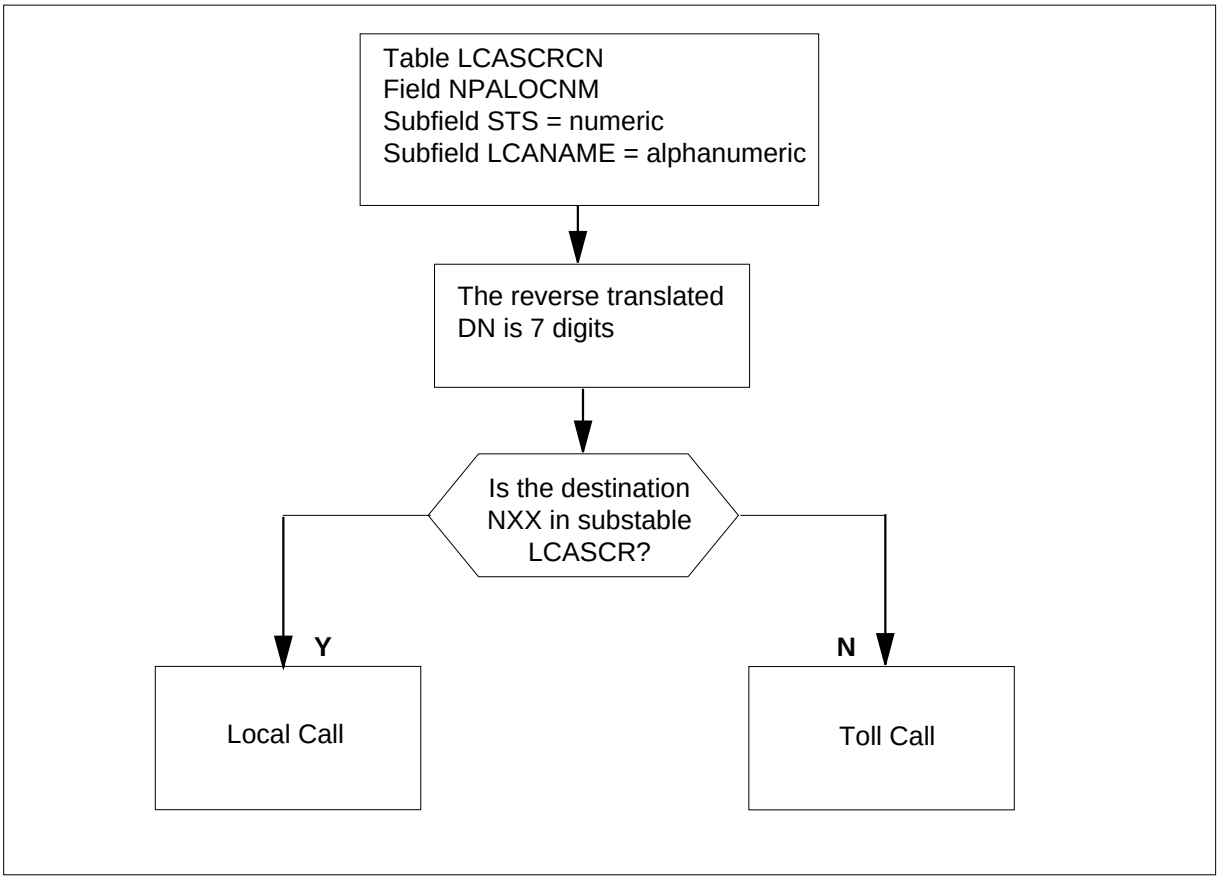
The following figures illustrate the LCASCR toll detection method.

LCASCR toll detection method - 10 digit screening



CMS Auto Recall Blocking of Private Calls (CABOP) (continued)

LCASCR toll detection method - 7 digit screening



Operational measurements (OM)

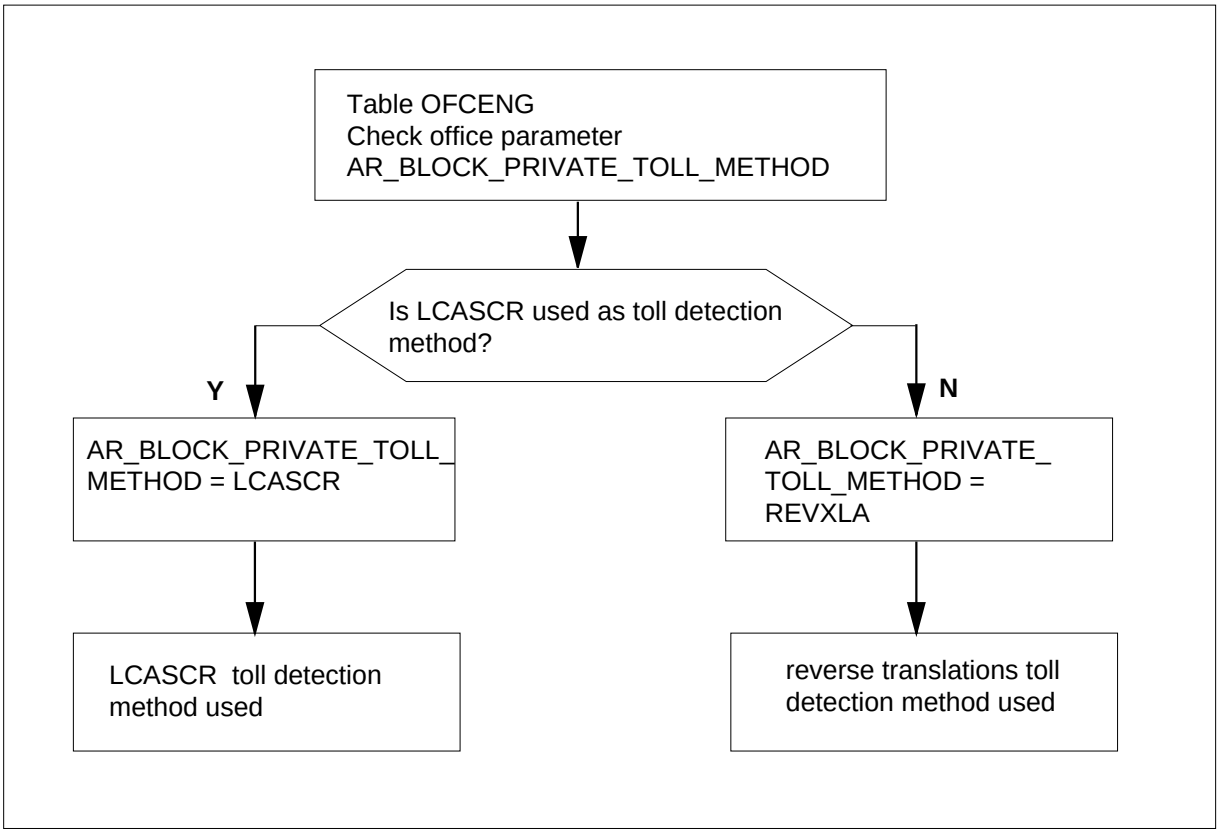
OM register ARPVTBLK is added to the AR OM group to count the number of blocked activation attempts by the AR feature.

Note: This register is visible in the AR OM group regardless of whether an operating company has included the CABOP package in the office load. If the CABOP package is not present in the load, (or if the CABOP feature is not working due to an IDLE SOC state), the register value remains at a value of zero.

The following figure illustrates how office parameter AR_BLOCK_PRIVATE_TOLL_METHOD affects the toll detection methods for RES lines.

CMS Auto Recall Blocking of Private Calls (CABOP) (continued)

AR_BLOCK_PRIVATE_TOLL_METHOD and toll detection methods



Datafilling announcement tables

The AR feature must have announcements defined to inform the end user of feature interactions. In order to set up an announcement, the following tables must be datafilled:

- Table CLLI (Common Language Location Identifier) contains the CLASS announcement CLLI which specifies the maximum number of announcement members for all CMS/CLASS applications.
- Table DRAMS (Digital Recorded Announcement Machine) defines the AR cards that are installed in the internal card slots of the MTM (maintenance trunk module) used for announcements.
- Table ANNS (Announcements) further refines the announcement.
- Table ANNMEMS (Announcements Members) defines the circuits that are assigned to the various members of the CLASS announcement group.

CMS Auto Recall Blocking of Private Calls (CABOP) (continued)

Translations table flow

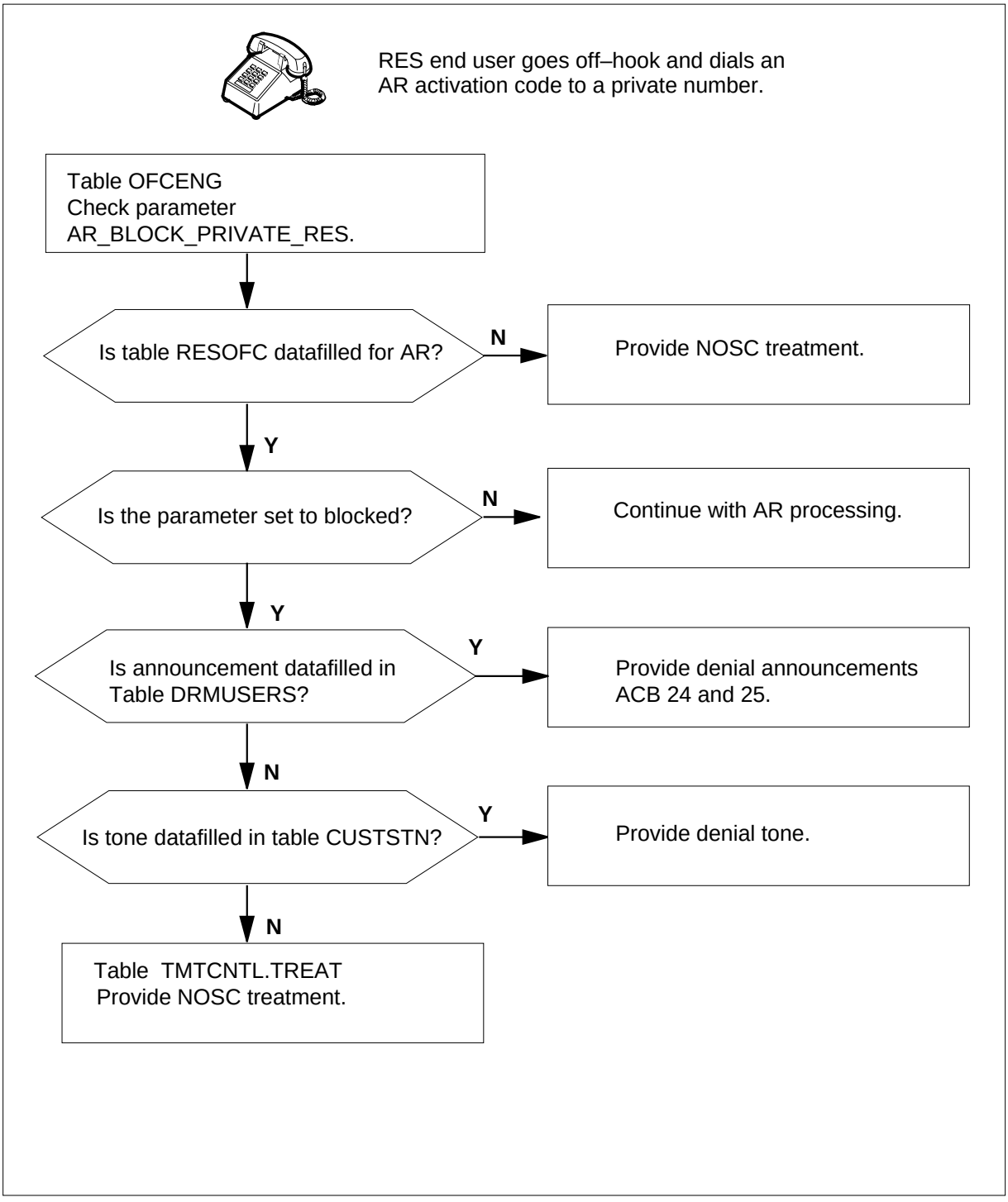
The CMS Auto Recall Blocking of Private Calls (CABOP) translations tables are described in the following list:

- Table OFCENG (Office Engineering) contains data on engineering parameters for the office.
- Table RESOFC (Residential Line CLASS Office Data) contains data pertaining to CLASS features. CLASS features are public network features targeted for the residential market.
- Table DRMUSERS (Digital Recorded Announcement Machine Users) provides denial announcements.
- Table CUSTSTN (Customer Group Station Option) provides denial tones.
- Table TMTCNTL.TREAT (Treatment Control) defines tones, announcements, states or, combinations of these, returned to the originator of the call.
- Table LCASCRCN (Local Calling Area Screening Control) determines if an AR call from a RES line to a private DN is a long distance call.

The CMS Auto Recall Blocking of Private Calls (CABOP) translation process is shown in the flowcharts that follow.

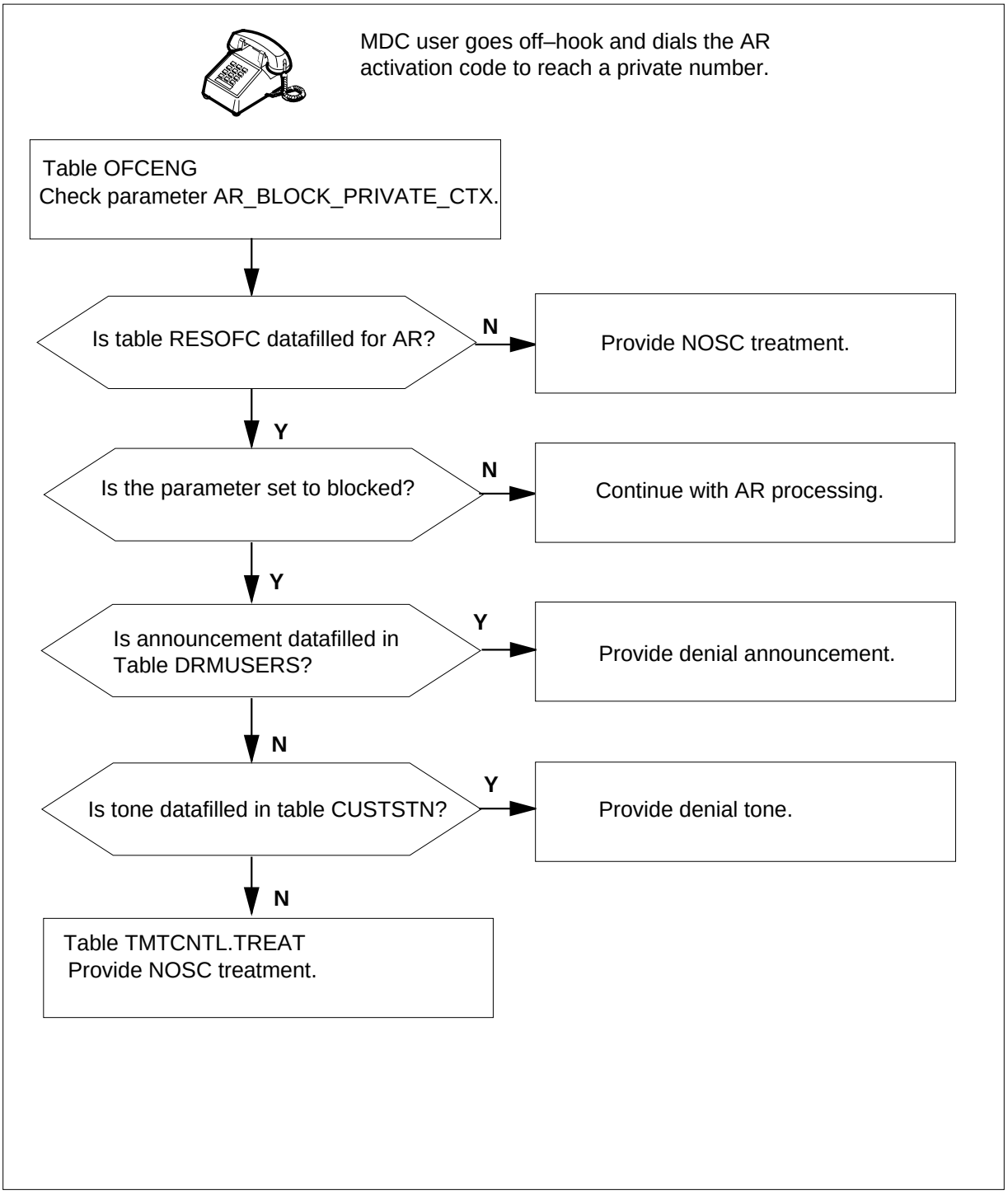
CMS Auto Recall Blocking of Private Calls (CABOP) (continued)

Table flow for CMS Auto Recall Blocking of Private Calls (CABOP) for RES



CMS Auto Recall Blocking of Private Calls (CABOP) (continued)

Table flow for CMS Auto Recall Blocking of Private Calls (CABOP) for MDC



CMS Auto Recall Blocking of Private Calls (CABOP) (continued)

The following table lists the datafill content used in the flowcharts.

Datafill example for CMS Auto Recall Blocking of Private Calls (CABOP)

Datafill table	Example data
OFCENG	AR_BLOCK_PRIVATE_RES ALL
RESOFC	ACB Y SUBSCR ACB
DRMUSERS	CLASSANN 3 (LANGUAGE1) (CENG5) (LANGUAGE2) $
CUSTSTN	RESG200 AR 1 2 Y ACBARRP N ONELEVEL
TMTCNTL.TREAT	NOSC Y T RAL0200
LCASCRCN	613 OTWA

Limitations and restrictions

The following limitations and restrictions apply to CMS Auto Recall Blocking of Private Calls (CABOP):

- The target DMS platform for this feature is SuperNode. The type of lines that are supported have the CLASS/CMS Auto Recall (AR) feature available and have a line class code of 1FR, 1MR, RES, IBN, PSET, M5009, M5112, M5209, or M5312. Integrated Voice and Data (IVD) sets and ISDN stimulus and functional sets are not supported.
- The number used by the AR feature to attempt a call completion is produced by reverse translations. The reverse translation process must correctly generate the dialable number of the destination for the AR feature to successfully complete a call attempt; otherwise, the call is blocked by translations/routing.
- For a RES line, reverse translations must produce a DN in the standard North American numbering plan, where a dialable long distance number has one of the two formats described above, or LCASCR tables must be set up correctly so that LCASCR can be used to detect AR-activated toll calls.
- Currently, the AR feature does not successfully complete inter-LATA Equal Access calls that require CCS7 TCAP messaging between the local network and the inter-LATA inter-exchange carrier networks. If AR is supported in an inter-LATA Equal Access environment, the CABOP feature is also supported in an inter-LATA Equal Access environment.
- If the tones option for AR is not datafilled in table CUSTSTN and the announcements are not datafilled in table DRMUSERS, AR activation to a private number is interrupted and a LINE 138 log is generated, showing the NOSC treatment.

CMS Auto Recall Blocking of Private Calls (CABOP) (continued)

Interactions

The following paragraphs describe the interactions between CMS Auto Recall Blocking of Private Calls (CABOP) and other functionalities.

Auto Recall

The CABOP feature does not affect the interaction of Auto Recall with any other CLASS/CMS residential or MDC feature.

CFDA

If an AR activation attempts to terminate on a line with CFDA (Call Forward Don't Answer) active and the call is not answered, AR activation follows the call forward to a third line. Even though the CFDA end user's private DN may be disclosed, it is the end user's decision to forward the DN and therefore control the display of the DN. This scenario is not AR specific. Any call to a private DN that is call forwarded by CFDA to a third DN, discloses the CFDA end user's DN.

CFU and CFF

If an AR activation attempts to terminate on a line with either CFU (Call Forwarding Universal) or CFF (Call Forwarding Fixed) active, the activation is blocked. If an AR activation attempts to terminate on a line with CFB (Call Forward Busy) active, the AR activation ignores the CFB feature does not follow the call forward.

OCM

If the CABOP feature blocks an AR activation attempt, an outgoing call is not attempted and the CLASS/CMS outgoing call memory (OCM) is not updated. The OCM is used by the Automatic Call Back (ACB) CLASS/CMS feature.

Activation/deactivation by the end user

The following chart describes the basic steps required to set up the feature by the end user.

Activation/deactivation of CMS Auto Recall Blocking of Private Calls (CABOP) by the end user

At your telephone

1 Go off-hook.

Response: Receive dial tone.

2 Dial the AR activation code to a private number.

Response: Receive denial tone or denial announcement.

CMS Auto Recall Blocking of Private Calls (CABOP) (continued)

Billing

CMS Auto Recall Blocking of Private Calls (CABOP) does not affect billing. However, if pay-per-use (SUSP) is turned on in an office and an AR activation attempt is blocked because of this feature, no AMA record is generated.

Station Message Detail Recording

CMS Auto Recall Blocking of Private Calls (CABOP) does not affect Station Message Detail Recording.

Datafilling office parameters

The following table shows the office parameters used by CMS Auto Recall Blocking of Private Calls (CABOP). For more information about office parameters, refer to *Office Parameters Reference Manual.*

Office parameters used by CMS Auto Recall Blocking of Private Calls (CABOP)

Table name	Parameter name	Explanation and action
OFCENG	AR_BLOCK_ PRIVATE_ TOLL_METHOD	This parameter selects the toll detection method for AR-activated long distance calls from RES lines to private DNs. If LCASCR is used as the toll detection method, this parameter is set to LCASCR; otherwise, it is set to REVXLA and analysis of the DN produced by reverse translations is used. The default parameter is REVXLA.
	AR_BLOCK_ PRIVATE_CTX	This parameter controls the blocking of AR activation attempts to a private directory number for an MDC MBS line within an end-office. Possible values are: • NOBLK - (default) no AR activated calls to private numbers are blocked • ALL - all AR activated calls to private numbers are blocked
	AR_BLOCK_ PRIVATE_RES	This parameter controls the blocking of AR activation attempts to a private directory number for a residential end user. Possible values are: • NOBLK - (default) no AR activated calls to private numbers are blocked • ALL - all AR activated calls to private numbers are blocked • TOLL - only long distance AR- activated calls to private numbers are blocked

CMS Auto Recall Blocking of Private Calls (CABOP) (continued)

Datafill sequence

The following table lists the tables that require datafill to implement CMS Auto Recall Blocking of Private Calls (CABOP). The tables are listed in the order in which they are to be datafilled.

Datafill tables required for CMS Auto Recall Blocking of Private Calls (CABOP)

Table	Purpose of table
OFCENG	Office Engineering. This table contains data on engineering parameters for the office. Refer to “Datafilling office parameters" for information on how CMS Auto Recall Blocking of Private Calls (CABOP) affects office parameters.
RESOFC	Residential Line CLASS Office Data Table. This table contains data on CLASS features and enables them for the office.
DRMUSERS	Digital Recorded Announcement Machine Users Table. This table describes the announcement requirements for various features.
CUSTSTN	Customer Group Station Operation. This table is required for a switching unit with North American translations and the MDC or RES. This table lists the station options assigned to each of the end user groups.
TMTCNTL.TREAT	Treatment Control. This table is used by the operating company to define the tone(s), announcement(s), state(s) (for example, IDLE or LOCKOUT); or combinations of these, that are returned to the originator of a call if a specified treatment code is encountered during call translation.
LCASCRCN	Local Calling Area Screening Control. This table determines if an AR call from a RES line to a private DN is a long distance call.

Datafilling table RESOFC

The following table shows the datafill specific to CMS Auto Recall Blocking of Private Calls (CABOP) for table RESOFC. Only those fields that apply directly to CMS Auto Recall Blocking of Private Calls (CABOP) are shown.

CMS Auto Recall Blocking of Private Calls (CABOP) (continued)

For a description of the other fields, refer to the data schema section of this document.

Datafilling table RESOFC

Field	Subfield or refinement	Entry	Explanation and action
KEY		see subfield	Key. This field consists of subfield FEATNAME.
	FEATNAME	ACB, AR	Class feature name. This field is the key to the table. Enter a CLASS feature as described below: • ACB (Automatic Call Back) • AR (Automatic Recall)
ENABLED		Y or N	Enabled. Enter Y (yes) to specify that the feature is enabled within the office. Enter N (no) to indicate the feature is disabled.
ACCESS		SUBSCR or UNIVER	Feature access. This field determines who can access the feature. Enter SUBSCR for end users only. Enter UNIVER for all RES lines to access the feature. ***Note:*** For features SCB and AR, if the entry in field ACCESS is changed, the entire datafill for the feature must be reentered.
FEATDATA		see subfield	Feature data. This field consists of subfield FEATNAME.
	FEATNAME	ACB, AR	Class feature name. Enter a CLASS feature and datafill its refinements as described below: • Enter ACB and datafill refinements. • Enter AR and datafill refinements.

Datafill example for table RESOFC

The following example shows sample datafill for table RESOFC.

CMS Auto Recall Blocking of Private Calls (CABOP) (continued)

MAP display example for table RESOFC

```
TABLE: RESOFC

KEY      ENABLED      ACCESS       FEATDATA
-------------------------------------------------------

ACB      Y            SUBSCR       ACB
```

Datafilling table DRMUSERS

The following table shows the datafill specific to CMS Auto Recall Blocking of Private Calls (CABOP) for table DRMUSERS. Only those fields that apply directly to CMS Auto Recall Blocking of Private Calls (CABOP) are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table DRMUSERS

Field	Subfield or refinement	Entry	Explanation and action
USERANN		see subfields	User announcement. This field consists of subfields CLLI and ANNUM.
	CLLI	alphanumeric (1 to 16 characters	Common language location identifier. Enter the name associated with the announcement group for MCCS as given in table ANNS.
	ANNUM	1 to 63	Announcement number. Enter the number assigned to the announcement.
PHSLIST		see subfield	Phrases list. This field consists of subfield PHRASES.
	PHRASES	alphanumeric	Phrases. Enter a vector of up to 32 phrases associated with an announcement. If less than 32 phrases are required, end the list with a dollar sign.

Datafill example for table DRMUSERS

The following example shows sample datafill for table DRMUSERS.

CMS Auto Recall Blocking of Private Calls (CABOP) (continued)

MAP display example for table DRMUSERS

```
TABLE: DRMUSERS
USERANN     PHSLIST
-------------------------------------------------------
CLASSANN  3 (LANGUAGE1)(CLASSENG5) (LANGUAGE2) $
CLASSANN  4 (LANGUAGE1)(CLASSENG11) (LANGUAGE2) $
CLASSANN  5 (LANGUAGE1)(CLASSENG8) (LANGUAGE2) $
CLASSANN  7 (LANGUAGE1)(CLASSENG6) (LANGUAGE2) $
CLASSANN  8 (LANGUAGE1)(CLASSENG12) (LANGUAGE2) $
```

Announcements for CABOP

Assume that phrases are used and that they are located on the EEPROM card number 1X79AA associated with DRAM number three shown below.

These phrases are assigned the correct phrase number on the EEPROM card using the DRAMREC utility as shown below. Assume that the four phrases introduced by CABOP are located at phrases numbers one through four on the EEPROM card located within DRAM number three.

Example input of the DRAMREC utility

```
DRAMREC
-------------------------------------------------
ASSIGN  3   CENG31  10  0   1
ASSIGN  3   CENG32  10  0   2
ASSIGN  3   CFRES31 10  0   3
ASSIGN  3   CFRES32 10  0   4
```

Datafilling table CUSTSTN

The following table shows the datafill specific to CMS Auto Recall Blocking of Private Calls (CABOP) for table CUSTSTN. Only those fields that apply directly to CMS Auto Recall Blocking of Private Calls (CABOP) are shown.

CMS Auto Recall Blocking of Private Calls (CABOP) (continued)

For a description of the other fields, refer to the data schema section of this document.

Datafilling table CUSTSTN

Field	Subfield or refinement	Entry	Explanation and action
CUSTNAME		alphanumeric (1 to 16 characters)	Customer group name. Enter the 1- to 16-character name assigned to the end user group.
OPTNAME		AR	Option name. Enter the name of the option.
OPTION		see subfields	Option. Enter the name of the option. This field consists of subfields RINGAPPL, RINGCYCL, TONES, RINGPTRN, CNCLACT, and ACTLEVEL.
	RINGAPPL	1 to 12	Ring application. Enter the maximum number of times ringback can be applied to an activator of option AR.
	RINGCYCL	numeric	Ring cycle. Enter the number of 6-second ring cycles used to recall the AR activator.
	TONES	Y or N	Tones. Enter Y if tones are used or N if announcements are used.
	RINGPTRN	ACBARP or AR	Ring pattern. Enter ACBARP for the ACB or AR ringing pattern on ringback.
	CNCLACT	Y or N	Cancel activation. Enter Y if an AR activation cancels all existing queued AR requests and queues the new request instead (allowing that one outstanding AR request is queued for the line). Enter N to allow lines to have AR requests against 30 different lines concurrently.
	ACTLEVEL	ONELEVEL or TWOLEVEL	Activation level. Enter a value to specify the activation level required. • ONELEVEL indicates that the end user enters an access code to use the feature. • TWOLEVEL indicates that the end user is prompted to enter a digit after entering the feature access code. An announcement prompts the end user either to proceed or terminate the AR feature activation.

CMS Auto Recall Blocking of Private Calls (CABOP) (continued)

Datafill example for table CUSTSTN

The following example shows sample datafill for table CUSTSTN.

MAP display example for table CUSTSTN

```
TABLE: CUSTSTN
CUSTNAME    OPTNAME     OPTION
-------------------------------------------------
RESG200     AR          1 2 Y ACBARRP N ONELEVEL
```

Datafilling table TMTCNTL.TREAT

The following table shows the datafill specific to CMS Auto Recall Blocking of Private Calls (CABOP) for table TMTCNTL.TREAT. Only those fields that apply directly to CMS Auto Recall Blocking of Private Calls (CABOP) are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table TMTCNTL.TREAT

Field	Subfield or refinement	Entry	Explanation and action
TREATMT		NOSC	Treatment name. Enter NOSC.
LOG		Y	Log. Enter Y for a trunk or line message 138 printout each time a translation is routed to a treatment.
FSTRTE		see subfields	First route. This field consists of subfields FSTRTSEL and CLLI.
	FSTRTSEL	selector T	First route selector. Enter the first route selector T.
	CLLI	alphanumeric (1 to 16 characters	Common language location identifier. Enter the CLLI of the tone to which translation routes.

Datafill example for table TMTCNTL.TREAT

The following example shows sample datafill for table TMTCNTL.TREAT.

CMS Auto Recall Blocking of Private Calls (CABOP) (continued)

MAP display example for table TMTCNTL.TREAT

```
TABLE: TMTCNTL.TREAT
TREATMT     LOG          FSTRTE
-------------------------------------------------------
NOSC        Y            T   RAL0200
```

Datafilling table LCASCRCN

The following table shows the datafill specific to CMS Auto Recall Blocking of Private Calls (CABOP) for table LCASCRCN. Only those fields that apply directly to CMS Auto Recall Blocking of Private Calls (CABOP) are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table LCASCRCN

Field	Subfield or refinement	Entry	Explanation and action
NPALOCNM		see subfields	NPA local calling area subtable name. This field consists of subfields STS and LCANAME.
	STS	numeric	Serving translation scheme. Enter a serving NPA code for the trunk group.
	LCANAME	alphanumeric (up to 4 characters)	Local calling area name. Enter the name of table LCASCRCN.LCASCR. Entry NLCA is not allowed in table LCASCRCN because it is reserved by DMS software to mean no local calling area screening. (Accidental addition of NLCA in table LCASCRCN followed by deletion removes NLCA from tables such as LINEATTR field LCANAME, making the specification of no local calling area screening impossible.)

Datafill example for table LCASCRCN

The following example shows sample datafill for table LCASCRCN.

CMS Auto Recall Blocking of Private Calls (CABOP) (end)

MAP display example for table LCASCRCN

```
TABLE:  LCASCRCN
NPALOCNM

-------------------------------------------------------

613 OTWA
```

Translation verification tools

CMS Auto Recall Blocking of Private Calls (CABOP) does not use translation verification tools.

SERVORD

CMS Auto Recall Blocking of Private Calls (CABOP) does not use SERVORD (Service Order System)

Customer Originated Trace (COT)

Ordering codes

Functional group ordering code: RES00005

Functionality ordering code: RES00030

Release applicability

NA011 and up

Prerequisites

To operate, Customer Originated Trace (COT) has the following prerequisites:

- BAS Generic, BAS00003
- MDC Minimum, MDC00001
- MDC Standard, MDC00003
- RES Service Enablers, RES00006

Network configuration

Common Channel Signaling No. 7 (CCS7) connectivity is required for network (interoffice) configuration of Customer Originated Trace. The following feature packages are required for CCS7 connectivity:

- Base ISUP, ISP70001
- TEL CCS7 Base, TEL00008
- BAS Generic, BAS00003

Description

The Customer Originated Trace (COT) feature allows the subscriber to activate a trace of the last incoming call. The trace results in an output report generated by the DMS log subsystem. Information about the call is available to the operating company, but not to the subscriber. The description of the traced call includes the calling directory number (DN) and DN suppression status. The trace also provides information on whether or not the call was out-of-area, and the time the call was received.

Operation

COT is activated by the subscriber and therefore requires no operating company intervention (except for administration of the COT service orders and COT log stream). COT can eliminate many of the costs currently associated with the tracing of malicious calls.

Customer Originated Trace (COT) (continued)

Incoming memory slot

The COT feature is distinct from many other call processing features in that it deals with information pertaining to a previously disconnected call. The disconnected call's information is stored in a buffer called an incoming memory slot (IMS). The IMS is associated with the subscriber's line and is assigned at the time that line option COT is added. The IMS is updated each time the subscriber's set is alerted. Only the most recent incoming call is traced.

“Alerted" does not indicate that the call was answered. The IMS is updated when the subscriber's line is rung, not when it is answered.

Note: For the purpose of updating the IMS, ring splash is not considered as “alerting."

For interoffice calls with CCS7, the IMS is updated with information received in the initial address message (IAM) as part of CCS7 call setup. Where the traced call is out-of-area (that is, the IAM is absent or incomplete because CSS7 connectivity was absent for all or part of the route), the IMS is updated to indicate this fact. The calling DN cannot be stored in this case, but the COT feature creates a log indicating that an out-of-area internode call was traced.

For intraoffice calls, the IMS is updated with data from local call processing.

Operating company control of COT

Line option COT gives the subscriber access to COT. This option is datafilled in Table RESOFC and assigned to lines using the service order system (SERVORD). The COT feature can also be disabled across the entire office. Enabling the COT feature across the entire office for subscription access means that Subscriber Services lines having option COT are able to access the COT feature. Table RESOFC contains the names of the announcements and the activation level to be used for the COT feature.

The two-digit COT access code can be changed for each office individually using translations datafill in Table IBNXLA.

Customer Originated Trace (COT) (continued)

COT announcements

COT announcements are obtained from the DMS digital recorded announcement machine (DRAM). Sample COT announcements are listed in the following table.

Note: Before datafilling announcements for the COT feature, read "Appendix Datafilling announcements," for Subscriber Services general announcement information.

COT announcements

Announce-ment	Definition	Recommended sample
COTCONF	COT confirmation indicating successful trace	"You have successfully traced your last incoming call. Please contact your operating company for further assistance."
COTFAIL	COT failure to provide complete trace	"A complete trace cannot be generated for your last incoming call. Please contact your operating company for further assistance."
COTPRMT1	COT initial prompt	"This is the customer originated trace feature. To activate a trace of your last incoming call, dial one now. Otherwise, please hang up."
COTPRMTN	COT Nth prompt	"You have not entered the proper digit. To activate a trace of your last incoming call, dial one now. Otherwise, please hang up."

Random access memory (RAM) based recordings, created by the operating company, are used. In addition to these standard RAM-based recordings, two DRAM cards with programmable read-only access (PROM) based recordings for customized COT announcements are available. The operating company can select, through an office parameter, standard or customized announcements. Note that with customized announcements, only one-level activation can be used. See "Datafilling office parameters" in this feature description for more information on selecting standard or customized announcements.

Datafill for standard announcements

Tables DRAMS, CLLI, ANNS, ANNMEMS, DRAMTRK, and RESOFC must be datafilled if standard announcements are used.

Customer Originated Trace (COT) (continued)

Table DRAMS

Table DRAMS is shown in the example that follows. The example shows the definitions of the COT cards.

```
DRAMCARD     TMTYPE   TMNO   TMCKT   CARDCODE     CARDINFO
_____________________________________________________________
2 0      MTM     4      0       1X75BA   CTLR
2 1      MTM     4      2       1X76BA   PROM 0 1
2 3      MTM     4      6       1X76AJ   PROM 2 3
2 5      MTM     4     10       1X76AK   PROM 4 5
2 7      MTM     4     14       1X76AM   PROM 6 7
```

Table CLLI

Table CLLI is shown in the example that follows. The example shows DRAM2 with capabilities for 10 trunks.

```
CLLI     ADNUM        TRKGRSIZ     ADMININFO
_____________________________________________________
DRAM2    524            10         DRAM_MTM_4
```

Table ANNS

Table ANNS is shown in the example that follows. The example shows the announcement CLLI and the announcement type.

```
CLLI     ANTYPE   TRAFSNO MAXCONN CYTIME     MAXCYC
_____________________________________________________
COTSC     STND   25        30       10       1
COTFL     STND   25        30       11       1
COTPRMT1 STND   30        1        0        1
COTPRMTN STND   30        1        0        1
```

Table ANNMEMS

Table ANNMEMS is shown in the example that follows. The example shows the DRAMS associated with the CLLI. Two cards are required for COT.

Customer Originated Trace (COT) (continued)

```
ANNMEM    HDWTYPE CARD  MEMINFO
_____________________________________________________________
COTSC     1   DRAM   DRA  (O MTM 4 2) (1 MTM 4 2) $
COTFL     1   DRAM   DRA  (0 MTM 4 4) (1 MTM 4 4) $
COTPRMT1 1   DRAM   DRA  (0 MTM 4 6) $
COTPRMTN 1   DRAM   DRA  (0 MTM 4 8) $
```

Table DRAMTRK

Table DRAMTRK is shown in the example that follows.

```
ANNTRACK    PHSLIST
_____________________________________________________________
CONFCOT 0   SILENCE CLASSENG9
CONFCOT 1   CLASSFRE5 CLASSFRE1
FAILCOT 0   SILENCE CLASSENG14
FAILCOT 1   CLASSFRE6 CLASSFRE1
PRMT1COT 0  CLASSENGx SILENCE CLASSFREx SILENCE
PRMTNCOT 0  CLASSENGy SILENCE CLASSFREy SILENCE
```

Table RESOFC

Table RESOFC is shown with subscriber access in the example that follows.

```
KEY  ENABLED            FEATDATA
        FNALANN
_____________________________________________________________
COT    Y    SUBSCR   COT ONELEVEL (COTCONF COTSC)
(COTFAIL COTFL) $
        $
```

Table RESOFC is shown with universal access in the example that follows.

```
KEY  ENABLED ACCESS FEATDATA FNALANN
_____________________________________________________
COT    Y     UNIVER   COT AMA  31  N  $
```

Datafill for customized announcements

Tables DRAMS, CLLI, ANNS, ANNMEMS, DRMUSERS, and RESOFC must be datafilled if customized announcements are used.

Table DRAMS

Table DRAMS is shown in the example that follows. The example shows the definitions of the EEPROM cards used for customized announcements.

```
DRAMCARD    TMTYPE  TMNO    TMCKT   CARDCODE   CARDINFO
_____________________________________________________
5  3    MTM 9   6   1X79AA  EEPROM ( 4 ) $
5  4    MTM 9   8   1X79AA  EEPROM ( 5 ) $
```

Table CLLI

Table CLLI is shown in the example that follows. The example shows the CLASS CLLI, specifying the maximum number of announcement members for all CLASS applications.

```
CLLI     ADNUM  TRKGRPSIZ        ADMININF
_____________________________________________________
CLASS   403     255         RECORDING
```

Table ANNS

Table ANNS is shown in the example that follows. The example shows the announcement CLLI and the customized announcement type.

Customer Originated Trace (COT) (continued)

```
CLLI      ANTYPE TRAFSNO    MAXCONN CYTIME    MAXCYC
_____________________________________________________
CLASS     CLASS  30  1      0       1
```

Table ANNMEMS

Table ANNMEMS is shown in the example that follows. The example shows the number of circuits to be assigned to the members of the CLASS announcement group.

```
ANNMEM   HDWTYPE     CARD        MEMINFO
_____________________________________________________
CLASS     20 DRAM        DRA     (0 MTM 4 0) $
CLASS     21 DRAM        DRA     (0 MTM 4 1) $
```

Table DRMUSERS

Table DRMUSERS is shown in the table that follows. The example shows two customized CLASS announcements from Table ANNMEMS.

```
USERANN PHSLIST
_____________________________________________________
CLASS     20     (LANGUAGE1) (CLASSENG5)  $
CLASS     21     (LANGUAGE1) (CLASSENG11) $
```

Table RESOFC

Table RESOFC is shown in the example that follows.

```
KEY  ENABLED            FEATDATA
       FNALANN
_____________________________________________________
COT    Y    SUBSCR COT ONELEVEL (COTCONF COTSC)
(COTFAIL COTFL) $
       $
```

Customer Originated Trace (COT) (continued)

System and subscriber errors

If the subscriber has accessed the COT feature and system failures prevent the feature from proceeding, the call is routed to the appropriate treatment. Treatment results are controlled by site-dependent datafill and are thus under operating company control. Refer to data schema section of this document for information on Table TMTCNTL.

If the subscriber flashes or dials the wrong digit while listening to the COTCONF or COTFAIL announcements (or corresponding tones), this input is ignored. However, if the subscriber flashes or dials the wrong digit during two-level activation, this input is handled according to two-level activation.

The COT feature cannot be flash-activated when a two-party call is in progress.

Universal access

The COT feature can be provided to all RES subscribers and IBN lines in an office through universal access when feature package NTXQ70AA, Universal Access to CLASS Features, is present in the office. For universal access, the value UNIVER instead of SUBSCR should be datafilled in subfield ACCESS in Table RESOFC.

Universal access only changes the *method* of access, not the operation of a CLASS feature. When universal access is available in an office, the subscriber can still have the feature assigned as a line option. Accessing a CLASS feature assigned to the subscriber as a line option or customer group option takes precedence over accessing the feature through universal access.

The Software Optional Control (SOC) allows the operating company to enable the functionality of common access for CLASS features through a Right to Use (RTU) access code. The subscriber is able to access the CLASS features without assigning each feature to the line.

The SOC commands enable or disable the universal access for CLASSfeatures. The RTU access code assignment to RES00011 and setting the state to ON enables the universal access for CLASS through SOC. The state is set to IDLE to disable the universal access for CLASS through SOC.

Note 1: Universal access to CLASS features is not applicable to Subscriber Services lines with IBN line class codes (LCC) through NA007.

Note 2: Universal access to CLASS features is not applicable to universal access to display features.

Note 3: Refer to “Universal Access to CLASS Features" for more information on universal access.

Customer Originated Trace (COT) (continued)

Translations table flow

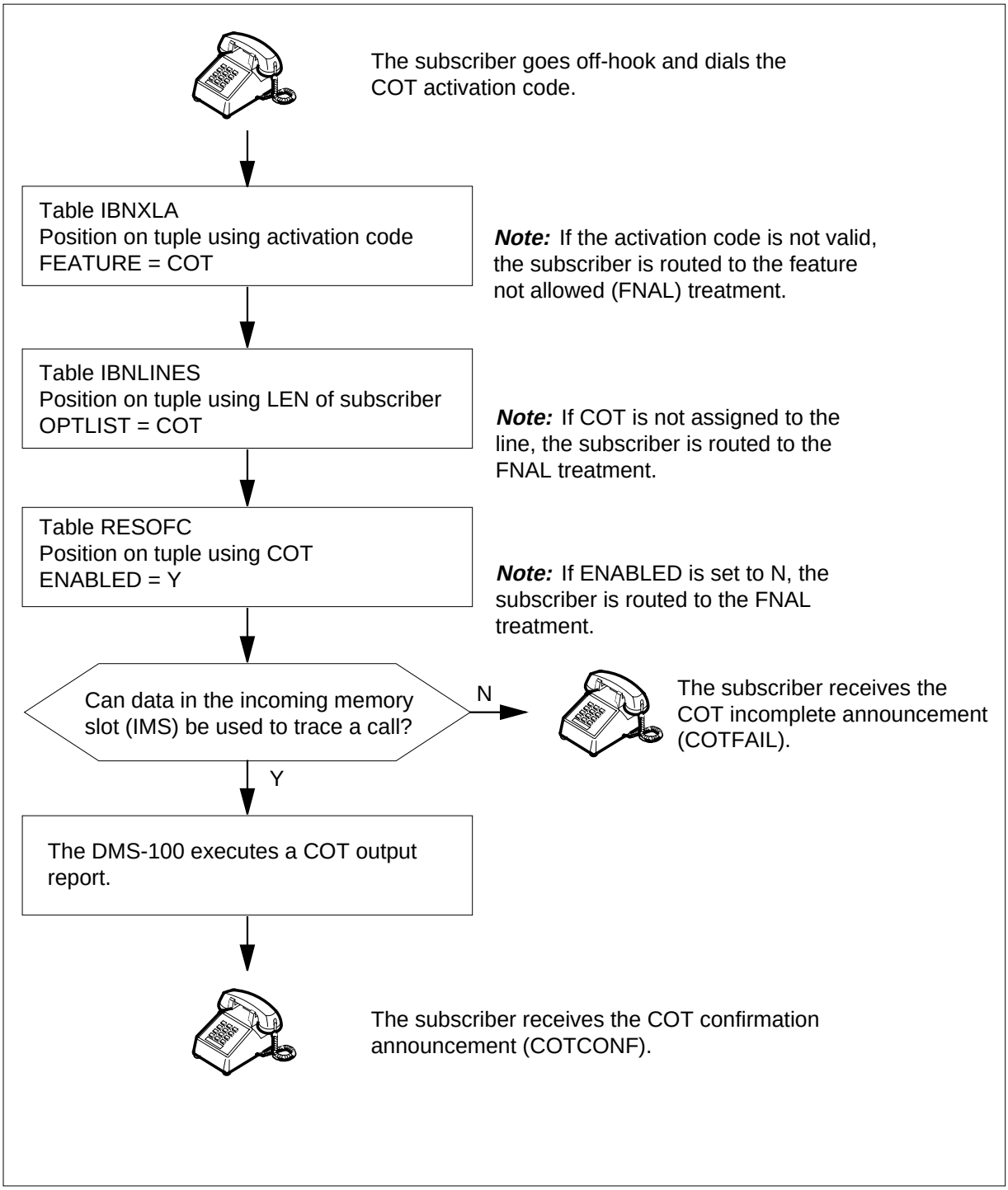
The Customer Originated Trace (COT) translations tables are described in the following list:

- Table IBNXLA provides the name of the feature associated with an activation code.
- Table IBNLINES lists the features assigned to a line equipment number (LEN).
- Table RESOFC controls the availability of individual CLASS features for an office. For this example, COT is enabled.

The Customer Originated Trace (COT) translation process is shown in the flowchart that follows. The flowchart shows the table flow for COT one-level activation.

Customer Originated Trace (COT) (continued)

Table flow for Customer Originated Trace (COT)



Customer Originated Trace (COT) (continued)

The following table lists the datafill content used in the flowchart. The datafill example is for one-level activation; COT activation code is 57; and LEN of subscriber is HOST 00 02 05.

Datafill example for Customer Originated Trace (COT)

Datafill table	Example data
IBNXLA	RXCFN 57 FEAT N N N COT
IBNLINES (note)	HOST 00 02 0 05 0 DT STN RES 6210011 0 (COT) $
RESOFC	COT Y SUBSCR COT ONELEVEL (COTCONF CONFCLLI) (COTFAIL FAILCLLI) $
Note: This table is datafilled through SERVORD; therefore, no datafill procedure or example is provided. Refer to “SERVORD" for an example of using SERVORD to datafill this table.	

Limitations and restrictions

The following limitations and restrictions apply to Customer Originated Trace (COT):

- Line options that are incompatible with COT are
  - — Denied Origination (DOR)
  - — Denied Termination (DTM)
  - — Automatic Line (AUL)
  - — Multiple Appearance Directory Number (MDN)
- The COT feature cannot be flash-activated when a two-party call is in progress.
- If office parameter COT_ANNOUNCEMENT_TYPE is set to CUSTOM, only one-level activation can be used.

Interactions

The following paragraphs describe the interactions between Customer Originated Trace (COT) and other functionalities.

Call Forwarding

The originating DN is stored or traced, not the DN of the base station forwarding the call.

Call Pickup

When Call Pickup (CPU) is used, COT cannot be used to trace the call.

Customer Originated Trace (COT) (continued)

Call Waiting

The DN of the party that call waited is traced, whether or not the call was answered. When field CWT displays a Y, the traced DN must not be that of the caller. For this reason, traces that have field CWT set to Y are output as LINE150 logs.

Calling Number Delivery

Calling Number Delivery (CND) does not affect use of the COT feature.

Calling Number Delivery Blocking

If a COT subscriber has the Calling Number Delivery Blocking (CNDB) feature, the COT feature traces the private DN in the output report if the traced DN originated from a line whose DN is suppressed. The subscriber does not see the result of the trace. The information remains private, as it is still under control of the operating company.

Meridian Digital Centrex lines

If a Subscriber Services line traces an interoffice call originating from a Meridian Digital Centrex (MDC) line (for example, a line class code of IBN), the traced DN is the DN datafilled against the Centrex LEN. In some offices the DN entered against an MDC LEN is not the public DN but instead is some DN that is more convenient for intraoffice translations. This is the DN that is traced. There is no attempt on the part of the call processing utilities to determine whether the DN stored against the LEN is a public DN. In the case of an ISUP interoffice call originating from an MDC line, the DN traced in the COT log is the DN provided in the IAM.

Activation/deactivation by the end user

The subscriber can activate COT using either the one-level activation procedure or the two-level activation procedure.

One-level activation

To activate COT, the subscriber goes off-hook, listens for dial tone, and dials the COT access code. The COT access code is of the form 11XX for dial pulse (DP) lines and *XX for dual-tone multifrequency (DTMF) lines, where XX is a 2-digit code defined by the operating company for each office individually. The recommended access codes for the COT feature for DP and DTMF lines are 1157 and *57, respectively.

Under one-level activation, the subscriber dials the COT access code. Upon receiving the code, the DMS checks to ensure that COT is enabled for the office and that the subscriber has option COT assigned to his or her line. If the check passes, the feature proceeds; otherwise, the COT attempt is routed to the feature not allowed (FNAL) treatment. The results of such treatments are

Customer Originated Trace (COT) (continued)

flexible and are entirely under the operating company's control. See the discussion of Table TMTCNTL in the data schema section of this document.

At this early point in the call, it is also possible that the subscriber may receive the negative acknowledgment (NACK) treatment or the no software resources (NOSR) treatment. The NACK treatment is given when the feature is denied due to feature interactions. The NOSR treatment is given when there is a problem in acquiring the necessary resources (for example, feature data blocks).

After the feature has been activated (that is, when the subscriber is allowed access and there are no interaction or resource problems), the system extracts the contents of the subscriber's IMS and executes the COT output report. At this point the feature operation follows one of two paths, depending on whether the IMS contains valid, complete data, or contains incomplete or ambiguous data.

In the case of a complete trace (all required data is present and valid), the subscriber hears the COTCONF announcement, for example, “You have successfully traced your last incoming call. Please contact your operating company for further assistance." The LINE150 log is generated.

In the case of an incomplete trace, the user hears the COTFAIL announcement, for example, “A complete trace cannot be generated for your last incoming call. Please contact your operating company for further assistance." The LINE151 log is generated. Incomplete traces correspond to situations such as out-of-area, calling party DNs other than seven or ten digits in length, or ambiguous data. An example of ambiguous data is an IMS that has the INTERWORKING_ENCOUNTERED bit set to Y and at the same time contains a valid traced DN.

Once the subscriber has received the COT announcement, the call releases in the standard fashion appropriate to a single-party Subscriber Services call. The subscriber has 10 s in which to go on-hook before being routed to the disconnect (DISC) treatment. (The line DISC treatment is generally datafilled with a route list.)

> ***Note:*** If a COT announcement has not been properly entered in Table RESOFC, the subscriber hears a predetermined tone. The COT success announcement is represented by feature confirmation tone (two beeps), and the COT incomplete announcement is represented by feature reorder tone (a fast busy tone) for 5s. These tones are hard-coded and are not changeable by extended-treatment table control.

Customer Originated Trace (COT) (continued)

Activation/deactivation of Customer Originated Trace (COT) by the end user

The procedure for one-level activation of COT follows:

At your telephone:

1 Go off-hook.

2 Hear dial tone.

3 Dial the COT access code.

4 Wait for confirmation of successful trace.

5 Go on-hook.

Two-level activation

In the initial stages of a call, two-level activation proceeds in a manner identical to one-level activation. After the data in the IMS is validated and found to be complete, the system determines whether the COT activation level for the office is two-level. If the data is ambiguous or incomplete, activation reverts to one-level, and an incomplete trace results. If the activation level is two-level, the subscriber hears the COTPRMT1 announcement, for example, “This is the customer originated trace feature. To activate a trace of your last incoming call, dial one now. Otherwise, please hang up."

Note: With customized announcements, two-level activation cannot be used.

The announcement stops as soon as the subscriber enters a digit.

At this point, if the subscriber dials the digit 1, the trace proceeds. A LINE150 log is generated and the COTCONF announcement is given. If the user hangs up, no output report is generated, and the call terminates.

The time-out value the system uses while waiting for a digit to be dialed is equal to a combination of the following:

- the value datafilled in office parameter LN_PERM_SIG_TIME (in Table OFCENG, units of 160 ms, default 20 s)
- the length of the prompt announcement (as datafilled in Table ANNS)

The maximum total allowable time is 40 s, due to constraints in the peripheral.

If this digit collection time-out occurs, the subscriber hears the COTPRMTN announcement, for example, “You have not entered the proper digit. To activate a trace of your last incoming call, dial one now. Otherwise, please

Customer Originated Trace (COT) (continued)

hang up." Field EXPIRIES in the COT tuple of Table RESOFC defines the number of times a subscriber can allow digit collection to time-out.

If an incorrect digit is entered, the subscriber hears the COTPRMTN announcement. Field BADIGITS in the COT tuple of Table RESOFC controls the number of times (from zero to five) that incorrect digits can be entered. An associated counter tracks the incidents of incorrect digit entry.

If an incorrect digit is entered, repeat prompting is immediate: the subscriber does not need to wait for the digit collection timer to expire before being reprompted. The following items are considered bad digit input and cause the counter to be incremented by one each time they are entered:

- digits 0 and 2-9
- a switchhook flash
- octothorpe (#)
- asterisk (*)

Note: The reporting of the # and * digits to the system is dependent on the type of telephone set. For DP sets, the # and the * digits are not reported and therefore have no effect on the feature operation. For DTMF sets, the # and * digits are reported and do affect feature operation, as described previously.

If the EXPIRIES or BADIGITS values are exceeded, the call is routed to the NACK treatment. The result of the NACK treatment is flexible and is entirely under operating company control.

Whenever two-level activation is chosen in Table RESOFC, fields EXPIRIES, BADIGITS, COTPRMT1, and COTPRMTN are mandatory. If either of the prompting announcements fails during feature operation, the feature reverts to one of the DMS extended treatments. Possible treatments are no service circuits (NOSC), network block heavy traffic (NBLH) or NOSR, depending on the cause of the interruptible announcement failure.

Because COT announcements are interruptible, the system takes immediate action as soon as a digit is entered by the subscriber. However, if the first digit the subscriber enters is a 1, feature operation proceeds, and all digits subsequently entered are ignored.

Activation/deactivation of Customer Originated Trace (COT) by the end user

The procedure for two-level activation of COT follows:

At your telephone:

1 Go off-hook.

2 Hear dial tone.

3 Dial the COT access code.

4 Wait for an additional prompt.

5 Indicate positive acknowledgment of the prompt.

6 Wait for confirmation of successful trace.

7 Go on-hook.

Billing

When subscription usage sensitive pricing (SUSP) is set to ON in Table AMAOPTS (Automatic Message Accounting Options), then the AMA billing option is available for the COT feature. See the following figure for an example of option SUSP in Table AMAOPTS. The AMA billing option is then specified during the addition of option COT to a subscriber line. This is done through service orders.

Example of option SUSP in Table AMAOPTS

OPTION	SCHEDULE
SUSP	ON

Call code and structure code

The CLASS feature code for COT is 070. Refer to “Billing" in “Calling Name Delivery (CNAMD)" for detailed information on billing for CLASS features.

Station Message Detail Recording

Customer Originated Trace (COT) does not affect Station Message Detail Recording.

Customer Originated Trace (COT) (continued)

Datafilling office parameters

The following table shows the office parameters used by Customer Originated Trace (COT). For more information about office parameters, refer to *Office Parameters Reference Manual.*

Office parameters used by Customer Originated Trace (COT)

Table name	Parameter name	Explanation and action
OFCENG	COT_ANNOUNCEMENT_TYPE	Indicates whether standard (RAM-based) or custom (PROM-based) COT announcements will be used. If this parameter is set to CUSTOM, only one-level activation can be used.
	FTRQ4WAREAS	Reserves temporary work areas for COT to be used as COT Timestamp Blocks. When a change is made to this parameter, the following message is displayed: `WARM RESTART REQUIRED TO ACTIVATE CHANGE TO THE NUMBER OF FTRQ4WAREAS BLOCKS`
Note: The COT feature increases the provisioning requirement for FTRQ4WAREAS based on the number of lines with the COT feature assigned. The provisioning for the FTRQ4WAREAS parameter must now add the following formula for the CLASS COT feature into the already existing provisioning formula: 0.02 x number of lines with COT feature / 10		

Datafill sequence

The following table lists the tables that require datafill to implement Customer Originated Trace (COT). The tables are listed in the order in which they are to be datafilled.

Note: Tables DRAMS, CLLI, ANNS, ANNMEMS, DRAMTRK (for standard announcements), and DRMUSERS (for customized announcements) must be datafilled in order for the COT announcements to work. Refer to “Datafill for standard announcements" and “Datafill for customized announcements" in this feature description for examples of datafill for the COT feature. Also refer to “Appendix Datafilling announcements," for Subscriber Services general announcement information. The method of datafilling standard announcements is

described in *Digital Recorded Announcement Machine DRAM and EDRAM Guide*.

Datafill tables required for Customer Originated Trace (COT)

Table	Purpose of table
OFCENG	Office Engineering. This table contains data on engineering parameters for the office. Refer to “Datafilling office parameters" for how COT affects office parameters.
RESOFC	Residential Line CLASS Office Data. Table RESOFC contains data on CLASS features and enables the COT feature for the office.
IBNXLA	IBN Translations. Table IBNXLA stores the data for the digit translations of calls from an MDC station, attendant console, incoming trunk group, or incoming side of a two-way trunk group. This table must be datafilled so that translations will recognize the access code that corresponds to the COT feature.

Datafilling table RESOFC (one-level activation)

The following table shows the datafill specific to Customer Originated Trace (COT) for table RESOFC (one-level activation). Only those fields that apply directly to Customer Originated Trace (COT) are shown. Refer to the data schema section of this doucument for a description of the other fields.

Datafilling table RESOFC (one-level activation) (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
KEY		see subfields	Key. This field consists of the subfield FEATNAME.
	FEATNAME	COT	Feature Name. This subfield is the key to the table. It specifies the name of the feature. Enter COT.
ENABLED		Y or N	Enabled. This field specifies whether or not the feature is enabled in the office. Enter Y or N. ***Note:*** The default value for each CLASS feature included in the load is N (disabled).
FEATDATA		see subfields	Feature Data. This field consists of subfields ACCESS, FEATNAME, ACTLEVEL and ANNCS.

Customer Originated Trace (COT) (continued)

Datafilling table RESOFC (one-level activation) (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	ACCESS	SUBSCR or UNIVER	Feature Access. This subfield specifies how the feature is accessed. SUBSCR indicates subscription access only and UNIVER indicates universal access for all RES lines. Enter SUBSCR or UNIVER. ***Note:*** The value UNIVER is valid only when feature package NTXQ70AA, Universal Access to CLASS Features, is present in the office. Refer to “Universal Access to CLASS Features" for more information on universal access.
	FEATNAME	COT	Feature Name. This subfield specifies the feature for the tuple. Enter COT.
	ACTLEVEL	ONELEVEL or TWOLEVEL	Activation Level. This subfield specifies the activation method for the COT feature. Enter ONE-LEVEL or TWO-LEVEL (the default is ONE-LEVEL). One-level activation means the subscriber accesses the feature by dialing the feature access code. Two-level activation means the subscriber is prompted to dial 1 to proceed with the COT feature, or otherwise to hang up.

Customer Originated Trace (COT) (continued)

Datafilling table RESOFC (one-level activation) (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	ANNCS	COTCONF <CLLI> or COTFAIL <CLLI> or $	Announcements. This subfield allows the operating company to select • no COT announcements • one COT announcement: for the case of a complete call trace or partial trace • two COT announcements: for both the complete and partial traces Enter COTCONF <CLLI> or COTFAIL <CLLI> or $. ***Note:*** The announcement clli must be datafilled in Tables CLLI, ANNS, ANNMEMS, and DRAMTRK first before it can be datafilled here.
FNALANN		see subfields	Feature Not Allowed Announcement. This field consists of the subfields POTS_ACCESS and FNAL_CLLI. Refer to “Datafill procedure for Table RESOFC" for “Feature not allowed announcement" on for details on these subfields.

Datafill example for table RESOFC (one-level activation)

The following example shows sample datafill for table RESOFC (one-level activation).

MAP display example for table RESOFC (one-level activation)

```
KEY ENABLED                          FEATDATA
          FNALANN
_____________________________________________________________________
COT   Y     SUBSCR    COT  ONELEVEL  $          $
COT   Y    SUBSCR    COT  ONELEVEL (COTCONF COTSC) $          $
COT   Y    SUBSCR    COT  ONELEVEL (COTFAIL COTFL) $          $
COT   Y    SUBSCR    COT  ONELEVEL (CONTCONF COTSC)
(CONTCONF COTFL) $
        $
```

Customer Originated Trace (COT) (continued)

Datafilling table RESOFC (two-level activation)

The following table shows the datafill specific to Customer Originated Trace (COT) for table RESOFC (two-level activation). Only those fields that apply directly to Customer Originated Trace (COT) are shown. Refer to the data schema section of this document for a description of the other fields.

Datafilling table RESOFC (two-level activation) (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
KEY		see subfields	Key. This field consists of the subfield FEATNAME.
	FEATNAME	COT	Feature Name. This subfield is the key to the table. It specifies the name of the feature. Enter COT.
ENABLED		Y or N	Enabled. This field specifies whether or not the feature is enabled in the office. Enter Y or N. ***Note:*** The default value for each CLASS feature included in the load is N (disabled).
FEATDATA		see subfields	Feature Data. This field consists of subfields ACCESS, FEATNAME, ACTLEVEL, ANNCS, EXPIRIES, BADIGITS, COTPRMPT1, and CPTPRMTN.
	ACCESS	SUBSCR UNIVER	Feature Access. This subfield specifies how the feature is accessed. SUBSCR indicates subscription access only and UNIVER indicates universal access for all RES lines. Enter SUBSCR or UNIVER. ***Note:*** The value UNIVER is valid only when feature package NTXQ70AA, Universal Access to CLASS Features, is present in the office. Refer to “Universal Access to CLASS Features" for more information on universal access.
	FEATNAME	COT	Feature Name. This subfield specifies the feature for the tuple. Enter COT.

Customer Originated Trace (COT) (continued)

Datafilling table RESOFC (two-level activation) (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	ACTLEVEL	ONELEVEL TWOLEVEL	Activation Level. This subfield specifies the activation method for the COT feature. Enter ONE-LEVEL or TWO-LEVEL (the default is ONE-LEVEL). ONE-LEVEL activation means the subscriber accesses the feature by dialing the feature access code. TWO-LEVEL activation means the subscriber is prompted to dial 1 to proceed with the COT feature, or otherwise to hang up.
	ANNCS	COTCONF <CLLI> or COTFAIL <CLLI $	Announcements. This subfield allows the operating company to select • no COT announcements • one COT announcement: for the case of a complete call trace or partial trace • two COT announcements: for both the complete and partial traces Enter COTCONF <CLLI> or COTFAIL <CLLI> or $. ***Note:*** The announcement clli must be datafilled in Tables CLLI, ANNS, ANNMEMS, and DRAMTRK first before it can be datafilled here.
	EXPIRIES	0 to 5	Expires. When ACTLEVEL is set to TWOLEVEL, the parameter EXPIRIES is used to determine the number of times that a subscriber can allow two-level digit collection to time out. If the value of this parameter is exceeded, the call is routed to NACK treatment. Enter a value from 0-5.
	BADIGITS	0 to 5	Bad Digits. When ACTLEVEL is set to TWOLEVEL, the parameter BADIGITS is used to determine the number of times that a subscriber can enter the wrong input during two-level activation. If the value of this parameter is exceeded, the call is routed to NACK treatment. Enter a value from 0 -5.

Customer Originated Trace (COT) (continued)

Datafilling table RESOFC (two-level activation) (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	COTPRMT1	CLLI	COT PRMT1. This subfield specifies the CLLI of the first prompting announcement provided to the user during two-level activation. The CLLI must be datafilled in Tables CLLI, ANNS, and ANNMEMS. Enter this CLLI.
	COTPRMTN	CLLI	COT PRMTN. This subfield specifies the CLLI of the repeat prompting announcement provided to the subscriber during two-level activation. The CLLI must be datafilled in Tables CLLI, ANNS, and ANNMEMS. Enter this CLLI.
FNALANN		see subfields	Feature Not Allowed Announcement. This field consists of the subfields POTS_ACCESS and FNAL_CLLI. Refer to “Datafill procedure for Table RESOFC" for “Feature not allowed announcement" on for details on these subfields.

Datafill example for table RESOFC (two-level activation)

The following example shows sample datafill for table RESOFC (two-level activation).

MAP display example for table RESOFC (two-level activation)

```
KEY ENABLED                          FEATDATA
        FNALANN
_____________________________________________________________
COT   Y   SUBSCR COT  TWOLEVEL $ 3 3 COTCLLIP1
COTCLLIPN
        $
COT   Y    SUBSCR  COT TWOLEVEL (COTCONF COTSC) $ 3
3 COTCLLIP1 COTCLLIPN
        $
COT   Y    SUBSCR  COT TWOLEVEL (COTFAIL COTFL) $ 3
3 COTCLLIP1 COTCLLIPN
        $
COT   Y     SUBSCR   COT TWOLEVEL (COTCONF COTSC)
(COTCONF COTFL) $ 3 3 COTCLLIP1 COTCLLIPN $
        $
```

Customer Originated Trace (COT) (continued)

Datafilling table IBNXLA

The following table shows the datafill specific to Customer Originated Trace (COT) for table IBNXLA. Only those fields that apply directly to Customer Originated Trace (COT) are shown. Refer to the data schema section of this document for a description of the other fields.

Datafilling table IBNXLA

Field	Subfield or refinement	Entry	Explanation and action
KEY		see subfields	Key. This field consists of the subfields XLANAME and DGLIDX. These subfields are described as follows and must be entered in succession.
	XLANAME	1- to 8-character name	Translator Name. This subfield specifies the 1- to 8-character name assigned to the translator. Enter RXCFN.
	DGLIDX	57	Digilator Index. This subfield specifies the digit or digits assigned to the index as the access code. Enter 57.
RESULT		see subfields	Result. This field consists of the subfields TRSEL, ACR, SMDR, and FEATURE.
	TRSEL	FEAT	Translation Selector. This subfield specifies the translation selector. Enter FEAT.
	ACR	N	Account Entry Code. This subfield specifies whether or not an account entry code is required. Enter N.
	SMDR	N	Station Message Detail Recording. This subfield specifies whether or not SMDR is required. Enter N.
	FEATURE	COT	Feature. This subfield specifies the name of the feature to which the code is assigned. Enter COT.

Customer Originated Trace (COT) (continued)

Datafill example for table IBNXLA

The following example shows sample datafill for table IBNXLA. The tuple shown below must be added for the Subscriber Services feature translator, which translates the COT access code.

> ***Note:*** The recommended access code is 57. The recommended Subscriber Services datafill should be used to prevent speed calling long access codes from overlapping with the COT access code, and to provide the proper translations for cases where the AMBIG selector is required.

MAP display example for table IBNXLA

```
        KEY              RESULT
____________________________________________________________
    RXCFN   57           FEAT N  N  N COT
```

Translation verification tools

The following example shows the output from TRAVER when it is used to verify Customer Originated Trace (COT).

Customer Originated Trace (COT) (continued)

TRAVER output example for Customer Originated Trace (COT)

```
>TRAVER L 6211233 'B57' B
TABLE IBNLINES
HOST 00 0 09 07 0 DP STN RES 6211233 0 $
TABLE LINEATTR
0 1FR NONE NT FR01 0 613 P621 L613 TSPS 10 NIL NILSFC       LATA1 0
NIL NIL 00 Y RESGRP 0 2
LCABILL OFF – BILLING DONE ON BASIS OF CALLTYPE
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TUPLE NOT FOUND
TABLE NCOS
RESGRP 2 0 0 RNCOS2 ( XLAS RXCMN2 NXLA RES ) $
TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT, AND
DIGCOL
RESGRP NXLA RESXLA RXCFN 0 RES
TABLE DIGCOL
RES SPECIFIED: RES DIGIT COLLECTION
NCOS FEAT XLA NAME IS NIL.  GO TO NEXT XLA NAME.
TABLE IBNXLA: XLANAME RXCFN
RXCFN 57 FEAT N N N COT

++ TRAVER: SUCCESSFUL CALL TRACE ++
```

SERVORD

SERVORD can be used to assign COT to a line with the ADO (add option) command. Use the DEO (delete option) command to delete COT from a line.

Note: For information on assigning COT to lines with an LCC of IBN or PSET, refer to “Datafilling CLASS on MDC."

SERVORD limitations and restrictions

Customer Originated Trace (COT) does not have SERVORD limitations and restrictions.

Customer Originated Trace (COT) (continued)

SERVORD prompts

The following table shows the SERVORD prompts used to add Customer Originated Trace (COT).

SERVORD prompts for Customer Originated Trace (COT)

Prompt	Valid input	Explanation
OPTION	COT	Assigns, updates or removes the COT feature
BILLING_ OPTION	AMA, NOAMA	Indicates the billing option to be specified when SUSP is enabled for the office. Enter AMA if an AMA record should be created; enter NOAMA if an AMA record should not be created. (NOAMA is the default value.)

When option SUSP in Table AMAOPTS is set to ON, a BILLING_ OPTION prompt is provided as part of the ADO command. The operating company must specify AMA or NOAMA in response to the prompt; otherwise, a carriage return indicates the default value of NOAMA.

SERVORD example for implementing Customer Originated Trace (COT)

The following SERVORD example shows how Customer Originated Trace (COT) is added to a line using the ADO command.

SERVORD example for Customer Originated Trace (COT) in prompt mode

```
> SERVORD
SO:
> ADO
SONUMBER:   NOW 88 1 11 PM
>
DN_OR_LEN:
> 6216055
OPTION:
> COT
OPTION:
> $
COMMAND AS ENTERED:
ADO NOW 88 1 11 PM 6216055 (COT) $
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
> Y
```

Customer Originated Trace (COT) (continued)

SERVORD example for Customer Originated Trace (COT) in no-prompt mode

```
> ADO $ 6216055 COT $  Y
```

The following SERVORD example shows how Customer Originated Trace (COT) is deleted from a line using the DEO command.

SERVORD example for Customer Originated Trace (COT) in prompt mode

```
> SERVORD
SO:
> DEO
SONUMBER:   NOW 88 1 11 PM
>
DN_OR_LEN:
> 0011
OPTION:
> COT
OPTION:
> $
COMMAND AS ENTERED:
DEO NOW 88 1 11 PM 0 0 1 1 (COT) $
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDITY
> Y
```

SERVORD example for Customer Originated Trace (COT) in no-prompt mode

```
> DEO $ 0 0 1 1 COT $  Y
```

The following SERVORD example shows how Customer Originated Trace (COT) is added to a line using the AMA command.

Customer Originated Trace (COT) (end)

SERVORD example for Customer Originated Trace (COT) in prompt mode

```
> SERVORD
SO:
> ADO
SONUMBER:   NOW 88 1 11 PM
>
DN_OR_LEN:
>6211061
OPTION:
> COT
BILLING_OPTION: NOAMA
> AMA
OPTION:
> $
COMMAND AS ENTERED:
ADO 88 1 11 PM 6211061 (COT AMA) $
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
> Y
```

SERVORD example for Customer Originated Trace (COT) in no-prompt mode

```
> ADO $ 6211061 COT AMA $ Y
```

DDNAR Voiceback (ARDDN)

Ordering codes

Functional group ordering code: RES00005

Functionality ordering code: RES00029

Release applicability

NA008 and up

Prerequisites

To operate, DDNAR Voiceback (ARDDN) has the following prerequisites:

- BAS Generic, BAS00003
- MDC Minimum, MDC00001
- MDC Standard, MDC00003
- RES Service Enablers, RES00006

Network configuration

Common Channel Signaling No. 7 (CCS7) connectivity is required for network (interoffice) configuration of Two Level Automatic Recall Enhancements. The following feature packages are required for CCS7 connectivity:

- Base ISUP, ISP70001
- TEL CCS7 Base, TEL00008

Description

The DDN AR Voiceback (ARDDN) feature provides a voiceback of the actual digits that a subscriber dials to reach the station that last called the subscriber. The actual digits to be dialed are provided by the Dialable Number Delivery (DDN) feature. The last call recall capability is provided by the Automatic Recall (AR) feature. The last call received is the last call to terminate on the line (answered or unanswered).

ARDDN allows for the following capabilities:

- DDN voiceback for AR activation
- Long Distance Indicator (LDI) announcement
- repeat announcements

Note: Repeat announcements are provided in feature package NTXA00AB, Call Setup (ACB/AR feature). Repeat announcements are

DDNAR Voiceback (ARDDN) (continued)

part of AR operation, regardless of whether feature package NTXP80AA is present.

Operation

Background information

DDN provides a dialable number to a DDN subscriber set. Refer to “Dialable Number Delivery (DDN)" for more information on DDN.

AR can be activated with two activation sequences. For one-level activation, the subscriber dials an AR activation code, and the AR feature originates the call for the user. The user does not receive the number that is called.

For two-level activation, the subscriber dials an AR activation code. The subscriber then receives an announcement with the DN of the last call, followed by instructions for completing the AR request. The subscriber can dial the digit 1 to complete the call or go on-hook to terminate the request. The DN announced to the subscriber is in the form NPA-NXX-XXXX. Refer to “Automatic Call Back/Automatic Recall (ACB/AR) for more information on AR operation.

Requirements for new announcement phrases

The customized announcements supported by ARDDN require a digital recorded announcement machine (DRAM) with an NT1X75BA controller card. The CLASS Phrase List PROM cards NT1X76AJ and NT1X75AK provide the standard CLASS announcements. The AR Date and Time Phrase List PROM cards NT1X76JA and NT1X76JB are recommended for AR date and time announcements. The LDI and ERROR phrases must reside on an EEPROM card.

Note: Before datafilling announcements for ARDDN, read “Appendix announcements" for Subscriber Services general announcement information.

DDN voiceback

The dialable DN is voiced back to subscribers in one of the following forms:

- NXX-XXXX
- 1 + NXX-XXXX
- 1+NPA-NXX-XXXX

Dialable DN voiceback is controlled with the office parameter AR_DDN_LINE_OR_OFFICE in Table OFCENG. This parameter is set to OFFICE or LINE. With OFFICE, every line that is assigned option AR receives DDN voiceback on two-level activation.

With LINE, the DDN voiceback capability is assigned to subscribers on a line-by-line basis. Thus, DDN voiceback is optional; the existing ten-digit voiceback can be used in an office with ARDDN. The line option, ARDDN, enables DDN voiceback for a given line. ARDDN can only be assigned to lines that already have the line option AR.

If ARDDN is present in an office, the only way to specify voiceback of a ten-digit DN is to set AR_DDN_LINE_OR_OFFICE to LINE and omit option ARDDN from a line. All other combinations of the office parameter setting and line option assignment result in DDN voiceback.

When AR sets up a call between a subscriber and the last station that placed a call to the subscriber, AR uses reverse translations to find the number that the AR subscriber would dial to originate the call. See the AR feature description for a complete description of reverse translations.

LDI announcement phrase

The ENGLDI phrase is added to CLASS announcement 8, the private DN announcement. With this phrase, the announcement is follows:

“The last number that called your line cannot be given out. This call was received on <date> at <time>. This was a long distance call. To call this number, enter 'one'; otherwise, hang up now."

The LDI and DDN voiceback capabilities are combined in one feature, but the presence of an ENGLDI phrase in the private DN announcement does not depend on the DDN voiceback capability being on a line. A subscriber hears the LDI phrase only if the call was long distance, as indicated by the long distance call field of the incoming call memory (ICM). Since this field is set by the LDI feature, LDI must be present for ENGLDI to be used in the private DN announcement.

The following example shows Table DRMUSERS with the ENGLDI phrase assigned.

```
 USERANN         PHSLIST
_____________________________________________________________
CLASS 8      ( LANGUAGE1 ) ( CLASSENG12 )
             ( ENGDATIME ) ( ENGLDI )
             ( CLASSENG17 ) $
```

DDNAR Voiceback (ARDDN) (continued)

The ENGLDI phrase is recorded by the operating company on an EEPROM card.

Repeat announcements

With two-level activation, AR announcements can be repeated to subscribers. Specifically, the prompts for subscriber-entered digits are repeated if the subscriber dials the wrong digits or waits too long to dial the digits. The number of repeated prompts allowed for each AR activation is controlled through datafill. The following fields in the AR tuple of Table RESOFC pertain to repeated announcements:

- ACTLEVEL specifies the AR activation sequence. It must be set to TWOLEVEL for repeat announcements.
- BADIGITS specifies the maximum number of times an invalid digit can be entered by the subscriber. Each time an invalid digit is entered, AR repeats the prompt, giving the subscriber another chance to enter the correct digit. If the subscriber exceeds the limit set by BADIGITS, an error treatment is given. BADIGITS can allow zero to seven attempts. This field applies to two-level activation only.
- TIMEOUT specifies the maximum number of times the subscriber can wait too long to enter a digit. For custom announcements, the timeout is approximately 38 s; the maximum length of an announcement is 40 s. Each time the subscriber fails to enter a digit in the time limit, AR repeats the prompt, giving the subscriber another chance to enter the digit. If the subscriber exceeds the limit set by TIMEOUT, an error treatment is given. TIMEOUT can allow the subscriber to wait from zero to seven intervals. This field applies to two-level activation only.

Setting BADIGITS and TIMEOUT to 0 disables repeat announcements. The following example shows Table RESOFC with the repeat limits BADIGITS set to 2 and TIMEOUT set to 7.

```
KEY ENABLED                FEATDATA
        FNALANN
_____________________________________________________________
AR    Y  SUBSCR    AR TWOLEVEL 3 5 30 180 120 5
5 2 Y ACCEPT DENY ACCEPT Y 2 7
            $
```

The announcement phrase ARERROR indicates to subscribers the reason for the repeated announcement. The ARERROR phrase might be:

"You have not entered the correct digit."

Following the phrase, the subscriber hears the original announcement, either stating that the DN is private or giving the DN of the last station that called the subscriber.

The following example shows Table DRMUSERS with the ARERROR announcement phrase added to announcements CLASS 8 and CLASS 10.

```
   USERANN      PHSLIST
_____________________________________________________________
CLASS   8       ( LANGUAGE1 )  ( ARERROR )
                ( CLASSENG12 ) ( ENGDATIME )
                ( ENGLDI )    ( CLASSENG17 ) $

CLASS 9         ( LANGUAGE1 )  ( CLASSENG7 )
                ( ENGDATIME )  ( CLASSENG23 ) $

CLASS   10      ( LANGUAGE1 )  ( ARERROR )
                ( CLASSENG16 ) ( ENGVARDNF )
                ( CLASSENG22 ) ( ENGDATIME )
                ( CLASSENG17 ) $
```

The ARERROR phrase is recorded by the operating company on an EEPROM card.

Translations table flow

The DDNAR Voiceback (ARDDN) translations tables are described in the following list:

- Table OFCENG contains information that pertains to an office. If office parameter AR_DDN_LINE_OR_OFFICE is set to LINE, ARDDN must be assigned individually to lines; if OFFICE, ARDDN is automatically available to all subscribers in the office.
- Table IBNLINES shows the options assigned to a line. For ARDDN, the options AR and ARDDN must be assigned to the line if the office parameter AR_DDN_LINE_OR_OFFICE is set to LINE. Table

DDNAR Voiceback (ARDDN) (continued)

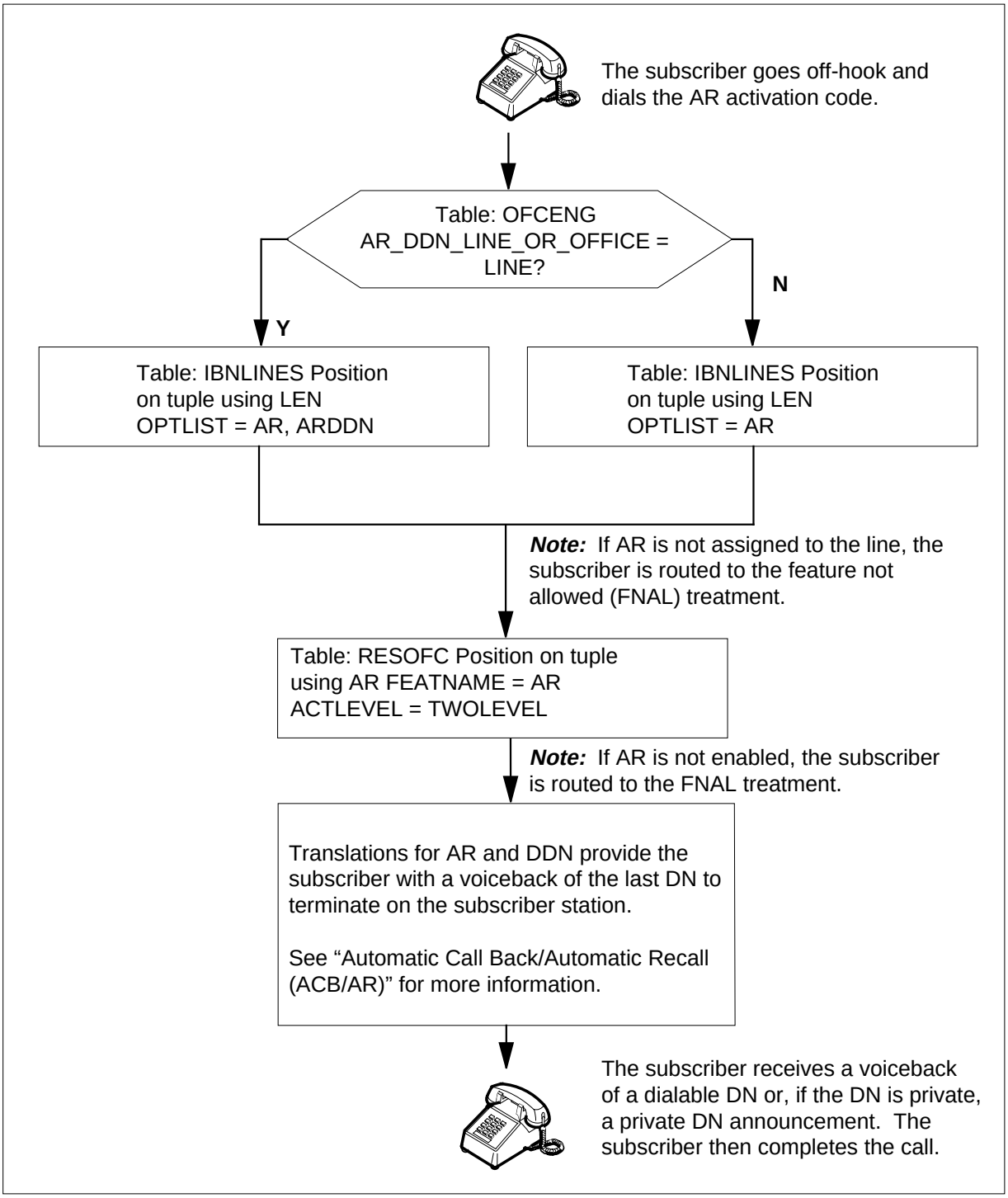
IBNLINES is accessed using the line equipment number (LEN) of the subscriber line.

- Table RESOFC specifies the type of announcements used with the AR feature. For ARDDN, two-level announcements must be specified. Table RESOFC is accessed using the feature code AR.

The DDNAR Voiceback (ARDDN) translation process is shown in the flowchart that follows.

DDNAR Voiceback (ARDDN) (continued)

Table flow for DDNAR Voiceback (ARDDN)



DDNAR Voiceback (ARDDN) (continued)

The following table lists the datafill content used in the flowchart. The Subscriber's LEN is HOST 00 0 00 20.

Datafill example for DDNAR Voiceback (ARDDN)

Datafill table	Example data
IBNLINES	HOST 00 0 00 20 0 DT STN RES 7211234 0 (AR) (ARDDN) $
RESOFC	AR Y SUBSCR AR TWOLEVEL 3 5 30 180 120 5 5 2 Y ACCEPT DENY ACCEPT Y 2 7 $

Limitations and restrictions

The following limitations and restrictions apply to DDNAR Voiceback (ARDDN):

- The interruptible announcements used in two-level activation cause an increased use of Digitone receivers and universal tone receivers (UTR).
- The time-out for waiting for a subscriber to dial a digit is approximately 38 s. The maximum allowable timeout is 40 s.
- The limitations and restrictions that apply to the ACB and AR features also apply to ARDDN.
- EEPROM cards are required for recording the ENGLDI and ARERROR announcement phrases.
- The switch disregards the octothorpe (#) and asterisk (*) when dialed by dial pulse (DP) set users. The switch considers the digits invalid when dialed by dual-tone multifrequency (DTMF) set users.
- On both DP and DTMF lines, a short flash is interpreted as the digit 1. A short flash could activate the AR feature during two-level activation.
- If a Meridian business set (MBS) subscriber deletes option AR from a line, option ARDDN, if assigned, is deleted as well.

Interactions

ARDDN interacts with the features described in “Feature interactions" in “Automatic Call Back/Automatic Recall (ACB/AR)".

Activation/deactivation by the end user

The following procedure shows how to activate the ARDDN feature. ARDDN uses two-level activation. For the following procedure, assume that Table RESOFC is datafilled for repeated announcements.

DDNAR Voiceback (ARDDN) (continued)

Activation/deactivation of DDNAR Voiceback (ARDDN) by the end user

At your telephone:

1 Go off-hook.

Response:

Receive dial tone.

2 Dial the AR access code.

Response:

If the DN is available, receive a dialable DN and a prompt for completing the AR request.

If the DN is private, receive a private DN announcement and a prompt for completing the AR request.

3 Dial the digit 1.

Response:

If the digit 1 is dialed within the time-out period, AR sets up the call.

If the wrong digit is dialed or no digit is dialed, receive a repeated prompt for completing the AR request.

Billing

DDNAR Voiceback (ARDDN) does not affect billing.

Station Message Detail Recording

DDNAR Voiceback (ARDDN) does not affect Station Message Detail Recording.

DDNAR Voiceback (ARDDN) (continued)

Datafilling office parameters

The following table shows the office parameters used by DDNAR Voiceback (ARDDN). For more information about office parameters, refer to *Office Parameters Reference Manual.*

Office parameters used by DDNAR Voiceback (ARDDN)

Table name	Parameter name	Explanation and action
OFCENG	AR_DDN_LINE_OR_OFFICE	Indicates whether DDN voiceback capability is available for all lines with option AR in an office or only for lines with both line options AR and ARDDN. Enter OFFICE for office-wide availability; enter LINE for line-by-line availability. If LINE is entered, DDN voiceback must be individually assigned to lines through line option ARDDN. See “Example service orders for implementing ARDDN". The default value is LINE.

Datafill sequence

The following table lists the tables that require datafill to implement DDNAR Voiceback (ARDDN). The tables are listed in the order in which they are to be datafilled.

Datafill tables required for DDNAR Voiceback (ARDDN) (Sheet 1 of 2)

Table	Purpose of table
OFCENG	Office Engineering. This table contains data on engineering parameters for the office. Refer to “Datafilling office parameters" for how DDNAR Voiceback (ARDDN) affects office parameters.

Datafill tables required for DDNAR Voiceback (ARDDN) (Sheet 2 of 2)

Table	Purpose of table
RESOFC	Residential Line CLASS Office Data. Table RESOFC contains data on CLASS features and enables ARDDN for the office. For ARDDN, the activation sequence must be set to two-level activation. The procedure that follows shows how to assign the activation level.
IBNLINES (note)	IBN Line Assignment. Table IBNLINES contains the line assignments for Subscriber Services lines. The definitions include certain line options. Option AR must be added to the line to implement ARDDN. If office parameter AR_DDN_LINE_OR_OFFICE is set to LINE, ARDDN must also be added to the line; if the parameter is set to OFFICE, ARDDN has no effect. ***Note:*** This table is datafilled through SERVORD; therefore, no datafill procedure or example is provided. Refer to “SERVORD" for an example of using SERVORD to datafill this table.

Datafilling table RESOFC

The following table shows the datafill specific to DDNAR Voiceback (ARDDN) for table RESOFC. Only those fields that apply directly to DDNAR Voiceback (ARDDN) are shown. Refer to the data schema section of this document for a description of the other fields.

Datafilling table RESOFC (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
KEY		see subfield	Key. This field consists of the subfield FEATNAME. This subfield is described below.
	FEATNAME	ACB or AR	Feature Name. This subfield is the key to the table. It specifies the name of the feature. Enter ACB or AR.
ENABLED		Y or N	Enabled. This field specifies whether or not the feature is enabled in the office. Enter Y or N.
FEATDATA		see subfield	Feature Data. This field is composed of the subfields ACCESS, FEATNAME, and others that vary depending on the feature to which the tuple pertains. Not all subfields are shown here.

DDNAR Voiceback (ARDDN) (continued)

Datafilling table RESOFC (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	ACCESS	SUBSCR or UNIVER	Feature Access. This subfield specifies how the feature is accessed. SUBSCR indicates subscription access only and UNIVER indicates universal access for all RES lines. Enter SUBSCR or UNIVER.
	FEATNAME	AR	Feature Name. This subfield specifies the feature for the tuple. Enter AR.
	ACTLEVEL	TWOLEVEL	Activation Level. This subfield specifies the activation sequence for feature AR. Enter TWOLEVEL to indicate that the subscriber can choose whether to set up the call after hearing the DN of the last station to call the subscriber.
If ACTLEVEL is set to TWOLEVEL, the following subfields are prompted for: BADIGITS and TIMEOUT.			
	BADIGITS	0 to 7	Bad Digits. This subfield specifies the number of times a subscriber can enter the wrong digit and receive a repeated prompt announcement. If the limit is exceeded, the subscriber is routed to a negative acknowledgement (NACK) treatment. Enter a value from 0 to 7. (Entering 0 disables repeat announcements for invalid input.)
FNALANN		see subfield	Feature Not Allowed Announcement. This field consists of the subfields POTS_ACCESS and FNAL_CLLI. Refer to “Datafill procedure for Table RESOFC" for “Feature not allowed announcement" for details on these subfields.

Datafill example for table RESOFC

The following example shows sample datafill for table RESOFC. In the example, the repeat announcements are assigned to the AR tuple. In the last two subfields in the sample input, BADIGITS is set to 2, and TIMEOUT is set to 7.

MAP display example for table RESOFC

```
KEY ENABLED                        FEATDATA
    FNALANN
_____________________________________________________________
AR   Y     SUBSCR   AR TWOLEVEL 3 5 30 180 120 5
5 2 Y ACCEPT DENY ACCEPT Y 2 7
     $
```

Translation verification tools

Adding ARDDN to a line with AR does not change translations. Refer to "Verification tools" in "Automatic Call Back/Automatic Recall (ACB/AR)" for an example of TRAVER for AR.

SERVORD

Table IBN Line Assignment (IBNLINES) is datafilled through SERVORD. Table IBNLINES contains the line assignments for Subscriber Services lines. The definitions include certain line options. Option AR must be added to the line to implement ARDDN. If office parameter AR_DDN_LINE_OR_OFFICE is set to LINE, ARDDN must also be added to the line; if the parameter is set to OFFICE, ARDDN has no effect.

The line option ARDDN can be assigned to RES lines through SERVORD. If office parameter AR_DDN_LINE_OR_OFFICE is set to LINE and a line has line option AR, ARDDN can be assigned individually to that line. (ARDDN can be assigned to a line if AR_DDN_LINE_OR_OFFICE is set to OFFICE, but ARDDN has no effect.) The subscriber then receives a 10DDN voiceback when activating AR, provided field ACTLEVEL in the AR tuple of Table RESOFC is set to TWOLEVEL.

SERVORD limitations and restrictions

The following SERVORD limitations and restrictions apply to DDNAR Voiceback (ARDDN) and line option ARDDN:

- Option AR must be assigned to a line before or at the same time option ARDDN is assigned.
- Conversely, if ARDDN is assigned to a line, AR cannot be removed from the line through SERVORD unless ARDDN is removed first.

Since ARDDN cannot be assigned to a line without AR, the restrictions and limitations that apply to AR also apply to ARDDN.

DDNAR Voiceback (ARDDN) (end)

SERVORD prompts

The following table shows the SERVORD prompts used to assign DDNAR Voiceback (ARDDN) to a RES line.

SERVORD prompts for DDNAR Voiceback (ARDDN)

Prompt	Valid input	Explanation
OPTION	ARDDN	Assigns DDN voiceback capability for AR. Note that AR must already be assigned or must be assigned with the same service order.

SERVORD example for implementing DDNAR Voiceback (ARDDN)

The following SERVORD example shows how DDNAR Voiceback (ARDDN) is added to an existing RES line using the ADO command.

SERVORD example for DDNAR Voiceback (ARDDN) in prompt mode

```
> SERVORD
SO:
> ADO
SONUMBER: NOW 91 11 23 AM
>
DN_OR_LEN:
> 0 0 18 8
OPTION:
> AR
OPTION:
> ARDDN
OPTION:
> $
COMMAND AS ENTERED:
ADO NOW 91 11 23 00188 (AR ARDDN) $
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
```

SERVORD example for DDNAR Voiceback (ARDDN) in no-prompt mode

```
> ADO $  0 0 18 8 AR ARDDN $ Y
```

Distinctive Ringing/Call Waiting (DRCW)

Ordering codes

Functional group ordering code: RES00005

Functionality ordering code: RES00034

Release applicability

NA008 and up

Prerequisites

To operate, Distinctive Ringing/Call Waiting (DRCW) requires the MDC Standard, MDC00003 functionality ordering code.

To operate, Distinctive Ringing/Call Waiting (DRCW) has the following prerequisites:

- MDC Standard, MDC00003

Network configuration

Common Channel Signaling No. 7 (CCS7) connectivity is required for network (interoffice) configuration of Distinctive Ringing/Call Waiting. The following feature packages are required for CCS7 connectivity:

- Base ISUP, ISP70001
- TEL CCS7 Base, TEL00008
- BAS Generic, BAS00003

Description

When the subscriber activates the Distinctive Ringing/Call Waiting (DRCW) feature for a line, certain terminating calls are identified at the called station by a distinctive pattern of alerting tones. These treatments are different from standard power ringing and call waiting tone. The caller receives standard audible ringing.

Operation

Distinctive alerting is given when the subscriber receives a call from a directory number (DN) that is on the DRCW list. The Screening List Editing (SLE) feature can be used to update the DRCW list.

Distinctive Ringing/Call Waiting (DRCW) (continued)

If the subscriber makes a call to a DRCW subscriber's line while it is busy, the distinctive call waiting tone is given under any of the following conditions:

- the subscriber has standard call waiting assigned to the line
- a call can be waited
- the calling DN is on the subscriber's DRCW list. Calling DNs not on the DRCW list are identified using standard call waiting treatment.

If the DNs of the incoming calls cannot be identified or do not exist on the DRCW screening list, standard alerting treatment is provided for these calls.

Assigning the DRCW feature

The operating company assigns line option DRCW to the subscriber through the service order system (SERVORD). When assigned, the feature is designated as subscription or usage sensitive pricing. DRCW can be assigned to any line that can be assigned Custom Local Area Signaling Services (CLASS) features.

Building the DRCW list

The DRCW list can be altered by either the subscriber or the operating company.

Using the DRCW list

Any call that terminates to a line that is capable of being assigned DRCW initiates a check for the existence of active DRCW on the line. This check is made regardless of the current state of the terminating line. If DRCW is active, the DRCW list is searched to determine if the incoming call's DN appears on the list. If a match is found, the called station is alerted using distinctive treatment. If the called station is idle, it is given distinctive power ring. If the called station is busy, distinctive call waiting tone is applied.

Call attempts from DNs that cannot be identified or are not on the DRCW screening list are given standard terminating treatment.

Universal access

The DRCW feature can be provided to all RES subscribers in an office through universal access when feature package NTXQ70AA, Universal Access to CLASS Features, is present in the office. For universal access, the value UNIVER instead of SUBSCR should be datafilled in subfield ACCESS in table RESOFC.

Universal access only changes the method of access, not the operation of a CLASS feature. When universal access is available in an office, the subscriber can still have the feature assigned as a line option. Accessing a CLASS feature

Distinctive Ringing/Call Waiting (DRCW) (continued)

assigned to the subscriber as a line option or customer group option takes precedence over accessing the feature through universal access.

The Software Optional Control (SOC) allows the operating company to enable the functionality of common access for CLASS features through a Right to Use (RTU) access code. The subscriber is able to access the CLASS features without assigning each feature to the line.

The SOC commands enable or disable the universal access for CLASSfeatures. The RTU access code assignment to RES00011 and setting the state to ON enables the universal access for CLASS through SOC. The state is set to IDLE to disable the universal access for CLASS through SOC.

Note 1: Universal access to CLASS features is not applicable to Subscriber Services lines with IBN line class codes (LCC) through NA007.

Note 2: Universal access to CLASS features is not applicable to universal access to display features.

Note 3: Refer to “Universal Access to CLASS Features" for more information on universal access.

Note 4: If RES00011 is on, DRCW does not give a text message indicating that the feature already exists on a DN.

Note 5: When DRCW is automatically provisioned by the RES00011 SOC, it can still be provisioned on an individual line a second time.

Translations table flow

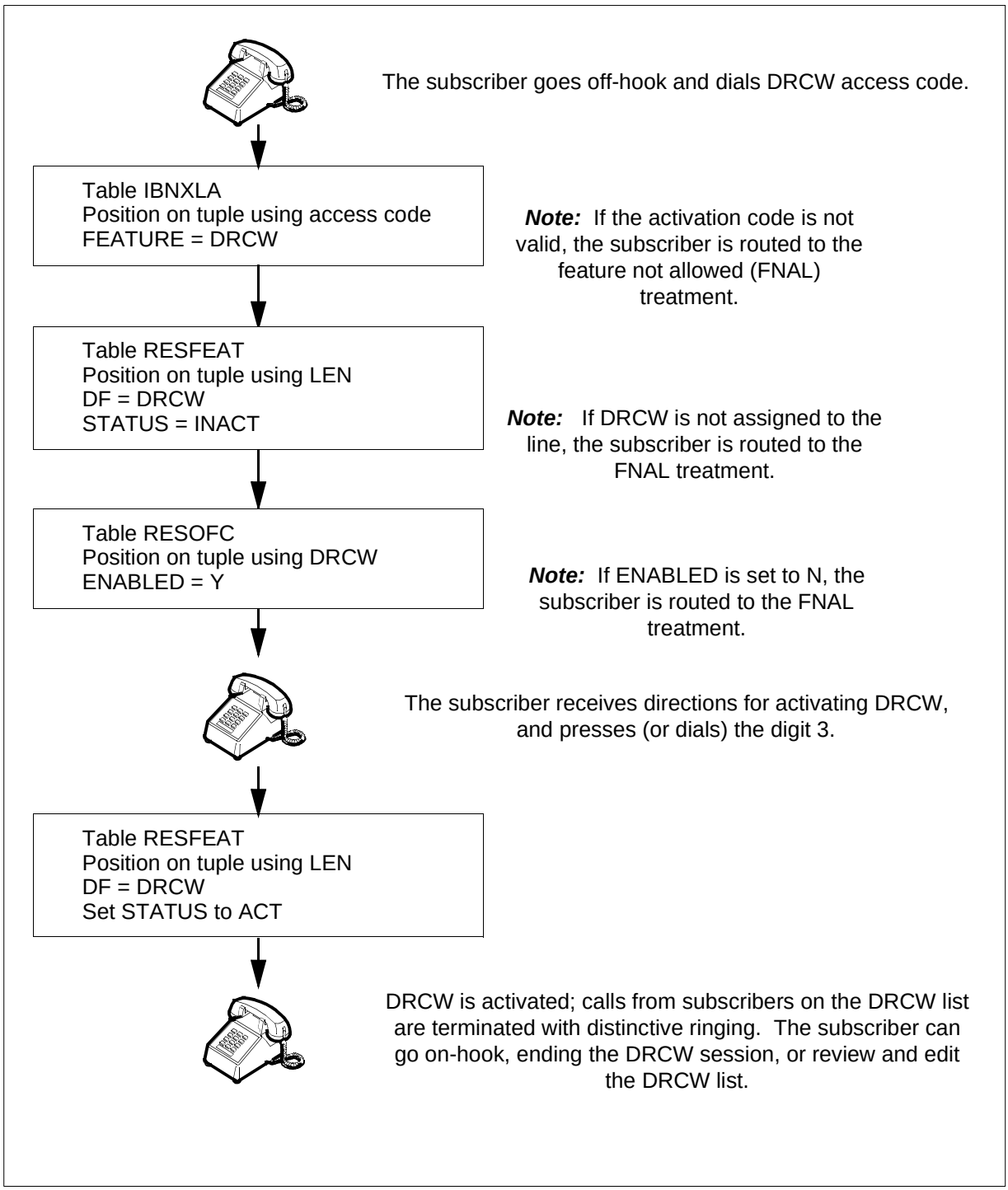
The Distinctive Ringing/Call Waiting (DRCW) translations tables are described in the following list:

- Table IBNXLA provides the name of the feature associated with an access code.
- Table RESFEAT lists the features assigned to a line equipment number (LEN). For DRCW, field STATUS is set to ACT when DRCW is activated, and it is set to INACT when DRCW is deactivated.
- Table RESOFC controls the availability of individual CLASS features for an office. For this example, DRCW is enabled.

The Distinctive Ringing/Call Waiting (DRCW) translation process is shown in the flowchart that follows.

Distinctive Ringing/Call Waiting (DRCW) (continued)

Table flow for Distinctive Ringing/Call Waiting (DRCW)



Distinctive Ringing/Call Waiting (DRCW) (continued)

The following table lists the datafill content used in the flowchart. The DRCW access code is 61, and the LEN of the subscriber is HOST 00 02 0 05.

Datafill example for Distinctive Ringing/Call Waiting (DRCW)

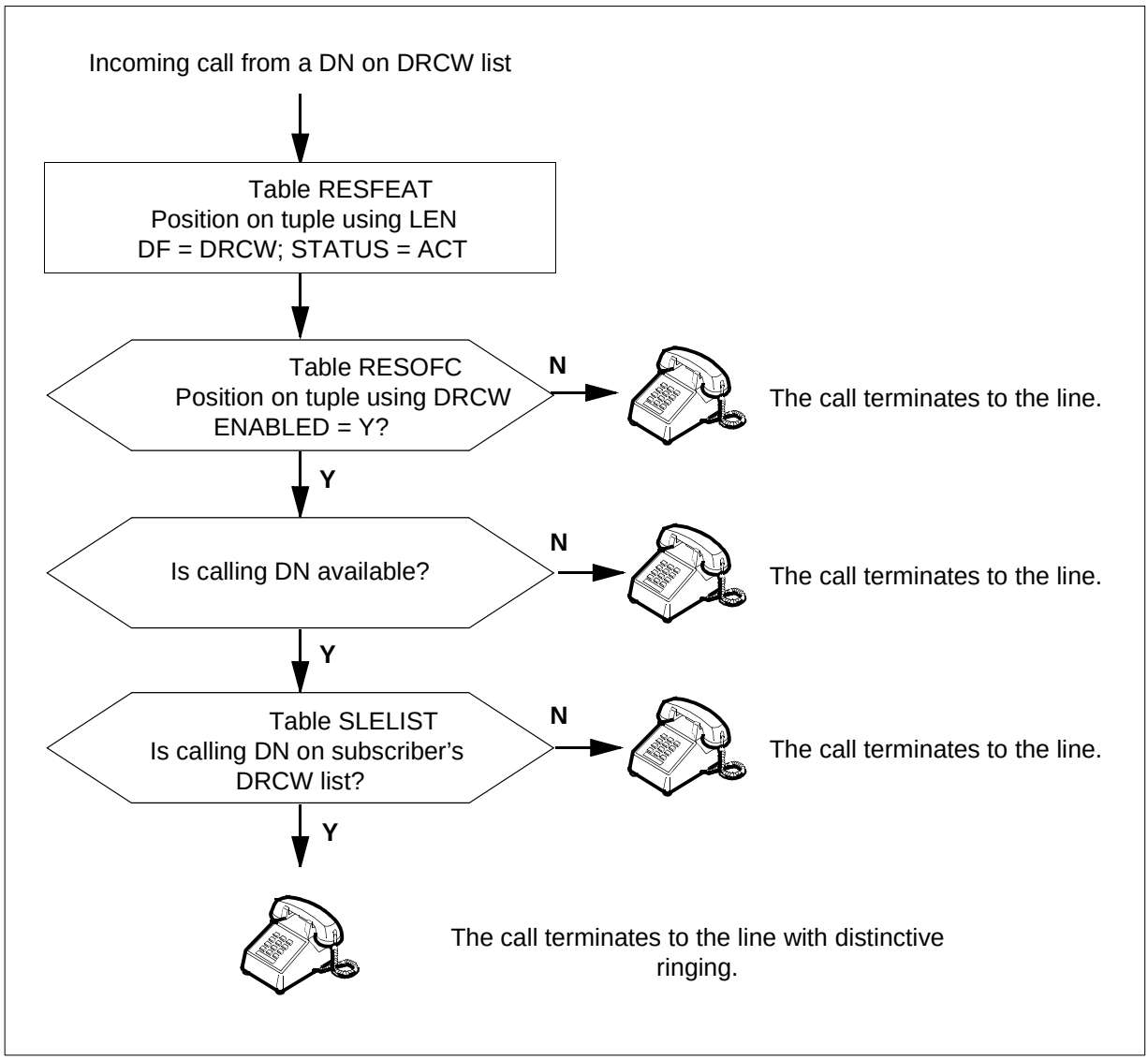
Datafill table	Example data
IBNXLA	RXCFN 61 FEAT N N N DRCW
RESFEAT	HOST 00 02 0 05 0 DRCW DRCW NOAMA ACT
RESOFC	DRCW Y SUBSCR DRCW 12 $

The following figure shows the table flow for an incoming call to a DRCW subscriber.

- Table RESFEAT lists the features assigned to an LEN. For DRCW, field STATUS is set to ACT when DRCW is activated, and it is set to INACT when DRCW is deactivated.
- Table RESOFC controls the availability of individual CLASS features for an office. For this example, DRCW is enabled.
- Table SLELIST contains the Screening List Editing (SLE) lists for an office. Each tuple in this table contains one entry for one SLE list. For the example that follows, table SLELIST contains a tuple defining a DRCW list entry.

Distinctive Ringing/Call Waiting (DRCW) (continued)

Table flow for Distinctive Ringing/Call Waiting (DRCW)



The following table lists the datafill content used in the flowchart. The calling DN is 613 621 0011, and the LEN of the subscriber is HOST 00 02 0 05.

Datafill example for Distinctive Ringing/Call Waiting (DRCW)

Datafill table	Example data
RESFEAT	HOST 00 02 0 05 0 DRCW DRCW NOAMA ACT

Distinctive Ringing/Call Waiting (DRCW) (continued)

Datafill example for Distinctive Ringing/Call Waiting (DRCW)

Datafill table	Example data
RESOFC	DRCW Y SUBSCR DRCW 12 $
SLELIST	HOST 00 02 0 05 0 DRCW 1 N 6136210011 PUBLIC 7 N

Limitations and restrictions

The following limitations and restrictions apply to Distinctive Ringing/Call Waiting (DRCW):

- DRCW is incompatible with the following line options:
  - AVT
  - BNN
  - CCSA
  - CFMDN
  - DIN
  - DTM
  - EHLD
  - LDTPSAP
  - PCWT
  - PREMTBL
  - PRL
  - 3WCPUB

Interactions

The following paragraphs describe the interactions between Distinctive Ringing/Call Waiting (DRCW) and other functionalities.

Automatic Call Back/Automatic Recall

If Automatic Call Back/Automatic Recall (ACB/AR) is activated on a line that has DRCW active, and if the number that activated ACB/AR is on the DRCW list, appropriate DRCW treatment is applied.

Call Forwarding and Selective Call Forwarding

Call Forwarding (CFW) and Selective Call Forwarding (SCF) take precedence over DRCW. Distinctive alerting is not provided at the base station on forwarded calls. If SCF and DRCW are both active on a subscriber line, but

Distinctive Ringing/Call Waiting (DRCW) (continued)

the terminating call is not forwarded, the DRCW list is checked to determine if distinctive treatment is to be provided.

Call Forwarding Busy Line

DRCW takes precedence over Call Forwarding Busy Line (CFBL).

Call Forwarding Don't Answer

The matched DNs of the terminating calls against the DRCW list are identified at the base station using DRCW distinctive ringing. Except for the DRCW distinctive ring, standard Call Forwarding Don't Answer (CFDA)—including the number of ringing cycles before forwarding—is applied for terminating calls to an idle line.

Calling Line Identification

Calling Line Identification (CLI) logs are generated for calls that receive DRCW treatment.

CLASS display features

The silent interval in the first ring cycle—after the first distinctive ring of DRCW—is long enough to allow a complete data message of CLASS display features.

Denied Termination

DRCW is incompatible with Denied Termination (DTM).

Directory Number Hunt

Any call that is allowed to terminate to a line in a Directory Number Hunt (DNH) group is screened, and DRCW alerting treatment is applied, if applicable.

Distributed Line Hunt

DRCW interacts with Distributed Line Hunt (DLH) as it does with MLH.

Free Number Terminating

Free Number Terminating (FNT) subscribers are not affected by the DRCW feature.

MADN Extension Bridging

DRCW is incompatible with MADN Extension Bridging (MADN EXB).

Make Set Busy

Make Set Busy (MSB) takes precedence over DRCW.

Distinctive Ringing/Call Waiting (DRCW) (continued)

Multiline Hunt

DRCW can be assigned to pilots and members of Multiline Hunt (MLH) groups. Incoming calls to a line in the MLH group are screened and appropriate DRCW treatment is applied under either of the following conditions:

- the MLH line has DRCW assigned to it
- the incoming call can terminate on the MLH line

Multiple Appearance Directory Number

DRCW is incompatible with Multiple Appearance Directory Number (MADN).

Selective Call Acceptance

Selective Call Acceptance (SCA) screening takes place before DRCW. A call from a number that is not on the SCA list is rejected. A call from a number on the list proceeds to DRCW screening. Thus calls to numbers on both the SCA and DRCW lists are identified at the called station by distinctive ringing.

Selective Call Rejection

Selective Call Rejection (SCRJ) takes precedence over DRCW. If the system does not find a match for the incoming DN on the SCRJ list, the call is allowed to terminate on the called station. The system then searches the DRCW list for the incoming DN; if a match is found, DRCW treatment is applied.

Teen Service

DRCW alerting treatment is applied only when the called station is the primary directory number (PDN) of the teen service (SDN) line, and not any of the possible secondary directory numbers (SDN) that can be assigned.

The ringing pattern of DRCW in offices with coded ringing is identical to secondary DN #3 (SDN3) in Teen Service. In offices with frequency-selective ringing (FSR), DRWC has the same ring pattern as SDN1. In both sets of conditions, the DRWC ringing will be indistinguishable from SDN1 or SDN3 ringing.

Three-Way Calling

DRCW takes precedence over Three-Way Calling (3WC). When a line that has Call Waiting (CWT) receives a call waiting call as a result of having DRCW active, a flash is not interpreted as a request for three-way services.

The 3WC interaction with DRCW works differently depending on whether the 3rd party is intraswitch or interswitch. When establishing a 3WC, if the 3rd party is receiving distinctive ringing of DRCW, the distinctive ringing

Distinctive Ringing/Call Waiting (DRCW) (continued)

continues, provided the 3rd party is on a different switch than the controller (interswitch call). If, however, the 3rd party is on the same switch as the controller, distinctive ringing subsides once the conference is established (intraswitch call).

Activation/deactivation by the end user

The subscriber initiates a DRCW SLE session by dialing the DRCW activation code, which is specified in table IBNXLA.

The Bellcore-recommended values for the DRCW activation and deactivation codes are *61 and *81, respectively. During the DRCW SLE session the subscriber can do any of the following:

- query feature status
- activate or deactivate the DRCW feature
- review the DRCW list
- add or delete entries to or from the DRCW list

The operating company can specify an initial DRCW list at the same time the option is assigned to the line, or can update the information later. This method is necessary for lines with denied origination (DOR), automatic line (AUL), requested suspension (RSUS) or any other option that denies dial tone since such lines cannot access the DRCW list through the first method.

Billing

Refer to “Billing" in “Screening List Editing (SLE)" for information on billing.

Station Message Detail Recording

Distinctive Ringing/Call Waiting (DRCW) does not affect Station Message Detail Recording.

Datafilling office parameters

Distinctive Ringing/Call Waiting (DRCW) does not affect office parameters.

Distinctive Ringing/Call Waiting (DRCW) (continued)

Datafill sequence

The following table lists the tables that require datafill to implement Distinctive Ringing/Call Waiting (DRCW). The tables are listed in the order in which they are to be datafilled.

Datafill tables required for Distinctive Ringing/Call Waiting (DRCW)

Table	Purpose of table
RESOFC	Contains data for CLASS features and enables the DRCW feature for the office.
IBNXLA	Contains the data for the digit translations of calls from an MDC station, attendant console, incoming trunk group, or incoming side of a two-way MDC trunk group
STN	Contains information for tones which require trunk cards.

Datafilling table RESOFC

Table RESOFC (Residential Line CLASS Office Data) contains data for CLASS features and enables the DRCW feature for the office. When the DRCW feature package is added to the load, a DRCW tuple is added to table RESOFC.

The following table shows the datafill specific to Distinctive Ringing/Call Waiting (DRCW) for table RESOFC. Only those fields that apply directly to Distinctive Ringing/Call Waiting (DRCW) are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table RESOFC

Field	Subfield or refinement	Entry	Explanation and action
KEY		See Subfield	Key. This field consists of the subfield FEATNAME. This subfield is described below.
	FEATNAME	DRCW	Feature name. This subfield is the key to the table. It specifies the name of the feature. Enter DRCW.
ENABLED		Y or N	Enabled. This field specifies whether or not the feature is enabled in the office. Enter Y or N.
FEATDATA		SEE Subfield	Feature data. This field consists of the subfields ACCESS, FEATNAME, and MAXSIZE. These subfields are described below.

Distinctive Ringing/Call Waiting (DRCW) (continued)

Datafilling table RESOFC

Field	Subfield or refinement	Entry	Explanation and action
	ACCESS	SUBSCR or UNIVER	Feature access. This subfield specifies how the feature is accessed. SUBSCR indicates subscription access only and UNIVER indicates universal access for all RES lines. Enter SUBSCR or UNIVER. ***Note:*** The value UNIVER is valid only when feature package NTXQ70AA, Universal Access to CLASS Features, is present in the office. Refer to “Universal Access to CLASS Features" in this document for more information on universal access.
	FEATNAME	DRCW	Feature name. This subfield specifies the feature name. Enter DRCW.
	MAXSIZE	1 to8191	Maximum size. This subfield specifies the maximum number of entries for any DRCW list in the office. Enter a value from 1 to 8191. The suggested maximum is 12 with standard DRAM resources. If additional DRAM resources are available, the suggested maximum is 31. Table RESOFC can be datafilled with a maximum number of entries greater than the DRAM resources available. However, when the subscriber tries to enter a value of 13 or 32, for example, the SLE session locks up, and the subscriber is unable to edit the list without operating company intervention.
FNALANN		See Subfield	Feature not allowed announcement. This field consists of the subfields POTS_ACCESS and FNAL_CLLI. Refer to “Datafill procedure for table RESOFC" for “Feature not allowed announcement" in this document for details on these subfields.

Datafill example for table RESOFC

The following example shows sample datafill for table RESOFC.

Distinctive Ringing/Call Waiting (DRCW) (continued)

MAP display example for table RESOFC

```
KEY      ENABLED                                          FEATDATA
             FNALANN
_____________________________________________________________________
DRCW     Y                                  SUBSCR       DRCW 31
             $
```

Datafilling table IBNXLA

Table IBNXLA (IBN Translations) contains the data for the digit translations of calls from an MDC station, attendant console, incoming trunk group, or incoming side of a two-way MDC trunk group. DRCW is added to table IBNXLA as a feature access code to give subscribers access to the DRCW function.

Table IBNXLA is datafilled to define the access codes used to activate and deactivate the DRCW feature. This allows translations to recognize these access codes and trigger the appropriate software.

The recommended format of the access codes is 11XX for dial pulse (DP) lines and *XX for dual-tone multifrequency (DTMF) lines, where XX is a two-digit code.

The recommended activation and deactivation codes for DRCW are as follows:

- 1161 and 1181 for DP lines
- *61 and *81 for DTMF lines

The following table shows the datafill specific to Distinctive Ringing/Call Waiting (DRCW) for table IBNXLA. Only those fields that apply directly to

Distinctive Ringing/Call Waiting (DRCW) (continued)

Distinctive Ringing/Call Waiting (DRCW) are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table IBNXLA

Field	Subfield or refinement	Entry	Explanation and action
KEY		See Subfield	KEY. This field consists of the subfields XLANAME and DGLIDX. These subfields are described below and must be entered in succession.
	XLANAME	See Subfield	Translator name. This subfield specifies the 1-to 8-character name assigned to the translator. Enter the translator name.
	DGLIDX	See Subfield	Digilator index. This subfield specifies the digit or digits assigned to the index. Enter the access code assigned to the digilator index.
RESULT		See Subfield	Result. This field consists of the subfields TRSEL, ACR, SMDR, and FEATURE. These subfields are described below.
	TRSEL	FEAT	Translation selector. This subfield specifies the translation selector. Enter FEAT.
	ACR	N	Account code entry. This subfield specifies whether or not an account code entry is required for all calls to the special feature access code. Enter N to bypass this subfield.
	SMDR	N	Station message detail recording. This subfield specifies whether or not SMDR is required for call originated by a customer group station or an attendant console. Enter N.
	FEATURE	DRCW	Feature. This subfield specifies the feature to be added to the table. Enter DRCW.

Datafill example for table IBNXLA

The following example shows sample datafill for table IBNXLA.

Distinctive Ringing/Call Waiting (DRCW) (continued)

MAP display example for table IBNXLA

```
        KEY                                     RESULT
 ________________________________________________________
RXCFN    61             FEAT    N   N       Y     DRCW
```

Datafilling table STN

Table STN (Special Tone) contains information for tones which require trunk cards. It lists the physical location and the maximum number of connections that can be made to each of the tones.The Distinctive Ringing/Call Waiting tone (DRCWTONE) must be added to field SK of table STN to provide distinctive tones for the DRCW feature.

> ***Note:*** DRCWTONE must be added as a CLLI value in table CLLI before table STN is datafilled.

The following table shows the datafill specific to Distinctive Ringing/Call Waiting (DRCW) for table STN. Only those fields that apply directly to Distinctive Ringing/Call Waiting (DRCW) are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table STN

Field	Subfield or refinement	Entry	Explanation and action
SK		See subfield	SPECIAL TONE KEY. This field consists of the subfields TONE and MEMBER. These subfields are described below.
	TONE	DRCWTONE	TONE. This subfield specifies the code assigned to the tone trunk circuit in table CLLI. Enter the DRCWTONE.
	MEMBER	0 to 999	MEMBER. This subfield specifies the member number assigned to the tone trunk circuit. Enter a value from 0 to 999.
TMTYPE		STM or MTM	TRUNK MODULE TYPE. Enter STM (for service trunk module) or MTM (for maintenance trunk module).
TMNO		0 to 255	TRUNK MODULE NUMBER. This field specifies the number assigned to the maintenance or service trunk module on which the tone trunk circuit is located. Enter a value from 0 to 255).

Distinctive Ringing/Call Waiting (DRCW) (continued)

Datafilling table STN

Field	Subfield or refinement	Entry	Explanation and action
TMCKTNO		0 to 29	TRUNK MODULE CIRCUIT NUMBER. This field specifies the the circuit number on the trunk module to which the tone trunk circuit is assigned. Enter a value from 0 to 29.
CARDCODE		3X68AC	CARD CODE. Enter 3X68AC.
MAXCONN		1 to 255	MAXIMUM CONNECTIONS. This field specifies the maximum number of simultaneous connections that can be made to the tone trunk circuit. Enter a value from 1 to 255.
TRAFSNO		0 to 127	TRAFFIC SEPARATION NUMBER. This field specifies the outgoing traffic separation number assigned to the tone. Enter a value from 0 to 127.

Datafill example for table STN

The following example shows sample datafill for table STN.

MAP display example for table STN

```
SK          TMTYPE  TMNO  TMCKTNO  CARDCODE  MAXCONN  TRAFSNO
_____________________________________________________________
DRCWTONE    0 STM   5        3     3X68AC      10         0
```

Translation verification tools

The following example shows the output from TRAVER when it is used to verify Distinctive Ringing/Call Waiting (DRCW).

Distinctive Ringing/Call Waiting (DRCW) (continued)

TRAVER output example for Distinctive Ringing/Call Waiting (DRCW)

```
>TRAVER L 6211233 'B61' B
 TABLE IBNLINES
    HOST 00 0 09 07 0 DP STN RES 6211233 0 $
 TABLE LINEATTR
    0 1FR NONE NT FR01 0 613 P621 L613 N TSPS N 10 NIL
 NILSFC                  LATA1 0 NIL NIL 00 Y RESGRP 0 2
    LCABILL OFF – BILLING DONE ON BASIS OF CALLTYPE
 TABLE DNATTRS
 TUPLE NOT FOUND
 TABLE DNGRPS
 TUPLE NOT FOUND
 TABLE NCOS
 RESGRP 2 0 0 RNCOS2 ( XLAS RXCMN2 NXLA RES ) $
 TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA,
 VACTRMT, AND DIGCOL
 RESGRP NXLA RESXLA RXCFN 0 RES
 TABLE DIGCOL
    RES SPECIFIED: RES DIGIT COLLECTION
 NCOS FEAT XLA NAME IS NIL.  GO TO NEXT XLA NAME.
 TABLE IBNXLA: XLANAME RXCFN
    RXCFN 61 FEAT N N N DRCW

 ++ TRAVER: SUCCESSFUL CALL TRACE ++
```

SERVORD

DRCW has been added as a value to the OPTION prompt to allow the assigning, updating, and removal of the DRCW feature to or from lines through the SERVORD system.

DRCW does not require the assignment of any other options. This option can be assigned to lines with a line class code (LCC) of RES or IBN, or to lines with an LCC of 1FR (one-party flat rate) or 1MR (one-party message rate) when office parameter RES_SO_SIMPLIFICATION in table OFCVAR has field RES_AS_POTS set to Y. Note that DRCW is incompatible with DTM.

Note: For information on how the DRCW feature can be assigned to lines with an LCC of PSET, refer to “Datafilling CLASS on MDC."

When DRCW is specified, the additional prompts are BILLING_OPTION, STATUS, and DNS. BILLING_OPTION is an existing prompt. There is no change to its range of values or behavior.

Distinctive Ringing/Call Waiting (DRCW) (continued)

SERVORD limitations and restrictions

Distinctive Ringing/Call Waiting (DRCW) has no SERVORD limitations and restrictions.

SERVORD prompts

The following table shows the SERVORD prompts used to assign Distinctive Ringing/Call Waiting (DRCW) to a line.

SERVORD prompts for Distinctive Ringing/Call Waiting (DRCW)

Prompt	Valid input	Explanation
OPTION	DRCW	Assigns, updates, and removes the DRCW feature
BILLING_ OPTION	AMA, NOAMA	Specifies AMA or NOAMA billing. Enter AMA to assign subscription usage sensitive pricing (SUSP) billing (the default is NOAMA.) This prompt appears if SUSP is enabled in table AMAOPTS. Refer to Chapter 5, “Datafilling the network base," for more information on table AMAOPTS.
STATUS	INACT, ACT	Assigns initial status of features (INACT = inactive, ACT = active)
DNS	10-digit DN (up to 4 DNs and VBCOUNT pairs) or $	Specifies the DN that is to be added to the DRCW list
VBCOUNT	0 to 10	Specifies the number of digits voiced back during DRCW SLE list review. Setting this value to 0 causes the entry to be designated as private; the entry is not voiced back during list review.

SERVORD example for adding Distinctive Ringing/Call Waiting (DRCW)

The following SERVORD example shows how Distinctive Ringing/Call Waiting (DRCW) is added to a line using the ADO command.

Distinctive Ringing/Call Waiting (DRCW) (end)

SERVORD example for Distinctive Ringing/Call Waiting (DRCW) in prompt mode

```
> SERVORD
SO:
> ADO
SONUMBER:   NOW 91  01  31  AM
>
DN_OR_LEN:
> 7224020
OPTION:
> DRCW
BILLING_OPTION: NOAMA
>
STATUS:
> INACT
DNS:
> 6136211234
VBCOUNT:
> 7
DNS:
> $
OPTION:
> $
COMMAND AS ENTERED:
ADO NOW 91 01 31 AM 7224020 (DRCW INACT NOAMA
(6136211234 7 )  $ ) $
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
> Y
```

SERVORD example for Distinctive Ringing/Call Waiting (DRCW) in no-prompt mode

```
>ADO $ 7224020 DRCW $ INACT 6136211234 7 $ $  Y
```

History of DRCW description

SN06 (DMS)

Notes added to specify interaction of DRCW with RES0001 SOC, for CR Q00735537. This History section added.

Enhanced Busy Call Return (EBCR)

Ordering codes

Functional group ordering code: RES00005

Functionality ordering code: RES00076

Release applicability

NA011 and up

Enhanced Busy Call Return (EBCR) was introduced in NA007.

Prerequisites

In addition to the functional packages required to operate the Automatic Call Back (ACB) feature, Enhanced Busy Call Return requires the following functional packages in order to operate:

- BAS00001, Base
- BAS00003, BAS Generic
- MDC00001, MDC Minimum
- MDC00003, MDC Standard
- RES00006, RES Service Enablers

For end-to-end ISUP connectivity, the following packages are also required:

- ISP70001, Base ISUP
- TEL00008, TEL CCS7 Base
- TEL00001, TEL Telecom Layer Function

Description

EBCR service in combination with the ACB feature allows callers to automatically call back the last party they called if that party was busy.

Operation

The following subsections provide a detailed description of the operation of EBCR from call screening to call termination.

Stages of operation

The operation of the EBCR service has the following stages:

- Screening: Common Offering Screening and Service-Specific Screening
- Busy detection

- Invocation
- Offer of the service
- Caller acceptance or rejection
- Termination

The following sections describe each stage of the operation of EBCR.

Screening

To minimize the chance that a caller will be denied EBCR service after having accepted its offer of service, EBCR performs screening. Screening ensures that various criteria required for EBCR service and ACB service to operate are satisfied before EBCR service is offered to the caller.

This section describes the screening criteria that must be met before EBCR service (and Access to Messaging service, if applicable) can be offered.

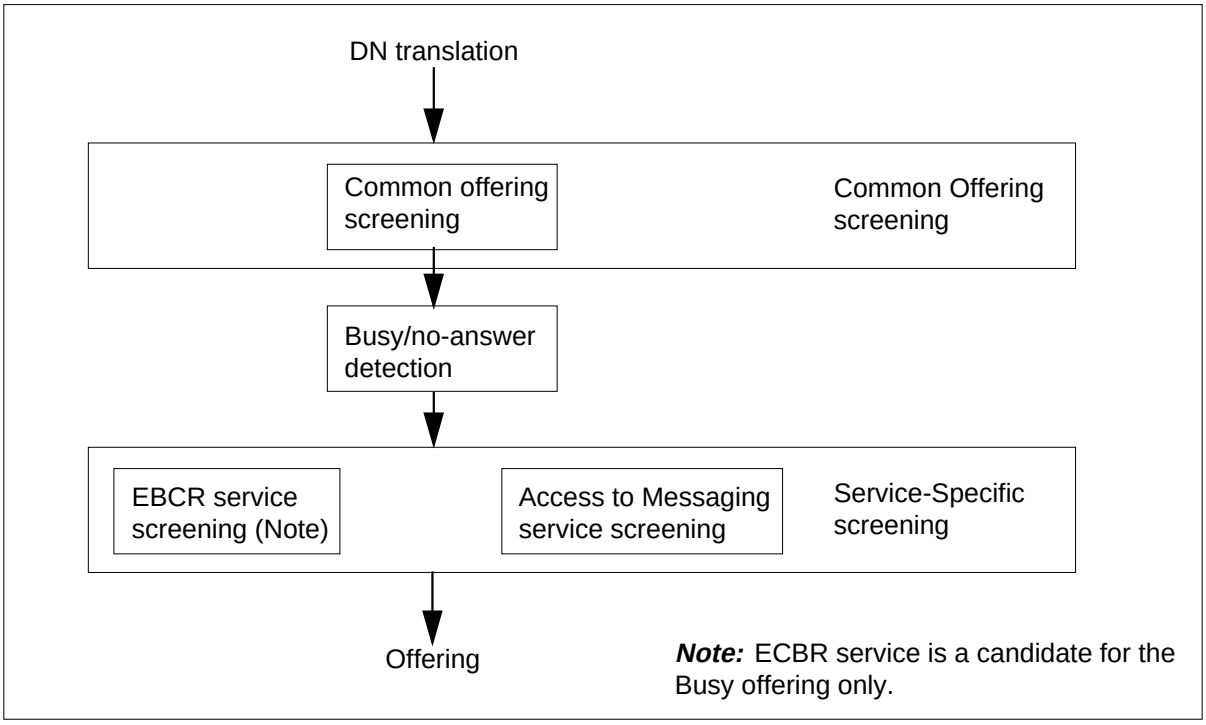
Screening is divided into two levels.

- Common Offering Screening
- Service-Specific Screening

The following figure illustrates where these two screening levels are performed in the progress of a call.

Enhanced Busy Call Return (EBCR) (continued)

Screening levels



Common Offering Screening

Common Offering Screening is performed immediately after the terminating DN has been successfully translated. This screening is performed when EBCR service and/or Access to Messaging service or a choice of either service is intended to be provided to the caller. The screening criteria is the same irrespective of which service or services are intended to be offered. Consequently, if Common Offering Screening fails, neither service can be offered to the caller.

Common offering screening checks for criteria relating to the originating end office, the calling party, the translated dialed digits and the terminating agent. These screening criteria are described in the following sections. A service passes Common offering screening only if all criteria described in the following sections are satisfied.

Originating end office characteristics

Enhanced Busy Call Return (EBCR) (continued)

The following criteria relate to the originating end office:

- Office parameter SDS_ENABLED in table OFCENG is set to Y. This office parameter enables and disables EBCR (and Access to Messaging, if applicable) on an office wide basis.
- The central processing unit occupancy of the end office is not in an overload condition. The end office is considered to be in an overload condition if it has been doing central processing work constantly for the last 5 seconds.

Calling party characteristics

The following criteria relate to the calling party:

- Neither per call denial nor sustained deactivation are active on the calling party's line.
- If service is distributed in Subscription mode (field SDSSUBS in table SDSINFO set to SUBSCR) then either:
  - — the SDS line option is assigned to the line

    OR
  - — the SDS customer group option is assigned to the customer group of which the calling party's line is a member, the SDSDENY line option is not assigned to the line, and the line type is supported by the SDS customer group option.
- If service is distributed in Universal mode (field SDSSUBS in table SDSINFO set to UNIVER) then the SDSDENY line option is not assigned to the line, the SDSDENY customer group option is not assigned to the line, the RSP option is not assigned to the line, and the line type is supported in Universal mode.
- If the service is distributed in Universal mode (field SDSSUBS in table SDSINFO set to UNIVER) and the line is a member of a hunt group, then table SDSINFO tuple SDSOFC field HUNTORIG is set to Y.
- If the service is distributed in Universal mode (field SDSSUBS in table SDSINFO set to UNIVER) and the line is an IBN, PSET, or ISDNKSET agent, then table SDSINFO tuple SDSOFC field CTXORIG is set to Y.
- If the calling party's set uses dial pulse signaling, then table SDSINFO tuple SDSOFC field DPORIG is set to Y.

Translated dialed digits

Enhanced Busy Call Return (EBCR) (continued)

The following criteria relate to the translated dialed digits:

- The call's translated dialed digits are not in the range of digits datafilled in field DNSCRN of table SDSINFO. This field lists the digit ranges that are used to screen the translated dialed digits. A range contains either three digits or six digits. The three-digit range is used to screen the NPA.The six-digit range is used to screen the NPA and office code (NXX).
- If the call is local and terminates on an NPA that is different from the NPA of the calling party, field REVXLA of table SDSINFO is set to Y, tables DNREVXLA and DNREGION are correctly datafilled, and reverse translations are successful.
- The translated dialed digits do not belong to any of the following groups of translated dialed digits:
  - N11, for example, 411, 611, 911
  - 900, 976 numbers
  - directory assistance: 555-1212 and 1+NPA-555-1212
  - domestic or international (inside world zone 1) operator assistance: 0+, 0-
  - international (outside world zone 1) operator assistance: 01+
  - interexchange carrier (IEC) operator assistance: 00-
  - international (outside world zone 1) carrier operator assistance: 00+
  - international direct dial: 011+
  - NSC calls, for example, 800, 888
  - feature group A and feature group B equal access calls: 950-0/1XXX

Terminating agents

The trunk that is used for the call from the caller to the called party is one of the following terminating trunk types:

- outgoing end office (TO)
- two-way end office (T2)
- outgoing IBN (IBNTO)
- two-way IBN (IBNT2)
- toll connecting (IT)
- access tandem to carrier (ATC)

Enhanced Busy Call Return (EBCR) (continued)

Service-Specific Screening

Service-Specific Screening is performed as soon as a busy (or ringing/no-answer condition for Access to Messaging service) is detected. This screening is composed of a screening specific to EBCR service and a screening specific to Access to Messaging service.

Whether one, both or neither screenings will be performed depends on whether the call encounters a busy or ringing/no-answer condition and on the service(s) the operating company intends to offer on that condition. The service(s) to be offered on the busy and ringing/no-answer condition is defined by the values the operating company datafills in fields BSYMODE and RNAMODE in table SDSINFO.

If the call encounters a busy condition and field BSYMODE is set to:

- NONE (no service offering), no Service-Specific Screening is performed.
- MSG (Access to Messaging service only), only Service-Specific Screening for Access to Messaging service is performed.
- ACB (EBCR service only), only Service-Specific Screening for EBCR service is performed.
- ACBMSG (both EBCR and Access to Messaging service), Service-Specific Screening for EBCR service is performed followed by Service-Specific Screening for Access to Messaging service. The caller is offered only the services that pass their Service-Specific Screening. If neither passes, no service is offered and the call proceeds as if neither service were active on the line.

If the call encounters a ringing/no-answer condition and field RNAMODE is set to:

- NONE (no service offering), no service-specific screening is performed.
- MSG (Access to Messaging only), only service-specific screening for Access to Messaging service is performed.

Service-Specific Screening for EBCR service

To pass Service-Specific Screening for EBCR service the following criteria must be satisfied:

- If the call is an interLATA call, field ACBINTER in table SDSINFO is set to Y (yes). This field enables and disables EBCR service on interLATA calls.
- The Automatic Call Back feature is available to the line.

Enhanced Busy Call Return (EBCR) (continued)

Service-Specific Screening for Access to Messaging service

Service-Specific Screening for Access to Messaging is composed of criteria related to equal access calls and privilege calls. For a list of this criteria, consult documentation for Access to Messaging, RES00077.

Busy detection

Busy detection occurs after Common Offering Screening and before Service-Specific Screening.

The called party's busy condition is detected in the following manner:

- On an intraoffice call, the called party line is in the off-hook state and it is not possible for the call to complete.
- On an interoffice call, a “Release With Cause" message is received in response to the Initial Address Message (IAM). The cause value must indicate “User Busy."

Service invocation

When both Common Offering Screening and Service-Specific Screening have been passed and a busy condition has been detected, EBCR service is considered to be invoked, or started. Invocation of EBCR service corresponds to the immediate offering of EBCR service to the caller by means of the offer of service announcement.

Note that EBCR service is not invoked in cases where the call cannot be completed because the called party's line is out of service or an interoffice facility is busy or out of service

Offer of service

During this stage, the caller is presented with an announcement offering EBCR service and is given an opportunity to accept the service via digit collection.

Offer of service announcements

There are two separate announcements that can offer EBCR service to the caller:

- The switch datafills the first announcement in field ACBANNC of table SDSINFO tuple SDSBUSY selector ACB. Field ACBANNC is a selector for standard (STND) or custom (CUSTOM) announcements.
- The switch datafills the second announcement in field ACBMSGAN of table SDSINFO tuple SDSBSY selector ACBMSG. Field ACBMSAN is a selector for STND or CUSTOM announcements.

If the applicable announcement is unavailable, service is not offered to the caller, and the call proceeds as if EBCR service were not active on the line.

Enhanced Busy Call Return (EBCR) (continued)

Digit collection

Normal digit collection lasts either the duration of the offer of service announcement (including announcement repetition) or the duration of the offer of service announcement (including announcement repetition) followed by the help announcement. Using extended digit collection, the operating company can increase the duration of the digit collection period from 1 to 10s beyond the normal digit collection. To give the caller a chance to press a key after hearing the instructions, a period of silence can be included at the end as part of the offer of service announcement.

To collect the digit entered by the caller, a universal tone receiver (UTR) is attached to the call. If a circuit is not available for the UTR, EBCR service is not offered, and the call proceeds as if EBCR were not active on the line.

Caller acceptance or rejection

When presented with an offer of service announcement, the caller accepts EBCR service either by pressing the acceptance key for EBCR or by entering the *66 sequence.

EBCR service is rejected if the caller does any of the following during digit collection period:

- presses a key or keys other than the following:
  - — the acceptance key for EBCR service
  - — *66
  - — the help key
  - — the repeat key
  - — #

    Note: The # key is ignored by EBCR service, unless it interrupts the *66 sequence.

- presses the # key between the digits of the *66 sequence
- allows the inter-digit time-out to expire before entering the next digit in the *66 sequence (see Note 2)
- does not press a key
- presses only the help key, the repeat key, #, or any combination of these keys any number of times

Note 1: If the originating station is a non-rotary-dial set using a DP line, the * and # digits cannot be detected. If the caller presses the * or # key, the result is the same as if the caller had not pressed a key

Enhanced Busy Call Return (EBCR) (continued)

Note 2: If the operating company chooses to use the *66 sequence for accepting EBCR service, the operating company can control the inter-digit time-out for the *66 sequence with the existing office parameter, LN_LONG_PARTIAL_DIAL_TIME in table OFCENG.

Acceptance

If the caller presses the acceptance key for EBCR or enters the *66 sequence during the digit collection period, the announcement offering EBCR service stops, digit collection stops, the announcement and universal tone receiver (UTR) circuits are released, and the ACB feature is invoked.

Rejection

If the caller presses a key during the digit collection period that causes EBCR service to be rejected, the announcement offering EBCR service stops (if it is still playing), digit collection stops and the universal tone receiver (UTR) circuit is released. The call is either disconnected or provided with busy tone depending on how the operating company has set up the rejection treatment on busy.

If the caller has not pressed a key which causes Access to Messaging service to be rejected by the end of the digit collection period, the announcement and universal tone receiver (UTR) circuits are released, and the call is either disconnected or provided with busy tone depending on how the operating company has set up the rejection treatment on busy.

Termination

This section is a summary of the most common ways that EBCR service can service terminate, namely, normal termination, interrupt cases, and error and failure conditions.

Normal termination

Normal termination occurs when the ACB feature is successfully invoked. From this point, EBCR is no longer active.

Enhanced Busy Call Return (EBCR) (continued)

Interrupt

Interrupt events cause EBCR service to be aborted or not offered at all. The following table lists these events and their results.

Events that cause EBCR service to be aborted or not offered

Event	Result
The screening criteria are not met.	EBCR service is not offered. The call is sent to busy treatment.
The digit collection period ends and the caller has not pressed a key.	EBCR service is aborted. The call is either disconnected or provided with busy treatment depending on how the operating company has set up the rejection treatment on busy.
The digit collection period ends and the caller has pressed only the help key, # or any combination of these keys any number of times.	EBCR service is aborted. The call is either disconnected (DISC treatment) or provided with busy treatment depending on how the operating company has set up the rejection treatment on busy.
The caller presses a key(s) during digit collection which is not one of the following:- the acceptance key- *66- the help key- the repeat key- #	EBCR service is aborted. The call is either disconnected or provided with busy treatment depending on how the operating company has set up the rejection treatment on busy.
The caller presses the # key between the digits of the *66 sequence or allows the inter-digit time-out to expire before entering the next digit in the *66 sequence.	EBCR service is aborted. The call is either disconnected or provided with busy treatment depending on how the operating company has set up the rejection treatment on busy.
The caller hangs up during the digit collection period.	EBCR service is aborted. The call terminates.

Error and failure conditions

Error conditions are unexpected events that could result in EBCR service not being offered. The following table shows one possible error condition.

Unexpected event and result

Error	Result
The call is sent to a treatment different from the one provided when the called party is busy.	EBCR service is not offered. Normal error treatment applies.

Enhanced Busy Call Return (EBCR) (continued)

Failure conditions result in EBCR service aborting or not being offered. The following table lists possible failure conditions and subsequent actions.

List of call failures and results

Failure condition	Results
Called line or interoffice facility is out of service or manually busied.	EBCR service is not offered. Treatment is provided.
Switch announcement fails.	EBCR service is not offered. Switch will provide a log message.
Reverse translations fail.	EBCR service is not offered. The call proceeds normally.
Remote is in emergency stand-alone (ESA) mode.	EBCR service is not offered. The call proceeds normally.
Universal tone receivers are not available.	EBCR service is not offered. The call proceeds normally.
Lack of software resources (for example, extension blocks, feature data blocks, feature control blocks, feature translations blocks).	EBCR service is not offered. The call proceeds normally.

Provisioning announcements

Standard or custom announcements can be used with EBCR service. The switch datafills standard announcements as type standard (STND) in field ANTYPE of table ANNS. The switch datafills custom announcements as type MENU in field ANTYPE of table ANNS. These announcements can be pre-recorded by Nortel or recorded on-site using the DRAMREC utility.

Announcements for EBCR service can be recorded on RAM or EEPROM cards (which are speech cards in a DRAM) or on an EDRAM card. DRAM cards should be used for single-track announcements. EDRAMs can be used for either single-track or multi-track announcements.

The operating company can use the following three types of arrangements for setting up EBCR service announcements:

- single-track announcements (single occurrence)
- single-track announcements (multiple occurrence)
- multi-track announcements

Though all three arrangements are possible, the use of multi-track announcements is strongly recommended, since multi-track announcements

have an acceptable maximum waiting time for callers to access the announcement and an acceptable hardware cost (that is, number of physical connections to the EDRAM). The following paragraphs explain this recommendation by examining each of the possible arrangements.

Single-track announcements (single occurrence)

A single-track announcement with only one occurrence has a low hardware cost, since only one connection to the DRAM/EDRAM is required. Unfortunately this type of arrangement will lead to situations in which callers wait an unacceptably long time to hear an announcement. Furthermore, during this waiting time, on busy calls, callers will hear only silence. The following paragraphs explain the causes of these problems.

With the DMS DRAM and EDRAM broadcast feature, up to 255 lines can connect to an announcement (that is, an announcement occurrence or track of an announcement when multi-track announcement are being used) at the same time. However, once the announcement has started to play, no lines can connect to it until the announcement recycles to the beginning. In the case of an 8-second occurrence, a caller may have to wait almost 8 seconds before the announcement starts playing again.

In many cases, a delay before the playing of an announcement is not a problem because the subscriber hears something, for example, a ringing tone, while the subscriber is waiting for the announcement to begin. For EBCR service on the busy condition, however, a significant delay before the playing of an announcement is a problem, since no busy tone is played while the caller waits for the announcement to begin. No busy tone is played since EBCR service takes over the call from call processing as soon as the busy condition is detected; call processing would normally provide busy tone. In a worst case scenario, if a single-track announcement (single occurrence) has just begun to play, the subscriber could hear nothing but dead air for nearly the whole length of the announcement. Leaving the subscriber with silence for this length of time is unacceptable.

Single-track announcements (multiple occurrence)

Operating companies commonly solve the problem of unacceptably long waiting times by provisioning many occurrences of the single-track announcement. In this scenario, every caller is immediately connected to an occurrence of the announcement that is just beginning. This arrangement eliminates the waiting time for the caller, but involves a high hardware cost, since each announcement occurrence requires one physical connection to the DRAM/EDRAM (also know as a channel).

To calculate the number of occurrences (and therefore DRAM/EDRAM connections) that are required, the operating company determines the

Enhanced Busy Call Return (EBCR) (continued)

maximum number of simultaneous connections that could be required to the announcement. This is the number of announcement occurrences that are required and also the required number of connections to the EDRAM. Since the announcements for EBCR service have high volume use, the number of occurrences that are required will be high, typically over 20.

Multi-track announcements

The use of multi-track announcements allows the operating company to reduce waiting times for callers to access an announcement to a maximum waiting time that is significantly shorter than that of the single-track single occurrence scenario. This reduction in waiting time is accomplished by dividing the announcement into a number of short equal-length tracks that are played in sequence. Dividing the announcement up reduces the maximum time a subscriber could wait to hear an announcement to the cycle time of one track. For example, if an 8-second announcement is divided into four 2-second tracks, the maximum dead air time becomes slightly less than 2 seconds. The hardware requirement is one physical connection to the EDRAM (or channel) for each track.

Multi-track announcements have a higher maximum waiting time than single-track announcements (multiple occurrence), since single-track (multiple occurrence) announcement have no waiting time for callers. However, multi-track announcements have a much lower hardware cost than single-track announcements (multiple occurrence). The following paragraph explains the reasons behind this lower hardware cost.

Since one connection to the EDRAM is required for each track of an announcement, and since a maximum of 8 tracks is required for a multi-track announcement, any multi-track announcement can require a maximum of 8 connections to the EDRAM. This is significantly lower than the number of connections that are required for single-track (multiple occurrence) announcements, which typically require more than 20 connections for EBCR service announcements.

Consequently, multi-track announcements are strongly recommended for EBCR service, since they involve acceptable maximum waiting times for callers to hear the announcement, while using fewer connections to the EDRAM than single-track (multiple occurrence) announcements.

Guidelines for recording multi-track announcements

When calls are made by equipment such as faxes, modems, alarm systems and Vista 350 phones, from lines that have EBCR service to lines that are busy, these types of equipment need to be able to detect the busy condition in order to function properly. To allow this equipment to detect the busy condition, the start of the announcement offering EBCR service must contain at least 2

seconds of busy tone. This constrains the first two seconds of the first track of the announcement to pure busy tone. To further increase the ability of this equipment to detect the busy condition, the operating company can use extended digit collection during which time busy tone is played. Extended digit collection is defined in table SDSINFO, tuple SDSOFC, field EXDIGCOL.

EDRAM space requirements

One 5-track announcement is required for the busy condition and one announcement on up to 8 tracks is required for the ringing/no-answer condition for EBCR service. If both EBCR service and Access to Messaging service are offered, three 5-track announcements are required for the busy condition and one announcement on up to 8 tracks is required for the ringing/no-answer condition.

Translation table flow

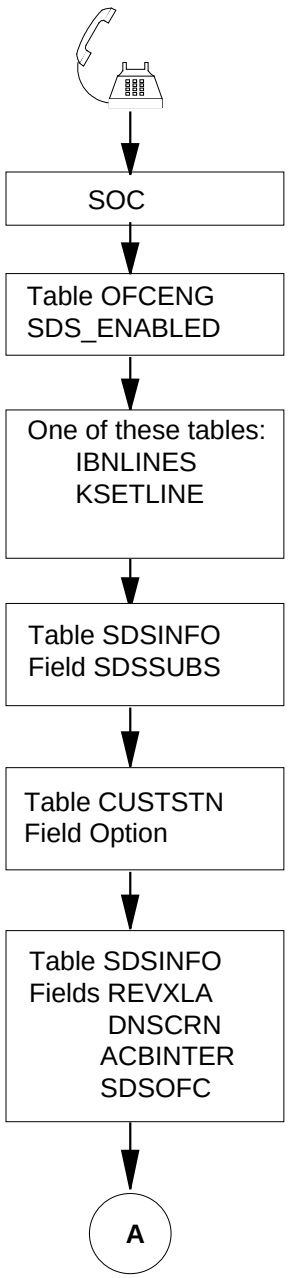
The EBCR translations tables are described in the following list:

- Table OFCENG
- Tables IBNLINES and KSETLINE
- Table SDSINFO
- Table CUSTSTN
- Table RESOFC

An overview of the EBCR translation process is shown in the flowchart that follows.

Enhanced Busy Call Return (EBCR) (continued)

Table flow for an EBCR busy call



Busy call

The subscriber goes off-hook and dials a DN.

Is the SOC option for EBCR on?

Is EBCR enabled in this office?

Is Option SDS present on the line?

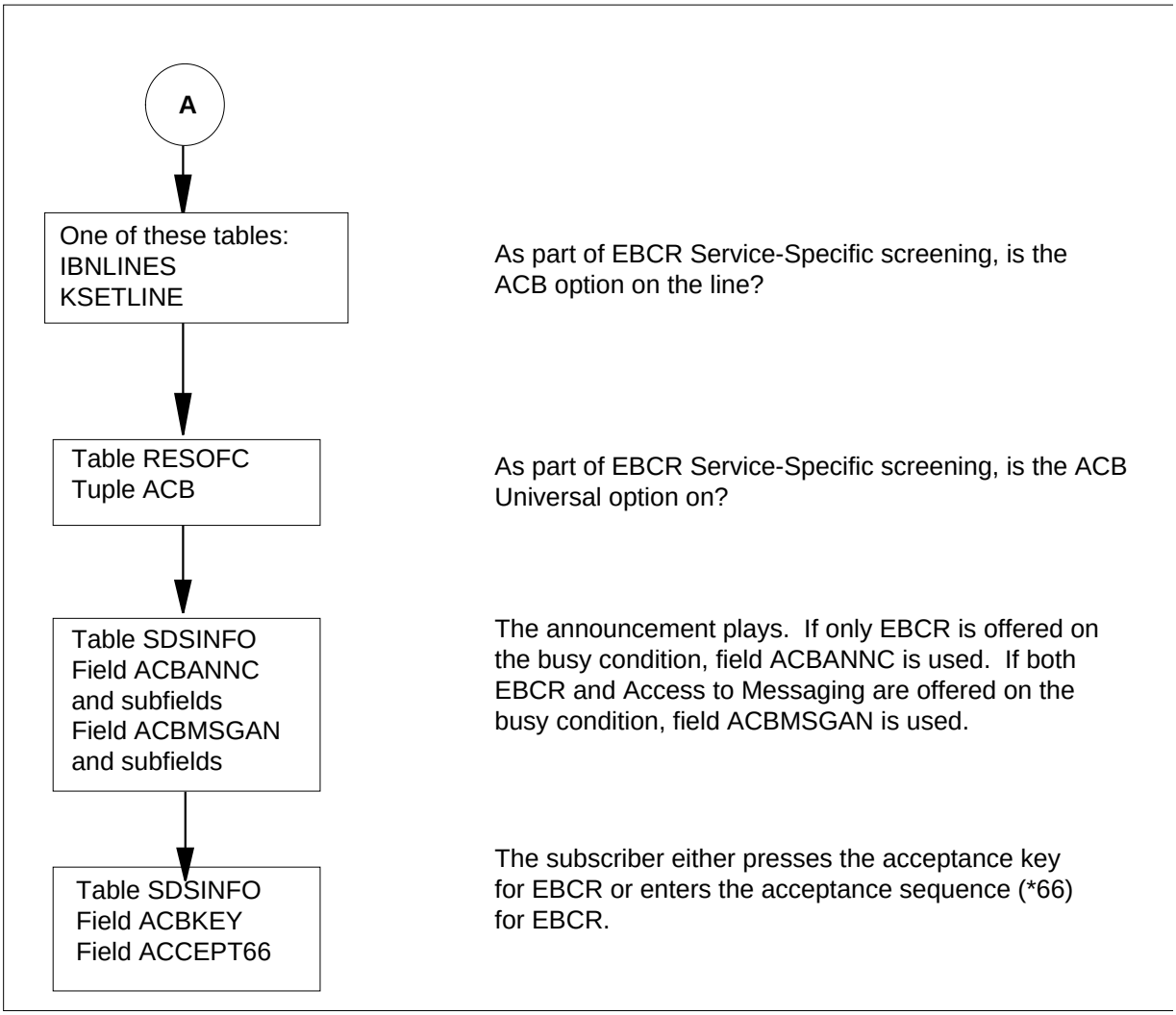
Is EBCR offered in Universal mode or Subscription mode?

Is SDS or SDSDENY assigned to the customer group?

Does the call pass the screening performed by fields REVXLA, DNSCRN, ACBINTER, and SDSOFC?

Enhanced Busy Call Return (EBCR) (continued)

Table flow for an EBCR busy call (continued)



The following table lists the datafill content used in the flowchart.

Datafill example for ECBR (Sheet 1 of 2)

Datafill table	Example data
OFCENG	SDS_ENABLED Y
IBNLINES	HOST 00 0 03 03 0 DT STN RES 6246112 274 (SDS) (ACB) $
KSETLINE	HOST 00 1 03 1 DN Y 2265235 COMKODAK 0 0 613 (SDS) (ACB)$

Enhanced Busy Call Return (EBCR) (continued)

Datafill example for ECBR (Sheet 2 of 2)

Datafill table	Example data
SDSINFO	OFFICE OFFICE N N N (514845) (454) $ Y Y N BUSY
	SDSOFC SDSOFC 9 8 CUSTOM SDSCUSTANNC 1 STND BSYHELPANNC UNIVER SUBSCR 10 N N N
	SDSBSY SDSBSY ACBMSG 4 CUSTOM SDSCUSTANNC 3 5155551234 7771234 5 Y Y STND ACBANNC STND ACBMSGANNC
	SDSRNA SDSRNA NONE
CUSTSTN	COMKODAK SDS SDS
RESOFC	ACB Y UNIVER ACB AMA 5 3 30 180 60 5 5 2 Y DENY DENY DENY Y $

Limitations and restrictions

The following limitations and restrictions apply to EBCR

- EBCR service performs screening prior to offering its service to the caller. This screening is performed in order to minimize the chance that the Automatic Call Back feature will fail after the caller has accepted the EBCR offer of service. Nonetheless, there will still be cases in which the Automatic Call Back feature fails after the caller accepts EBCR service.
- The ACB feature does not support all of the agents that EBCR supports. When EBCR is a service candidate for the busy offering, the ACB screening may reject some agents which have already passed common screening. However, it is not within the scope of the EBCR feature to expand the range of agents that ACB supports.
- The `1166' sequence is not supported for in-call EBCR activation.
- Only one help announcement is available for the busy condition service offering regardless of whether only EBCR service is offered on the busy condition or whether a choice of Access to Messaging or EBCR service is offered.
- Per-call denial and sustained deactivation are not available on POTS and PBX lines.
- Call forwarding detection may fail when one or more switches involved in the call path fail to send call forwarding information to the originating switch. When this information is not received by the originating switch, EBCR service is offered on the call even when field CFW in table SDSINFO tuple OFFICE is set to N.
- On inter-switch calls, EBCR service is only available if the inter-switch call is end-to-end ISUP.

Enhanced Busy Call Return (EBCR) (continued)

- The ``#" and ``*" digits cannot be detected by EBCR if the originating station is a DP line.
- EBCR service is not available on hotel/motel calls and credit card calls.
- EBCR service is not supported on interoffice busy calls where the busy treatment is not applied by the originating end office.
- Since EBCR uses UTRs for digit collection, subscriber lines must be hosted by Series 2 peripherals (XPM).
- If a warm or cold restart is performed while an EBCR announcement is playing, the announcement will play over and over. The caller must hang up and then go off-hook to get dial tone. This behavior is not caused by EBCR and is not restricted to EBCR announcements.
- If a call is forwarded more than 5 times, the system provides busy treatment to the caller and EBCR service is offered on the call.
- The acceptance key for EBCR is not displayed when entered on a KSET line with called number/name display.
- When the R selector in table STDPRTCT.STDPRT or the REPL selector in IBNXLA is used, the dialed digits are replaced by new digits. If these selectors are used on calls where EBCR service is active, EBCR will only perform screening on the new digits. Therefore, in the case of N11 calls, for example, EBCR service may be offered if the N11 digits are replaced by digits that satisfy the screening criteria for EBCR service.
- EBCR service may be offered on the second leg of a 3-way call or on the consultation leg of a station-controlled conference call. While the offer of service announcement or help announcement is playing, the hook flash is ignored. To return to conference mode, the user must first accept the offer of service, reject the offer of service by pressing any key other than the acceptance key, or wait for the offer of service announcement to complete. After service is accepted, rejected, or the offer of service announcement is over, EBCR service is no longer on the call and the user can use the hook flash to return to the first party on the call.
- When a call terminates on a busy line, the user may elect to hang up, go off-hook and then dial *66, thereby activating the Automatic Call Back feature directly. There are some cases where the Automatic Call Back feature will fail and generate a busy treatment. In such cases, EBCR will detect the busy condition and offer EBCR service. However, if the user accepts the offer of Access to ACB service, the user will receive the busy treatment and not the ACB service proposed by EBCR. This is a limitation inherited from the Automatic Call Back feature.

Enhanced Busy Call Return (EBCR) (continued)

Interactions

The following paragraphs describe the interactions between EBCR and other functionalities.

Advanced intelligent network (AIN 0.1)

On calls that terminate on a busy line and where an AIN 0.1 trigger is hit on the originating switch, EBCR service will be offered if the terminating party's DN is the same as the DN the caller dialed. If the call is routed from the dialed DN to another DN because of the AIN response, EBCR service will not be offered.

On calls that terminate on a busy line and where an AIN 0.1 trigger is hit on a non-originating switch, EBCR service will be offered. However, in the case where the AIN 0.1 trigger is a Termination Attempt Trigger and the SCP response is a FORWARD_CALL response, if the user accepts the service, the user will hear the busy tone and not the ACB confirmation announcement. The user is not provided with the ACB service the user was offered and accepted. This is a limitation of the standard ACB feature.

On calls that terminate on a busy line and where an AIN 0.1 trigger is hit on non-originating switch, EBCR service will be offered if the conditions described above are met. However, if the SCP response is a FORWARD_CALL response, and if the user elects to hang up, go off-hook and then dial *66, thereby accessing standard ACB directly instead of accepting the EBCR offer of service (if it is provided), standard ACB will fail. Standard ACB service will not be provided and will generate a busy treatment instead of the ACB confirmation announcement. EBCR will then detect the busy condition and will offer EBCR service. If the caller accepts the offer of EBCR service, the caller will receive busy tone and will not receive the ACB service the caller was offered and accepted. This is a limitation of standard ACB.

Call blocking

EBCR service is not invoked when call blocking occurs.

Call forwarding (IBN and POTS)

Call forwarding features allow stations to forward calls to subscriber-defined locations.

When the operating company sets field CFW in table SDSINFO tuple OFFICE to Y (yes), EBCR service is offered on calls that have one or more Call forwarding features. When this field is set to N (no), EBCR service is not offered on calls that have one or more Call forwarding features. For this functionality Call forwarding feature refers to all types of Call forwarding

Enhanced Busy Call Return (EBCR) (continued)

including AIN FORWARD_CALL response. Some exceptions exist and are described below.

On calls to DNs with AIN FORWARD_CALL response, if the AIN trigger is hit on the originating end office, EBCR service is not offered, even if field CFW is set to Y.

Interworking with other vendor's equipment can impact call forwarding detection on the originating switch, causing EBCR to be offered, even if field CFW is set to N. When an inter-office call is forwarded, Nortel's implementation of call forwarding sends a forwarding indicator back to the originating switch as part of the ISUP pass-along message (PAM). However, if one or more switches in the call path does not send the Call forwarding indicator back to the originating switch, the originating switch will be unable to detect the Call forwarding interaction and will offer EBCR service on the call even if field CFW is set to N.

The values of fields CFW and HNTGRP (see interaction with Hunt groups) only determine whether EBCR service will be offered when the called party has either one or more Call forwarding features or the Hunt Group feature. Therefore, in a call forwarding scenario, if the forwarded to party has the hunt group feature or call forwarding features, this is irrelevant to fields CFW and HNTGRP. Take the following scenario as an example: A (who has EBCR service) calls B who is busy and has the Call Forward Busy (CFB) feature. The call is then forwarded to C who is a member of a hunt group. In this scenario, EBCR service will be offered if field CFW is set to yes even if field HNTGRP is set to N, since the Hunt Group feature is on the forwarded to party and not on the called party.

When the called party has both one or more Call forwarding features and the Hunt Group feature, EBCR service is not offered if either field CFW or field HNTGRP is set to N or if both fields are set to N.

Automatic Call Back (the service to which EBCR provides access) cannot be activated, even if field CFW is set to Y unless Automatic Call Back supports the type of Call forwarding feature that is present on the called party's line. Consult documentation for the ACB feature for ACB interaction with Call forwarding features.

Enhanced Busy Call Return (EBCR) (continued)

Call forwarding validation

This option validates the DN entered as the forwarding DN. The following validation options are offered on a customer group basis only:

- no validation of the DN to which calls are forwarded (default option)
- validation of the DN as a routable number (routing option)
- validation by attempting to complete the call to the target station upon feature activation (terminating option)

If the terminating option is selected, an attempt is made to call the forwarding DN. EBCR service is not activated when the validation call attempt encounters a busy condition.

Calling name and number delivery blocking

Calling Name Delivery Blocking (CNAB) and Calling Number Delivery Blocking (CNDB) are outgoing call services that operate on a per-call basis. They allow subscribers to control the delivery of their name and number to a called party by toggling the default name and number suppression of the line. If the information delivery is suppressed by default, the services allow the subscribers to enable the delivery of their name and number before dialing the called DN. If the information delivery is allowed by default, subscribers can block their name and number delivery.

Calling Number Blocking (CNB) is an outgoing call service. CNB enables subscribers to block the display of their number on the subscriber set of the called party. CNB is used on an individual call basis and is available to subscribers who have the CNAB or CNDB line option.

Calling Name and Number Delivery Blocking (CNNB) is an outgoing call service. CNNB enables a subscriber to block the display of number and name information on the subscriber set of the person being called. CNNB is used on an individual call basis and is available to all subscribers who have the CNAB or CNDB line option.

The Calling Name and Number Delivery (CNND) feature is available to subscribers who have the CNAB or CNDB line option. CNND allows subscribers to deliver both name and number information to the called party, regardless of the permanent name and number suppression status of the line. CNND works on an individual call basis.

A subscriber to any of these features will be provided with EBCR service and EBCR will not interfere with these features.

Enhanced Busy Call Return (EBCR) (continued)

Call Pickup (CPU)

The CPU feature enables a station to answer calls incoming to another station within the same pickup group.

EBCR service is not invoked if a CPU request is denied.

Call Waiting (CWT)

The CWT feature notifies a subscriber in a stable call when another call arrives. The subscriber can place the current party on hold and answer the call that is waiting.

On calls to parties that have the Call Waiting feature, EBCR will only offer its service to the caller if there is already one party waiting on the called party's line.

Conferencing

EBCR allows the operating company to decide whether to offer EBCR service on the consultation leg of Conference calls. Conferencing calls for this functionality refer only to the operation of conferencing features which make use of consultation legs, for example, Three-Way Call (3WC), Station Controlled Conference, Flexible Call, and Call Transfer.

Setting field CONF in table SDSINFO tuple OFFICE to Y (yes) allows EBCR service to be offered on calls using one of these types of conferencing features, while setting this field to N (no) prevents the offering of EBCR service on calls that have one of these types of Conferencing features.

Customized dialing

EBCR service is not invoked on calls originated with a customized dial plan (on-net calls). However, EBCR service is invoked on off-net calls that qualify for EBCR service activation. EBCR will ensure that the original translated dialed digits (public DN) will be present in the proper ISUP message where applicable.

Distinctive Ringing/Call Waiting (DRCW)

When a line has DRCW, incoming calls from DNs that are on the DRCW list are identified by a distinctive ring, or if the line is busy, a distinctive call waiting tone. The caller receives standard audible ringback tone.

The interaction of EBCR service with DRCW is the same as with CWT.

Enhanced Busy Call Return (EBCR) (continued)

Enhanced Secondary DN (ESDN)

Note: This feature is also called Enhanced Teen Service.

The Teen Service feature allows multiple DNs (up to 6) to be assigned to a single line without the expense of additional equipment. The ESDN feature is an enhancement to the Teen Service feature.

EBCR is not available on secondary DNs. If the operating company has both the EBCR feature and the Access to Messaging feature active in an end office and has datafilled these features to provide callers with a choice of either service on the busy condition, only Access to Messaging service will be offered to secondary DNs. Primary DNs will be offered a choice of either service.

Hook flash

EBCR service ignores hook flashes while an offer of service announcement for EBCR service is playing and while a help announcement is playing. The user must accept or reject the offer of service before hook flash can be used again (for example to return to the first party on a 3-way call or on the consultation leg of a station-controlled conference call). After the offer of service announcement is over, EBCR service is no longer on the call and the user can use the hook flash.

Hunt groups

A hunt group is an end-user defined group of lines. When attempting to terminate a call to a busy line within the hunt group's group of lines, the switch scans the group of lines sequentially and searches for an idle line on which to terminate the call.

EBCR allows the operating company to decide whether to offer EBCR service on intraoffice calls that terminate on a hunt group. Setting field HNTGRP in table SDSINFO tuple OFFICE to Y (yes) allows the offering of EBCR service on intraoffice calls that terminate on a hunt group, while setting this field to N (no) prevents the offering of EBCR service on intraoffice calls that terminate on a hunt group.

Note that if table RESOFC tuple ACB field HUNTLINE is set to DENY, Automatic Call Back (ACB) (the service to which EBCR provides access) will not be activated on intraoffice calls terminating on a hunt group, even if field HNTGRP is set to Y. Though ACB cannot be activated when field HUNTLINE is set to DENY, an announcement offering EBCR service to the caller will still be played when field HNTGRP is set to Y.

Enhanced Busy Call Return (EBCR) (continued)

Long Distance Alerting (LDA/LDS)

The Long Distance Alerting feature notifies its subscribers that they have an incoming long distance call by means of LDS distinctive call waiting tones. If the subscriber does not respond to the distinctive call waiting tones within a predefined period of time, the call is routed to the no terminal responding treatment.

On a call to a party with the Long Distance Alerting feature who is currently receiving LDS distinctive waiting tones due to an incoming long distance call, EBCR service is provided to the caller.

Meet-Me Conference

The Meet-Me Conference feature allows conferees to dial a specific DN at a predetermined time to access a bridge and hold the conference.

EBCR service is offered when a caller tries to join a Meet-Me Conference by dialing a specific DN and that DN is busy.

Network Facility Access (NFA)

The Network Facility Access (NFA) feature provides a direct connection between a subscriber line and an intelligent processor (IP) by means of the DMS switch. Through this connection, the subscriber has direct access to services provided by the IP.

The subscriber is provided with access to the IP in two manners: implicit and explicit. With implicit access, the subscriber is directly connected to the IP simply by going off-hook; the subscriber can interact with the IP or revert to regular call processing by dialing as normal. With explicit access, the subscriber dials an NFA explicit access code to connect to the IP; then the subscriber can interact with the IP.

When the IP redirects the caller to a new DN, EBCR service is offered when the new DN is busy.

Spontaneous Call Waiting Identification with Disposition (DSCWID)

The DSCWID feature allows subscribers to receive calling party information during call waiting and provides subscribers with a set of disposition options to treat incoming calls.

On calls to parties that have the DSCWID feature, EBCR service is only offered to the caller if there is already one party waiting on the called party's line.

Enhanced Busy Call Return (EBCR) (continued)

Toll Diversion (TDV)

The TDV feature diverts originators' toll calls to an attendant console, thus preventing the completion of toll calls or calls to a toll operator without the assistance of an attendant.

EBCR service is not invoked after a call attempt is blocked by TDV.

Uniform Call Distribution/Automatic Call Distribution features

Uniform Call Distribution (UCD) allows calls to be evenly distributed to a number of predesignated stations known as UCD stations or UCD positions. This feature is used to queue incoming calls to a message desk.

Automatic Call Distribution (ACD) is a set of MDC features that assigns answering machine priority to incoming calls and then queues and distributes them to a predetermined group of telephone sets designated as answering positions.

EBCR service is not offered on calls to a UCD or ACD group unless the call is forwarded to an overflow DN or a Night Service DN that is outside of the UCD/ACD group and the forward-to DN is busy.

If the call is forwarded to an overflow DN or a Night Service DN outside the UCD or ACD group and the forward-to DN is busy, EBCR will detect the busy condition and offer EBCR service. However, when the caller accepts the service, the caller will hear busy tone instead of the ACB confirmation announcement. The caller will not receive the ACB service that was accepted. This is a limitation of EBCR.

On a call to a UCD or ACD group that is forwarded to an overflow DN or a Night Service DN outside the UCD or ACD group which is busy, EBCR service will be offered, as explained above. However, if the user elects to hang up, go off-hook and then dial *66, thereby accessing the standard ACB feature directly, instead of accepting the EBCR offer of service, standard ACB will fail. Standard ACB service will not be provided and will generate a busy treatment instead of the ACB confirmation announcement. EBCR will then detect the busy condition and will offer EBCR service for the second time. If the caller accepts the offer of EBCR service, the caller will receive busy tone and will not receive the ACB service the caller was offered and accepted. This is a limitation of standard ACB.

Virtual Facility Group (VFG)

A Virtual Facility Group (VFG) is a software structure that emulates a trunk. For example, a VFG can be used to limit the number of calls originating from

a customer group or to simulate a looparound trunk without using physical resources.

If no redirection has occurred before a VFG is encountered, screening for EBCR service is performed after the call has gone through the VFG. When this happens, EBCR service is offered if the screening for EBCR is passed.

Activation/deactivation by the end user

End users can deactivate the EBCR offer of service for the duration of a call using an access code. Before dialing a DN, the end user dials the access code to deactivate EBCR for one call. The user hears a confirmation tone followed by standard dial tone. After the call has completed, the offer of service is restored to the end user's line. The access code is datafilled by the operating company. However, it is recommended that *03 be used for this functionality as it is pending standardization by Bellcore. The sequence 1103 is also supported in order to invoke this functionality on dial-pulse RES lines. This functionality is provided by the Cancel In-Call Service Access (CISA) feature.

End users can also deactivate the EBCR offer of service for as long as they wish, or reactivate the EBCR offer of service using an access code. If the EBCR offer of service is active, use of the access code deactivates the offer of service, that is, the offer of service will no longer be offered to the end user. If the EBCR offer of service is not active, use of the access code reactivates the offer of service, that is, EBCR service will once again be offered to the end user. The access code is datafilled by the operating company. However, it is recommended that *02 be used for this functionality as it is pending standardization by Bellcore. The sequence 1102 is also supported in order to invoke this functionality on dial-pulse RES lines. This functionality is provided by the In Call Service Control (ICSCTRL) feature.

Billing

EBCR does not affect billing. The ACB feature generates its own AMA records.

Enhanced Busy Call Return (EBCR) (continued)

Datafilling office parameters

The following table shows the office parameters used by EBCR.

Office parameters used by EBCR (Sheet 1 of 3)

Table name	Parameter name	Explanation and action
OFCENG	SDS_ENABLED	This parameter controls the activation and deactivation of EBCR on an office-wide basis. When this parameter is set to Y (yes), EBCR is enabled. When this parameter is set to N (no), the default value, EBCR cannot operate, even if table SDSINFO is datafilled and the EBCR Software Optionality Control is in the ON state. ***Note:*** This parameter also activates and deactivates Access to Messaging if table SDSINFO has been datafilled for Access to Messaging and if the Software Optionality Control for Access to Messaging is in the ON state.

Enhanced Busy Call Return (EBCR) (continued)

Office parameters used by EBCR (Sheet 2 of 3)

Table name	Parameter name	Explanation and action
OFCAUT	NO_OF_SDS_EXT_ BLKS	This parameter determines the number of SDS extension blocks that exist in the office upon setting this parameter. To determine the value of this parameter, begin by performing the following calculation: U = A X B / 100, where • A is the number of calls that pass screening (both Common-Offering screening and Service-Specific screening) during the busy hour (BCHA). The value of register ACTIVATE from OM group SDS during the busy hour can be used as a lower estimation of this value: • B is the average length of time that this extension block is used for each call in seconds. Use 10 seconds for the value of B. • U is the maximum SDS extension block requirement for EBCR. U is then converted using the Erlang B table with a probability of blockage or delay to be determined by the operating company. Set the office parameter to this converted U value.

Enhanced Busy Call Return (EBCR) (continued)

Office parameters used by EBCR (Sheet 3 of 3)

Table name	Parameter name	Explanation and action
OFCENG	NO_MEDIUM_FTR_ DATA_BLKS	This parameter sets the number of medium feature data blocks that are available in the office. To determine the number of medium feature data blocks required for EBCR, use the following calculation, and then add the converted result to the value already datafilled for this parameter: U = A X B / 100, where • A is the number of calls that pass screening (both Common-Offering screening and Service-Specific screening) during the busy hour (BCHA). This value corresponds to the value of register ACTIVATE from OM group SDS for the busy hour. • B is the average length of time in seconds that a medium feature data block is used on a call. A medium feature data block is used on a call from the beginning of the call until the caller either hangs up, rejects, or accepts the service. • U is maximum medium feature data block requirement for EBCR. U is then converted using the Erlang B table with a probability of blockage or delay to be determined by the operating company.

Enhanced Busy Call Return (EBCR) (continued)

Datafill sequence

The following table lists the tables that require datafill for the EBCR feature to operate. The tables are listed in the order in which they are to be datafilled.

Datafill tables required for EBCR (Sheet 1 of 2)

Datafill table	Example data
Announcement tables	Tables TMINV, EDRAMINV, CLLI, DRAMS, ANNS, ANNMEMS, DRAMTRK, and DRMUSERS (custom announcements) must be datafilled for each announcement used for EBCR. The following announcements may be required for EBCR depending on the functionality the operating company wishes to provide to subscribers: offer of EBCR service, offer of a choice of Access to Messaging service or EBCR service (on the busy condition), and a help announcement (for the busy condition). Digital multi-track announcements are strongly recommended for EBCR.
OFRT	Office Route. This table defines the route reference index that can be used to define treatments ICSD or ICSA in table TMTCNTL. If you do not wish to define either treatment ICSD or ICSA using a route reference index you do not need to datafill this table. ***Note:*** Table OFR2, OFR3 or OFR4 may also be used to define route reference indices.
TMTCNTL	Treatment Control. This table defines treatments. EBCR requires that treatments ICSA and ICSD be datafilled in table TMTCNTL.
SDSINFO	Special Delivery Service Information. This table defines the behavior of EBCR on an office wide basis. Tuples OFFICE, SDSOFC, SDSBSY and SDSRNA must be datafilled for this service to operate.

Enhanced Busy Call Return (EBCR) (continued)

Datafill tables required for EBCR (Sheet 2 of 2)

Datafill table	Example data
CUSTSTN	Customer Group Station Option. This table contains information that defines Centrex customer group options. The SDS customer group option and the SDSDENY customer group option are assigned to customer groups using this table. Customer group option SDS and SDSDENY assign and deny EBCR service to a customer group. If you do not require the SDS customer group option or the SDSDENY customer group option, you do not need to provide datafill for this table. ***Note:*** Before assigning option SDS or SDSDENY to a customer group using table CUSTSTN, the customer group must already be defined in table CUSTENG.
IBNXLA	IBN Translations. This table contains the information used to translate the digits for calls from MDC and RES stations. Datafill is required for this table in order to map access codes to the sustained deactivation and per-call denial functionality provided by EBCR.
IBNLINES	IBN Line Assignment. This table is datafilled through SERVORD, therefore no datafill procedure or example is provided. Refer to “SERVORD" in this chapter for an example of using SERVORD to datafill this table.
KSETLINE	Business Set and Data Unit Line Assignment. This table is datafilled through SERVORD, therefore no datafill procedure or example is provided. Refer to “SERVORD" in this chapter for an example of using SERVORD to datafill this table.

Enhanced Busy Call Return (EBCR) (continued)

Datafilling table CLLI

The following table shows the datafill required in table CLLI for EBCR service announcements.

Datafilling table CLLI (Sheet 1 of 2)

Field	Subfield	Entry	Explanation and action
CLLI		alphanumeric (vector of up to 16 characters)	Common language location identifier. Enter a CLLI code to uniquely identify the announcement. ***Note:*** Only alphabetic characters, numeric characters, and _ (underscores) can be used to datafill this field. The use of other special characters such as @,#,$,%,^,&,*, (,),-,+,=,/,',;,:,?,}, and { can cause errors in the data in this field. For optimum use, a CLLI code must not contain more than 12 characters, as only the first 12 characters are displayed on the maintenance and administration position (MAP). However, when a CLLI code is displayed in a log report, the entire 16-character CLLI code appears.
ADNUM		numeric (0 to 8191)	Administrative trunk group number. Enter a number in the range from 51 to one less than the current size of table CLLI datafilled in field SIZE of table DATASIZE. (ADNUMS for operating company defined CLLI codes must be in the range from 51 to the size of table CLLI defined in table DATASIZE minus one.) The value of field ADNUM must be unique. Attempts to add a CLLI code with an ADNUM already in use are rejected. The operating company can modify the ADNUM value only if its CLLI code is not referred to by any other tables in the switch. An ADNUM value cannot be changed without deleting the tuple containing the ADNUM to be modified. The tuple must be deleted, the ADNUM value modified, and the tuple reentered in table CLLI.

Enhanced Busy Call Return (EBCR) (continued)

Datafilling table CLLI (Sheet 2 of 2)

Field	Subfield	Entry	Explanation and action
TRKGRSIZ		numeric (0 to 2047)	Trunk group size. Enter a number that is equal to or larger than the number of announcement members for your announcement. This number is used to allocate storage. Consequently, it can be greater than the total number of announcement members. An announcement member is defined as either an occurrence of a single track announcement or as an occurrence of a multi-track announcement. For example, if the announcement is a single track announcement with 4 occurrences, datafill 4 or a number larger than 4. If your announcement consists of a single occurrence of a multi-track announcement composed of 5 tracks, enter 1 or a number larger than 1. The only change that can be made dynamically to this quantity is to increase the size. An attempt to decrease TRKGRSIZ results in an error message. The only size reduction permitted is to decrease the quantity entered in field TRKGRSIZ to 0 (zero). In this case, all announcement members using this CLLI code must be deleted before decreasing the quantity to 0.
ADMININF		alphanumeric (vector of up to 32 characters)	Administrative information. Enter operating company administrative information. The information in this field is not used by the switch. ***Note:*** Only alphabetic characters, numeric characters, and _ (underscores) can be used to datafill this field. The use of other special characters such as @,#,$,%,^,&,*, (,),-,+,=,/,',;,:,?,}, and { can cause errors in the data in this field.

Datafill example for table CLLI

The following example shows sample datafill for table CLLI.

MAP display example for table CLLI

```
       CLLI   ADNUM   TRKGRSIZ                    ADMININF

-------------------------------------------------------------
SDS_BUSY_HELP  187          1                      SDS_ANNC
```

Datafilling table ANNS

The following table shows the datafill required in table ANNS for EBCR service announcements.

Datafilling table ANNS (Sheet 1 of 2)

Field	Subfield	Entry	Explanation and action
CLLI		alphanumeric (1 to 16 characters)	Announcement CLLI keys. Enter the CLLI code that was entered in table CLLI to identify this announcement.
ANNTYPE		ACTSAINAIS AOSSVRCFR ACLASSCNA LCNALTCNA TCSMIDMCT MCCSMDSM ENUNFRANT CRCTLSACB SLEENGSLE FRESPPSTN DorTOPSVR	Announcement type. Enter STND to specify Standard or enter MENU to specify custom type.

Enhanced Busy Call Return (EBCR) (continued)

Datafilling table ANNS (Sheet 2 of 2)

Field	Subfield	Entry	Explanation and action
TRAFSNO		0 to 127	Traffic separation numbers. Enter 0 (zero) to specify that traffic separation numbers are not required. Traffic separation numbers allow the operating company to monitor the traffic on an announcement through the traffic separation system (OM group TFCANA). Since OM group SDS pegs the relevant events pertaining to EBCR service announcements, the use of traffic separation numbers with EBCR service announcements is not recommended. For more information on this field consult table ANNS, field TRAFSNO in *DMS-100 Family NA100 Data Schema Part 2 of 10 Translations Guide Volume 19 of 27.*
MAXCONN		1 to 255	Maximum connections. Enter the maximum number of lines that you will allow to be simultaneously connected to the announcement member
CYTIME		0 to 18	Cycle times. Enter the time in seconds for one track of the announcement to play. 0 (zero) should never be used for EBCR service announcements. ***Note:*** 0 (zero) should never be entered in field CYTIME for EBCR service announcements, since entering 0 (zero) in this field allows for flexible announcement timing. Flexible announcement timing does not support digit collection and therefore cannot be used with EBCR service.
MAXCYC		1 to 255	Maximum cycles. Enter the maximum number of times the complete announcement will play.

Datafill example for table ANNS

The following example shows sample datafill for table ANNS.

MAP display example for table ANNS

```
          CLLI   ANTYPE   TRAFSNO   MAXCONN   CYTIME   MAXCYC

-------------------------------------------------------------
SDS_BUSY_HELP      STND        0        15        2        1
```

Datafilling table ANNMEMS

The following table shows the datafill required in table ANNMEMS for EBCR service announcements.

Datafilling table ANNMEMS (Sheet 1 of 4)

Field	Subfield	Entry	Explanation and action
ANNMEM		see subfields	Announcement member key. This field consists of subfields ANN and MEMBER.
	ANN	alphanumeric	Announcement. Enter the CLLI code that represents the announcement group in table CLLI.
	MEMBER	0 to 255	Member. Enter the number assigned to this announcement member
HDWTYPE		AUDICHRON, DRAM, or blank	Hardware type. Enter DRAM. DRAM is the HDWTYPE entry for digital announcements. ***Note:*** Only digital announcements can be used with the EBCR service.
CARD		2X72AA2 X72AB2X 72AC2X8 8AADRA or blank	Card code. Enter DRA. DRA is the card code entry for digital announcements.

Enhanced Busy Call Return (EBCR) (continued)

Datafilling table ANNMEMS (Sheet 2 of 4)

Field	Subfield	Entry	Explanation and action
MEMINFO		see subfields	Memory information. This field consists of subfield TRCKLIST. Digital multi-track announcements are strongly recommended for EBCR service announcements. A digital announcement member can be assigned up to 8 tracks. The order in which the tracks are heard is determined by the sequence in which the tracks are listed in field MEMINFO. That is, if an announcement member has three tracks listed in the following sequence: 1, 5, and 3, then track 1 is heard first, followed by track 5 and then track 3. The track numbers given in field TRACK are used to index into table DRAMTRK for DRAM and EDRAM announcements. If a track number is used in field TRACK, but there is no corresponding entry in table DRAMTRK, an entire track will be missing from the playback of the announcement. Only EDRAMs support digital multi-track announcements.
	TRCKLIST	see subfields	Track list. This field consists of subfields TRACK, PMTYPE, TMNO and TMCKT.
	TRACK	0 to 31	Track number. Enter the track number you wish to assign to the track.

Enhanced Busy Call Return (EBCR) (continued)

Datafilling table ANNMEMS (Sheet 3 of 4)

Field	Subfield	Entry	Explanation and action
	PMTYPE	ATMCTM DTMMTM MTMAOA UPTMRM MRSMST MTANTM ATM2TM 4TM8T8A	Peripheral module type. Enter the type of peripheral module to which the track is assigned. If the announcement member is connected to a DRAM, enter maintenance trunk module (MTM) or service trunk module (STM). If the announcement member is connected to an EDRAM (1X80), enter DTM. ***Note:*** Only EDRAMs support digital multi-track announcements. Digital multi-track announcements are strongly recommended for EBCR service announcements.
	TMNO	0 to 2047	Trunk module number. Enter the trunk module number of the trunk module to which the track is assigned. If the trunk module type is MTM, the range is 0 to 255. If the trunk module type is STM or DTM, the range is 0 to 2047. ***Note:*** All tracks and channels assigned to an announcement member must be located on the same trunk module.
	TMCKT	0 to 29	Trunk module circuit number. Enter the channel number on the trunk module to which the track is assigned. A channel cannot be assigned the number 0 (zero) when using a DRAM or EDRAM. Channel 0 (zero) is reserved for the DRAM controller. For MTMs, the DRAM can be configured to function as an 8, 16, 24 or 30 channel interface depending on the dip switch settings on the DRAM controller card. There are four dip switches on the controller card, which enable the number of channels below:

Enhanced Busy Call Return (EBCR) (continued)

Datafilling table ANNMEMS (Sheet 4 of 4)

Field	Subfield	Entry	Explanation and action	
			Switch setting	Enabled channels
			None	1 to 7
			3	8 to 15
			2	16 to 23
			4	24 to 29
			Channels 1 to 7 are permanently enabled and have no switch setting.	
			For STMs, only 15 channels can be enabled. The DRAM controller switch setting and associated channel number assignments for STMs are shown below.	
			Switch setting	Enabled channels
			None	1 to 7
			3	8 to 15
			For DTMs, all channels can be used and there are no dip switch settings.	
			One channel is required for each announcement track assigned to the announcement member.	

Datafill example for table ANNMEMS

The following example shows sample datafill for table ANNMEMS.

MAP display example for table ANNMEMS

```
                ANNMEM    HDWTYPE    CARD
                                                MEMINFO
-------------------------------------------------------
SDS_BUSY_HELP     0       DRAM       DRA
                                    (0 DTM 4 1) (1 DTM 4 2)
                                    (2 DTM 4 3) (3 DTM 4 4) $
```

Datafilling table DRAMTRK

The following table shows the datafill required in table DRAMTRK for EBCR service announcements.

Datafilling table DRAMTRK

Field	Subfield	Entry	Explanation and action
ANNTRACK		see subfields	Announcement key. This field consists of subfields ANN and TRACK.
	ANN	alphanumeric or blank	Enter the code that represents the announcement in table CLLI.
	TRACK	0 to 31or blank	Enter the track number assigned to the announcement. ***Note:*** The track numbers given in table ANNMEMS are used to index into table DRAMTRK for DRAM and EDRAM announcements. If a track number is used in table ANNMEMS, but there is no corresponding entry in table DRAMTRK, an entire track will be missing from the playback of the announcement.
PHSLIST		alphanumeric (up to 16 names)	Enter the name(s) assigned to the phrase(s) you wish to be associated with this track. Separate each phrase from the next by a blank space. If fewer than 16 names are required, end the list with a $ (dollar sign). ***Note:*** The phrase NIL is no longer supported. If an announcement is not used or is in the process of being re-recorded, field PHSLIST must be set to SILENCE for each track of the announcement.

Datafill example for table DRAMTRK

The following example shows sample datafill for table DRAMTRK.

Enhanced Busy Call Return (EBCR) (continued)

MAP display example for table DRAMTRK

```
ANNTRACK                                                PHSLIST
-------------------------------------------------------------
SDS_BUSY_HELP 0          (BSY_TRK0)   (BSY_TRK1)
                         (BSY_TRK2)   (BSY_TRK3) $
```

Datafilling table DRMUSERS

The following table shows the datafill required in table DRMUSERS for messaging service announcements.

Datafilling table DRMUSERS

Field	Subfield	Entry	Explanation and action
USERANN		see subfields	User announcement. This field contains subfields common language location identifier (CLLI) and announcement number (ANNUM).
	CLLI	alphanumeric a maximum of 16 characters	Common language location identifier. Enter the name associated with the announcement group as table ANNS provides.
	ANNUM	1 to 63	Announcement number. Enter the number of the announcement.
PHSLIST		see subfield	Phrases list. This field contains subfield PHRASES.
	PHRASES	alphanumeric	Phrases. Enter vector of a maximum of 32 phrases associated with an announcement. If the requirement is less than 32 phrases, end the list with a $.

Datafill example for table DRMUSERS

The following example shows sample datafill for table DRMUSERS.

MAP display example for table DRMUSERS

```
USERANN                                              PHSLIST
-----------------------------------------------------------
CLASSANN 1
          (   LANGUAGE1) (   CLASSENG3) (   LANGUAGE2) $
```

Datafilling table OFRT

The following table shows the datafill required in table OFRT to define a route reference index that can later be used to define treatment ICSD or ICSA in table TMTCNTL.

Datafilling table OFRT

Field	Subfield	Entry	Explanation and action
RTE		1 to 1023	Route reference index. Enter the route reference number that you wish to assign to the route list.
RTELIST		see subfields	Route list. This field consists of subfields RTESEL, CONNTYPE, and CLLI.
	RTESEL	S	Route selector. Enter S to specify that route selector S will be used. Route selector S is used to route calls to tones, announcements or states that have are identified by their CLLI code from table CLLI. ***Note:*** Other values are valid for this field, but for the sake of clarity only S has been shown in the entry column.
	CONNTYPE	D	Connection type. This field is not used by system logic. Enter D to satisfy table control.
	CLLI	alphanumeric (1 to 16 characters)	Common language location identifier. Enter the code from table CLLI that identifies the tone, announcement or state.

Datafill example for table OFRT

The following example shows sample datafill for table OFRT.

Enhanced Busy Call Return (EBCR) (continued)

MAP display example for table OFRT

```
RTE                                                    RTELIST

_____________________________________________________
900                              (S D T120)  (S D LKOUT) $
```

Datafilling table TMTCNTL

The following table shows the datafill required in table TMTCNTL for Access to Messaging service treatments. EBCR service requires the following treatments be datafilled in table TMTCNTL: ICSD and ICSA.

Datafilling table TMTCNTL (Sheet 1 of 2)

Field	Subfield	Entry	Explanation and action
EXTTMTNM		OFFTREATIT TRKGRPLNT TITRKGRPP XTRKGRPTO PSINT101TT PRIVLNTTFE ATANNS	Extended treatment name. Enter LNT to specify subtable LNT. Subtable LNT is used in all local and combined local/toll switches to specify routing treatments associated with lines.
TREATMT		alphanumeric (1 to 4) characters)	Treatment name. Enter either ICSD or ICSA.
LOG		Y or N	Log. Enter Y if you wish a log to be generated whenever a call is routed to the treatment specified in field TREATMT. Enter N if you do not wish a log to be generated whenever a call is routed to the treatment specified in field TREATMT.

Datafilling table TMTCNTL (Sheet 2 of 2)

Field	Subfield	Entry	Explanation and action
FSTRTE		see subfields	First route. This field consists of subfield FSTRTSEL and additional field/subfields which depend on the value entered in subfield FSTRTSEL.
	FSTRTSEL	S or T	First route selector. Enter the first route selector S or T. S indicates that the treatment associated with the treatment name is the playing of a tone. T indicates that the treatment associated with the treatment name involves going to a routing table. You will be prompted for different field/subfields depending on whether you enter S or T as the first route selector. Information on the field/subfields associated with each selector follows.

Datafilling table TMTCNTL subtable TREAT tuple LNT - first route selector S

The following table shows the datafill for table TMTCNTL subtable TREAT tuple LNT where the treatment datafill consists of a CLLI from one of the tones in table TONES.

Datafilling table TMTCNTL subtable TREAT tuple LNT - first route selector S

Field	Subfield	Entry	Explanation and action
	CLLI	alphanumeric (1 to16 characters)	Common language location identifier. Enter the CLLI code of the tone that is the treatment assigned to the treatment name. ***Note:*** The CLLI used by the treatment must be datafilled in table CLLI.

Datafill example for table TMTCNTL subtable TREAT tuple LNT - first route selector S

The following example shows sample datafill for table TMTCNTL subtable TREAT tuple LNT in which the first route selector has been datafilled as S.

Enhanced Busy Call Return (EBCR) (continued)

MAP display example for table TMTCNTL subtable TREAT tuple LNT - first route selector S

```
TREATMT LOG                              FSTRTE
__________________________________________________________
   ICSA  Y   S                              '*CONF'
```

Datafilling table TMTCNTL subtable TREAT tuple LNT - first route selector T

The following table shows the datafill for table TMTCNTL subtable TREAT tuple LNT where the treatment datafill points to a route list in either table OFRT, OFR2, OFR3 or OFR4.

Datafilling table TMTCNTL subtable TREAT tuple LNT - first route selector T

Field	Subfield	Entry	Explanation and action
EXTRTEID		see subfields	External route ID.
	TABID	OFRTOFR2OFR3 orOFR4	Table name. Enter the office route table name.
	KEY	1 to 1023	Key. Enter the index into the office route table which defines the route list for the treatment. The entry zero (0) cannot be datafilled by the operating company. ***Note:*** Each CLLI specified in the route list for a treatment must be datafilled in table CLLI.

Datafill example for table TMTCNTL subtable TREAT tuple LNT - first route selector T

The following example shows sample datafill for table TMTCNTL subtable TREAT tuple LNT.

Enhanced Busy Call Return (EBCR) (continued)

MAP display example for table TMTCNTL subtable TREAT tuple LNT - first route selector T

```
TREATMT LOG                                  FSTRTE
-------------------------------------------------------
    ICSD  N              T       OFRT     900
```

Enhanced Busy Call Return (EBCR) (continued)

Datafilling table SDSINFO

The following table shows the datafill required in table SDSINFO for EBCR.

Enhanced Busy Call Return (EBCR) (continued)

Datafilling table SDSINFO (Sheet 1 of 2)

Field	Subfield	Entry	Explanation and action
SDSKEY		OFFICE SDSOFC SDSRNA SDSBSY, or FTS	Special Delivery Service Key. This field, in combination with the Service field, provides access to the different tuples of table SDSINFO, which contain the datafill information required for EBCR, Access to Messaging, and Fax-Thru service. ***Note:*** The use of Access to Messaging requires that RES00077 be active in the end office. The use of Fax-Thru service requires that RES00078 be active in the end office. For EBCR to operate tuples OFFICE, SDSOFC, SDSRNA and SDSBSY must be datafilled. Enter OFFICE to access the OFFICE tuple. Enter SDSOFC to access the SDSOFC tuple. Enter SDSRNA to access the SDSRNA tuple. Enter SDSBSY to access the SDSBSY tuple. ***Note:*** Entering FTS provides access to the FTS tuple which contains the information fields specific to Fax-Thru service. The FTS tuple does not need to be datafilled for EBCR to operate.

Enhanced Busy Call Return (EBCR) (continued)

Datafilling table SDSINFO (Sheet 2 of 2)

Field	Subfield	Entry	Explanation and action
SERVICE		OFFICE SDSOFC SDSRNA SDSBSY, or FTS	Service Selector. This field, in combination with the Special Delivery Service Key field, provides access to the different tuples of SDSINFO. Enter OFFICE to access the OFFICE tuple. Enter SDSOFC to access the SDSOFC tuple. Enter SDSRNA to access the SDSRNA tuple. Enter SDSBSY to access the SDSBSY tuple. ***Note 1:*** Entering FTS provides access to the FTS tuple which contains the information fields specific to Fax-Thru service. The FTS tuple does not need to be datafilled for EBCR to operate. ***Note 2:*** You must enter the same value in the SERVICE and SDSKEY fields. ***Note 3:*** Once you have specified the tuple you wish to datafill by entering values for the SDSKEY and SERVICE fields, refer to the table describing the datafill information specific to the tuple you are datafilling. Tuple-specific datafill information is provided later in this chapter.

Error messages for table SDSINFO fields SDSKEY and SERVICE

The following error message applies to the SDSKEY and SERVICE fields of table SDSINFO.

Error messages for table SDSINFO fields SDSKEY and SERVICE

Error message	Explanation and action
`Error: The fields SDSKEY and SERVICE must have the same value.`	The entries in fields SDSKEY and SERVICE do not match.

Enhanced Busy Call Return (EBCR) (continued)

General error messages for table SDSINFO

The following error messages may appear when datafilling table SDSINFO.

Error messages for table SDSINFO

Error message	Explanation and action
`Warning: Changing or deleting a tuple in table SDSINFO can affect SDS or FTS.`	This message appears if an attempt is made to modify table SDSINFO with either the DEL or CHA command.
`One or more of the SDSINFO tuples is not present. Change not allowed.`	You have attempted to change the value of office parameter SDS_ENABLED in table OFCENG to Y, but at least one of tuples OFFICE, SDSOFC, SDSRNA, or SDSBSY has not been datafilled. You must datafill all of these tuples before setting the value of office parameter SDS_ENABLED in table OFCENG to Y.
`Error: SDS_ENABLED is Y in table OFCENG. Disable before deleting tuple.`	You cannot delete tuple OFFICE, SDSOFC, SDSRNA, or SDSBSY while office parameter SDS_ENABLED in table OFCENG is set to Y. Set SDS_ENABLED to N before deleting the tuple.
`Internal error: unable to access table SDSINFO due to out of range index.`	Refer to your next level of technical assistance.
`Internal error: Data is invalid in table SDSINFO.`	Refer to your next level of technical assistance.
`Internal error: cannot allocate digilator or digilator not allocated.`	Refer to your next level of technical assistance.
`Internal error: cannot write to a digilator in table SDSINFO.`	Refer to your next level of technical assistance.
Internal error: no digilator pool allocated for table SDSINFO.	Refer to your next level of technical assistance.

Enhanced Busy Call Return (EBCR) (continued)

Datafilling table SDSINFO tuple OFFICE

The following table shows the datafill required in table SDSINFO tuple OFFICE for EBCR.

Enhanced Busy Call Return (EBCR) (continued)

Datafilling table SDSINFO tuple OFFICE (Sheet 1 of 5)

Field	Subfield	Entry	Explanation and action
BILLING		Y or N	Billing. This field is not used by EBCR. Nonetheless, you must datafill this field for EBCR to operate. ***Note 1:*** If the call to the SDS messaging routing DN is an equal access call or a Number Service Code (NSC) call (for example, an 800 number), the AMA record for the call is generated, even if field BILLING is set to N. ***Note 2:*** If Access to Messaging is active in your end office, entering Y (yes) allows billing on the call to the SDS messaging routing DN. Entering N (no) suppresses billing on the call to the SDS messaging routing DN, and no AMA record is generated, even if the second leg is billable according to translations. ***Note 3:*** If FAX-Thru service is active in your end office, entering Y allows billing on calls to FTS routing DNs, while entering N suppresses billing on calls to FTS routing DNs.
REVXLA		Y or N	Reverse translation. This field is not used by EBCR. Nonetheless, you must datafill this field for EBCR to operate. ***Note 1:*** If Access to Messaging is active in your end office, entering Y (yes) specifies that reverse translations are needed to determine the NPA of the called party (when it is not dialed) for Access to Messaging service. Entering N (no) specifies that reverse translations are not required for Access to Messaging service. ***Note 2:*** If Fax-Thru service is active in your end office, entering Y (yes) specifies that reverse translations are needed to determine the NPA of the called party (when it is not dialed) for Fax-Thru service. Entering N (no) specifies that reverse translations are not required for Fax-Thru service.

Enhanced Busy Call Return (EBCR) (continued)

Datafilling table SDSINFO tuple OFFICE (Sheet 2 of 5)

Field	Subfield	Entry	Explanation and action
INTERLAT		Y or N	InterLATA calls. This field is not used by EBCR. Nonetheless, you must datafill this field for EBCR to operate. ***Note 1:*** If Access to Messaging is active in your end office, entering Y (yes) allows Access to Messaging service on interLATA calls. Entering N (no) disallows Access to Messaging service on interLATA calls. ***Note 2:*** If Fax-Thru service is active in your end office, entering Y (yes) allows Fax-Thru service on interLATA calls, while entering N (no) disallows Fax-Thru service on interLATA calls.
DNSCRN		list of 3-digit NPAs or 6-digit NPA-NXXs (maximum 51 entries)	Directory number screening. Enter the range of digits for which you do not wish EBCR service to be provided. End the list with $. ***Note:*** Access to Messaging service and Fax-Thru service are also not provided for digit ranges entered in this field.

Enhanced Busy Call Return (EBCR) (continued)

Datafilling table SDSINFO tuple OFFICE (Sheet 3 of 5)

Field	Subfield	Entry	Explanation and action
CFW		Y or N	Call forwarding interaction. Enter Y (yes) to allow EBCR service to be offered on calls to parties which have one or more Call forwarding features. For this functionality, Call forwarding refers to all types of Call forwarding, including AIN FORWARD_CALL response. ***Note 1:*** Automatic Call Back (ACB) (the service to which Enhanced Busy Call Return provides access) cannot be activated, even if field CFW is set to Y, unless ACB supports the type of Call forwarding feature that is present on the called party's line. The caller is still offered Enhanced Busy Call Return. ***Note 2:*** On calls to DNs with AIN FORWARD_CALL response, if the AIN trigger is hit on the originating end office, Enhanced Busy Call Return is not offered to the caller, even if field CFW is set to Y. ***Note 3:*** Entering Y (yes) also allows Access to Messaging service and Fax-Thru service to be offered on calls to parties which have one or more Call forwarding features. Entering N (no) also prevents Access to Messaging service and Fax-Thru service from being offered on calls to parties which have one or more Call forwarding features.

Enhanced Busy Call Return (EBCR) (continued)

Datafilling table SDSINFO tuple OFFICE (Sheet 4 of 5)

Field	Subfield	Entry	Explanation and action
CONF		Y or N	Conferencing interaction. Enter Y (yes) to allow EBCR service to be offered on the consultation leg of Conference calls. Enter N (no) to prevent EBCR service from being offered on the consultation leg of Conference calls. Conference calls for this functionality refer only to the operation of Conferencing features which make use of consultation legs, for example, Three-Way Call (3WC), Station Controlled Conference, Flexible Call, and Call Transfer. ***Note:*** Entering Y (yes) also allows Access to Messaging service to be offered on the consultation leg of Conference calls. Entering N (no) also prevents Access to Messaging service from being offered on the consultation leg of Conference calls.

Enhanced Busy Call Return (EBCR) (continued)

Datafilling table SDSINFO tuple OFFICE (Sheet 5 of 5)

Field	Subfield	Entry	Explanation and action
HNTGRP		Y or N	Hunt group interaction (intraoffice). Enter Y (yes) to allow EBCR service to be offered on intraoffice calls that terminate on a hunt group. Enter N (no) to prevent EBCR service from being offered on intraoffice calls that terminate on a hunt group. ***Note 1:*** If table RESOFC tuple ACB field HUNTLINE is set to DENY, Automatic Call BAck (ACB) cannot be activated on intraoffice calls terminating on a hunt group, even if field HNTGRP is set to Y. EBCR service will be offered to the caller even if ACB cannot be activated. ***Note 2:*** Entering Y (yes) also allows Access to Messaging service and Fax-Thru service to be offered on intraoffice calls that terminate on a hunt group. Entering N (no) also prevents Access to Messaging service and Fax-Thru service from being offered on intraoffice calls that terminate on a hunt group.
REJECTMT		BUSY or DISC	Rejection treatment. Enter BUSY to provide the user with busy treatment should the user reject the offer of EBCR service. Enter DISC to disconnect the call should the caller reject the offer of EBCR service. ***Note:*** Entering BUSY also provides the user with busy treatment should the user reject the offer of Access to Messaging service on busy calls. Entering DISC also disconnects the call should the caller reject the offer of Access to Messaging service on busy calls.

Datafill example for table SDSINFO tuple OFFICE

The following example shows sample datafill for table SDSINFO tuple OFFICE.

Enhanced Busy Call Return (EBCR) (continued)

MAP display example for table SDSINFO tuple OFFICE

```
SDSKEY SERVICE
_____________________________________________________________
OFFICE OFFICE N N N (514845) (454) $ Y Y N BUSY
```

Error messages for table SDSINFO tuple OFFICE

The following error messages may appear when datafilling table SDSINFO tuple OFFICE.

Error messages for table SDSINFO tuple OFFICE

Error message	Explanation and action
`Field DNSCRN: Must be 3 or 6 digits.`	Each item in field DNSCRN must be 3 digits (screens the NPA) or 6 digits (screens the NPA-NXX). Make sure each item is either 3 or 6 digits.
`Field DNSCRN: two or more digit ranges are overlapping.`	NPA screening and NPA-NXX screening overlap. Remove the redundancy.
Vector of 3 or 6 digits {0 TO 9}	This message appears when one or more non-numeric characters is entered in field DNSCRN. Reenter the field with a list of 3-digit NPAs or 6-digit NPA-NXXs.

Datafilling table SDSINFO tuple SDSOFC

The following table shows the datafill required in table SDSINFO tuple SDSOFC for EBCR.

Datafilling table SDSINFO tuple SDSOFC (Sheet 1 of 3)

Field	Subfield	Entry	Explanation and action
	RPTKEY	0 to 9, NIL, or STAR	Repeat announcement key. Enter the key that subscribers should press to replay the offer of service announcement for EBCR service. ***Note 1:*** Enter STAR when subscribers should press the * key on the telephone set. ***Note 2:*** If *66 is datafilled as a valid acceptance sequence for in-call EBCR service (table SDSINFO tuple SDSBSY field ACCEPT66 set to Y), then neither the help key nor the repeat key can be * (star). ***Note 3:*** This field is also used to define the repeat key for Access to Messaging service.
	HELP_KEY	0 to 9, NIL, or STAR	Help announcement key. Enter the key that subscribers should press to play a help announcement. If this field is set to NIL, there will be no prompts for subfields RNAHELP and BSYHELP. ***Note 1:*** Enter STAR when subscribers should press the * key on the telephone set. ***Note 2:*** If *66 is datafilled as a valid acceptance sequence for in-call EBCR service (table SDSINFO tuple SDSBSY field ACCEPT66 set to Y), then neither the help key nor the repeat key can be * (star). ***Note 3:*** This field is also used to define the help key for Access to Messaging service.

Enhanced Busy Call Return (EBCR) (continued)

Datafilling table SDSINFO tuple SDSOFC (Sheet 2 of 3)

Field	Subfield	Entry	Explanation and action
	RNAHELP	see subfields	Ringing/no-answer help announcement. This subfield is not used by EBCR. Nonetheless, you must datafill this field if you have entered a value other than NIL in field HELP_KEY. Enter the CLLI code that identifies the busy help announcement in table CLLI. However, no help announcement will be offered for EBCR on the ringing/no-answer condition. ***Note:*** If Access to Messaging service is active in your end office and you wish to provide a ringing/no-answer help announcement for Access to Messaging service, enter the CLLI code that is used to identify the ringing/no-answer help announcement for Access to Messaging service in table CLLI.
	STND	CLLI	Standard. This subfield specifies the CLLI for standard announcements. Datafill CLLI in table ANNMEMS.
	CUSTOM	ANNCLLI	Custom. This subfield specifies the CLLI for custom announcements. Datafill CLLI in table DRMUSERS.
		ANNID	This subfield specifies which custom announcement to play corresponding to CLLI.
	BSYHELP	see subfields	Busy help announcement. Enter the CLLI code that is used to identify the busy help announcement in table CLLI. ***Note 1:*** This field requires an entry only if field HELP_KEY is a value other than NIL. ***Note 2:*** This field is also used to identify the busy help announcement that is used by Access to Messaging service. ***Note 3:*** Only one help announcement can be provided on the busy condition, even when callers are offered a choice of either Access to Messaging service or EBCR service on busy calls.

Enhanced Busy Call Return (EBCR) (continued)

Datafilling table SDSINFO tuple SDSOFC (Sheet 3 of 3)

Field	Subfield	Entry	Explanation and action
	STND	CLLI	Standard. This subfield specifies the CLLI for standard announcements. Datafill CLLI in table ANNMEMS.
	CUSTOM	ANNCLLI	Custom. This subfield specifies the CLLI for custom announcements. Datafill CLLI in table DRMUSERS.
		ANNID	This subfield specifies which custom announcement to play corresponding to CLLI.
	SDSSUBS	SUBSCR or UNIVER	Subscription mode. Enter SUBSCR to offer EBCR in Subscription mode. Enter UNIVER to offer EBCR in Universal mode.
	AMSGSUBS	SUBSCR or UNIVER	Access to Messaging subscription mode. This field specifies the subscription mode for access to messaging service.
	EXDIGCOL	0 to 10 (integer values only)	Extended digit collection period. Enter the number of seconds that you wish to extend the digit collection period by, beyond the normal digit collection period. Field EXDIGCOL is also used to extend the digit collection period used by Access to Messaging and Enhanced Busy Call Return.
	HUNTORIG	Y or N	Hunt originator. When the operating company offers SDS on an office-wide basis, this field determines whether SDS is offered on call that originate from members of hunt groups.
	CTXORIG	Y or N	Centrex originator. When the operating company offers SDS on an office-wide basis, this field determines whether SDS is offered on calls that originate from IBN, PSET or ISDNKSET agents.
DPORIG		Y or N	Dial Pulse Originator. This field determines whether Access to Messaging and EBCR are offered on calls that originate from sets that use dial pulse signaling.

Datafill example for table SDSINFO tuple SDSOFC

The following example shows sample datafill for table SDSINFO tuple SDSOFC.

Enhanced Busy Call Return (EBCR) (continued)

MAP display example for table SDSINFO tuple SDSOFC

```
SDSKEY SERVICE
_____________________________________________________

SDSOFC SDSOFC 5 0 STND HELPANN01 STND HELPANN02 UNIVER
SUBSCR 10 N N N
```

Error messages for table SDSINFO tuple SDSOFC

The following error messages may appear while datafilling tuple SDSOFC of table SDSINFO.

Error messages for table SDSINFO tuple SDSOFC (Sheet 1 of 2)

Error message	Explanation and action
Field value must be {0 -9} digit, STAR or NIL	An incorrect value has been entered in field RPTKEY or field HELP_KEY. Reenter the field with a valid entry.
Fields RPTKEY and HELP_KEY must have different values.	Use different values for fields RPTKEY and HELP_KEY.
Fields ACBKEY and RPTKEY must have different values.	You have used the same key for the repeat key and the acceptance key for EBCR service. Reenter either field ACBKEY or field RPTKEY with a different value.
Fields ACBKEY and HELP_KEY must have different values.	You have used the same key for the help key and the acceptance key for EBCR service. Reenter either field ACBKEY or field HELP_KEY with a different value.
Fields HELP_KEY and RPTKEY cannot have STAR as a valid key if ACCEPT66 is on.	This message appears when an attempt is made to datafill STAR as either a help key or a repeat key in the case where *66 has already been datafilled as a valid acceptance sequence for in-call EBCR service (table SDSINFO, tuple SDSBSY, field ACCEPT66 set to Y). Set field ACCEPT66 to N or choose another key for the help or repeat key.
Warning: The RNAHELP and BSYHELP CLLIs will be deleted from table SDSINFO.	When the value of field HELP_KEY is changed from a non-nil value to NIL, the RNAHELP and BSYHELP CLLIs are deleted from the SDSINFO table.

Error messages for table SDSINFO tuple SDSOFC (Sheet 2 of 2)

Error message	Explanation and action
Fields MSGACKEY and RPTKEY must have different values.	This error message applies to Access to Messaging only. Use different values for fields MSGACKEY (in tuple SDSRNA and in tuple SDSBSY) and RPTKEY.
Fields MSGACKEY and HELP_KEY must have different values.	This error message applies to Access to Messaging only. Use different values for fields MSGACKEY (in tuple SDSRNA and in tuple SDSBSY) and HELP_KEY.

Datafilling table SDSINFO tuple SDSRNA

The following table shows the datafill required in table SDSINFO tuple SDSRNA for EBCR.

Datafilling table SDSINFO tuple SDSRNA

Field	Subfield	Entry	Explanation and action
RNAMODE		MSG or NONE ***Note:*** Entry MSG is not used by EBCR. If NONE is entered in this field, no further datafill is required.	Ringing/no-answer selector. This field specifies whether Access to Messaging service will be offered on the ringing/no-answer condition. Tuple SDSRNA is not used by EBCR. Nonetheless, you must datafill this field for EBCR to operate. Enter NONE, unless Access to Messaging is also active in your end office. If Access to Messaging is also active in your end office and you wish to offer Access to Messaging service on the ringing/no-answer condition, enter MSG. Then consult Access to Messaging documentation for information on tuple SDSRNA selector MSG.

Datafill example for table SDSINFO tuple SDSRNA selector NONE

The following example shows sample datafill for table SDSINFO tuple SDSRNA selector NONE.

Enhanced Busy Call Return (EBCR) (continued)

MAP display example for table SDSINFO tuple SDSRNA selector NONE

```
SDSKEY SERVICE
_____________________________________________________________
SDSRNA SDSRNA NONE
```

Datafilling table SDSINFO tuple SDSBSY

The following table shows the datafill required in table SDSINFO tuple SDSBSY for EBCR.

Datafilling table SDSINFO tuple SDSBSY (Sheet 1 of 2)

Field	Subfield	Entry	Explanation and action
BSYMODE		MSG, ACB, ACBMSG, or NONE	Busy mode selector. This field specifies the service or services that will be offered on the busy condition. Enter ACB if only EBCR service is to be offered.

Enhanced Busy Call Return (EBCR) (continued)

Datafilling table SDSINFO tuple SDSBSY (Sheet 2 of 2)

Field	Subfield	Entry	Explanation and action
		Note: Entry MSG is not used by EBCR.	Enter ACBMSG if the caller is to be offered a choice of either Access to Messaging service or EBCR service.
		If you enter ACB, see the section entitled "Datafilling table SDSINFO tuple SDSBSY selector ACB".	Entering NONE prevents the offering of any service on the busy condition. ***Note 1:*** ACBMSG is a valid entry only if Access to Messaging is also active in the end office. ***Note 2:*** Entering MSG offers only Access to Messaging on the busy condition. This entry is only valid if Access to Messaging is active in the end office. Consult Access to Messaging documentation for information on datafilling table SDSINFO tuple SDSBSY selector MSG.
		If you enter ACBMSG, see the section entitled "Datafilling table SDSINFO tuple SDSBSY selector ACBMSG".	
		If you enter NONE, no further datafill is required for tuple SDSBSY.	

Enhanced Busy Call Return (EBCR) (continued)

Datafilling table SDSINFO tuple SDSBSY selector ACB

The following table shows the datafill required in table SDSINFO tuple SDSBSY selector ACB for EBCR.

Datafilling table SDSINFO tuple SDSBSY selector ACB (BSYMODE = ACB)

Field	Subfield	Entry	Explanation and action
	ACBKEY	1 to 9 or NIL	Acceptance key for ACB. Enter the key that subscribers should press to accept EBCR service. When this field is set to NIL, no single-digit acceptance key is supported. Do not set this field to 1. ***Note:*** NIL is only a valid entry for this field if field ACCEPT66 is set to Y.
	ACCEPT66	Y or N	*66 acceptance sequence. Enter Y (yes) to allow *66 as an acceptance sequence for EBCR service. Enter N (no) to disallow *66 as an acceptance sequence for EBCR service. ***Note 1:*** N is only a valid value if field ACBKEY is set to a value other than NIL. ***Note 2:*** If *66 is datafilled as a valid acceptance sequence for EBCR service, then neither the Help key nor the Repeat key can be *.
	ACBINTER	Y or N	ACB offer on interLATA calls. Enter Y (yes) to allow EBCR service on interLATA calls. Enter N (no) to disallow EBCR service on interLATA calls.
	ACBANNC	see refinements	Announcement for ACB offer. Enter the CLLI code that identifies the announcement that offers Enhanced Busy Call Return service in table CLLI.
	STND	CLLI	Standard. This subfield specifies the CLLI for standard announcements. Datafill CLLI in table ANNMEMS.
	CUSTOM	ANNCLLI	Custom. This subfield specifies the CLLI for custom announcements. Datafill CLLI in table DRMUSERS.
		ANNID	This subfield specifies which custom announcement to play corresponding to CLLI.

Datafill example for table SDSINFO tuple selector ACB

The following example shows sample datafill for table SDSINFO tuple SDSBSY selector ACB.

MAP display example for table SDSINFO tuple SDSBSY selector ACB

```
SDSKEY SERVICE
_____________________________________________________________
SDSBSY SDSBSY ACB 2 N N STND ANN_ACB
```

Datafilling table SDSINFO tuple SDSBSY selector ACBMSG

The following table shows the datafill required for table SDSINFO tuple SDSBSY selector ACBMSG for EBCR.

Datafilling table SDSINFO tuple SDSBSY selector ACBMSG (BSYMODE = ACBMSG) (Sheet 1 of 3)

Field	Subfield	Entry	Explanation and action
	MSGACKEY	1 to 9	Acceptance key for messaging. This field is used for Access to Messaging. Enter the key that subscribers should press to accept Access to Messaging on the busy condition. ***Note:*** The entry in this field must not be the same as the entry in field ACBKEY.
	MSGANNC	see subfields	Announcement for messaging offer. This field is used for Access to Messaging. Enter the CLLI code that identifies the busy offer of service announcement for Access to Messaging in table CLLI. ***Note:*** This field is included in selector ACBMSG to cover the case where EBCR service fails to pass screening. Should EBCR service fail screening, only Access to Messaging service will be offered.
	STND	CLLI	Standard. This subfield specifies the CLLI for standard announcements. Datafill CLLI in table ANNMEMS.

Enhanced Busy Call Return (EBCR) (continued)

Datafilling table SDSINFO tuple SDSBSY selector ACBMSG (BSYMODE = ACBMSG) (Sheet 2 of 3)

Field	Subfield	Entry	Explanation and action
	CUSTOM	ANNCLLI	Custom. This subfield specifies the CLLI for custom announcements. Datafill CLLI in table DRMUSERS.
		ANNID	This subfield specifies which custom announcement to play corresponding to CLLI.
	INTERBSY	A DN with 7, 10 or more (up to 30) digits	SDS messaging routing DN for interLATA calls. This field is used for Access to Messaging. Enter the SDS messaging routing DN for interLATA busy calls.
	INTRABSY	A DN with 7, 10 or more (up to 30) digits	SDS messaging routing DN for intraLATA calls. This field is used for Access to Messaging. Enter the SDS messaging routing DN for intraLATA busy calls.
	ACBKEY	1 to 9 or NIL	Acceptance key for ACB. Enter the key that subscribers should press to accept EBCR service. ***Note 1:*** The entry in this field must not be the same as the entries in field MSGACKEY tuple SDSBSY selector ACBMSG, field HELP_KEY tuple SDSOFC, or field RPTKEY tuple SDSOFC. ***Note 2:*** Field ACBKEY cannot take the NIL value unless field ACCEPT66 is set to Y.
	ACCEPT66	Y or N	*66 acceptance sequence. Enter Y (yes) to allow *66 as an acceptance sequence for EBCR service. Enter N (no) to disallow *66 as an acceptance sequence for EBCR service. ***Note:*** Field ACCEPT66 cannot be set to Y if the * (star) is a valid help key (field HELP_KEY tuple SDSOFC) or repeat key (field RPTKEY tuple SDSOFC).
	ACBINTER	Y or N	ACB offer on interLATA calls. Enter Y (yes) to allow EBCR service on interLATA calls. Enter N (no) to disallow EBCR service on interLATA calls.

Enhanced Busy Call Return (EBCR) (continued)

Datafilling table SDSINFO tuple SDSBSY selector ACBMSG (BSYMODE = ACBMSG) (Sheet 3 of 3)

Field	Subfield	Entry	Explanation and action
	ACBANNC	see subfields	Announcement for ACB offer. Enter the CLLI code that identifies the announcement that offers EBCR service in table CLLI. ***Note:*** This field is included in selector ACBMSG to cover the case where Access to Messaging service fails to pass screening. Should Access to Messaging service fail screening, only EBCR service will be offered.
	STND	CLLI	Standard. This subfield specifies the CLLI for standard announcements. Datafill CLLI in table ANNMEMS
	CUSTOM	ANNCLLI	This refinement specifies the CLLI for custom announcements. Datafill CLLI in table DRMUSERS.
		ANNID	This refinement specifies which custom announcement to play corresponding to CLLI.
	ACBMSGAN	see subfields	Announcement for ACB and messaging offer. Enter the CLLI code (from table CLLI) that identifies the announcement that offers a choice of either EBCR service or Access to Messaging service on the busy condition.
	STND	CLLI	Standard. This subfield specifies the CLLI for standard announcements. Datafill CLLI in table ANNMEMS.
	CUSTOM	ANNCLLI	Custom. This subfield specifies the CLLI for custom announcements. Datafill CLLI in table DRMUSERS.
		ANNID	This subfield specifies which custom announcement to play corresponding to CLLI.

Datafill example for table SDSINFO tuple SDSBSY selector ACBMSG

The datafill in this example provisions Access to Messaging as follows when a choice of either EBCR service or Access to Messaging service is offered to subscribers.

Enhanced Busy Call Return (EBCR) (continued)

MAP display example for table SDSINFO tuple SDSBSY selector ACBMSG

```
SDSKEY SERVICE
_____________________________________________________
SDSBSY SDSBSY ACBMSG 1 STND ANNMSGBUSY 6271234 18196261234 2 N N
STND ANN_ACB STND ANN_ACBMSG
```

Error messages for table SDSINFO tuple SDSBSY

The following error messages may appear while datafilling table SDSINFO tuple SDSBSY.

Error messages for table SDSINFO tuple SDSBSY (Sheet 1 of 2)

Error message	Explanation and action
`Field INTERBSY: Must be 7 or more than 9 digits (up to 30 digits.`	This error message applies to Access to Messaging only. The SDS messaging routing DN for interLATA busy calls must be either 7 digits or more than 9 digits (up to a maximum of 30 digits). Reenter the field with a 7- or 10- to 30-digit DN.
`Field INTRABSY: Must be 7 or more than 9 digits (up to 30 digits).`	This error message applies to Access to Messaging only. The SDS messaging routing DN for intraLATA busy calls must be either 7 digits or more than 9 digits (up to a maximum of 30 digits). Reenter the field with a 7- or 10- to 30-digit DN.
`Vector of 7 or more than 9 digits {0 TO 9} up to 30 digits.`	This error message applies to Access to Messaging only. This message appears when one or more non-numeric characters is entered in one of the following fields: INTERBSY, INTERRNA, INTRABSY or INTRARNA. Reenter the field with a 7- or 10- to 30-digit DN.
`Fields MSGACKEY and RPTKEY must have different values.`	This error message applies to Access to Messaging only. Use different values for fields MSGACKEY (tuple SDSBSY) and RPTKEY.
`Fields MSGACKEY and HELP_KEY must have different values.`	This error message applies to Access to Messaging only. Use different values for fields MSGACKEY (tuple SDSBSY) and HELP_KEY.

Enhanced Busy Call Return (EBCR) (continued)

Error messages for table SDSINFO tuple SDSBSY (Sheet 2 of 2)

Error message	Explanation and action
`Fields MSGACKEY and ACBKEY must have different values in the SDSBSY tuple.`	You have datafilled field BSYMODE as ACBMSG (offering the caller a choice of Access to Messaging service or Enhanced Busy Call Return [EBCR] service) and you have used the same key for the Access to Messaging acceptance key on the busy condition and for the acceptance key for EBCR service. Reenter either field MSGACKEY or field ACBKEY with a different value.
`Fields ACBKEY and RPTKEY must have different values.`	You have used the same key for the repeat key and the acceptance key for EBCR service. Reenter either field ACBKEY or field RPTKEY with a different value.
`Fields ACBKEY and HELP_KEY must have different values.`	You have used the same key for the help key and the acceptance key for EBCR service. Reenter either field ACBKEY or field HELP_KEY with a different value.
`Field ACBKEY cannot take the NIL value unless the ACCEPT66 is set to Y.`	You must provide a key or a key sequence for accepting EBCR service. Either reenter field ACBKEY with a non-nil value or reenter field ACCEPT66 with N.
`Field ACCEPT66 cannot be set if the STAR is a valid help or repeat key.`	Field ACCEPT66 cannot be set to Y if STAR is a valid help or repeat key since field ACCEPT66 set to Y uses the STAR key as part of *66 a valid acceptance sequence for EBCR service. Either reenter field ACCEPT66 with value N or change the datafill for the help or repeat keys (fields HELP_KEY and RPTKEY) to a value other than STAR.
`Field value must be {1-9} digit or NIL.`	Field ACBKEY must be datafilled with one digit in the range from 1 to 9 or with value NIL. Reenter this field with a valid entry.

Enhanced Busy Call Return (EBCR) (continued)

Datafilling table CUSTSTN

The following table shows the datafill required in table CUSTSTN to provide or deny EBCR on a customer group basis.

Datafilling table CUSTSTN

Field	Subfield	Entry	Explanation and action
CUSTNAME		alphanumeric (1 to 16 characters)	Customer group name. Enter the customer group name.
OPTNAME		SDS or SDSDENY	Option name. This field is part of the key of table CUSTSTN. Enter either SDS or SDSDENY. The SDS customer group option assigns EBCR service to a customer group. The SDSDENY customer group option denies EBCR service to a customer group. ***Note 1:*** The SDSDENY customer group option cannot be assigned to a customer group that already has customer group option SDS assigned to it. Similarly, the SDS customer group option cannot be assigned to a customer group that already has customer group option SDSDENY assigned to it. ***Note 2:*** Although other entries, besides SDS and SDSDENY, are valid for this field, only entries SDS and SDSDENY are shown in the Entry column for clarity.
OPTION		SDS or SDSDENY	Option. Enter the same entry as entered in field OPTNAME. ***Note:*** Although other entries, besides SDS and SDSDENY, are valid for this field, only entries SDS and SDSDENY have been shown in the Entry column for clarity.

Datafill example for table CUSTSTN

The following example shows sample datafill for table CUSTSTN.

Enhanced Busy Call Return (EBCR) (continued)

MAP display example for table CUSTSTN

```
CUSTNAME            OPTNAME             OPTION
-------------------------------------------------

COMKODAK            SDSDENY             SDSDENY
```

Error messages for table CUSTSTN

The following error messages concerning customer group options SDS and SDSDENY apply to table CUSTSTN.

Error messages for table CUSTSTN

Error message	Explanation and action
`Cannot add SDSDENY option: SDS is assigned to the customer group.`	An attempt has been made to add option SDSDENY to a customer group which already has option SDS. Delete option SDS from that customer group before assigning SDSDENY to it.
`Cannot add SDS option: SDSDENY is assigned to the customer group.`	An attempt has been made to add option SDS to a customer group which already has option SDSDENY. Delete option SDSDENY from the customer group before assigning the SDS option to it.
Note: Deleting option SDS from a customer group only removes the EBCR service from the customer group when field SDSSUBS in table SDSINFO is set to SUBSCR. When field SDSSUBS in table SDSINFO is set to UNIVER, SDSDENY must be assigned to the customer group to remove its service.	

Enhanced Busy Call Return (EBCR) (continued)

Datafilling table IBNXLA

The following table shows the datafill required in table IBNXLA to map access codes to Sustained deactivation (feature ICSCTRL) and Per-call denial (feature CISA) functionality for EBCR.

Datafilling table IBNXLA (Sheet 1 of 2)

Field	Subfield	Entry	Explanation and action
KEY		see subfields	Key. This field consists of subfields XLANAME and DGLIDX, which are described below.
	XLANAME	1 through 8 alphanumeric characters	Translator name. Enter the feature translator name assigned to the customer group.
	DGLIDX	vector of up to 18 digits	Digilator index. Enter the digit or digits assigned as an ambiguous code. The range of this field depends on field MAXDIG in table XLANAME. The DGLIDX can accept overdecadic digits. The allowable values for the digilator portion of DGLIDX of table IBNXLA are as follows: 9 digits 0 through 9C digits 0 through 9 and B and CF digits 0 through 9 and B through F The allowable digit range for table IBNXLA digilator values is determined for each translator.
RESULT		see subfields	Result. This field consists of subfields TRSEL, ACR, SMDR, and FEATURE, which are described below.
	TRSEL	FEAT	Translator selector. Enter the translation selector FEAT.
	ACR	Y or N	Account code entry. Enter Y (yes) if an account code entry is required for all calls to the special feature access code, otherwise, enter N (no).

Enhanced Busy Call Return (EBCR) (continued)

Datafilling table IBNXLA (Sheet 2 of 2)

Field	Subfield	Entry	Explanation and action
	SMDR	Y or N	Station message detail recording. Enter Y if all calls from a customer group station or attendant console to any station in the block of station numbers are recorded. Enter N if recording is not required.
	FEATURE	CISA, ICSCTRL	Feature. Enter CISA to allow the end user to deactivate the offer of service provided by EBCR for the duration of a call using an access code. After the call has completed, the offer of service is restored to the end user's line. Enter ICSCTRL to allow the end user to either deactivate or reactivate the offer of EBCR using an access code. If the offer of service is active, use of the ICSCTRL feature deactivates the offer of service, that is, EBCR will no longer be offered to the end user. If the offer of service is not active, use of the ICSCTRL feature reactivates the offer of service, that is, EBCR will once again be offered. ***Note:*** Although other entries, besides CISA and ICSCTRL, are valid for this field, only the CISA and ICSCTRL features are shown in the Entry column for clarity.

Datafill example for table IBNXLA

The following example shows sample datafill for table IBNXLA.

MAP display example for table IBNXLA

```
             KEY                                 RESULT
________________________________________________________
CUSTFEAT    02                        FEAT N N N ICSCTRL
CUSTFEAT    03                        FEAT N N N CISA
```

Translation verification tools

Translation verification tools are not modified by EBCR.

Enhanced Busy Call Return (EBCR) (continued)

SERVORD

The SDS, SDSDENY and ICSDEACT line options can be added to or removed from a line using the service orders (SERVORD) utility.

SDS and SDSDENY line options can be added to lines with the following LCCs: RES, IBN, PSET, M5XXX, and ISDNKSET.

ICSDEACT line option can be added to lines with the following LCCs: RES, IBN, PSET, M5XXX, and ISDNKSET.

SERVORD limitations and restrictions

The following SERVORD limitations and restrictions apply to line options SDS and SDSDENY.

- The SDSDENY line option cannot be assigned to a line which already has the SDS line option assigned to it. Similarly, the SDS line option cannot be assigned to a line which already has the SDSDENY line option assigned to it.

SERVORD prompts

The following table shows the SERVORD prompt used to assign line options SDS, SDSDENY and ICSDEACT to lines.

SERVORD prompts for EBCR

Prompt	Valid input	Explanation
OPTION	SDS	Enter SDS to assign EBCR to a line.
	SDSDENY	Enter SDSDENY to prevent EBCR from being offered to a line.
	ICSDEACT	Enter ICSDEACT to prevent EBCR from being offered to a line. Typically, this line option is added and removed by the end user.

SERVORD example for adding the SDSDENY option to a line

The following SERVORD example shows how the SDSDENY option is added to a line using the add option (ado) command. To assign option SDS or option ICSDEACT to a line, follow the same procedure, but type in SDS or ICSDEACT for SDSDENY in the following example.

Enhanced Busy Call Return (EBCR) (end)

SERVORD example for the SDSDENY line option in prompt mode

```
>ADO
SONUMBER:                NOW 96 04 10 PM
> $
DN_OR_LEN:
> 6211088
OPTION:
>SDSDENY     (or sds, or  icsdeact)
OPTION:
> $
```

SERVORD example for the SDSDENY line option in no-prompt mode

```
> ADO   $   6211088   SDSDENY   $
```

Reverse Translations Simplification

Ordering codes

Functional group ordering code: RES00005

Functionality ordering code: RES00082

Release applicability

NA009 and up

Prerequisites

Reverse Translations Simplification has no prerequisites.

Description

Reverse translations simplification permits the operating company to reuse forward translations datafill (tables HNPACONT, LCASCRCN, and so on) for the CLASS reverse translations. With this feature enabled, the operating company does not need to provision and maintain the existing reverse translations datafill in tables DNREVXLA and DNREGION except for private-to-private reverse translations (see “Limitations"). Simplification is achieved through a utility that parses forward translations to complete the reverse translations.

Reverse translations simplification addresses the following scenarios:

- Public to Public
- Private to Public

Operation

Reverse translations simplification alleviates the requirements of provisioning and maintaining most of the existing reverse translations datafill in tables DNREVXLA and DNREGION. This datafill simplification is transparent to the caller.

Translations table flow

The tables required for The Reverse Translations Simplification depends on the features that the tables support. These features are characterized as follows:

- features that use reverse translations to convert a 10-digit national number to dialable format
- features that use reverse translations to convert a dialable number of a 10-digit national number

Reverse Translations Simplification (continued)

Translations table flow for conversion to dialable format

The tables needed for features that convert a 10-digit national number into dialable format are:

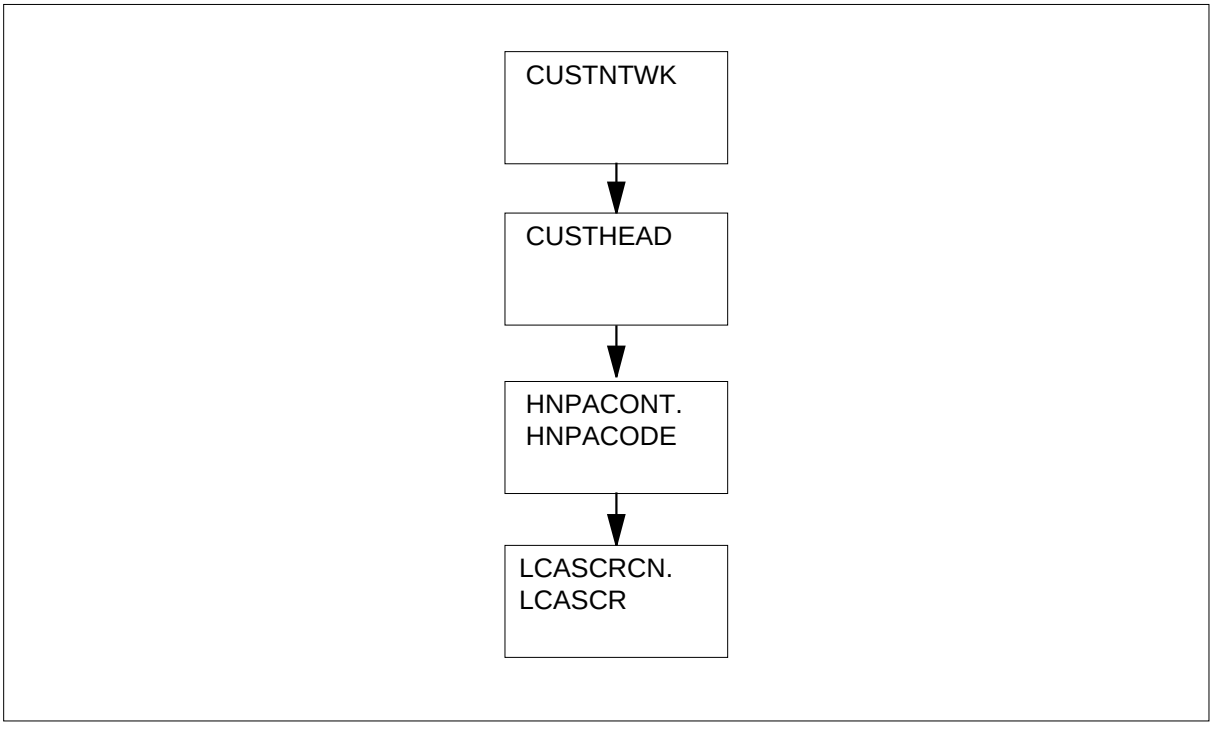
- Table CUSTNTWK
- Table CUSTHEAD

The reverse translations simplification feature uses the existing datafill in the following tables, but does not modify that datafill:

- Table HNPACONT
- Table LCASCRCN

The Reverse Translations Simplification translation process for converting a 10-digit national number into dialable format is shown in the flowchart that follows.

Table flow for Reverse Translations Simplification: 10-digit national number into dialable format



Reverse Translations Simplification (continued)

The following table lists the datafill content used in the flowchart.

Datafill example for Reverse Translations Simplification: 10-digit national number into dialable format

Datafill table	Example data
CUSTNTWK	COMKODAK PRIVATE 6 (PRIVATE RESRXLA 10) *(PUBLIC NAT2DIAL 10)* $ (NTWKRAG 47 30 5 31 2 30 OFFNET) (CLID OFFNET) $
CUSTHEAD	COMKODAK CXDK KDK NIL (VACTRMT 0) (EXTNCOS 0) (ACCT 5 N N) FETXLA CUSTFEAT) (PLMXLA PXDK) (*PUB_NET_ACC 9* (LINEATTR 80) $)$
HNPACONT	613 Y 932 2 (436) (1) (84) (0)
HNPACONT. HNPACODE	905 905 VCT HNPI
LCASCRCN	905 L613 (43) OPTL N N
LCASCRCN. LCASCR	963 963

Translations table flow for conversion to 10-digit national number

The tables needed for features that convert a dialable number to a 10-digit national number are:

- Table DNREVXLA
- Table CUSTHEAD
- Table FNPA7DIG

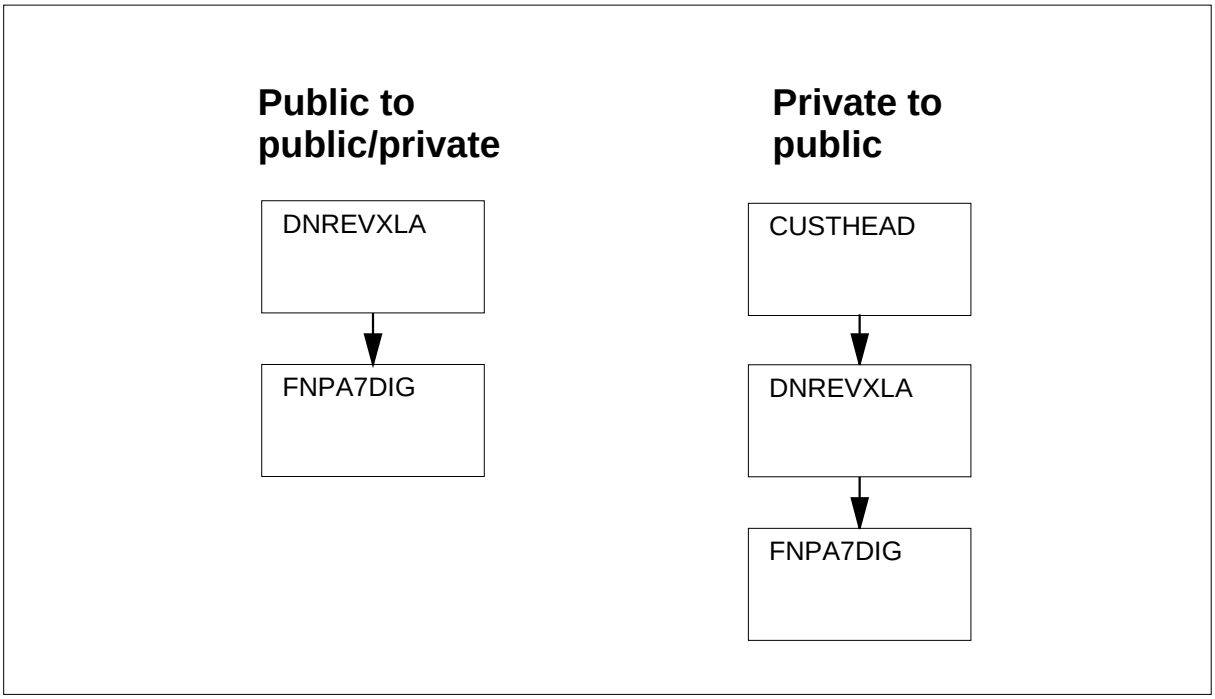
Note 1: Table DNREVXLA is required only if the originator is a private customer.

Note 2: Table FNPA7DIG is required only for 7-digit dialing to a foreign NPA.

The Reverse Translations Simplification translation process for converting a dialable number into a 10-digit national number is shown in the flowchart that follows.

Reverse Translations Simplification (continued)

Table flow for Reverse Translations Simplification: dialable format into 10-digit national number



The following table lists the datafill content used in the flowchart.

Note: The flow for private to public is shown in the table. For the flow for public to public and public to private, table CUSTHEAD is not required.

Datafill example for Reverse Translations Simplification dialable format into 10-digit national number

Datafill table	Example data
DNREVXLA	PRIT1 9 9 (DEFAULT 1 N N) $
CUSTHEAD	COMKODAK CXDK KDK NIL (VACTRMT 0) (EXTNCOS 0) (ACCT 5 N N) (FETXLA CUSTFEAT) (PLMXLA PXDK) (PUBTCXLA DIAL2NAT) (PRITCXLA PRIT1) $
FNPA7DIG	613 963 963 905

Reverse Translations Simplification (continued)

Limitations and restrictions

The following limitations and restrictions apply to Reverse Translations Simplification:

- Private to private reverse translations (that is, customized dial plans) are not supported by the simplified reverse translation system.

  Note: Simplified reverse translations co-exists with private to private reverse translations.

- The new reverse translations algorithm cannot handle cases where the optional `OPTPRFX' field in table DNREVXLA is used (since this optional prefix cannot be found elsewhere in forward translations datafill).

Interactions

Reverse Translations Simplification has no functionality interactions. Existing features that use reverse translations continue to work as before when using the simplified reverse translation system provided by this feature.

Activation/deactivation by the end user

Reverse Translations Simplification requires no activation or deactivation by the end user.

Billing

Reverse Translations Simplification does not affect billing.

Station Message Detail Recording

Reverse Translations Simplification does not affect Station Message Detail Recording.

Datafilling office parameters

Reverse Translations Simplification does not affect office parameters.

Reverse Translations Simplification (continued)

Datafill sequence

The following table lists the tables that require datafill to implement Reverse Translations Simplification. The tables are listed in the order in which they are to be datafilled.

Note: This datafill sequence applies to translations for 10-digit national number into dialable format only.

Datafill tables required for Reverse Translations Simplification: 10-digit national number into dialable format

Table	Purpose of table
CUSTNTWK	The Customer Group Network table contains the network name with which a customer group is associated. It also provides a predetermined global numeric identifier (field NETCGID) in the specified field NETNAME used for the customer group throughout the network. Table CUSTNTWK allows the operating company to assign or deny calling features to customer groups.
CUSTHEAD	The Customer Group Head table contains the names assigned to the blocks of data in table IBNXLA (IBN Translations) that store the data for the translation of digits. These digits originate from an IBN station, attendant console, incoming or incoming side of a two-way trunk group.
HNPACONT. HNPACODE	The List of Home Numbering Plan Area Code table contains the home numbering plan area subtables. The Home NPA Code subtable contains the route, treatment, or table that translation routes to for each of the 1000 three-digit codes (000 to 999) within each of the serving number plan areas (SNPA) or serving translation scheme (STS) assigned in table HNPACONT.
LCASCRCN	The Local Calling Area Screening Control Table and subtables are required in a toll or local/toll switching unit for incoming or two-way Traffic Operator Position System (TOPS), Centralized Automatic Message Accounting (CAMA), or AMR5 trunk groups.

Reverse Translations Simplification (continued)

The following table lists the tables that require datafill to implement Reverse Translations Simplification. The tables are listed in the order in which they are to be datafilled.

Note: This datafill sequence applies to translations for dialable format into 10-digit national number only.

Datafill tables required for Reverse Translations Simplification: dialable format into 10-digit national number

Table	Purpose of table
CUSTHEAD	Customer group head table contains the names assigned to the blocks of data in table IBNXLA (IBN Translations) that store the data for the translation of digits. These digits originate from an IBN station, attendant console, incoming or incoming side of a two-way trunk group.
DNREVXLA	Directory number reverse translation table contains reverse translations algorithms that are used to determine the manner in which the calling party digits are manipulated. Table DNREVXLA is required only if the originator is a private customer.
FNPA7DIG	Foreign numbering plan area for seven digits contains information to associate an NPA with a seven-digit dialing plan. It allows operating company personnel to specify the NPA for a seven-digit dialing plan (for offices that support seven-digit dialing from one NPA to another). It is datafilled against the originator's NPA and the dialing NXX. If there is no datafill for a particular NXX pattern, it is assumed that the terminating NPA is the same as the originating NPA.

Datafilling table CUSTNTWK for NAT2DIAL

The following table shows the datafill specific to Reverse Translations Simplification for table DNREVXLA. Only those fields that apply directly to

Reverse Translations Simplification (continued)

Reverse Translations Simplification are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table CUSTNTWK

Field	Subfield or refinement	Entry	Explanation and action
DNREVXLA		see subfields (up to 4 multiples)	*DN reverse translators* This field consists of subfields NETNAME, RXLANAME, and NUMDIGS.
	NETNAME	alphanumeric (1 to 32 characters)	*Network name* Enter the name assigned to the network with the reverse translator.
	RXLANAME	alphanumeric (1 to 8 characters)	*Reverse translator name* Enter NAT2DIAL (a pre-defined value) to indicate that the network uses the automatic reverse translation feature when converting a 10-digit national format to a dialable format.
	NUMDIGS	numeric (1 to 10)	*Number of digits* Enter the number of digits used for the reverse translation process by applications that are using the reverse translator identified in field RXLANAME. For NAT2DIAL, NUMDIGS = 10.

Datafill example for table CUSTNTWK

The following example shows sample datafill for table CUSTNTWK.

MAP display example for table CUSTNTWK

```
CUSTNAME NETNAME NETCGID DNREVXLA                                  OPTIONS
-------------------------------------------------------------------------
COMKODAK PRIVATE 6       (PRIVATE RESXLA 10 (PUBLIC NAT2DIAL 10) $
(CLID OFFNET) $
```

Error messages for table CUSTNTWK

There are no error messages for table CUSTNTWK.

Reverse Translations Simplification (continued)

Datafilling table CUSTHEAD for NAT2DIAL

The following table shows the datafill specific to Reverse Translations Simplification for table CUSTHEAD. Only those fields that apply directly to Reverse Translations Simplification are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table CUSTHEAD

Field	Subfield or refinement	Entry	Explanation and action
OPTION		PUBTCXLA	Option. Enter PUBTCXLA. Use this option to indicate that reverse translations for this customer group uses automatic reverse translations when converting a dialable format to the 10-digit national format.
	PUBTCXLA	alphanumeric (1 to 8 characters)	Public TCAP translator name. Enter DIAL2NAT (a pre-defined value). Option PUBTCXLA is not required for AR-type features (that is, NAT2DIAL calls).
OPTION		PUB_NET_ ACC	Option. Enter PUB_NET_ACC. Use this option to datafill the network access code and the prefix digits to be used to access the public domain. This option is needed to support automatic reverse translations when converting a 10-digit national format to a dialable format.
	LINEATTR	Integer 0 to 31999	Line attribute index. Datafill the line attribute index used to convert the 10 digit national number into a dialable format.
	PFX_DIGS	five digit alphanumeric string { N, 1 to 0, B, C)	Datafill the prefix required to reuse the public network access datafill for AIN response processing. ***Note:*** Simplifed reverse translations does not require AIN functionality.

Datafill example for table CUSTHEAD

The following example shows sample datafill for table CUSTHEAD.

MAP display example for table CUSTHEAD

```
CUSTNAME  CUSTXLA  DGCOLNM IDIGCOL
                                                          OPTIONS
_____________________________________________________________________
COMKODAK    CXDK     KDK     NIL
(VACTTRMT 0) (EXTNCOS 0) (ACCT 5 N N) (FETXLA CUSTFEAT)
(PLMXLA PXDK) (PUB_NET_ACC 9 (LINEATTR 80) $)$
```

Error messages for table CUSTHEAD

There are no error messages for table CUSTHEAD.

Datafilling subtable HNPACONT.HNPACODE for NAT2DIAL

The following table shows the datafill specific to Reverse Translations Simplification for subtable HNPACONT.HNPACODE. Only those fields that apply directly to Reverse Translations Simplification are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling subtable HNPACONT.HNPACODE

Field	Subfield or refinement	Entry	Explanation and action
FROMDIGS		Vector of up to 18 digits	From digits. Datafill the lower range of digits for vacant treatment.
TODIGS		Vector of up to 18 digits	To digits. Datafill the upper range of digits for vacant treatment.
CD		VCT	Code description.
TMT		HNPI	Treatment.

Datafill example for subtable HNPACONT.HNPACODE

The following example shows sample datafill for subtable HNPACONT.HNPACODE.

Reverse Translations Simplification (continued)

MAP display example for subtable HNPACONT.HNPACODE

```
          FROMDIG             TODIGS
                               CDRRTMT
-------------------------------------------------------
          905                 905
                                 VCT HNPI
```

Error messages for subtable HNPACONT.HNPACODE

There are no error messages for subtable HNPACONT.HNPACODE.

Datafilling table DNREVXLA for DIAL2NAT

The following table shows the datafill specific to Reverse Translations Simplification for table DNREVXLA. Only those fields that apply directly to Reverse Translations Simplification are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table DNREVXLA

Field	Subfield or refinement	Entry	Explanation and action
RXLANAME		alphanumeric (up to 8 characters)	*Reverse translation algorithm name* Enter the reverse translation algorithm name. This name is used in table CUSTHEAD to define option Private TCAP Translator name (PRITCXLA). This datafill is for IBN agents only and is not required for RES datafill.

Datafill example for table DNREVXLA

The following example shows sample datafill for table DNREVXLA.

MAP display example for table DNREVXLA

```
RXLANAME       FROMDIGS      TODIGS                    RESULTS
_____________________________________________________________
PRIT1             0          9      (MVPREG1  3      N    N)$
```

Error messages for table DNREVXLA

There are no error messages for table DNREVXLA.

Datafilling table CUSTHEAD for DIAL2NAT

The following table shows the datafill specific to Reverse Translations Simplification for table CUSTHEAD. Only those fields that apply directly to Reverse Translations Simplification are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table CUSTHEAD

Field	Subfield or refinement	Entry	Explanation and action
OPTION		PUBTCXLA	Option. Enter PUBTCXLA.
	PUBTCXLA	DIAL2NAT	Public TCAP translator name.
OPTION		PRITCXLA	Option. Enter PRITCXLA.
	PRITCXLA	alphanumeric (1 to 8 characters)	Private TCAP translator name. Enter the name assigned to the private TCAP translator in table DNREVXLA. This datafill is for IBN agents only and is not required for RES datafill.

Datafill example for table CUSTHEAD

The following example shows sample datafill for table CUSTHEAD.

Reverse Translations Simplification (continued)

MAP display example for table CUSTHEAD

```
CUSTNAME  CUSTXLA  DGCOLNM IDIGCOL
                                                          OPTIONS
_____________________________________________________________________
COMKODAK    CXDK     KDK     NIL
(VACTTRMT 0) (EXTNCOS 0) (ACCT 5 N N) (FETXLA CUSTFEAT)
(PUBTCXLA DIAL2NAT) (PRITCXLA PRIT1)$
```

Error messages for table CUSTHEAD

There are no error messages for table CUSTHEAD.

Datafilling table FNPA7DIG for DIAL2NAT

The following table shows the datafill specific to Reverse Translations Simplification for table FNPA7DIG. Only those fields that apply directly to Reverse Translations Simplification are shown. For a description of the other fields, refer to the data schema section of this document.

Note: Table FNPA7DIG is required only for 7-digit dialing to a foreign NPA.

Datafilling table FNPA7DIG

Field	Subfield or refinement	Entry	Explanation and action
ORIGSTS		3-digit NPA	ORIGINATING SERVING TRANSLATION SCHEMEEnter the NPA of the originator. This part of the key must be an entry in table HNPACONT/SNPANAME.
FROMNXX		3-digit code	FROM NXXEnter the start of the range of dialed NXX that is associated with the TERMNPA.
TONXX		3-digit code	TONXXEnter the range of dialed NXX that is associated with the TERMNPA.
TERMNPA		3-digit NPA	TERMINATING NUMBERING PLAN AREAEnter the NPA that is associated with the dialed NXX between the specified range.

Datafill example for table FNPA7DIG

The following example shows sample datafill for table FNPA7DIG.

MAP display example for table FNPA7DIG

```
ORIGSTS        FROMNXX        TONXX        TERMNPA

_____________________________________________________

613              963           963           905
```

Error messages for table FNPA7DIG

There are no error messages for table FNPA7DIG.

Translation verification tools

Reverse Translations Simplification does not use translation verification tools.

The REVXLVER tool is available to support the transition to the simplified reverse translations. Refer to the Cost of Ownership Reduction Feature Specification, 297-8991-110.

SERVORD

Reverse Translations Simplification does not use SERVORD.

Selective Call Acceptance (SCA)

Ordering codes

Functional group ordering code: RES00005

Functionality ordering code: not applicable

Release applicability

NA011 and up

Prerequisites

To operate, Selective Call Acceptance (SCA) has the following prerequisites:

- BAS Generic, BAS00003
- MDC Minimum, MDC00001
- MDC Standard, MDC00003
- RES Service Enablers, RES00006

Network configuration

Common Channel Signaling No. 7 (CCS7) connectivity is required for network (interoffice) configuration of Selective Call Acceptance. The following feature packages are required for CCS7 connectivity:

- Base ISUP, ISP70001
- TEL CCS7 Base, TEL00008
- BAS Generic, BAS00003

Description

The Selective Call Acceptance (SCA) feature allows a subscriber to selectively accept calls arriving from a limited set of previously identified directory numbers (DN).

Operation

The DNs to be accepted are built into a list through the Screening List Editing (SLE) feature. Rejected calls receive SCA treatment.

Assigning the SCA feature

The operating company assigns line option SCA to the subscriber through the service order system (SERVORD). When assigned, the feature is designated as subscription or usage sensitive pricing. SCA can be assigned to any line that can be assigned Custom Local Area Signaling Services (CLASS) features.

Selective Call Acceptance (SCA) (continued)

Building the SCA list

The SCA list can be altered by either the subscriber or the operating company.

Using the SCA list

Any call that terminates to a line that is capable of being assigned SCA initiates a check for the existence of active SCA on the line. This check is made regardless of the current state of the terminating line. If SCA is active, the SCA list is searched to determine if the incoming call's DN appears on the list. If a match is found, the incoming call receives SCA treatment (announcement or tone).

The following points apply to SCA list functioning:

- Answer supervision is provided when a call is routed to treatment. The long-distance caller is charged for the call. (This feature is datafilled in table RESOFC.)
- The subscriber with SCA is not informed that calls are being rejected.
- When a call is rejected because of SCA, the incoming call memory slot of the called party is not updated.
- When the incoming call to be screened is a forwarded call, the originating DN is screened, rather than the forwarding station's DN.
- If any failure occurs during screening, screening is not applied. (Screening failure can occur due to system failure, lack of resources, or inability to determine the calling DN.) The incoming call is not accepted.
- Any call incoming from an operator no-test trunk is not subject to SCA screening. This allows emergency calls originating from a line not specified in the SCA list to be sent to an SCA subscriber. An operator completes a call to the terminating party to inform the SCA subscriber of the emergency call. The SCA subscriber decides how to handle the call at that point, depending on the capabilities that are provided by the operator or attendant call handling.

Universal access

The SCA feature can be provided to all RES subscribers in an office through universal access when feature package NTXQ70AA, Universal Access to CLASS Features, is present in the office. For universal access, the value UNIVER instead of SUBSCR should be datafilled in subfield ACCESS in table RESOFC.

Universal access only changes the *method* of access, not the operation of a CLASS feature. When universal access is available in an office, the subscriber can still have the feature assigned as a line option. Accessing a CLASS feature

Selective Call Acceptance (SCA) (continued)

assigned to the subscriber as a line option or customer group option takes precedence over accessing the feature through universal access.

The Software Optional Control (SOC) allows the operating company to enable the functionality of common access for CLASS features through a Right to Use (RTU) access code. The subscriber is able to access the CLASS features without assigning each feature to the line.

The SOC commands enable or disable the universal access for CLASSfeatures. The RTU access code assignment to RES00011 and setting the state to ON enables the universal access for CLASS through SOC. The state is set to IDLE to disable the universal access for CLASS through SOC.

Note 1: Universal access to CLASS features is not applicable to Subscriber Services lines with IBN line class codes (LCC) through NA007.

Note 2: Universal access to CLASS features is not applicable to universal access to display features.

Note 3: Refer to “Universal Access to CLASS Features” for more information on universal access.

Note 4: If RES00011 is on, SCA does not give a text message indicating that the feature already exists on a DN.

Note 5: When SCA is automatically provisioned by the RES00011 SOC, it can still be provisioned on an individual line a second time.

Refer to “Universal Access to CLASS Features" for more information on universal access.

Translations table flow

The SCA translations process is shown in the following figures. The flowcharts show the table flow for SCA activation and for an incoming call to an SCA subscriber.

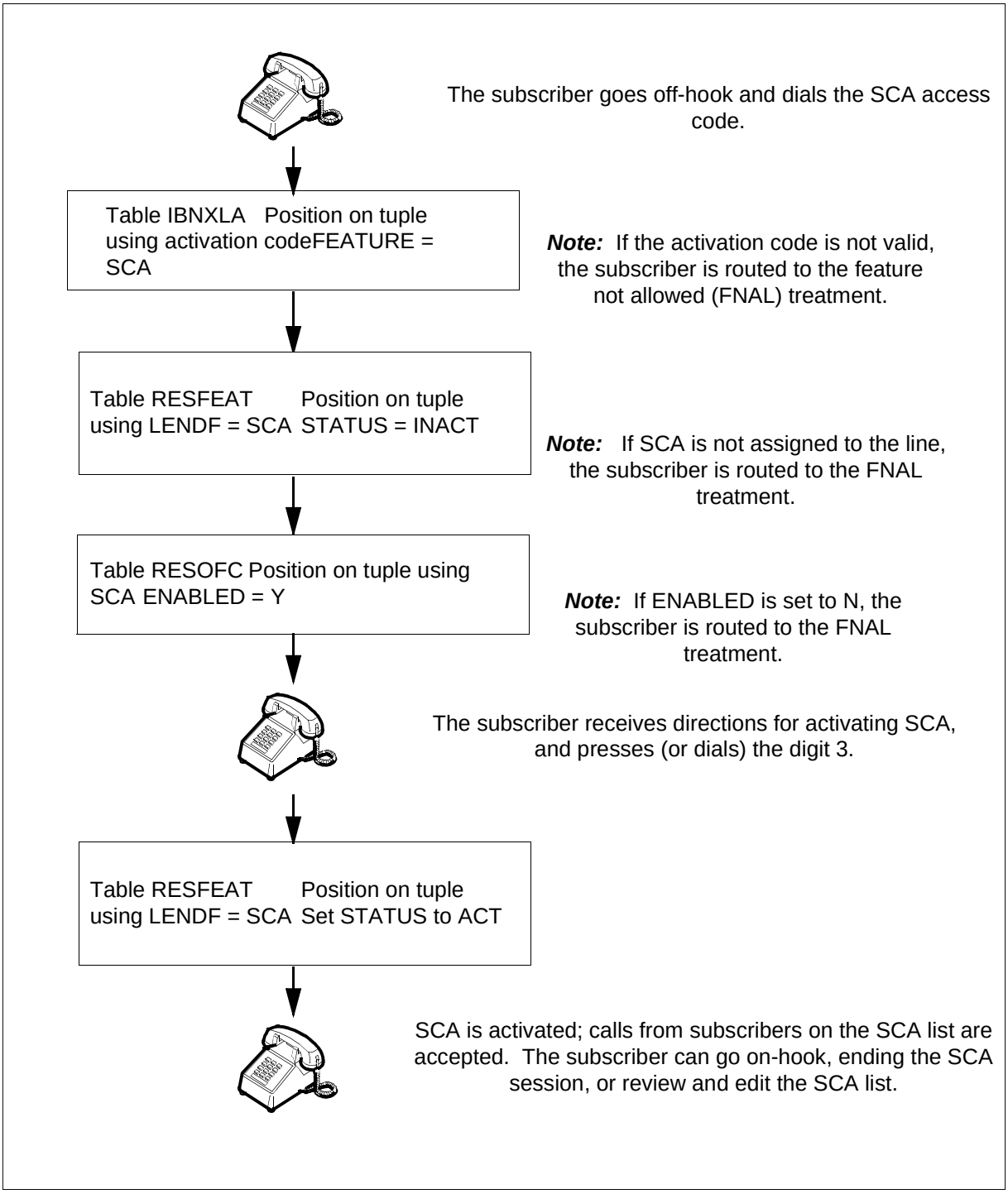
The Selective Call Acceptance (SCA) translations tables are:

- Table IBNXLA provides the name of the feature associated with an access code.
- Table RESFEAT lists the features assigned to a line equipment number (LEN). For SCA, field STATUS is set to ACT when SCA is activated, and it is set to INACT when SCA is deactivated.
- Table RESOFC controls the availability of individual CLASS features for an office. For this example, SCA is enabled.

The SCA translation process is shown in the flowchart that follows.

Selective Call Acceptance (SCA) (continued)

Table flow for Selective Call Acceptance (SCA)



Selective Call Acceptance (SCA) (continued)

The following table lists the datafill content used in the flowchart. The SCA access code is 68. The LEN of subscriber is HOST 00 02 0 05.

Datafill example for Selective Call Acceptance (SCA)

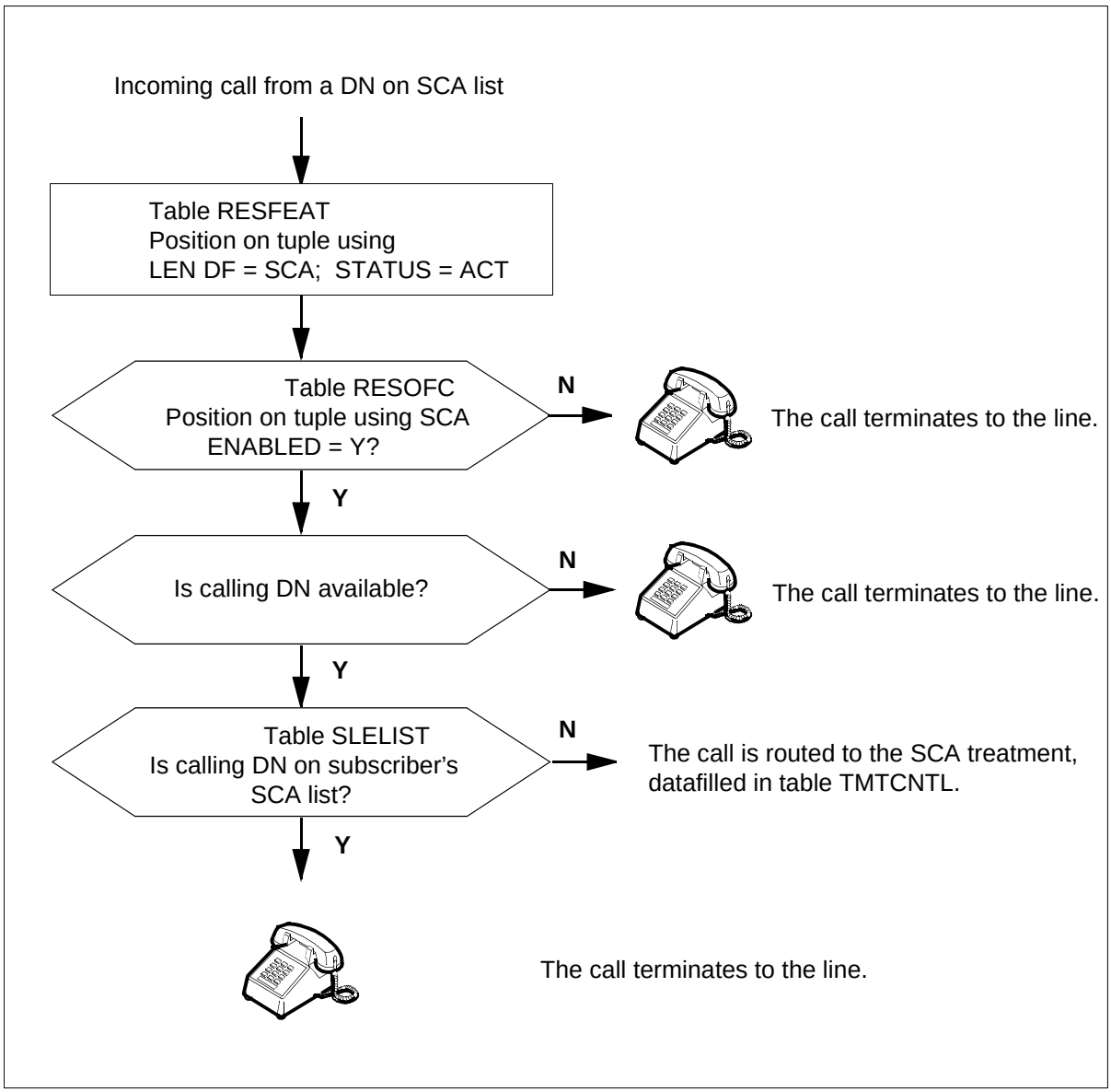
Datafill table	Example data
IBNXLA	RXCFN 64 FEAT N N N SCA
RESFEAT	HOST 00 02 0 05 0 SCA SCA NOAMA ACT
RESOFC	SCA Y SUBSCR SCA 12 N $

The following figure shows the table flow for an incoming call to a SCA subscriber.

- Table RESFEAT lists the features assigned to a LEN. For SCA, field STATUS is set to ACT when SCA is activated, and it is set to INACT when SCA is deactivated.
- Table RESOFC controls the availability of individual CLASS features for an office. For this example, SCA is enabled.
- Table SLELIST contains the Screening List Editing (SLE) lists for an office. Each tuple in this table contains one entry for one SLE list. For the example that follows, table SLELIST contains a tuple defining an SCA entry.

Selective Call Acceptance (SCA) (continued)

Table flow for Selective Call Acceptance (SCA)



Selective Call Acceptance (SCA) (continued)

The following table lists the datafill content used in the flowchart. The LEN of subscriber is HOST 00 02 0 05. The calling DN is 613 621 0011.

Datafill example for Selective Call Acceptance (SCA)

Datafill table	Example data
RESFEAT	HOST 00 02 0 05 0 SCA SCA NOAMA ACT
RESOFC	SCA Y SUBSCR SCA 12 N $
SLELIST	HOST 00 02 0 05 0 SCA 1 N 6136210011 PUBLIC 7 N

Limitations and restrictions

The following limitations and restrictions apply to Selective Call Acceptance (SCA):

- SCA can only be assigned to lines using the service order system (SERVORD). Casual feature access is not allowed.
- SCA cannot be assigned to groups of lines.
- Once SCA has been assigned to a line, it is impossible to deny SCA (except to remove it from the line or to disable it for the entire office in table RESOFC).
- SCA is incompatible with the following line options:
  - AVT
  - BNN
  - CCSA
  - CFMDN
  - DIN
  - DTM
  - EHLD
  - LDTPSAP
  - PCWT
  - PREMTBL
  - PRL
  - 3WCPUB

Selective Call Acceptance (SCA) (continued)

Interactions

The following paragraphs describe the interactions between Selective Call Acceptance (SCA) and other functionalities.

SCA takes precedence over most other terminating features that may exist on a destination station, regardless of the state of the line. In other words, a call is first screened by SCA. For accepted calls, the other screening features function as required.

Automatic Call Back

Subscribers with SCA can activate Automatic Call Back (ACB) to DNs that appear on their SCA lists. If a subscriber attempts to activate ACB to a DN that has SCA and contains the same calling DN in the SCA list, the calling line receives SCA treatment.

Automatic Recall

Normally, SCA subscribers cannot activate Automatic Recall (AR) to a DN in their SCA lists, because incoming calls from such numbers are rejected, and the incoming memory slot for the terminating line is not updated. An exception occurs when the SCA subscriber adds the incoming DN to the list after the call has arrived but before any subsequent call is received. Under these circumstances, the AR activation is successful. If a subscriber attempts to activate AR to a DN that has SCA and the same calling DN in the SCA list, the calling line receives SCA treatment.

Call Forwarding

SCA takes precedence over all other forms of Call Forwarding (CFX, CFW, CFDA, CFBL). When an incoming call has been forwarded, it is the originating DN that is screened, not the DN of the forwarding base station. Treatment is provided according to the characteristics of the remote DN. The one exception is CFDA. When a call is forwarded from a line with CFDA and the remote DN is located in the same switch as the base station, the remote DN rejects the call. The calling party continues to ring the base station. Rejection treatment is not provided. If the remote DN is located in a different switch, the call does not revert to the base station, and SCA treatment is provided.

Call Waiting

An SCA subscriber does not receive Call Waiting (CWT) tones for calls that are rejected by the SCA feature. CWT cannot be accessed during an SCA SLE session.

SCA can coexist with Denied Origination (DOR), Automatic Line (AUL) and Requested Suspension (RSUS). However, the SCA lists for these subscribers

Selective Call Acceptance (SCA) (continued)

must be built (in table SLELIST) by the operating company, since these subscribers are able to access SCA SLE.

Calling Line Identification

Calling Line Identification (CLI) logs are generated for calls that are rejected. SCA treatment logs can optionally be generated.

Calling Number Delivery

When an SCA subscriber has Calling Number Delivery (CND), no calling information is delivered to that subscriber when a call is rejected.

Denied Termination

SCA is incompatible with Denied Termination (DTM).

Directory Number Hunt

When a line in a Directory Number Hunt (DNH) group has SCA, any call that goes directly to that line is screened, and SCA treatment is provided, if appropriate. Any call that hunts to that line is also screened; however, if screening determines that the line should reject the call, the call continues to hunt instead of receiving SCA treatment. This method gives consistent results to incoming calls.

Distinctive Ringing/Call Waiting

SCA screening takes place before Distinctive Ringing/Call Waiting. A call from a number that is not on the SCA list is rejected. A call from a number on the list proceeds to DRCW screening. Thus calls to numbers on both the SCA and DRCW lists are identified at the called station by distinctive ringing.

Distributed Line Hunt

SCA interacts with Distributed Line Hunt (DLH) the same as it interacts with MLH.

Free Number Terminating

When answer supervision has been enabled (in table RESOFC), rejected calls to lines with Free Number Terminating (FNT) also receive answer supervision.

Multiline Hunt

SCA can be assigned to pilots and members of Multiline Hunt (MLH) groups. When SCA is assigned to the pilot, it takes precedence over hunting. When SCA is assigned to a member and an incoming call to that member is rejected as a result of hunting, that incoming call continues to hunt instead of receiving SCA treatment.

Selective Call Acceptance (SCA) (continued)

Selective Call Forwarding

Selective Call Acceptance screening takes place before Selective Call Forwarding. A call from a number that is not on the SCA list is rejected. A call from a number on the list proceeds to SCF screening. Thus calls to numbers on both the SCA and SCF lists are forwarded.

Selective Call Rejection

Selective Call Acceptance screening takes place before Selective Call Rejection. A call from a number that is not on the SCA list is rejected. A call from a number on the list proceeds to SCRJ screening. Thus calls to numbers on both the SCA and SCRJ lists are rejected.

Teen Service

With Teen Service (SDN), screening is applied to all calls to the line, regardless of which DN was dialed.

Terminating features

SCA takes precedence over other terminating features, such as RSUS, Suspended Service (SUS), and Make Set Busy (MSB).

Three-Way Calling

SCA is not accessed during Three-Way Calling (3WC). A subscriber can conference together two lines, even though one line may appear in the other line's SCA list.

Wake Up Call Reminder

Wake Up Call Reminder overrides SCA.

Activation/deactivation by the end user

The subscriber initiates an SCA SLE session by dialing the SCA activation code, which is specified in table IBNXLA.

The Bellcore-recommended values for the SCA activation and deactivation codes are *68 and *88 respectively. During the SCA SLE session the subscriber can do any of the following:

- query feature status
- activate or deactivate the SCA feature
- review the SCA list
- add or delete entries to or from the SCA list

The operating company can specify an initial SCA list at the same time the option is assigned to the line, or can update the information later. This method

Selective Call Acceptance (SCA) (continued)

is necessary for lines with DOR, AUL, RSUS or any other option that denies dial tone since such lines cannot access the list through the first method.

Billing

Refer to “Billing" in “Screening List Editing (SLE)" for information on billing.

Station Message Detail Recording

Selective Call Acceptance (SCA) does not affect Station Message Detail Recording.

Datafilling office parameters

Selective Call Acceptance (SCA) does not affect office parameters.

Datafill sequence

The following table lists the tables that require datafill to implement Selective Call Acceptance (SCA). The tables are listed in the order in which they are to be datafilled.

Datafill tables required for Selective Call Acceptance (SCA)

Table	Purpose of table
RESOFC	Contains data on CLASS features and enables the SCA feature for the office.
IBNXLA	Contains the data for the digit translations of calls from an MDC station, attendant console, incoming trunk group, or incoming side of a two-way MDC trunk group.
TMTCNTL. TREAT	Contains the subtable TREAT.
TMTMAP	Provides a mapping from DMS treatments into call failure messages supported by certain CCS7 protocols.

Datafilling table RESOFC

Table RESOFC (Residential Line CLASS Office Data) contains data on CLASS features and enables the SCA feature for the office. When the SCA feature package is added to the load, an SCA tuple is added to table RESOFC.

Three fields must be completed:

- ENABLED—if set to Y, SCA feature is activated in an office.
- MAXSIZE—sets the maximum number of calls in an SCA list.
- ANSWRSUP—if set to Y, answer supervision is returned to the originating switch. The caller is played an announcement and, if the call is billable,

Selective Call Acceptance (SCA) (continued)

the caller is charged for the call. If tone is used instead of announcement, the call is not billable.

The following table shows the datafill specific to Selective Call Acceptance (SCA) for table RESOFC. Only those fields that apply directly to Selective Call Acceptance (SCA) are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table RESOFC

Field	Subfield or refinement	Entry	Explanation and action
KEY		See subfield	Key. This field consists of the subfield FEATNAME. This subfield is described below.
	FEATNAME	SCA	Feature name. This subfield is the key to the table. It specifies the name of the feature. Enter SCA.
ENABLED		Y or N	Enabled. This field specifies whether or not the feature is enabled in the office. Enter Y or N.
FEATDATA		See subfields	Feature data. This field consists of the subfields ACCESS, FEATNAME, MAXSIZE, and ANSWRSUP. These subfields are described below.
	ACCESS	SUBSCR, UNIVER	Feature access. This subfield specifies how the feature is accessed. SUBSCR indicates subscription access only and UNIVER indicates universal access for all RES lines. Enter SUBSCR or UNIVER. ***Note:*** The value UNIVER is valid only when feature package NTXQ70AA, Universal Access to CLASS Features, is present in the office. Refer to “Universal Access to CLASS Features" for more information on universal access.
	FEATNAME	SCA	Feature name. This subfield specifies the feature name. Enter SCA.

Selective Call Acceptance (SCA) (continued)

Datafilling table RESOFC

Field	Subfield or refinement	Entry	Explanation and action
	MAXSIZE	1 to 8191	Maximum size. This subfield specifies the maximum number of entries for any SCA list in the office. Enter a value from 1 to 8191. The suggested maximum number of entries is 12 with standard DRAM resources. If additional DRAM resources are available, the suggested maximum is 31. ***Note:*** Table RESOFC can be datafilled with a maximum number of entries greater than the DRAM resources available. However, when the subscriber tries to enter a value of 13 or 32, for example, the SLE session locks up, and the subscriber is unable to edit the list without operating company intervention.
	ANSWRSUP	Y or N	Answer supervision. This subfield specifies whether answer supervision is returned to the original switch (that is, whether the call was answered) when a rejected call goes to treatment. Enter Y or N.
FNALANN		Alphanumeric	Feature not allowed announcement. This field consists of the subfields POTS_ACCESS and FNAL_CLLI. Refer to “Datafill procedure for table RESOFC" for “Feature not allowed announcement" for details on these subfields.

Datafill example for table RESOFC

The following example shows sample datafill for table RESOFC.

MAP display example for table RESOFC

```
KEY      ENABLED                                          FEATDATA
             FNALANN
_____________________________________________________________________
SCA      Y                                 SUBSCR    SCA 31   N
             $
```

Datafilling table IBNXLA

Table IBNXLA (IBN Translations) contains the data for the digit translations of calls from an MDC station, attendant console, incoming trunk group, or

Selective Call Acceptance (SCA) (continued)

incoming side of a two-way MDC trunk group. SCA is added to table IBNXLA as a feature access code, to give subscribers access to the SCA function.

Table IBNXLA is datafilled to define the access codes used to activate and deactivate the SCA feature. This allows translations to recognize these access codes and trigger the appropriate software.

The recommended format of the access codes is 11XX for dial pulse (DP) lines and *XX for dual-tone multifrequency (DTMF) lines, where XX is a two-digit code.

The recommended activation and deactivation codes for SCA are as follows:

- 1168 and 1188 for DP lines
- *68 and *88 for DTMF lines

The following table shows the datafill specific to Selective Call Acceptance (SCA) for table IBNXLA. Only those fields that apply directly to Selective Call Acceptance (SCA) are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table IBNXLA

Field	Subfield or refinement	Entry	Explanation and action
KEY		See subfields	Key. This field consists of the subfields XLANAME and DGLIDX. These subfields are described below and must be entered in succession.
	XLANAME	Character	Translator name. This subfield specifies the 1-to 8-character name assigned to the translator. Enter the translator name.
	DGLIDX	Numeric	Digilator index. This subfield specifies the digit or digits assigned to the index. Enter the access code assigned to the digilator index.
RESULT		See subfields	Result. This field consists of the subfields TRSEL, ACR, SMDR, and FEATURE. These subfields are described below.
	TRSEL	FEAT	Translation selector. This subfield specifies the translation selector. Enter FEAT.

Selective Call Acceptance (SCA) (continued)

Datafilling table IBNXLA

Field	Subfield or refinement	Entry	Explanation and action
	ACR	N	Account code entry. This subfield specifies whether or not an account code entry is required for all calls to the special feature access code. Enter N to bypass this subfield.
	SMDR	N	Station message detail recording. This subfield specifies whether or not SMDR is required for calls originated by a customer group station or an attendant console. Enter N to bypass this subfield.
	FEATURE	SCA	Feature. This subfield specifies the feature to be added to the table. Enter SCA.

Datafill example for table IBNXLA

The following example shows sample datafill for table IBNXLA.

MAP display example for table IBNXLA

```
                KEY                                          RESULT
 ------------------------------------------------------------------------
 RXCFN          68              FEAT      N    N          N       SCA
```

Datafilling table TMTCNTL.TREAT

Table TMTCNTL (Treatment Control) contains the subtable TREAT. The SCA feature is added to subtable TREAT to enable feature treatment to be mapped to the calling line and supply an announcement or tone.

SCA must be added to two fields in the extended treatment range: LNT (line treatment) and OFFTREAT (office treatment).

The following table shows the datafill specific to Selective Call Acceptance (SCA) for table TMTCNTL.TREAT. Only those fields that apply directly to

Selective Call Acceptance (SCA) are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table TMTCNTL.TREAT

Field	Subfield or refinement	Entry	Explanation and action
TREATMT		SCA	Treatment. This field specifies the feature treatment. Enter SCA.
LOG		Y or N	Log. This field specifies whether or not a log report is to be generated each time treatment is activated. Enter Y or N.
FSTRTE		See subfields	First route. This field specifies the first route. It consists of the subfields FSTRTSEL and CLLI. These subfields are described below.
	FSTRTSEL	S or T	First route selector. This subfield specifies the first route selector. Enter S (for standard) or T (for table). Enter S to provide answer supervision.
	CLLI	Alphanumeric	Common language location identifier. This subfield specifies the CLLI of the tone to which translation has to route. Enter the CLLI.

Datafill example for table TMTCNTL.TREAT

The following example shows sample datafill for table TMTCNTL.TREAT.

MAP display example for table TMTCNTL.TREAT

```
TREATMT      LOG                            FSTRTE
________________________________________________________________
SCA          N                              S         SCATMT
```

Datafilling table TMTMAP

Table TMTMAP (Treatment Map) provides a mapping from DMS treatments into call failure messages supported by certain CCS7 protocols. Calls over ISDN user part (ISUP) trunks that terminate unsuccessfully are dropped. To avoid this problem with the SCA feature, table TMTMAP is used to route the call status back to the originating office.

The following table shows the datafill specific to Selective Call Acceptance (SCA) for table TMTMAP. Only those fields that apply directly to Selective

Selective Call Acceptance (SCA) (continued)

Call Acceptance (SCA) are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table TMTMAP

Field	Subfield or refinement	Entry	Explanation and action
TMTMPKEY		See subfields	Treatment map key. This field specifies the treatment map key. This field consists of the subfields PROTOCOL, TMT, and BC_CT. These subfields are described below and must be entered in succession.
	PROTOCOL	Q764	Protocol. This subfield specifies the PROTOCOL. Enter Q764.
	TMT	SCA	Treatment. This subfield specifies the treatment code defined in field TREATMT in table TMTCNTL.TREAT. Enter SCA.
	BC_CT	ALLBC	Bc_ct. This subfield specifies the BC_CT_TYPE. Enter ALLBC.
TMTMPVAR		See subfields	Treatment map variable. This field specifies the treatment map. This field consists of subfield FORMAT and ISUPPROC. These subfields are described below.
	FORMAT	ISUP	Format. This subfield specifies the FORMAT. Enter ISUP.
	ISUPPROC	See subfield	ISup procedure. This subfield consists of the subfield TMTPROC. This subfield is described below.
	TMTPROC	LOCAL, NOLOCAL, ISLOCAL	Treatment procedure. This subfield specifies the treatment to apply locally. Enter LOCAL and skip subfields CAUSE and LOG; enter NOLOCAL when the treatment is to be mapped to a cause and included in a release message without exception; enter ISLOCAL when the treatment is to be applied locally, mapped to a cause, and included in a release message.

Selective Call Acceptance (SCA) (continued)

Datafilling table TMTMAP

Field	Subfield or refinement	Entry	Explanation and action
	CAUSE	Alphanumeric	ISup cause. This subfield specifies the cause subfields. If TMTPROC is set to ISLOCAL, enter one of the CAUSE subfields listed in the customer data schema section of the *Translations Guide* for this table.
	LOG	Y or N	Log. This subfield specifies whether or not the LOG is to be generated. Generate ISUP Log if TMTPROC is set to NOLOCAL, ISLOCAL, or INTLOCAL. Enter Y to indicate that a log is to be generated when a release with cause is sent. Otherwise, enter N.

Datafill example for table TMTMAP

The following example shows sample datafill for table TMTMAP.

MAP display example for table TMTMAP

```
                TMTMPKEY                          TMTMPVAR
-------------------------------------------------------------
Q764    SCA     ALLBC                     ISUP    LOCAL
```

Translation verification tools

The following example shows the output from TRAVER when it is used to verify Selective Call Acceptance (SCA).

Selective Call Acceptance (SCA) (continued)

TRAVER output example for Selective Call Acceptance (SCA)

```
>TRAVER L 6211233 'B68' B
TABLE IBNLINES
   HOST 00 0 09 07 0 DP STN RES 6211233 0 $
TABLE LINEATTR
   0 1FR NONE NT FR01 0 613 P621 L613 N TSPS N 10 NIL NILSFC
        LATA1 0 NIL NIL 00 Y RESGRP 0 2
   LCABILL OFF – BILLING DONE ON BASIS OF CALLTYPE
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TUPLE NOT FOUND
TABLE NCOS
RESGRP 2 0 0 RNCOS2 ( XLAS RXCMN2 NXLA RES ) $
TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA,
VACTRMT, AND DIGCOL
RESGRP NXLA RESXLA RXCFN 0 RES
TABLE DIGCOL
   RES SPECIFIED: RES DIGIT COLLECTION
NCOS FEAT XLA NAME IS NIL.  GO TO NEXT XLA NAME.
TABLE IBNXLA: XLANAME RXCFN
   RXCFN 68 FEAT N N N SCA

++ TRAVER: SUCCESSFUL CALL TRACE ++
```

SERVORD

SCA has been added as a value to the OPTION prompt to allow the assigning, updating, and removal of the SCA feature to or from lines through the SERVORD system.

SCA does not require the assignment of any other options. This option can be assigned to lines with a line class code (LCC) of RES or IBN, or to lines with an LCC of 1FR or 1MR when office parameter RES_SO_SIMPLIFICATION in table OFCVAR has field RES_AS_POTS set to Y. Note that SCA is incompatible with DTM.

Note: For information on how the SCA feature can be assigned to lines with an LCC of PSET, refer to “Datafilling CLASS on MDC."

When SCA is specified, the additional prompts are BILLING_OPTION, STATUS, and DNS. BILLING_OPTION is an existing prompt. There is no change to its range of values or behavior.

Selective Call Acceptance (SCA) (continued)

SERVORD limitations and restrictions

Selective Call Acceptance (SCA) has no SERVORD limitations and restrictions.

SERVORD prompts

The following table shows the SERVORD prompts used to assign Selective Call Acceptance (SCA) to a line.

SERVORD prompts for Selective Call Acceptance (SCA)

Prompt	Valid input	Explanation
OPTION	SCA	Assigns, updates, and removes the SCA feature
BILLING_OPTION	AMA, NOAMA	Specifies AMA or NOAMA billing. Enter AMA to assign subscription usage sensitive pricing (SUSP) billing (the default is NOAMA.) This prompt appears if SUSP is enabled in table AMAOPTS. Refer to "Datafilling the network base," for more information on table AMAOPTS.
STATUS	INACT, ACT	Assigns initial status of features (INACT = inactive, ACT = active).
DNS	10-digit DN (up to 4 DNs and VBCOUNT pairs) or $	Specifies the DN that is to be added to the SCA list.
VBCOUNT	0 to 10	Specifies the number of digits voiced back during SCA SLE list review. Setting this value to 0 designates the entry as private; the entry is not voiced back during list review.

SERVORD example for adding Selective Call Acceptance (SCA)

The following SERVORD example shows how Selective Call Acceptance (SCA) is added to a line using the ADO command.

Selective Call Acceptance (SCA) (end)

SERVORD example for Selective Call Acceptance (SCA) in prompt mode

```
> SERVORD
SO:
> ADO
SONUMBER:   NOW 91  01  31  AM
>
DN_OR_LEN:
> 7224020
OPTION:
> SCA
BILLING_OPTION:  NOAMA
>
STATUS:
> INACT
DNS:
> 5146223421
VBCOUNT:
> 7
DNS:
> $
OPTION:
> $
COMMAND AS ENTERED:
ADO NOW 91 01 31 AM  7224020  ( SCA INACT NOAMA
( 5146223421 7 )  $ ) $
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
>Y
```

SERVORD example for Selective Call Acceptance (SCA) in no-prompt mode

```
>ADO $ 7224020 SCA $  INACT 6136211234 7 5146223421 10 $ $ Y
```

History of SCA description

SN06 (DMS)

Notes added to specify interaction of SCA with RES0001 SOC, for CR Q00735537.

This History section added.

Selective Call Forwarding (SCF)

Ordering codes

Functional group ordering code: RES00005

Functionality ordering code: not applicable

Release applicability

NA011 and up

Prerequisites

To operate, Selective Call Forwarding (SCF) has the following prerequisites:

- BAS Generic, BAS00003
- MDC Minimum, MDC00001
- MDC Standard, MDC00003
- RES Service Enablers, RES00006

Network configuration

Common Channel Signaling No. 7 (CCS7) connectivity is required for network (interoffice) configuration of Selective Call Forwarding. The following feature packages are required for CCS7 connectivity:

- Base ISUP, ISP 70001
- TEL CCS7 Base, TEL00008
- BAS Generic, BAS00003

Description

The Selective Call Forwarding (SCF) feature is an incoming call management feature that allows subscribers to define a special list of directory numbers (DN) (called an SCF list) and a destination number, using the Screening List Editing (SLE) feature.

Operation

Calls that terminate on a line with this feature are forwarded only if the DN of the originating station matches one of the numbers on the SCF list.

Assigning the SCF feature

The operating company assigns line option SCF to the subscriber through the service order system (SERVORD). When assigned, the feature is designated as subscription or usage sensitive pricing. SCF can be assigned to any line that can be assigned Custom Local Area Signaling Services (CLASS) features.

Selective Call Forwarding (SCF) (continued)

Building the SCF list

The SCF list can be altered by either the subscriber or the operating company.

Using the SCF list

Any call that terminates to a line that is capable of being assigned SCF initiates a check for the existence of active SCF on the line. This check is made regardless of the current state of the terminating line. If SCF is active, the SCF list is searched to determine if the incoming call's DN appears on the list. If a match is found, the incoming call is forwarded to the specified DN.

Universal access

The SCF feature can be provided to all RES subscribers in an office through universal access when feature package NTXQ70AA, Universal Access to CLASS Features, is present in the office. For universal access, the value UNIVER instead of SUBSCR should be datafilled in subfield ACCESS in table RESOFC.

Universal access only changes the method of access, not the operation of a CLASS feature. When universal access is available in an office, the subscriber can still have the feature assigned as a line option. Accessing a CLASS feature assigned to the subscriber as a line option or customer group option takes precedence over accessing the feature through universal access.

The Software Optional Control (SOC) allows the operating company to enable the functionality of common access for CLASS features through a Right to Use (RTU) access code. The subscriber is able to access the CLASS features without assigning each feature to the line.

The SOC commands enable or disable the universal access for CLASSfeatures. The RTU access code assignment to RES00011 and setting the state to ON enables the universal access for CLASS through SOC. The state is set to IDLE to disable the universal access for CLASS through SOC.

Note 1: Universal access to CLASS features is not applicable to Subscriber Services lines with IBN line class codes (LCC) through NA007.

Note 2: Universal access to CLASS features is not applicable to universal access to display features.

Note 3: Refer to "Universal Access to CLASS Features" for more information on universal access.

Note 4: If RES00011 is on, SCF does not give a text message indicating that the feature already exists on a DN.

Note 5: When SCF is automatically provisioned by the RES00011 SOC, it can still be provisioned on an individual line a second time.

Selective Call Forwarding (SCF) (continued)

Translations table flow

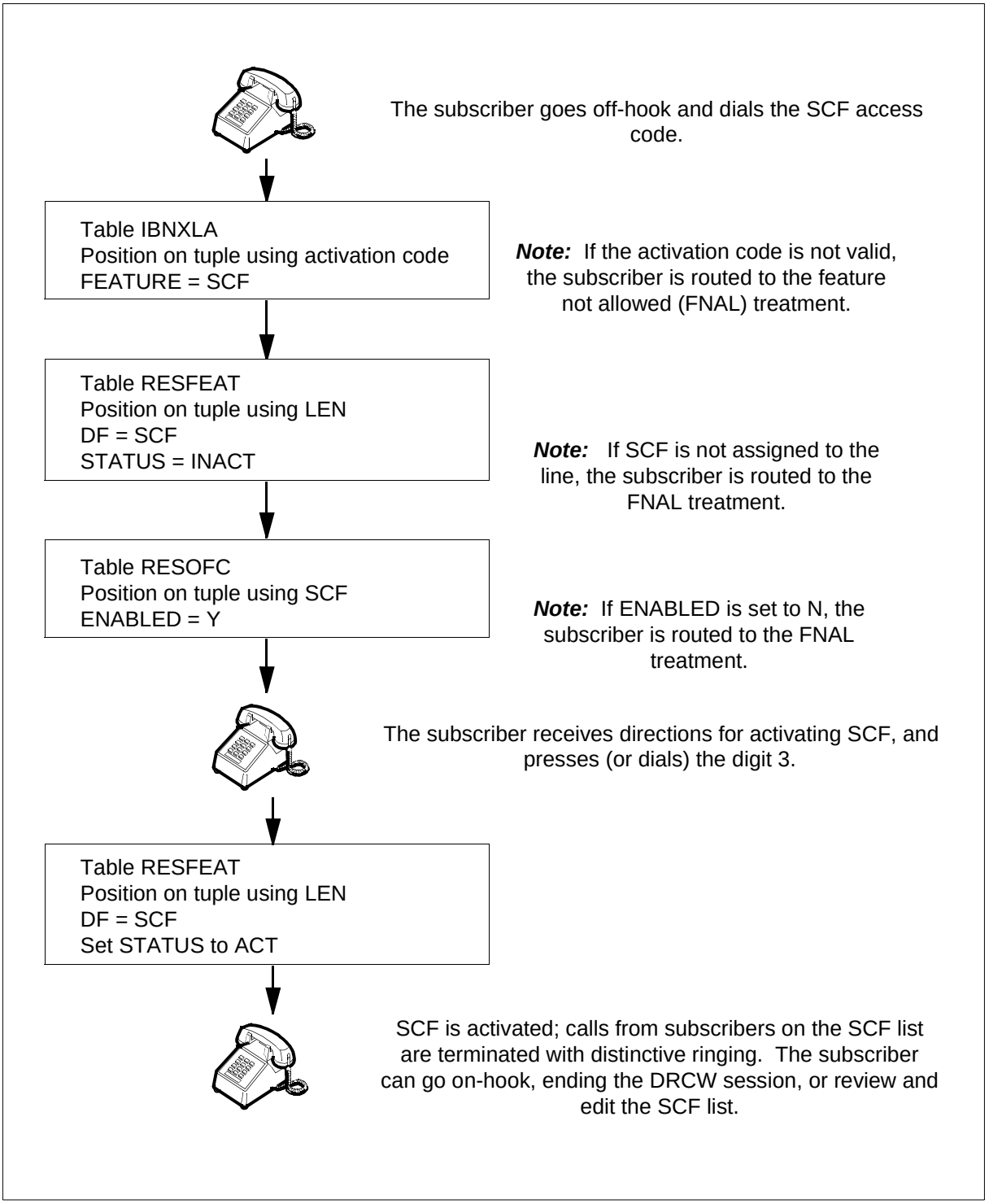
The Selective Call Forwarding (SCF) translations tables are described in the following list:

- Table IBNXLA provides the name of the feature associated with an access code.
- Table RESFEAT lists the features assigned to a line equipment number (LEN). For SCF, field STATUS is set to ACT when SCF is activated, and it is set to INACT when SCF is deactivated.
- Table RESOFC controls availability of individual CLASS features for an office. For this example, SCF is enabled.

The Selective Call Forwarding (SCF) translation process is shown in the flowchart that follows.

Selective Call Forwarding (SCF) (continued)

Table flow for Selective Call Forwarding (SCF)



Selective Call Forwarding (SCF) (continued)

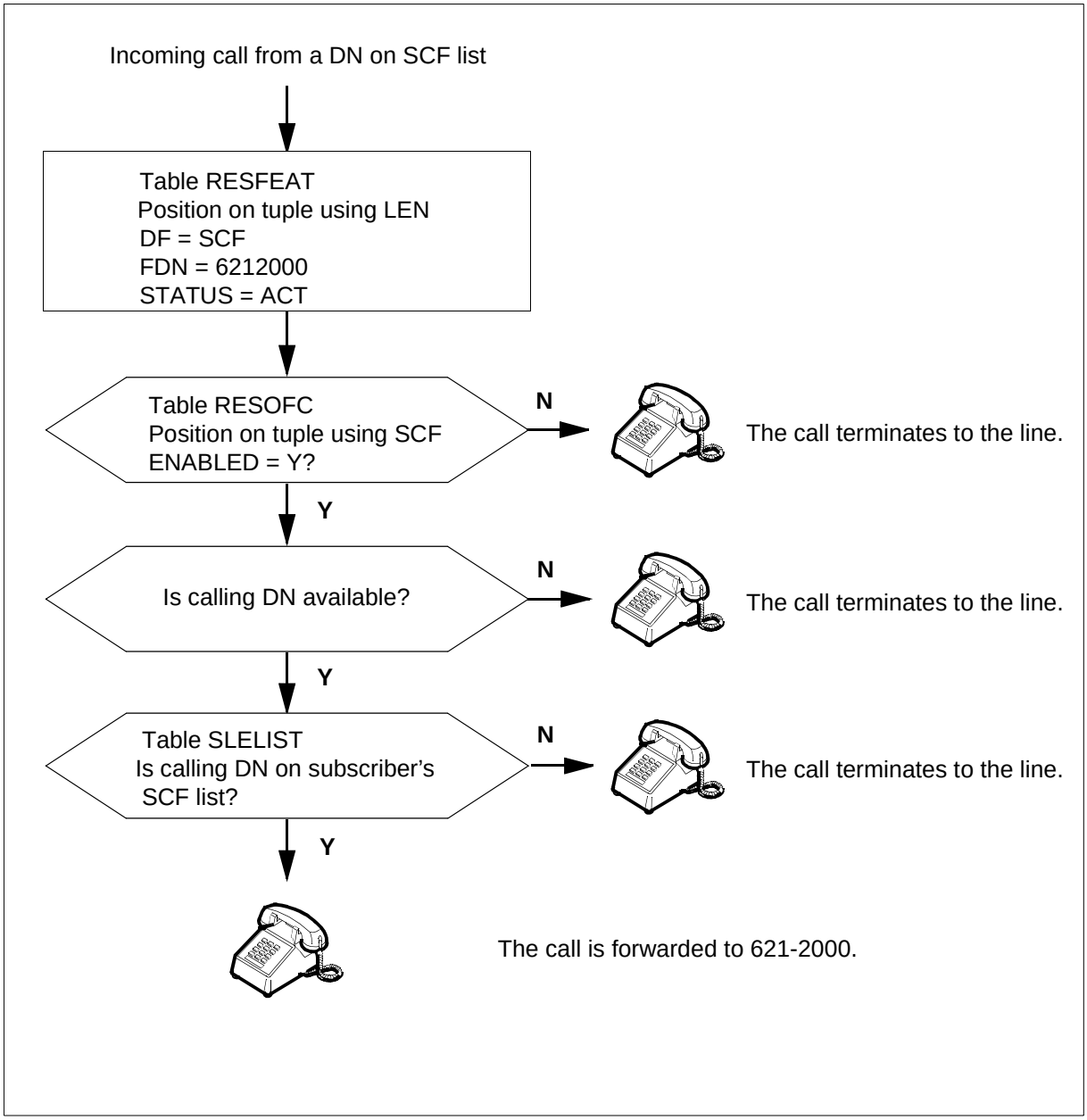
Datafill table	Example data
IBNXLA	RXCFN 63 FEAT N N N SCF
RESFEAT	HOST 00 02 0 05 0 SCF SCF NOAMA ACT 6212000
RESOFC	SCF Y SUBSCR SCF 12 $

The following figure shows the table flow for an incoming call to an SCF subscriber.

- Table RESFEAT lists the features assigned to a LEN. For SCF, field STATUS is set to ACT when SCF is activated, and it is set to INACT when SCF is deactivated.
- Table RESOFC controls the availability of individual CLASS features for an office. For this example, SCF is enabled.
- Table SLELIST contains the Screening List Editing (SLE) lists for an office. Each tuple in this table contains one entry for one SLE list. For the example that follows, table SLELIST contains a tuple defining an SCF entry.

Selective Call Forwarding (SCF) (continued)

Table flow for an incoming call to an SCF subscriber



Selective Call Forwarding (SCF) (continued)

The following table lists the datafill content used in the flowchart. The LEN of subscriber is HOST 00 02 0 05, the calling DN is 613 621 0011, and the forward to DN is 621 2000.

Datafill example for Selective Call Forwarding (SCF)

Datafill table	Example data
RESFEAT	HOST 00 02 0 05 0 SCF SCF NOAMA ACT 6212000
RESOFC	SCF Y SUBSCR SCF 12 $
SLELIST	HOST 00 02 0 05 0 SCF 1 N 6136210011 PUBLIC 7 N

Limitations and restrictions

The following limitations and restrictions apply to Selective Call Forwarding (SCF):

- A tuple in table CFX must exist for any line having one or more types of call forwarding. The upper limit on the number of lines having call forwarding is 30,000 on an NT40 processor and 65,520 on a DMS SuperNode.
- SCF cannot be assigned to a group of lines on a class of service basis.
- Semirestricted or fully-restricted numbers on a DMS are not supported. Therefore, when specifying a forwarding DN, an error announcement cannot result from programming of restricted numbers.
- SCF cannot be simultaneously assigned on an office-wide basis.
- A blocking indicator for usage-sensitive SCF is not supported.

Selective Call Forwarding (SCF) (continued)

- Usage sensitive pricing (USP) is available on a subscription basis only.
- SCF is incompatible with the following line options:
  - ATC
  - AVT
  - BNN
  - CCSA
  - CFMDN
  - CSDO
  - DIN
  - DTM
  - EHLD
  - FNT
  - HOT
  - LDTPSAP
  - ONI
  - PCWT
  - PLP
  - PREMTBL
  - PRL
  - TRMBOPT
  - 3WCPUB

Interactions

The following paragraphs describe the interactions between Selective Call Forwarding (SCF) and other functionalities.

Attendant console

Attendant consoles are not allowed to update the forward-to DN of an SCF base station. All other attendant interactions are the same as if the call was a CFU call.

Automatic Call Back/Automatic Recall

Automatic Call Back (ACB) and Automatic Recall (AR) are not affected by the SCF feature.

Selective Call Forwarding (SCF) (continued)

Busy Treatment

The SCF feature causes a call, where SCF applies, to be forwarded if the base station is busy.

Call Forwarding

SCF can be added to a valid line with any other type of call forwarding. The forward-to DN specified for SCF is unique. This means that any other type of call forwarding can have a different forwarding DN and not affect that specified for SCF. The same situation exists for the maximum allowable number of calls to be simultaneously active through the base station.

Call Park

Subscribers using Call Park (PRK) are allowed to park calls and pick them up at a remote station. The status of SCF at the remote station has no effect on the call park procedure.

Call Pickup

A line with SCF can pick up a call that is ringing within its pickup group. SCF checking is not done during the call pickup procedure.

Calling Line Identification

Calling Line Identification (CLI) logs are generated even if a call is forwarded by SCF.

CLASS display features

SCF takes precedence over CLASS display features. No calling information is delivered to the base station if SCF applies to the call.

Directory Number Hunt

SCF takes precedence over Directory Number Hunt (DNH) groups. SCF can be assigned to any member of a DNH group. The SLE facility can be entered by any member having SCF, but the member can change only his or her own SCF status and list.

Display sets

All terminals with display capability receive the same display information as would be presented with the CFU type of call forwarding.

Distinctive Ringing/Call Waiting

The SCF feature takes precedence over the Distinctive Ringing/Call Waiting (DRCW) feature. No call waiting tones are delivered if SCF applies to the call.

Selective Call Forwarding (SCF) (continued)

Make Set Busy

SCF takes precedence over Make Set Busy (MSB). Even if the terminating line has MSB active, if an SCF call is forwarded through, a ring splash is provided if required.

Multiline Hunt/Distributed Line Hunt

SCF takes precedence over Multiline Hunt (MLH) and Distributed Line Hunt (DLH). SCF can be assigned only to the pilot of these groups; the SLE facility can be entered only by the pilot.

Network Ring Again

Network Ring Again (NRAG) is not affected by the SCF feature.

Other Call Forwarding features

The SCF feature takes precedence over the other Call Forwarding features. For example, if a line has both SCF and Call Forwarding Universal (CFU) active, and the calling DN appears on the SCF line's list, the call is forwarded to the SCF forward-to DN. If SCF is active but does not apply to a particular call, the call is forwarded to the CFU forward-to DN.

When forwarding takes place and the call is routed to an SCF base station, the originating DN (not the forwarding base station DN) is compared to the screening list.

Ring Again

Ring Again (RAG) is not affected by the SCF feature.

Selective Call Acceptance (SCA)

Selective Call Acceptance screening takes place before SCF. A call from a number that is not on the SCA list is rejected. A call from a number on the list proceeds to SCF screening. Thus calls to numbers on both the SCA and SCF lists are forwarded.

Selective Call Rejection (SCRJ)

SCRJ takes precedence over SCF.

Suspended Service and Requested Suspension

Suspended service (SUS) and Requested Suspension (RSUS) take precedence over SCF.

Teen Service

When SCF exists on a line with Teen Service (SDN), the SCF list information is stored against the PDN. Only one SCF list exists for a group of SDNs and their PDN.

Selective Call Forwarding (SCF) (continued)

Three-Way Calling, Conference Calls, Call Transfer

Calls that are established to a third party (Three-Way Calling [3WC], Conference Calls, and Call Transfer [CXR]) have already passed possible SCF forwarding procedures. As a result, no party is denied access to joining already established calls.

Activation/deactivation by the end user

The subscriber initiates an SCF SLE session by dialing the SCF activation code, which is specified in table IBNXLA.

The Bellcore-recommended values for the SCF activation and deactivation codes are *63 and *83 respectively. During the SCF SLE session the subscriber can be any of the following:

- query feature status
- activate or deactivate the SCF feature
- review the SCF list
- add or delete entries to or from the SCF list

The operating company can specify an initial SCF list at the same time the option is assigned to the line, or can update the information later. This method is necessary for lines with denied origination (DOR), automatic line (AUL), RSUS, or any other options that deny dial tone since such lines cannot access the list through the first method.

The following set of procedures applies only to SCF. The complete set of general procedures is described in “Screening List Editing (SLE)" in this chapter.

Note: Procedures include information for both Digitone (DTMF) subscribers and rotary phone (DP) subscribers.

Selective Call Forwarding (SCF) (continued)

Activation/deactivation of Selective Call Forwarding (SCF) by the end user

At your telephone

1. Enter a valid feature access code.

   Response:

   a. Subscribers hear “Your SCF service is now <on, off>." Subscribers then hear one of the following four statements:

      - “There (is) are (one . .) entr(y)ies on your list, including (one . .) private entr(y)ies."
      - “There (is) are (one . .) entr(y)ies on your list."
      - “There (is) are (one . .) private entr(y)ies on your list."
      - “There are no entries on your list."

      Subscribers then hear “You may dial during the announcements for faster service. When you have finished, hang up."

   b. DTMF subscribers hear the following:

      - “To turn this service <on, off>, dial 3.
      - To add an entry, press the number sign key.
      - To remove one or more entries, press the star key.
      - To hear the entries on your list, dial 1.
      - To hear these instructions repeated, dial 0.
      - Please dial now."

   c. DP subscribers hear the following:

      - “To turn this service <on, off>, dial 3.
      - To add an entry, dial 1, 2.
      - To remove one or more entries, dial 1, 1.
      - To hear the entries on your list, dial 1.
      - To hear these instructions repeated, dial 0.
      - Please dial now."

2. Press 05.

   Note 1: This number is only the recommended activation number for this procedure. Use the activation number datafilled in table IBNXLA.

   Note 2: If the status is inactive and a remote DN has already been used, subscribers hear “Your calls will be forwarded to <remote DN>. If this

number is correct, dial 1. If this number is not correct, dial 0. Please dial now."

Note 3: If an invalid number has been entered, subscribers hear “The number you have dialed, <DN>, is not permitted."

Response:

a. If service is active, subscribers hear “Your SCF service is now off. Please continue, dial 0 for instructions, or hang up."

b. If the status is inactive and a remote DN is used, subscribers hear “Your calls will be forwarded to <remote DN>. If this number is correct, dial 1. If this number is not correct, dial 0. Please dial now."

c. If subscribers reject the remote DN or service is inactive and subscribers do not have a remote DN programmed, the following occurs:

- DTMF subscribers hear “Please dial the number to which you want your calls forwarded, then press the number sign key. Please dial now."
- DP subscribers hear “Please dial the number to which you want your calls forwarded. Please dial now."1.

3. Dial a number.

Note: If an invalid number has been entered, subscribers hear “The number you have dialed, <DN>, is not permitted."

Response:

Subscribers hear “Your calls will be forwarded to <remote DN>. If this number is correct, dial 1. If this number is not correct, dial 0. Please dial now."

4. Response:

a. If the screening list is not empty, the status is activated, and subscribers hear “Your SCF service is now on. Please continue, dial 0 for instructions, or hang up."

b. If the screening list is empty, subscribers hear “To turn on this service, you must add an entry to your list." (DTMF subscribers) “To add an

Selective Call Forwarding (SCF) (continued)

entry, please press the number sign key." (DP subscribers) “To add an entry, dial 1, 2."

Instructions for adding entries to a screening list are provided in “Adding entries to a screening list."

c. If the addition is successful, the status changes to active, and subscribers hear “Your SCF service is now on. Please continue, dial 0 for instructions, or hang up."

Selective Call Forwarding (SCF) (continued)

Programming a remote DN for SCF

At your telephone:

1. Enter a valid feature access code.

   Response:

   a. Subscribers hear “Your SCF service is now <on, off>." Subscribers then hear one of the following four statements:

      - “There (is) are (one . .) entr(y)ies on your list, including (one . .) private entr(y)ies."
      - “There (is) are (one . .) entr(y)ies on your list."
      - “There (is) are (one . .) private entr(y)ies on your list."
      - “There are no entries on your list."

      Subscribers then hear “You may dial during the announcements for faster service. When you have finished, hang up."

   b. DTMF subscribers hear the following:

      - “To turn this service <on, off>, dial 3.
      - To add an entry, press the number sign key.
      - To remove one or more entries, press the star key.
      - To hear the entries on your list, dial 1.
      - To hear these instructions repeated, dial 0.
      - Please dial now."

   c. DP subscribers hear the following:

      - “To turn this service <on, off>, dial 3.
      - To add an entry, dial 1, 2.
      - To remove one or more entries, dial 1, 1.
      - To hear the entries on your list, dial 1.
      - To hear these instructions repeated, dial 0.
      - Please dial now."

2. Dial the remote (forward-to) DN.

   Note: If an invalid number has been entered, subscribers hear “The number you have dialed, <DN>, is not permitted."

Selective Call Forwarding (SCF) (continued)

Response:

a. If a remote DN is used, subscribers hear “Your calls will be forwarded to <remote DN>. If this number is correct, dial 1. If this number is not correct, dial 0. Please dial now."

b. If subscribers reject the remote DN or do not have a remote DN programmed, the following occurs:

- DTMF subscribers hear “Please dial the number to which you want your calls forwarded, then press the number sign key. Please dial now."
- DP subscribers hear “Please dial the number to which you want your calls forwarded. Please dial now."

3. Response:

a. If the screening list is not empty, the status is activated, and subscribers hear “Your SCF service is now on. Please continue, dial 0 for instructions, or hang up."

b. If the screening list is empty, subscribers hear “To turn on this service, you must add an entry to your list." (DTMF subscribers) “To add an entry, please press the number sign key." (DP subscriber) “To add an entry, dial 1, 2."

Instructions for adding entries to a screening list are provided in “Adding entries to a screening list."

c. If the addition is successful, the status changes to active and subscribers hear “Your SCF service is now on. Please continue, dial 0 for instructions, or hang up."

Billing

Refer to “Billing" in “Screening List Editing (SLE)" for information on billing.

Station Message Detail Recording

Selective Call Forwarding (SCF) does not affect Station Message Detail Recording.

Datafilling office parameters

Selective Call Forwarding (SCF) does not affect office parameters.

Selective Call Forwarding (SCF) (continued)

Datafill sequence

The following table lists the tables that require datafill to implement Selective Call Forwarding (SCF). The tables are listed in the order in which they are to be datafilled.

Datafill tables required for Selective Call Forwarding (SCF)

Table	Purpose of table
RESOFC	Contains data for CLASS features and enables the SCF feature for the office.
IBNXLA	Contains the data for the digit translation of calls from an MDC station, attendant console, incoming trunk group, or incoming side of a two-way MDC trunk group.

Datafilling table RESOFC

Table RESOFC (Residential Line CLASS Office Data) contains data for CLASS features and enables the SCF feature for the office. When the SCF feature package is added to the load, an SCF tuple is added to table RESOFC.

The following table shows the datafill specific to Selective Call Forwarding (SCF) for table RESOFC. Only those fields that apply directly to Selective Call Forwarding (SCF) are shown. Refer to the data schema section of this document for a description of the other fields.

Datafilling table RESOFC

Field	Subfield or refinement	Entry	Explanation and action
KEY		See subfield	Key. This field consists of the subfield FEATNAME. This subfield is described below.
	FEATNAME	SCF	Feature name. This field is the key to the table. It specifies the name of the feature. Enter SCF.
ENABLED		Y or N	Enabled. This field specifies whether or not the feature is enabled in the office. Enter Y or N.
FEATDATA		See subfield	Feature data. This field consists of the subfields ACCESS, FEATNAME and MAXSIZE. These subfields are described below.

Selective Call Forwarding (SCF) (continued)

Datafilling table RESOFC

Field	Subfield or refinement	Entry	Explanation and action
	ACCESS	Character	Feature access. This subfield specifies how the feature is accessed. SUBSCR indicates subscription access only and UNIVER indicates universal access for all RES lines. Enter SUBSCR or UNIVER. Note: The value UNIVER is valid only when feature package NTXQ70AA, Universal Access to CLASS Features, is present in the office. Refer to “Universal Access to CLASS Features" for more information on universal access.
	FEATNAME	SCF	Feature name. This field specifies the feature name. Enter SCF.
	MAXSIZE	Numeric	Maximum size. This field specifies the maximum number of entries for any SCF list in the office. Enter a value from 1 to 8191. The suggested maximum number of entries is 31. Table RESOFC can be datafilled with a maximum number of entries greater than the DRAM resources available. However, when the subscriber tries to enter a value of 13 or 32, for example, the SLE session locks up, and the subscriber is unable to edit the list without operating company intervention.
FNALANN		See subfield	Feature not allowed announcement. This field consists of the subfields POTS_ACCESS and FNAL_CLLI. Refer to “Datafill procedure for table RESOFC" for “Feature not allowed announcement" for details on these subfields.

Datafill example for table RESOFC

The following example shows sample datafill for table RESOFC.

MAP display example for table RESOFC

```
KEY      ENABLED                                          FEATDATA
             FNALANN
_____________________________________________________________________
SCF      Y                                  SUBSCR       SCF 31
             $
```

Datafilling table IBNXLA

Table IBNXLA (IBN Translations) contains the data for the digit translation of calls from an MDC station, attendant console, incoming trunk group, or incoming side of a two-way MDC trunk group. SCF is added to table IBNXLA as a feature access code, to give subscribers access to the SCF function.

Table IBNXLA is datafilled to define the access codes used to activate and deactivate the SCF feature. This allows translations to recognize these access codes and trigger the appropriate software.

The recommended format of the access codes is 11XX for dial pulse (DP) lines and *XX for dual-tone multifrequency (DTMF) lines, where XX is a two-digit code.

The recommended activation and deactivation codes for SCF are as follows:

- 1163 and 1183 for DP lines
- *63 and *83 for DTMF lines

The following table shows the datafill specific to Selective Call Forwarding (SCF) for table IBNXLA. Only those fields that apply directly to Selective Call

Selective Call Forwarding (SCF) (continued)

Forwarding (SCF) are shown. Refer to the data schema section of this document for a description of the other fields.

Datafilling table IBNXLA

Field	Subfield or refinement	Entry	Explanation and action
KEY		Subfield	Key. This field consists of the subfields XLANAME and DGLIDX. These subfields are described below and must be entered in succession.
	XLANAME	Character	Translator name. This field specifies the 1- to 8-character name assigned to the translator. Enter the translator name.
	DGLIDX	Numeric	Digilator index. This field specifies the digit or digits assigned to the index. Enter the access code assigned to the digilator index.
RESULT		See subfield	Result. This field consists of the subfields TRSEL, ACR, SMDR, and FEATURE. These subfields are described below.
	TRSEL	FEAT	Translation selector. This field specifies the translation selector. Enter FEAT.
	ACR	N	Account code entry. This field specifies whether or not an account code entry is required for all calls to the special feature access code. Enter N to bypass this subfield.
	SMDR	N	Station message detail recording. This field specifies whether or not SMDR is required for calls originated by a customer group station or an attendant console. Enter N to bypass this subfield.
	FEATURE	SCF	Feature. This field specifies the feature to be added to the table. Enter SCF.

Datafill example for table IBNXLA

The following example shows sample datafill for table IBNXLA.

MAP display example for table IBNXLA

KEY						RESULT
RXCFN	63	FEAT	N	N	N	SCF

Translation verification tools

The following example shows the output from TRAVER when it is used to verify Selective Call Forwarding (SCF).

TRAVER output example for Selective Call Forwarding (SCF)

```
> TRAVER L 6211233 'B63' B
TABLE IBNLINES
   HOST 00 0 09 07 0 DP STN RES 6211233 0 $
TABLE LINEATTR
   0 1FR NONE NT FR01 0 613 P621 L613 N TSPS N 10 NIL
NILSFC          LATA1 0 NIL NIL 00 Y RESGRP 0 2         LCA
BILL OFF – BILLING DONE ON BASIS OF CALLTYPE
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TUPLE NOT FOUND
TABLE NCOS
RESGRP 2 0 0 RNCOS2 ( XLAS RXCMN2 NXLA RES ) $
TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA,
VACTRMT, AND DIGCOL
RESGRP NXLA RESXLA RXCFN 0 RES
TABLE DIGCOL
   RES SPECIFIED: RES DIGIT COLLECTION
NCOS FEAT XLA NAME IS NIL.  GO TO NEXT XLA NAME.
TABLE IBNXLA: XLANAME RXCFN
   RXCFN 63 FEAT N N N SCF

++ TRAVER: SUCCESSFUL CALL TRACE ++
```

SERVORD

SCF has been added as a value to the OPTION prompt to allow the assigning, updating, and removal of the SCF feature to or from lines through the SERVORD system.

SCF does not require the assignment of any other options. This option can be assigned to lines with a line class code (LCC) of RES or IBN, or to lines with

Selective Call Forwarding (SCF) (continued)

an LCC of 1FR or 1MR when office parameter RES_SO_SIMPLIFICATION in table OFVAR has field RES_AS_POTS set to Y and field ENHANCED_POTS_OPTIONS set to Y or N. Note that SCF is incompatible with DTM.

Note: For information on how the SCF feature can be assigned to lines with an LCC of PSET, refer to "Datafilling CLASS on MDC."

SCF is added to the range of possible responses to the OPTION prompt. When SCF is specified, the additional prompts are BILLING_OPTION, STATUS, and DNS. BILLING_OPTION is an existing prompt. There is no change to its range of values or behavior.

SERVORD limitations and restrictions

Selective Call Forwarding (SCF) has no SERVORD limitations and restrictions.

SERVORD prompts

The following table shows the SERVORD prompts used to assign Selective Call Forwarding (SCF) to a line.

SERVORD prompts for Selective Call Forwarding (SCF)

Prompt	Valid input	Explanation
OPTION	SCF	Assigns, updates, and removes the SCF feature.
BILLING_OPTION	AMA, NOAMA	Specifies AMA or NOAMA billing. Enter AMA to assign subscription usage sensitive pricing (SUSP) billing (the default is NOAMA.) This prompt appears if SUSP is enabled in table AMAOPTS. Refer to Chapter 5, "Datafilling the network base," for more information on table AMAOPTS.
STATUS	INACT, ACT	Assigns initial status of features (INACT = inactive, ACT = active)
DNS	10-digit DN (up to 4 DNs and VBCOUNT pairs) or $	Specifies the DN that is to be added to the SCF list
VBCOUNT	0 to 10	Specifies the number of digits voiced back during DRCW SLE list review. Setting this value to 0 causes the entry to be designated as private; the entry is not voiced back during list review.
FDN	Valid forward-to DN	Specifies the forward-to (remote) DN where calls are forwarded to.

Selective Call Forwarding (SCF) (continued)

SERVORD prompts for Selective Call Forwarding (SCF)

Prompt	Valid input	Explanation
SCRNCL	Valid screening class	Sets the screening class used for call forwarding. This prompt appears when OPTION is SCF and the LCC is not IBN. Field SCRNCL is not displayed when the LCC is IBN.
NUMCALLS	1 to 1024	Sets the maximum number of simultaneous SCF calls allowed through the base station.
RINGREM	NORING, RING, NA	Specifies whether the ring splash is on or off. If RINGREM is set to RING, a ring splash is delivered to the SCF base station when a call is forwarded through. If RINGREM is set to NORING, no ring splash is delivered. The value NA indicates that the customer group ring splash value is used (option CFXFEAT in table CUSTSTN). This option is provided when the OPTION prompt is set to SCF. The value of field RINGREM, if not set to NA, overrides that specified at the customer group level (option CFXFEAT in table CUSTSTN).

SERVORD example for adding Selective Call Forwarding (SCF)

The following SERVORD example shows how Selective Call Forwarding (SCF) is added to a line using the ADO command.

Selective Call Forwarding (SCF) (end)

SERVORD example for Selective Call Forwarding (SCF) in prompt mode

```
> SERVORD
SO:
> ADO
SONUMBER:   NOW 91  01  31  AM
>
DN_OR_LEN:
> 7224020
OPTION:
> SCF
BILLING OPTION:
> NOAMA
STATUS:
> INACT
DNS:
>6136211234
VBCOUNT:
> 7
DNS:
> $
FDN:
> $
SCRNCL:
> NSCR
NUMCALLS:
> 50
RINGREM:
> NA
OPTION:
> $
COMMAND AS ENTERED:
ADO NOW 91  01 31 AM  7224020  ( SCF NOAMA INACT
( 6136211234 7 ) $  $ NSCR 50 NA) $
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.
> Y
```

SERVORD example for Selective Call Forwarding (SCF) in no-prompt mode

```
>ADO $ 7224020 SCF NOAMA INACT 6136211234 7  $ $ NSCR 50 NA $
```

History of SCF description

SN06 (DMS)

Notes added to specify interaction of SCF with RES0001 SOC, for CR Q00735537. This History section added.

Selective Call Rejection (SCRJ)

Ordering codes

Functional group ordering code: RES00005

Functionality ordering code: not applicable

Release applicability

NA011 and up

Prerequisites

To operate, Selective Call Rejection (SCRJ) has the following prerequisites:

- BAS Generic, BAS00003
- MDC Standard, MDC00003
- MDC Minimum, MDC00001
- RES Service Enablers, RES00006

Network configuration

Common Channel Signaling No. 7 (CCS7) connectivity is required for network (interoffice) configuration of Selective Call Rejection. The following feature packages are required for CCS7 connectivity:

- Base ISUP, ISP70001
- TEL CCS7 Base, TEL00008
- BAS Generic, BAS00003

Description

The Selective Call Rejection (SCRJ) feature allows a subscriber to selectively reject incoming calls from a limited set of previously identified directory numbers (DN). The DNs to be accepted are built into a list through the Screening List Editing (SLE) feature. Rejected calls receive the SCRJ treatment.

Operation

SelectiveCallRejection(SCRJ) affects the following operations.

Assigning the SCRJ feature

The operating company assigns line SCRJ to the subscriber through the service order system (SERVORD). When assigned, the feature is designated as subscription or usage sensitive pricing. SCRJ can be assigned to any line that can be assigned Custom Local Area Signaling Services (CLASS) features.

Selective Call Rejection (SCRJ) (continued)

Building the SCRJ list

The SCRJ list can be altered by either the subscriber or the operating company.

Using the SCRJ list

Any call that terminates to a line that is capable of being assigned SCRJ initiates a check for the existence of active SCRJ on the line. This check is made regardless of the current state of the terminating line. If SCRJ is active, the SCRJ list is searched to determine if the incoming call's DN appears on the list. If a match is found, the incoming call receives the SCRJ treatment (announcement or tone).

The following points apply to SCRJ list functioning:

- Answer supervision is provided when a call is routed to treatment. The long-distance caller is charged for the call. (This feature is datafilled in table RESOFC.)
- The subscriber with SCRJ is not informed that calls are being rejected.
- When a call is rejected because of SCRJ, the incoming call memory slot of the called party is not updated.
- When the incoming call to be screened is a forwarded call, the originating DN is screened, rather than the forwarding station's DN.
- If any failure occurs during screening, screening is not applied. (Screening failure can occur due to system failure, lack of resources, or inability to determine the calling DN.)

Universal access

The SCRJ feature can be provided to all RES subscribers in an office through universal access when feature package NTXQ70AA, Universal Access to CLASS Features, is present in the office. For universal access, the value UNIVER instead of SUBSCR should be datafilled in subfield ACCESS in table RESOFC.

Universal access only changes the method of access, not the operation of a CLASS feature. When universal access is available in an office, the subscriber can still have the feature assigned as a line option. Accessing a CLASS feature assigned to the subscriber as a line option or customer group option takes precedence over accessing the feature through universal access.

The Software Optional Control (SOC) allows the operating company to enable the functionality of universal access for CLASS features through a Right to Use (RTU) access code. The subscriber is able to access the CLASS features without assigning the individual features to the line.

Selective Call Rejection (SCRJ) (continued)

The SOC commands enable or disable the universal access for CLASSfeatures. The RTU access code assignment to RES00011 and setting the state to ON enables the universal access for CLASS through SOC. The state is set to IDLE to disable the universal access for CLASS through SOC.

Note 1: Universal access to CLASS features is not applicable to Subscriber Services lines with IBN line class codes (LCC) through NA007.

Note 2: Universal access to CLASS features is not applicable to universal access to display features.

Note 3: Refer to “Universal Access to CLASS Features" for more information on universal access.

Note 4: If RES00011 is on, SCRJ does not give a text message indicating that the feature already exists on a DN.

Note 5: When SCRJ is automatically provisioned by the RES00011 SOC, it can still be provisioned on an individual line a second time.

Translations table flow

The Selective Call Rejection (SCRJ) translations tables are described in the following list:

- Table IBNXLA provides the name of the feature associated with an access code.
- Table RESFEAT lists the features assigned to a line equipment number (LEN). For SCRJ, field STATUS is set to ACT when SCRJ is activated, and it is set to INACT when SCRJ is deactivated.
- Table RESOFC controls the availability of individual CLASS features for an office. For this example, SCRJ is enabled.

The Selective Call Rejection (SCRJ) translation process is shown in the flowchart that follows. The flowcharts show the table flow for SCRJ activation and an incoming call to an SCRJ subscriber.

Selective Call Rejection (SCRJ) (continued)

Table flow for Selective Call Rejection (SCRJ)

The subscriber goes off-hook and dials the SCRJ access code.

Table IBNXLA
Position on tuple using activation code
FEATURE = SCRJ

Note: If the activation code is not valid, the subscriber is routed to the feature not allowed (FNAL) treatment.

Table RESFEAT
Position on tuple using LEN
DF = SCRJ
STATUS = INACT

Note: If SCRJ is not assigned to the line, the subscriber is routed to the FNAL treatment.

Table RESOFC
Position on tuple using SCRJ
ENABLED = Y

Note: If ENABLED is set to N, the subscriber is routed to the FNAL treatment.

The subscriber receives directions for activating SCRJ, and presses (or dials) the digit 3.

Table RESFEAT
Position on tuple using LEN
DF = SCRJ
Set STATUS to ACT

SCRJ is activated; calls from subscribers on the SCRJ list are terminated with distinctive ringing. The subscriber can go on-hook, ending the SCRJ session, or review and edit the SCRJ list.

Selective Call Rejection (SCRJ) (continued)

The following table lists the datafill content used in the flowchart. In the example the SCRJ access code is 63, and the LEN of subscriber is HOST 00 02 0 05.

Datafill example for Selective Call Rejection (SCRJ)

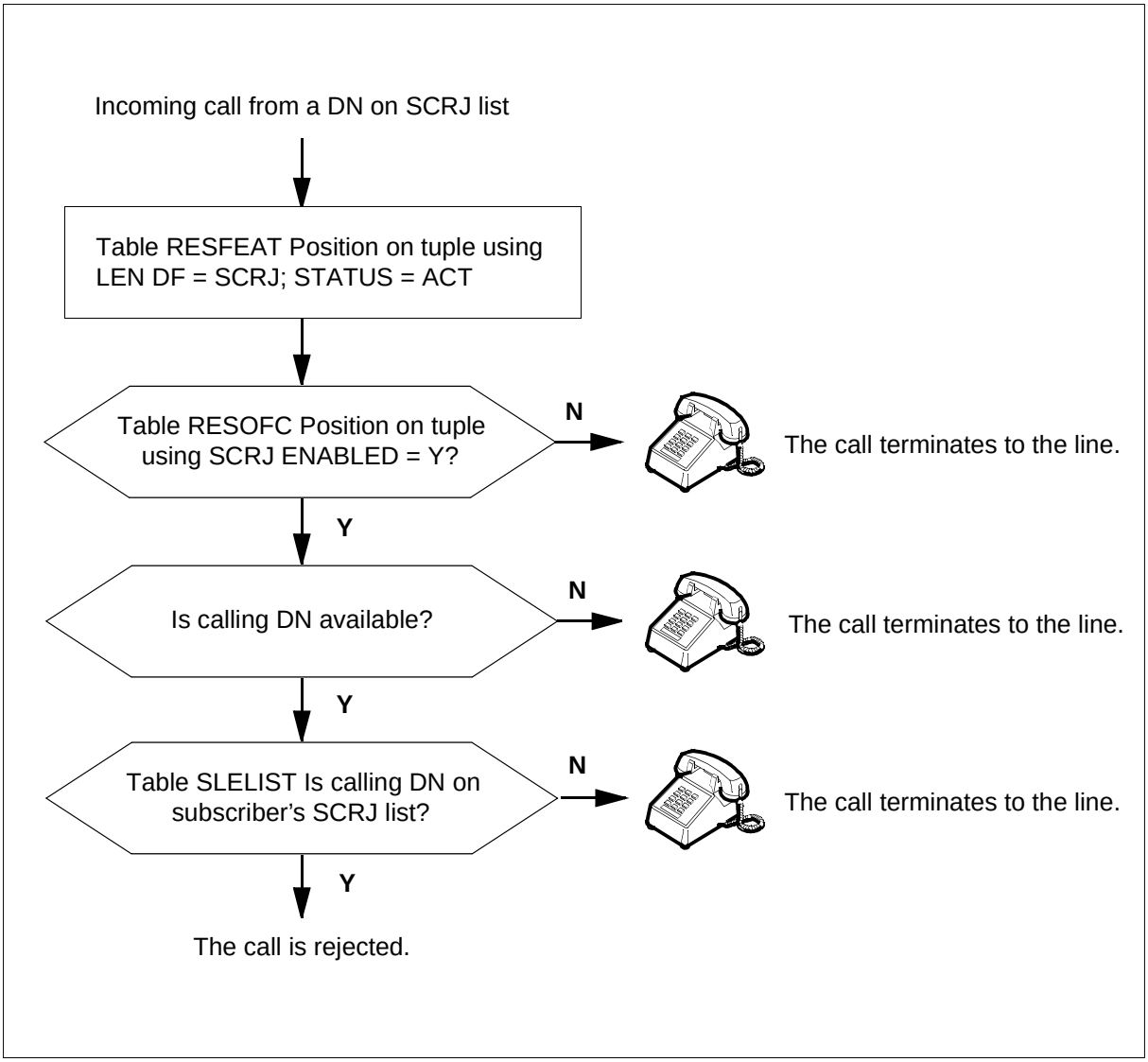
Datafill table	Example data
IBNXLA	RXCFN 63 FEAT N N N SCRJ
RESFEAT	HOST 00 02 0 05 0 SCRJ SCRJ NOAMA ACT 6212000
RESOFC	SCRJ Y SUBSCR SCRJ 12 $

The following figure shows the table flow for an incoming call to an SCRJ subscriber.

- •Table RESFEAT lists the features assigned to a LEN. For SCRJ, field STATUS is set to ACT when SCRJ is activated, and it is set to INACT when SCRJ is deactivated.
- •Table RESOFC controls the availability of individual CLASS features for an office. For this example, SCRJ is enabled.
- •Table SLELIST contains the Screening List Editing (SLE) lists for an office. Each tuple in this table contains one entry for one SLE list. For the example that follows, table SLELIST contains a tuple defining an SCRJ entry.

Selective Call Rejection (SCRJ) (continued)

Table flow for Selective Call Rejection (SCRJ)



The following table lists the datafill content used in the flowchart. In the example, the LEN of subscriber is HOST 00 02 0 05, and the calling DN is 613 621 0011.

Datafill example for an incoming call to a Selective Call Rejection (SCRJ)

Datafill table	Example data
RESFEAT	HOST 00 02 0 05 0 SCRJ SCRJ NOAMA ACT

Selective Call Rejection (SCRJ) (continued)

Datafill example for an incoming call to a Selective Call Rejection (SCRJ)

Datafill table	Example data
RESOFC	SCRJ Y SUBSCR SCRJ 12 $
SLELIST	HOST 00 02 0 05 0 SCRJ 1 N 6136210011 PUBLIC 7 N

Limitations and restrictions

SCRJ is incompatible with the following line options:

- AVT
- BNN
- CCSA
- CFMDN
- DIN
- DTM
- EHLD
- LDTPSAP
- PCWT
- PREMTBL
- PRL
- 3WCPUB

Interactions

The following paragraphs describe the interactions between Selective Call Rejection (SCRJ) and other functionalities.

Automatic Call Back

Subscribers with SCRJ can activate Automatic Call Back (ACB) to DNs that appear on their SCRJ lists. If a subscriber attempts to activate ACB to a DN that has SCRJ and contains that calling DN in the SCRJ list, the calling line receives SCRJ treatment.

Automatic Recall

Normally, SCRJ subscribers cannot activate Automatic Recall (AR) to a DN in their SCRJ lists, because incoming calls from such numbers are rejected, and the incoming memory slot for the terminating line is not updated. An exception occurs when the SCRJ subscriber adds the incoming DN to the list after the call has arrived but before any subsequent call is received. Under

Selective Call Rejection (SCRJ) (continued)

these circumstances, the AR activation is successful. If a subscriber attempts to activate AR to a DN that has SCRJ and contains that calling DN in the SCRJ list, the calling line receives SCRJ treatment.

Call Forwarding

SCRJ takes precedence over all other forms of Call Forwarding (CFX, CFW, CFDA, CFBL). When an incoming call has been forwarded, it is the originating DN that is screened, not the DN of the forwarding base station. Treatment is provided according to the characteristics of the remote DN. The one exception is CFDA. When a call is forwarded from a line with CFDA and the remote DN is located in the same switch as the base station, the remote DN rejects the call. The calling party, however, continues to ring the base station. Rejection treatment is not provided. If the remote DN is located in a different switch, the call does not revert to the base station, and SCRJ treatment is provided.

Call Waiting

An SCRJ subscriber does not receive Call Waiting (CWT) tones for calls that are rejected by the SCRJ feature. CWT cannot be accessed during an SCRJ SLE session.

Calling Line Identification

Calling Line Identification (CLI) logs are generated for calls that are rejected. SCRJ treatment logs can optionally be generated.

Calling Number Delivery

When a SCRJ subscriber has Calling Number Delivery (CND), no calling information is delivered to that subscriber when a call is rejected.

Denied Termination

SCRJ is incompatible with Denied Termination (DTM).

Directory Number Hunt

When a line in a Directory Number Hunt (DNH) group has SCRJ, any call that goes directly to that line is screened, and SCRJ treatment is provided, if appropriate. Any call that hunts to that line is also screened; however, if screening determines that the line should reject the call, the call continues to hunt instead of receiving SCRJ treatment. This method gives consistent results to incoming calls.

Distinctive Ringing/Call Waiting

SCRJ takes precedence over Distinctive Ringing/Call Waiting (DRCW)

Selective Call Rejection (SCRJ) (continued)

SCRJ takes precedence over checking for most other terminating features which may exist on a destination station, regardless of the state of the line.

Distributed Line Hunt

SCRJ interacts with Distributed Line Hunt the same way in does with MLH.

Free Number Terminating

When answer supervision has been enabled (in table RESOFC) for rejected calls, rejected calls to lines with Free Number Terminating (FNT) also receive answer supervision.

Multiline Hunt

SCRJ can be assigned to pilots and members of Multiline Hunt (MLH) groups. When SCRJ is assigned to the pilot, it takes precedence over hunting. When SCRJ is assigned to a member and an incoming call to that member is rejected as a result of hunting, that incoming call continues to hunt, instead of receiving SCRJ treatment.

Originating features that deny dial tone

SCRJ can coexist with Denied Origination (DOR), Automatic Line (AUL), and Requested Suspension (RSUS). However, the SCRJ lists for these subscribers must be built (in table SLELIST) by the operating company, since these subscribers are able to access SCRJ SLE.

Selective Call Acceptance

Selective Call Acceptance screening takes place before SCRJ. A call from a number that is not on the SCA list is rejected. A call from a number on the list proceeds to SCRJ screening. Thus calls to numbers on both the SCA and SCRJ lists are rejected.

Selective Call Forwarding

SCRJ takes precedence over Selective Call Forwarding (SCF).

Terminating features

SCRJ takes precedence over other terminating features, such as RSUS, Suspended Service (SUS), and Make Set Busy (MSB).

Teen Service

With Teen Service (SND) screening is applied to all calls to a line with Teen Service, regardless of which DN was dialed.

Selective Call Rejection (SCRJ) (continued)

Three-Way Calling

SCRJ is not accessed during Three-Way Calling (3WC). A subscriber can conference together two lines, even though one line may appear in the other line's SCRJ list.

Activation/deactivation by the end user

The subscriber initiates an SCRJ SLE session by dialing the SCRJ activation code, which is specified in table IBNXLA.

The Bellcore-recommended values for the SCRJ activation and deactivation codes are *60 and *80 respectively. During the session the subscriber can do any of the following:

- query feature status
- activate or deactivate the SCRJ feature
- review the SCRJ list
- add or delete entries to or from the SCRJ list

The operating company can specify an initial SCRJ list at the same time the option is assigned to the line, or can update the information later. This method is necessary for lines with DOR, AUL, RSUS or any other options that deny dial tone since such lines cannot access the list through the first method.

Activation/deactivation of Selective Call Rejection (SCRJ) by the end user

The following procedure applies only to SCRJ. The complete set of procedures is described in "Screening List Editing (SLE)" in this chapter. The procedure contains information for Digitone (DTMF) subscribers and rotary phone (DP) subscribers.

At your telephone:

1. Enter valid feature access code.

   Response:

When entering the SCRJ feature, if there is a DN from the last calling party the following occurs:

- DTMF subscribers hear “To reject the last calling party, press the number sign key, dial 0, 1, and then press the number sign key again."
- DP subscribers hear “To reject the last calling party, dial 1, 2 and then dial 0, 1."
- End of procedure.

Billing

Refer to “Billing" in “Screening List Editing (SLE)" for information on billing.

Station Message Detail Recording

Selective Call Rejection (SCRJ) does not affect Station Message Detail Recording.

Datafilling office parameters

Selective Call Rejection (SCRJ) does not affect office parameters.

Datafill sequence

The following table lists the tables that require datafill to implement Selective Call Rejection (SCRJ). The tables are listed in the order in which they are to be datafilled.

Datafill Selective Call Rejection (SCRJ)

Table	Purpose of table
RESOFC	Residential line class office data. Enables the SCRJ feature for the office.
IBNXLA	MDC translation table. Contains the data for the digit translations of calls from an MDC station, attendant console, incoming trunk group, or incoming side of a two-way MDC trunk group.

Selective Call Rejection (SCRJ) (continued)

Datafill Selective Call Rejection (SCRJ)

Table	Purpose of table
TMTCNTL. TREAT	Treatments subtable. Contains the subtable TREAT. The SCRJ feature is added to subtable TREAT to enable feature treatment to be mapped to the calling line and supply an office route to send the call to a T120 treatment.
TMTMAP	Treatment to cause map table. Provides a mapping from DMS treatments into call failure messages supported by certain CCS7 protocols.

Datafilling table RESOFC

Table RESOFC (Residential Line CLASS Office Data) contains data on CLASS features and enables the SCRJ feature for the office. When the SCRJ feature package is added to the load, an SCRJ tuple is added to table RESOFC.

Three fields must be completed:

- ENABLED—if set to Y, SCRJ feature is activated in an office.
- MAXSIZE—sets the maximum number of calls in an SCRJ list.
- ANSWRSUP— if set to Y, answer supervision is returned to the originating switch. The caller is played an announcement and, if the call is billable, the caller is charged for the call. If tone is used instead of announcement, the call is not billable.

The following table shows the datafill specific to Selective Call Rejection (SCRJ) for table RESOFC. Only those fields that apply directly to Selective Call Rejection (SCRJ) are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table RESOFC

Field	Subfield or refinement	Entry	Explanation and action
KEY		see subfield	Key. This field consists of the subfield FEATNAME. This subfield is described below.
	FEATNAME	SCRJ	Feature name. This subfield is the key to the table. It specifies the name of the feature. Enter SCRJ.
ENABLED		Y or N	Enabled. This field specifies whether or not the feature is enabled in the office. Enter Y or N.

Selective Call Rejection (SCRJ) (continued)

Datafilling table RESOFC

Field	Subfield or refinement	Entry	Explanation and action
FEATDATA		see subfields	Feature data. This field consists of the subfields ACCESS, FEATNAME, MAXSIZE, and ANSWRSUP. These subfields are described below.
	ACCESS	SUBSCR, UNIVER	Feature access. This subfield specifies how the feature is accessed. SUBSCR indicates subscription access only and UNIVER indicates universal access for all RES lines. Enter SUBSCR or UNIVER. ***Note:*** The value UNIVER is valid only when feature package NTXQ70AA, Universal Access to CLASS Features, is present in the office. Refer to “Universal Access to CLASS Features" for more information on universal access.
	FEATNAME	SCRJ	Feature name. This subfield specifies the feature name. Enter SCRJ.
	MAXSIZE	1 to 8191	Maximum size. This subfield specifies the maximum number of entries for any SCRJ list in the office. Enter a value from 1 to 8191. The suggested maximum number of entries is 12 with standard DRAM resources. If additional DRAM resources are available, the suggested maximum is 31. Table RESOFC can be datafilled with a maximum number of entries greater than the DRAM resources available. However, when the subscriber tries to enter a value of 13 or 32, for example, the SLE session locks up, and the subscriber is unable to edit the list without operating company intervention.

Selective Call Rejection (SCRJ) (continued)

Datafilling table RESOFC

Field	Subfield or refinement	Entry	Explanation and action
	ANSWRSUP	Y or N	Answer supervision. This subfield specifies whether or not answer supervision is returned to the original switch (that is, whether the call was answered) when a rejected call goes to treatment. Enter Y or N.
FNALANN		see subfields	Feature not allowed announcement. This field consists of the subfields POTS_ACCESS and FNAL_CLLI. Refer to the data schema section of this document for details on these subfields.

Datafill example for table RESOFC

The following example shows sample datafill for table RESOFC.

MAP display example for table RESOFC

```
KEY      ENABLED                                    FEATDATA
             FNALANN
_____________________________________________________________
SCRJ         Y                      SUBSCR      SCRJ 31   N
                 $
```

Datafilling table IBNXLA

Table IBNXLA (MDC Translations) contains the data for the digit translations of calls from an MDC station, attendant console, incoming trunk group, or incoming side of a two-way MDC trunk group. SCRJ is added to table IBNXLA as a feature access code, to give subscribers access to the SCRJ function.

To define the access codes used to activate and deactivate the SCRJ feature, datafill table IBNXLA. This allows translations to recognize these access codes and trigger the appropriate software.

The recommended format of the access codes is 11XX for dial pulse (DP) lines and *XX for dual-tone multifrequency (DTMF) lines, where XX is a two-digit code.

Selective Call Rejection (SCRJ) (continued)

The recommended activation and deactivation codes for SCRJ are as follows:

- 1160 and 1180 for DP lines
- *60 and *80 for DTMF lines

The following table shows the datafill specific to Selective Call Rejection (SCRJ) for table IBNXLA. Only those fields that apply directly to Selective Call Rejection (SCRJ) are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table IBNXLA

Field	Subfield or refinement	Entry	Explanation and action
KEY		see subfields	Key. This field consists of the subfields XLANAME and DGLIDX. These subfields are described below and must be entered in succession.
	XLANAME	alphanumeric	Translator name. This subfield specifies the 1- to 8-character name assigned to the translator. Enter the translator name.
	DGLIDX	numeric	Digilator index. This subfield specifies the digit or digits assigned to the index. Enter the access code assigned to the digilator index.
RESULT		see subfields	Result. This field consists of the subfields TRSEL, ACR, SMDR, and FEATURE. These subfields are described below.
	TRSEL	FEAT	Translation selector. This subfield specifies the translation selector. Enter FEAT.
	ACR	Y or N	Account code entry. This subfield specifies whether or not an account code entry is required for all calls to the special feature access code. Enter N to bypass this subfield.
	SMDR	Y or N	Station message detail recording. This subfield specifies whether or not SMDR is required for calls originated by a customer group station or an attendant console . Enter N to bypass this subfield.
	FEATURE	SCRJ	Feature. This subfield specifies the feature to be added. Enter SCRJ.

Selective Call Rejection (SCRJ) (continued)

Datafill example for table IBNXLA

The following example shows sample datafill for table IBNXLA.

MAP display example for table IBNXLA

```
        KEY                                       RESULT
________________________________________________________
RXCFN   60              FEAT    N     N     N     SCRJ
```

Datafilling table TMTCNTL.TREAT

Table TMTCNTL (Treatment Control) contains the subtable TREAT. The SCRJ feature is added to subtable TREAT to enable feature treatment to be mapped to the calling line and supply an office route to send the call to a T120 treatment.

SCRJ must be added to two fields in the extended treatment range: LNT (line treatment) and OFFTREAT (office treatment).

The following table shows the datafill specific to Selective Call Rejection (SCRJ) for table TMTCNTL.TREAT. Only those fields that apply directly to Selective Call Rejection (SCRJ) are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table TMTCNTL.TREAT

Field	Subfield or refinement	Entry	Explanation and action
TREATMT		SCRJ	Treatment. This field specifies the feature treatment. Enter SCRJ.
LOG		Y or N	Log. This field specifies whether or not a log report is to be generated each time treatment is activated. Enter Y or N.
FSTRTE		see subfields	First route. This field specifies the first route. It consists of the subfields FSTRTSEL, TABID, and KEY. These subfields are described below.
	FSTRTSEL	T	First route selector. This subfield specifies the first route selector. Enter T (for table). ***Note:*** It is recommended to send SCRJ to a T120 using the T selector instead of using the S selector and routing directly to a CLLI.

Selective Call Rejection (SCRJ) (continued)

Datafilling table TMTCNTL.TREAT

Field	Subfield or refinement	Entry	Explanation and action
	TABID	OFRT, OFR2, OFR3, or OFR4	Table name. This subfield specifies the office route table name. Enter OFRT, OFR2, OFR3, or OFR4.
	KEY	1-1023	Key. This subfield specifies the index into the office route table to define the route list for the treatment. Enter a value 1-1023.

Datafill example for table TMTCNTL.TREAT

The following example shows sample datafill for table TMTCNTL.TREAT.

MAP display example for table TMTCNTL.TREAT

```
TREATMT          LOG                    FSTRTE
_____________________________________________________
SCRJ             N                      T        OFRT 5
```

Datafilling table TMTMAP

Table TMTMAP (Treatment Map) provides a mapping from DMS treatments into call failure messages supported by certain CCS7 protocols. Calls over ISDN user part (ISUP) trunks that terminate unsuccessfully are dropped. To avoid this problem with the SCRJ feature, table TMTMAP is used to route the call status back to the originating office.

The following table shows the datafill specific to Selective Call Rejection (SCRJ) for table TMTMAP. Only those fields that apply directly to Selective

Selective Call Rejection (SCRJ) (continued)

Call Rejection (SCRJ) are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table TMTMAP

Field	Subfield or refinement	Entry	Explanation and action
TMTMPKEY		see subfields	Treatment map key. This field specifies the treatment map key. This field consists of the subfields PROTOCOL,TMT, and BC_CT. These subfields are described below and must be entered in succession.
	PROTOCOL	Q764	Protocol. This subfield specifies the PROTOCOL. Enter Q764.
	TMT	SCRJ	Treatment code. This subfield specifies the treatment code defined in field TREATMT in table TMTCNTL.TREAT. Enter SCRJ.
	BC_CT	ALLBC	Bc_ct. This subfield specifies the BC_CT_TYPE. Enter ALLBC.
TMTMPVAR		see subfield	Treatment map variable. This field specifies the treatment map. This field consists of the subfield FORMAT. This subfield is described below.
	FORMAT	ISUP	Format. This subfield specifies the FORMAT. Enter ISUP.
	ISUPPROC	see subfield	ISUP procedure. This subfield consists of the subfield TMTPROC. This subfield is described below.
	TMTPROC	LOCAL or NOLOCAL or ISLOCAL	Treatment procedure. This field specifies the treatment to apply locally. Enter LOCAL and skip the CAUSE and LOG subfields; enter NOLOCAL when the treatment is to be mapped to a cause and included in a release message without exception; or enter ISLOCAL when the treatment is to be applied locally, mapped to a cause, and included in a release message.

Datafilling table TMTMAP

Field	Subfield or refinement	Entry	Explanation and action
	CAUSE	see listed subfields	ISUP cause. This subfield specifies the cause subfields. If TMTPROC is set to ISLOCAL, enter one of the CAUSE subfields listed in the data schema section of this document for this table.
	LOG	Y or N	Log. This subfield specifies whether or not the LOG is to be generated. Generate ISUP Log if TMTPROC is set to NOLOCAL, ISLOCAL, or INTLOCAL. Enter Y to indicate that a log is to be generated when a release with cause is sent. Otherwise, enter N.

Datafill example for table TMTMAP

The following example shows sample datafill for table TMTMAP.

MAP display example for table TMTMAP

```
                TMTMPKEY                              TMTMPVAR
________________________________________________________________________
Q764     SCRJ     ALLBC                        ISUP   LOCAL
```

Translation verification tools

The following example shows the output from TRAVER when it is used to verify Selective Call Rejection (SCRJ).

Selective Call Rejection (SCRJ) (continued)

TRAVER output example for Selective Call Rejection (SCRJ)

```
>TRAVER L 6211233 'B60' B
TABLE IBNLINES
   HOST 00 0 09 07 0 DP STN RES 6211233 0 $
TABLE LINEATTR
   0 1FR NONE NT FR01 0 613 P621 L613 N TSPS N 10 NIL    NILSFC
   LATA1 0 NIL NIL 00 Y RESGRP 0 2
   LCABILL OFF – BILLING DONE ON BASIS OF CALLTYPE
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TUPLE NOT FOUND
TABLE NCOS
RESGRP 2 0 0 RNCOS2 ( XLAS RXCMN2 NXLA RES ) $
TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA,    VACTRMT, AND
DIGCOL
RESGRP NXLA RESXLA RXCFN 0 RES
TABLE DIGCOL
   RES SPECIFIED: RES DIGIT COLLECTION
NCOS FEAT XLA NAME IS NIL.  GO TO NEXT XLA NAME.
TABLE IBNXLA: XLANAME RXCFN
   RXCFN 60 FEAT N N N SCRJ

++ TRAVER: SUCCESSFUL CALL TRACE ++
```

SERVORD

SCRJ has been added as a value to the OPTION prompt to allow the assigning, updating, and removal of the SCRJ feature to or from lines through the SERVORD system.

SCRJ does not require the assignment of any other options. This option can be assigned to lines with a line class code (LCC) of RES or MDC, or to lines with an LCC of 1FR or 1MR when office parameter RES_SO_SIMPLIFICATION in table OFCENG has field RES_AS_POTS set to Y. Note that SCRJ is incompatible with DTM.

> ***Note:*** For information on how the SCRJ feature can be assigned to lines with an LCC of PSET, refer to “Datafilling CLASS on MDC."

When SCRJ is specified, the additional prompts are BILLING_OPTION, STATUS, and DNS. BILLING_OPTION is an existing prompt. There is no change to its range of values or behavior.

Selective Call Rejection (SCRJ) (continued)

SERVORD limitations and restrictions

Selective Call Rejection (SCRJ) has no SERVORD limitations and restrictions.

SERVORD prompts

The following table shows the SERVORD prompts used to assign Selective Call Rejection (SCRJ) to a line.

SERVORD prompts for Selective Call Rejection (SCRJ)

Prompt	Valid input	Explanation
OPTION	SCA	Assigns, updates, and removes the SCRJ feature
BILLING_ OPTION	AMA, NOAMA	Specifies AMA or NOAMA billing. Enter AMA to assign subscription usage sensitive pricing (SUSP) billing (the default is NOAMA.) This prompt appears if SUSP is enabled in table AMAOPTS. Refer to "Datafilling the network base," for more information on table AMAOPTS.
STATUS	INACT, ACT	Assigns initial status of features (INACT = inactive, ACT = active).
DNS	10-digit DN (up to 4 DNs and VBCOUNT pairs) or $	Specifies the DN that is to be added to the SCRJ list.
VBCOUNT	0 to 10	Specifies the number of digits voiced back during SCRJ SLE list review. Setting this value to 0 designates the entry as private; the entry is not voiced back during list review.

SERVORD example for adding Selective Call Rejection (SCRJ)

The following SERVORD example shows how the Selective Call Rejection (SCRJ) feature is added to a line using the ADO command.

Selective Call Rejection (SCRJ) (end)

SERVORD example for Selective Call Rejection (SCRJ) in prompt mode

```
> SERVORD
SO:
>ADO
SONUMBER:   NOW 91  01  31  AM
>
DN_OR_LEN:
> 7224020
OPTION:
>SCRJ
BILLING_OPTION:   NOAMA
>
STATUS:
> INACT
DNS:
> 6136211234
VBCOUNT:
> 7
DNS:
> 5146223421
VBCOUNT:
> 10
DNS:
> $
OPTION:
> $
COMMAND AS ENTERED:
ADO NOW 91 01 31 AM  7224020 ( SCRJ INACT ( 6136211234 7
5146223421 10 )  $ ) $
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
> Y
```

SERVORD example for Selective Call Rejection (SCRJ) in no-prompt mode

```
>ADO $ 7224020 SCRJ  $ INACT 6136211234 7 5146223421 10 $ $ Y
```

History of SCRJ description

SN06 (DMS)

Notes added to specify interaction of SCRJ with RES0001 SOC, for CR Q00735537. This History section added.

User Specified COT Announcements

Ordering codes

Functional group ordering code: RES00005

Functionality ordering code: RES00031

Release applicability

NA008 and up

Prerequisites

To operate, User Specified COT Announcements has the following prerequisites:

- BAS Generic, BAS00003
- MDC Minimum, MDC00001
- MDC Standard, MDC00003
- RES Service Enablers, RES00006
- Customer Tracing, RES00030

Network configuration

Common Channel Signaling No. 7 (CCS7) connectivity is required for network (interoffice) configuration of User Specified COT Announcements. The following feature packages are required for CCS7 connectivity:

- Base ISUP, ISP70001
- TEL CCS7 Base, TEL00008

Description

The User Specified COT Announcements feature provides Customer Originated Trace (COT) announcements in a secondary language.

COT is a Custom Local Area Signaling Services (CLASS) feature that allows the subscriber to record the phone number of a caller for use by the operating company. Depending on the datafill, subscribers hear confirmation tones or announcements when using COT.

Operation

The operating company specifies a primary language as the default and equips the system with messages in primary and secondary languages. Subscribers then can place an order to receive COT announcements in either language. Subscribers hear COT messages in the language they choose.

User Specified COT Announcements (continued)

Datafill for secondary language announcements

Refer to “Datafill for standard announcements" in “Customer Originated Trace (COT)" for examples of datafill for the COT feature in Tables DRAMS, CLLI, ANNS, ANNMEMS, and DRAMTRK.

Note: Before datafilling announcements for User Specified COT Announcements, read “Appendix Datafilling announcements" for Subscriber Services general announcement information.

Translations table flow

Refer to “Verification tools" in “Customer Originated Trace (COT)" for information on translations data flow.

Limitations and restrictions

If the operating company does not record announcements in the secondary language, the feature provides hard-coded tones.

Interactions

User Specified COT Announcements has no functionality interactions.

Activation/deactivation by the end user

User Specified COT Announcements requires no activation or deactivation by the end user; however, the subscriber selects a language for COT announcements when the operating company establishes the COT feature.

Billing

User Specified COT Announcements does not affect billing.

Station Message Detail Recording

User Specified COT Announcements does not affect Station Message Detail Recording.

Datafilling office parameters

User Specified COT Announcements does not affect office parameters. However, field SECONDARY in the office parameter OFFICE_ LANGUAGE in Table OFCENG must be datafilled with valid language information.

User Specified COT Announcements (continued)

Datafill sequence

The following table lists the tables that require datafill to implement User Specified COT Announcements. The tables are listed in the order in which they are to be datafilled.

Datafill tables required for User Specified COT Announcements

Table	Purpose of table
RESOFC	Residential Line CLASS Office Data. Table RESOFC contains data on CLASS features and enables the User Specified COT Announcements feature in the office.

Datafilling table RESOFC

The User Specified COT Announcements feature adds subfields in Table RESOFC that provide secondary language announcements for each existing COT announcement. No other table is changed by this feature.

The following table shows the datafill specific to User Specified COT Announcements for table RESOFC. Only those fields that apply directly to User Specified COT Announcements are shown. Refer to the data schema section of this document for a description of the other fields.

Datafilling table RESOFC (Sheet 1 of 4)

Field	Subfield or refinement	Entry	Explanation and action
KEY		see subfield	Key. This field consists of the subfield FEATNAME. This subfield is described below.
	FEATNAME	COT	Feature Name. This subfield is the key to the table. It specifies the name of the feature. Enter COT.
ENABLED		Y or N	Enabled. This field specifies whether or not the feature is enabled in the office. Enter Y or N. ***Note:*** The default value for each CLASS feature included in the load is N (disabled).
FEATDATA		see subfields	Feature Data. This field consists of subfields ACCESS, FEATNAME, ACTLEVEL and ANNCS. These subfields are described below.

User Specified COT Announcements (continued)

Datafilling table RESOFC (Sheet 2 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	ACCESS	SUBSCR or UNIVER	Feature Access. This subfield specifies how the feature is accessed. SUBSCR indicates subscription access only and UNIVER indicates universal access for all RES lines. Enter SUBSCR or UNIVER. ***Note:*** The value UNIVER is valid only when feature package NTXQ70AA, Universal Access to CLASS Features, is present in the office. Refer to “Universal Access to CLASS Features" for more information on universal access.
	FEATNAME	COT	Feature Name. This subfield specifies the feature for the tuple. Enter COT.
	ACTLEVEL	ONELEVEL or TWOLEVEL	Activation Level. This subfield specifies the activation method for the COT feature. Enter ONELEVEL or TWOLEVEL (the default is ONELEVEL). ONELEVEL activation means the subscriber accesses the feature by dialing the feature access code. TWOLEVEL activation means the subscriber is prompted to dial 1 to proceed with the COT feature, or otherwise to hang up.

User Specified COT Announcements (continued)

Datafilling table RESOFC (Sheet 3 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	ANNCS	COTCONF <CLLI> or COTFAIL <CLLI> or $	Announcements. This subfield allows the operating company to select • no COT announcements • one COT announcement: for the case of a complete call trace or partial trace. • two COT announcements: for both the complete and partial traces. Enter COTCONF <CLLI> or COTFAIL <CLLI> or $. ***Note:*** The announcement clli must be datafilled in Tables CLLI, ANNS, ANNMEMS, and DRAMTRK first before it can be datafilled her
	SECOND_ LANGUAGE	Y or N	Second Language. This subfield specifies if the secondary language is available for the COT feature. Enter Y if the second language is available. Otherwise, enter N.
	SANNCS	SCOTFAIL	SANNCS. This subfield appears when SECOND_LANGUAGE is set to Y. Enter SCOTCONF to provide an announcement that indicates a successful trace. Enter SCOTFAIL to provide an announcement that indicates an unsuccessful trace.
	SCOTPRMT1	initial prompt for the secondary language announceme nt	SCOTPRMT1. This subfield appears when ACTLEVEL in Table RESOFC is set to TWOLEVEL and when SECOND_LANGUAGE is specified. For two-level activation of COT, datafill this field with the initial prompt for the secondary language announcement.

User Specified COT Announcements (continued)

Datafilling table RESOFC (Sheet 4 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	SCOTPRMTN	initial prompt for the secondary language announcements	SCOTPRMTN. This field appears when ACTLEVEL in Table RESOFC is set to TWOLEVEL and when SECOND_LANGUAGE is specified. For two-level activation of COT, datafill this field with the initial prompt for the following secondary language announcements.
FNALANN		see subfields	Feature Not Allowed Announcement. This field consists of the subfields POTS_ACCESS and FNAL_CLLI. Refer to “Datafill procedure for Table RESOFC" for “Feature not allowed announcement" for details on these subfields.

Datafill example for table RESOFC

The following example shows sample datafill for table RESOFC.

MAP display example for table RESOFC

```
KEY ENABLED                        FEATDATA
          FNALANN
_____________________________________________________________
COT  Y          SUBSCR  COT ONELEVEL (COTCONF COTSC)
(COTFAIL COTFL) $ Y (SCOTCONF SCOTSC) (SCOTFAIL SCOTFL) $

         $
```

Translation verification tools

User Specified COT Announcements does not use translation verification tools.

SERVORD

The service order system (SERVORD) can be used to specify a secondary language (SL) as an option on a subscriber line. The system defaults to the primary language designated by the operating company; therefore subscribers must specifically request COT messages in the SL. Option SL can be assigned to a line while assigning a new DN to a line using the NEW command, or by

adding an option to an existing line using the ADO command. The same option can be deleted by using the DEO command.

SERVORD limitations and restrictions

User Specified COT Announcements does not have SERVORD limitations or restrictions.

SERVORD prompts

The following table shows the SERVORD prompts used to add or delete User Specified COT Announcements option SL.

SERVORD prompts for User Specified COT Announcements

Prompt	Valid input	Explanation
OPTION	SL	Specifies that the line receives COT messages in the secondary language.

SERVORD example for adding User Specified COT Announcements

The following SERVORD example shows how option SL of User Specified COT Announcements is added to a line using the ADO command.

SERVORD example for User Specified COT Announcements in prompt mode

```
> SERVORD
SO:
> ADO
SONUMBER:  NOW 90 12 AM
>
DN_OR_LEN:
> 7211000
OPTION:
> SL
OPTION:
> $
COMMAND AS ENTERED:
ADO NOW 90 12 AM 7211000 (SL) $
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
> Y
```

SERVORD example for User Specified COT Announcements in no-prompt mode

```
> ADO $ 7211000 SL $ Y
```

User Specified COT Announcements (end)

The following SERVORD example shows how option SL of User Specified COT Announcements is deleted from a line using the DEO command.

SERVORD example for User Specified COT Announcements in prompt mode

```
> SERVORD
SO:
> DEO
SONUMBER:  NOW 90 12 AM
>
DN_OR_LEN:
> 7211000
OPTION:
> SL
OPTION:
> $
COMMAND AS ENTERED:
DEO NOW 90 12 AM 7211000 (SL) $
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
> Y
```

SERVORD example for User Specified COT Announcements in no-prompt mode

```
> DEO $  7211000 SL $
```

2 Datafilling RES Service Enablers

The following chapter describes the RES Service Enablers, RES00006, functionality.

CLASS Line Office Data

Ordering codes

Functional group ordering code: RES00006

Functionality ordering code: not applicable

Release applicability

NA013 and up

Prerequisites

To operate, CLASS Line Office Data has the following prerequisites:

- BAS Generic, BAS00003
- MDC Minimum, MDC00001
- MDC Standard, MDC00003

Network configuration

CCS7 connectivity (required for network configuration of CLASS) requires the following feature packages:

- Base ISUP, ISP70001
- TEL CCS7 Base, TEL00008
- BAS Generic, BAS00003

CLASS Line Office Data (continued)

Description

Three sets of datafill are required to implement the CLASS Line Office Data feature package for the Custom Local Area Signaling Services (CLASS) base. These parameters and tables are as follows:

- Office parameters that reserve data store for call data received over Common Channel Signaling No. 7 (CCS7) signaling links:
  - NO_OF_HIS_CONTROL_BLKS
  - NO_OF_HIS_DATA_BLKS

  Note: These parameters replace the NUM_ISUP_EXTN_BLOCKS parameter, which should now be set to zero.

- Tables that set up the system for the implementation of CLASS features:
  - AMAOPTS
  - OPTCTL
  - RESOFC
- Tables that generate directory number (DN) attributes and, where appropriate, a substitute calling DN:
  - DNATTRS
  - DNGRPS
  - NETNAMES

In addition, the feature not allowed (FNAL) announcement can be used with CLASS features, routing users to the FNAL treatment when they enter an invalid access code. See “Feature not allowed announcement" in this feature package description for more information on datafilling the FNAL treatment.

CLASS features

CLASS features include all the following features:

- screening list editing features
- calling party identification features
- additional features

CLASS Line Office Data (continued)

- CLASS on MDC features

  Note: CLASS on MDC features include CLASS features that operate in the MDC and MVP environments, for subscribers with 500/2500 telephone sets and Meridian business sets (MBS).

- enhanced network features

Refer to the following tables for a list of features available in Subscriber Services CLASS. These features require the network base software in order to function properly.

Screening list editing features

Acronym	Feature name
SLE	Screening List Editing
DRCW	Distinctive Ringing/Call Waiting
SCA	Selective Call Acceptance
SCF	Selective Call Forwarding
SCRJ	Selective Call Rejection
N/A	SERVORD Enhancement for SLE

Calling party identification features (Sheet 1 of 2)

Acronym	Feature name
BCLID	Bulk Calling Line Identification
BCLID USP	BCLID USP Billing & DN Changes in Message Format
CNAMD	Calling Name Delivery
CNNB	Calling Number Delivery Blocking for POTS
CNB	Calling Number Blocking
CNDB	Calling Number Delivery Blocking
CND	Calling Number Delivery
CNDB for POTS	Calling Number Delivery Blocking for POTS
CNAB & CNND	Calling Name Display Enhancements

CLASS Line Office Data (continued)

Calling party identification features (Sheet 2 of 2)

Acronym	Feature name
CMWI	CLASS Message Waiting Indicator
ACRJ	Anonymous Caller Rejection
DDN	Dialable Number Delivery
LDI	Long Distance Indicator
N/A	CLASS: TCAP for Calling Name Delivery (CNAMD)
N/A	Calling Name TR Compliancy - Residential

Additional features

Acronym	Feature name
ACB & AR	Automatic Call Back and Automatic Recall
ARDDN	DDN AR Voiceback
N/A	Universal Access to CLASS Features
GTT	Ten Digit Global Title Translations (GTT) for CLASS Features
COT	Customer Originated Trace
N/A	User Specified COT Announcements
N/A	Network Message Waiting Indicator
N/A	CLASS NPA Split

CLASS on MDC features (Sheet 1 of 2)

Acronym	Feature name
N/A	CLASS on MVP Base
N/A	SLE on MVP
N/A	CLASS on MDC Base
N/A	SLE on MDC
N/A	CLASS on MBS/MADN Base

CLASS Line Office Data (continued)

CLASS on MDC features (Sheet 2 of 2)

Acronym	Feature name
N/A	SLE on MBS/MADN
CNAMD on MADN	Calling Name Delivery on MADN

Enhanced network features

Acronym	Feature name
N/A	Downloadable Softkeys
VSLE	Visual Screen List Editing
CALLOG	Call Logging
SCWID	Spontaneous Call Waiting Identification
DSCWID	SCWID with Disposition
N/A	Domestic 6X69LB for ADSI

Translations table flow

Refer to “Verification tools" in this feature package description for information on translations data flow.

Limitations and restrictions

The CLASS Line Office Data feature package has no feature limitations and restrictions.

Interactions

The CLASS Line Office Data feature package has no special feature interactions.

Activation/deactivation by the end user

CLASS Line Office Data requires no activation or deactivation by the end user.

Billing

Refer to “Assigning SUSP billing" for complete information on subscription usage sensitive pricing (SUSP).

Station Message Detail Recording

The CLASS Line Office Data feature package does not affect Station Message Detail Recording.

Datafilling office parameters

The following table shows the office parameters used by CLASS Line Office Data. These office parameters reserve the data store for call control and call history information received over CCS7 signaling links. For more information on office parameters, refer to *Office Parameters Reference Manual*.

Office parameters used by CLASS Line Office Data

Table name	Parameter name	Explanation and action
OFCENG	NO_OF_HIS_CONTROL_BLKS	This parameter reserves data store (0 to 32,000 (50)) to be allocated as temporary call control blocks (1 block required for each call) to record information essential to call completion.
	NO_OF_HIS_DATA_BLKS	This parameter reserves data store (0 to 32,000 (50)) to be allocated as temporary call data blocks (a minimum of 2 blocks required for a call where calling line identification data is transmitted) to record information not essential to call completion.
Note 1: () denotes the default value ***Note 2:*** Adding the above parameters eliminates the need for the NUM_ISUP_EXTN_BLKS parameter. NUM_ISUP_EXTN_BLKS should be set to zero.		

NO_OF_HIS_CONTROL_BLKS office parameter

This parameter is required for a central office (CO) that transmits and receives calls using separate signaling and voice paths. When a call is established, a history control block is required to store the call control information passed over the signaling path. The history control block stores information that is essential to call completion. This parameter reserves data store from which history control blocks are allocated. NO_OF_HIS_CONTROL_BLKS requires a cold restart to activate.

The value of this parameter is based on the number of

- CCS7 Integrated Services Digital Network (ISDN) user part (ISUP) trunks (the voice paths for CCS7 calls)
- stored program controlled (SPC) network trunks (the voice paths for calls from analog switches equipped with pseudo-CCS7 links that pass on calling line identification information)

CLASS Line Office Data (continued)

- primary rate access (PRA) trunks (the voice paths for switch-to-switch ISDN calls)
- PRA trunks (the voice paths for ISDN calls between private branch exchanges [PBX] and digital offices)

NO_OF_HIS_DATA_BLKS office parameter

This parameter is required for a CO that transmits and receives calls using separate signaling and voice paths. When a call is established, at least two history data blocks are required to store the call information passed over the signaling path. The history data blocks only store information that is not essential to call completion, such as calling line identification. This parameter reserves data store from which history data blocks are allocated. NO_OF_HIS_DATA_BLKS requires a cold restart to activate.

The value of this parameter is based on the number of

- CCS7 ISUP trunks (the voice paths for CCS7 calls)
- SPC network trunks (the voice paths for calls from analog switches equipped with pseudo-CCS7 links that pass on calling line identification information)
- PRA trunks (the voice paths for switch-to-switch ISDN calls)
- PRA trunks (the voice paths for ISDN calls between PBXs and digital offices)

Datafill sequence

The following table lists the tables that require datafill to implement CLASS Line Office Data. The tables are listed in the order in which they are to be datafilled.

Datafill tables required for CLASS Line Office Data (Sheet 1 of 2)

Table	Purpose of table
RESOFC	Residential Line CLASS Office Data. This table contains data pertaining to custom local area signaling services (CLASS) features.
AMAOPTS	AMA Options. This table is used to control activation and scheduling of the recording options for automatic message accounting (AMA).
NETNAMES	Internal Logical Network Names. This table defines internal logical network names.
Note: This table is datafilled through SERVORD; therefore, no datafill procedure or example is provided. Refer to “SERVORD" for an example of using SERVORD to datafill this table.	

CLASS Line Office Data (continued)

Datafill tables required for CLASS Line Office Data (Sheet 2 of 2)

Table	Purpose of table
DNGRPS	Directory Number Groups. This table contains Directory Number (DN) attributes for blocks of DNs normally assigned to a particular customer group.
DNATTRS	Directory Number Attributes. This table contains DN attributes for specific DNs.
OPTCTL	Option Control. This table is used by Northern Telecom to price features related to custom local area signaling service (CLASS) on the basis of 100-line groupings.
Note: This table is datafilled through SERVORD; therefore, no datafill procedure or example is provided. Refer to “SERVORD" for an example of using SERVORD to datafill this table.	

Datafilling table RESOFC

Table RESOFC (Residential Line CLASS Office Data) contains data on CLASS features and enables and controls the operation of CLASS features.

Note: The contents of each tuple in table RESOFC are tailored for a single CLASS feature.

The control information in a table RESOFC tuple can include the following:

- feature access method (subscription or universal)
- activation level (one-level or two-level)
- announcement common language location identifier (CLLI)
- maximum wait time

The following table shows the datafill specific to CLASS Line Office Data for table RESOFC. Only those fields that apply directly to CLASS Line Office

CLASS Line Office Data (continued)

Data are shown. Refer to the *Customer Data Schema Reference Manual* for a description of the other fields.

Datafilling table RESOFC (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
KEY		see subfields	Key. This field consists of the subfield FEATNAME. This subfield is described below.
	FEATNAME	see subfields	Feature name. This subfield is the key to the table. It specifies the name of the CLASS feature. Enter the feature option code, such as CND.
ENABLED		Y or N	Enabled. This field specifies whether or not the feature is enabled in the office. Enter Y for enabled or N for disabled. ***Note:*** The default value for each CLASS feature included in the load is N (disabled).
FEATDATA		see subfields	Feature data. This field consists of the subfields FEATNAME and various subfields that are associated with each feature. For CND, the subfields are ACCESS, FEATNAME and CND_MSGTYPE. These subfields are described below.
	ACCESS	SUBSCR or UNIVER	Feature access. This subfield specifies how the feature is accessed. SUBSCR indicates subscription access only and UNIVER indicates universal access for all RES lines. Enter SUBSCR or UNIVER. ***Note:*** The value UNIVER is valid only when feature package NTXQ70AA, Universal Access to CLASS Features, is present in the office. Refer to “Universal Access to CLASS Features" for more information on universal access.
	FEATNAME	see subfields	Feature name. This subfield specifies the feature name. (Enter the same feature option code from field FEATNAME above.) Enter CND.

CLASS Line Office Data (continued)

Datafilling table RESOFC (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	CND_ MSGTYPE	<CR> or MULTIPLE	CND message type. This subfield specifies whether or not the CND subscriber set served by the office should receive calling information in a single or multiple data format message. SINGLE is the default value. Enter <CR> or MULTIPLE.
FNALANN		see subfields	Feature not allowed announcement. This field consists of the subfields POTS_ACCESS and FNAL_CLLI. Refer to “Datafill procedure for table RESOFC" for “Feature not allowed announcement" for details on these subfields.

Datafill example for table RESOFC

The following example shows sample datafill for table RESOFC.

MAP display example for table RESOFC

```
KEY      ENABLED           FEATDATA
  FNALANN
 ------------------------------------------------------------
 CND      Y          SUBSCR  CND   SINGLE
                $
```

Datafilling table AMAOPTS

Table AMAOPTS (Automatic Message Accounting Options) contains information that controls the scheduling of various automatic message accounting (AMA) processes. Table AMAOPTS is used to schedule the reporting of usage sensitive pricing (USP) data for the Bulk Calling Line Identification (BCLID) group.

If the CLASS features are sold to each subscriber using AMA SUSP, option SUSP in table AMAOPTS should be enabled.

CLASS Line Office Data (continued)

When SUSP is enabled, the following occurs:

- An AMA billing record is generated each time a CLASS feature is successfully activated from a line where the option code for the feature is qualified with the AMA billing code.
- An AMA/NOAMA parameter is prompted for each time a CLASS option is added to a line using service orders.

When SUSP is disabled, the following occurs:

- No AMA billing records are generated, even if features are activated for lines where the option code is qualified with the AMA billing code.
- No AMA/NOAMA prompts appear in service order inputs.

To enable SUSP for all features in the office, option SUSP in table AMAOPTS is datafilled as ON.

An explanation of the fields to be datafilled in table AMAOPTS and an example follow. Only those fields that directly apply to the CLASS Line Office Data feature package are shown. Refer to the data schema section of this document for a description of the other fields.

The following table shows the datafill specific to CLASS Line Office Data for table AMAOPTS. Only those fields that apply directly to CLASS Line Office Data are shown. Refer to the *Customer Data Schema Reference Manual* for a description of the other fields.

Datafilling table AMAOPTS

Field	Subfield or refinement	Entry	Explanation and action
OPTION		SUSP	Option. This field specifies the option. Enter SUSP.
SCHEDULE		ON	Schedule. This field specifies the activation. The prompt is AMASEL plus the current SUSP status. Enter ON.

Datafill example for table AMAOPTS

The following example shows sample datafill for table AMAOPTS.

MAP display example for table AMAOPTS

```
OPTION          SCHEDULE
_____________________________________________________________

SUSP            ON
```

Note: Although the field name is SCHEDULE, the prompt is AMASEL.

Datafilling table NETNAMES

Table NETNAMES (Network Names) contains information that applies to DNs on a logical network basis.

Two procedures are involved with datafilling table NETNAMES: datafilling for DN suppression and datafilling for calling name display.

Datafilling table NETNAMES for DN suppression

The public network tuple in table NETNAMES can suppress the calling DN from display (and from announcement, as part of the recall confirmation announcement) for all public network calls originated at an office.

An explanation of the fields to be datafilled in table NETNAMES and an example follow. Only those fields that directly apply to the CLASS Line Office Data feature package are shown. Refer to the *Customer Data Schema Reference Manual* for a description of the other fields.

The following table shows the datafill specific to CLASS Line Office Data for table NETNAMES. Only those fields that apply directly to CLASS Line Office

CLASS Line Office Data (continued)

Data are shown. Refer to the *Customer Data Schema Reference Manual* for a description of the other fields.

Datafilling table NETNAMES (DN suppression) (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
NETNAME		PUBLIC	Logical network name. This field specifies the network through which calls are routed (including intraoffice calls). Enter PUBLIC.
EXTNETID		1 to 32 600	External network identifier. This field specifies the external logical network. All switching systems must agree on the value. Enter a value from a value from 1 to 32 600. The default value is 0 for NETNAME PUBLIC.
NETDIGS		1 to 10	Network digits. This field specifies the number of digits in the logical network The value in this field is used to extract the correct number of digits from the stored DN. Valid values are from 1 to 10.The default value is 0 for NETNAME PUBLIC.
NETOPTS		see subfield	Network options. This field consists of the subfield OPTION. This subfield is described below.
	OPTION	see options	Network option. This subfield specifies the options assigned to the network. Enter SUPPRESS. SUPPRESS consists of four refinements. These refinements are described below.
	INTRNLDN	Y or N	Internal suppression of DN. Enter Y to mark the intraoffice/intranetwork number as private or enter N to allow number delivery on intraoffice/intra- network calls.
	EXTRNLDN	Y or N	External suppression of DN. Enter Y to mark the interoffice/intranetwork number as private or enter N to allow number delivery on interoffice/ intranetwork calls.
Note: Network suppression overrides all other blocking and delivery options.			

Datafilling table NETNAMES (DN suppression) (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	INTRNLNM	Y or N	Internal suppression of name. Enter Y mark intraoffice/intranetwork calls as private or enter N to allow name delivery on intraoffice/intra-network calls.
	EXTRNLNM	Y or N	External suppression of name. Enter Y to mark interoffice/intranetwork calls as private or enter N to allow name delivery on interoffice/intra-network calls
Note: Network suppression overrides all other blocking and delivery options.			

Datafill example for table NETNAMES (DN suppression)

The following example shows sample datafill for table NETNAMES. This example shows two tuples, the first of which is the default tuple present in the table at load time. The second tuple defines a network named BNR, which has an external identifier of 4, uses 5 of the DN digits, and has suppressed external name and number identification on a network basis using option SUPPRESS.

MAP display example for table NETNAMES

```
NETNAME     EXTNETID    NETDIGS  NETOPTS
-------------------------------------------------
PUBLIC          0           0    $
BNR             4           5   (SUPPRESS N N Y Y )
```

Limitations and restrictions

The following limitations and restrictions apply to the determination of the network identifier for a call.

- If the call is a trunk call, the network of the originating line and trunk are compared to verify if the call is a private or public network call. If the trunk does not have a network name, the call is assumed to be a public network call.
- If the originator of the call is a POTS line, the public network identifier is used.
- If the customer group of either the originator or the terminator is not datafilled in table CUSTNTWK, the public network identifier is used.

CLASS Line Office Data (continued)

- If the customer groups for both the originator and the terminator are datafilled in table CUSTNTWK, but are associated with different networks, the public network identifier is used.
- If the customer groups of both the originator and the terminator are datafilled in table CUSTNTWK and are associated with the same network, the network identifier in table CUSTNTWK is used.

Datafilling table NETNAMES for calling name display

Table NETNAMES requires datafill to enable interoffice and intraoffice delivery and display of the name of the calling party. Subfield NMDSP in table NETNAMES specifies that the public network supports the display of the calling name and specifies the method of name transmission (query or setup) for interoffice calls.

An explanation of the fields to be datafilled in table NETNAMES and an example follow. Only those fields that directly apply to the CLASS Line Office Data feature package are shown. Refer to the *Customer Data Schema Reference Manual* for a description of the other fields.

Datafilling table NETNAMES (calling name display) (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
NETNAME		PUBLIC	Logical network name. This field specifies the network through which calls are routed (including intraoffice calls). Enter PUBLIC.
EXTNETID		1 to 32 600	External network identifier. This field specifies externally the logical network. All switching systems must agree on the value. Enter a value from 1 to 32 600. The default value is 0 for NETNAME PUBLIC.
NETDIGS		1 to 10	Network digits. This field specifies the number of digits in the logical network The value in this field is used to extract the correct number of digits from the stored DN. Valid values are from 1 to 10.The default value is 0 for NETNAME PUBLIC.
NETOPTS		see subfields	Network options. This field consists of the subfields OPTION and NMXCHG. These subfields are described below.

Datafilling table NETNAMES (calling name display) (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	OPTION	NMDSP	Network option. This Subfield specifies the network option. Enter NMDSP to indicate that the network specified in field NETNAME supports the display of the calling name.
	NMXCHG	QUERY	Name exchange method. This subfield specifies the method of name exchange. Enter QUERY, to indicate that the method of name exchange across the network is the query method. With the query method, the name of the calling party is only sent from the originating switch to the terminating switch if a request for the name information is received at the originating switch.

Datafill example for table NETNAMES (calling name display)

The following example shows sample datafill for calling name display in table NETNAMES using option NMDSP. In the example, option NMDSP is specified, which indicates that name display is supported across the network. Subfield NMXCHG indicates that the query method of name exchange is to be used.

The following example shows sample datafill for table NETNAMES (calling name display).

MAP display example for table NETNAMES (calling name display)

```
NETNAME      EXTNETID    NETDIGS      NETOPTS
-------------------------------------------------
PUBLIC       0           0          (NMDSP QUERY) $
```

Datafilling table OPTCTL

Table OPTCTL (Option Control) is used by Northern Telecom to price certain features on a “per 100 lines" basis. This table also increments the number of lines allowed to have the feature package. Refer to the *Customer Data Schema Reference Manual* for further details on table OPTCTL.

CLASS Line Office Data (continued)

Translation verification tools

The online tool for verifying the datafill of CLASS features is TRAVER (translations verification). TRAVER can confirm that the correct tuple in table IBNXLA has been accessed. TRAVER does not show the results of the CLASS processing initiated by the datafill in the tuple.

The following example shows the output from TRAVER when it is used to verify CLASS Line Office Data. In the example, the feature Calling Number Delivery Blocking (CNDB) has an access code of *67.

TRAVER output example for CLASS Line Office Data

```
>TRAVER L 6216051 'B67' B
TABLE IBNLINES
HOST 00 0 19 16 DT STN RES 6216051 200 (CNDBAMA) q
TABLE LINEATTR
200 1FR NONE NT FR01 0 613 P621 L613 TSPS N 10 NIL NILSFC LATA1
0 NIL NIL 00 Y RESG200 0 0
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
613 621 6051 6051
    (PUBLIC (NONUNIQUE ) Q)Q
TABLE NCOS
RESG200 0 0 0 RNCOS Q
TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT, AND
DIGCOL
RESG200 NXLA RXCMN200 RXCFN 0 RES
TABLE DIGCOL
RES SPECIFIED: RES DIGIT COLLECTION
NCOS FEAT XLA NAME IS NIL. GO TO NEXT XLA NAME.
TABLE IBNXLA: XLANAME RXCFN
RXCFN 67 FEAT N N N (CNDB)
+++ TRAVER: SUCCESSFUL CALL TRACE +++

FEATURE  CNDB NOT SUPPORTED BY TRAVER
+++ TRAVER: SUCCESSFUL CALL TRACE +++
```

CLASS Line Office Data (continued)

SERVORD

SERVORD can be used to

- assign SUSP billing for CLASS features
- assign the following attributes to an individual DN:
  - — suppression
  - — nonuniqueness
  - — name
- assign the following attributes to a range of DNs
  - — address (substitute DN)
  - — suppression
  - — nonuniqueness
  - — name

Assigning SUSP billing

SUSP billing can be enabled for any number of different CLASS line options that are present on a given CLASS line. When a CLASS line option is added, a prompt for BILLING_OPTION appears. If AMA is entered, SUSP billing is enabled at the line level for the option, and AMA records are generated as required by the individual CLASS features.

SERVORD limitations and restrictions

The following limitations and restrictions apply when assigning SUSP billing at the line level.

- If SUSP is disabled for the office in table AMAOPTS, the BILLING_OPTION prompt does not appear, and the CLASS line option assumes NOAMA status by default. Lines that are assigned CLASS line options with AMA status prior to SUSP being disabled for the office retain the AMA status (although no SUSP billing occurs while SUSP is disabled in table AMAOPTS).
- In an office that is receiving SUSP software for the first time, all existing CLASS line options assume NOAMA status by default.
- The SUSP billing option can be added to one or more CLASS features on a CLASS line while SUSP is enabled for the office in table AMAOPTS. With no other controls present, this change results in SUSP billing on the next usage of the CLASS feature on that line.

CLASS Line Office Data (continued)

SUSP billing prompts

The following table shows the SERVORD prompts used to assign SUSP billing to a line.

SERVORD prompts for CLASS Line Office Data

Prompt	Valid input	Explanation
OPTION	Any CLASS line option	Specifies a CLASS line option, such as CND.
BILLING_OPTION	AMA, NOAMA	Specifies AMA or NOAMA billing. Enter AMA to assign SUSP billing to the option specified at the OPTION prompt (the default is NOAMA).

Example of SUSP billing

The following example shows how to enable SUSP billing for option CND on an existing line. For this example, the SUSP entry in table AMAOPTS must be datafilled as ON.

SERVORD example for adding CLASS Line Office Data

The following SERVORD example shows how CLASS Line Office Data is added to an existing line using the ADO command.

SERVORD example for adding CLASS Line Office Data in prompt mode

```
>SERVORD
SO:
>ADO
SONUMBER: NOW 87 11 23 AM
>
DN_OR_LEN:
 >7654205
OPTION:
 >CND
BILLING OPTION: NOAMA      (defaults to NOAMA)
 >AMA
OPTION:
>$
COMMAND AS ENTERED:
ADO NOW 87 11 23 AM 6211061 ( CND AMA ) $
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
>Y
```

SERVORD example for adding CLASS Line Office Data in no prompt mode

```
>ADO $ 7654205 CND AMA $ Y
```

Note: Query commands, such as Query Directory Number (QDN), display the selected CLASS line options followed by either NOAMA or AMA to indicate whether SUSP billing has been enabled at the line level for each given CLASS option.

Assigning attributes to an individual DN

Service order option codes are used to assign attributes to an individual DN. The option codes allocated to the attributes are shown in the following table. Each option is described in the following subsections.

Service order option codes allocated to individual DN attributes

Option code	DN attribute
SUPPRESS	Suppression
NONUNIQUE	Uniqueness
NAME	Name

SUPPRESS option

The SUPPRESS option code is entered to suppress the calling DN from being displayed at the call destination. When a calling DN is supplied to a destination office, it is accompanied by an indicator showing whether the DN should be suppressed from display (and from announcement, as part of the recall confirmation announcement) to the called party. This indicator is called the calling number suppression attribute. It has a default value of UNSUPPRESSED. Entering option SUPPRESS causes a value of SUPPRESSED to be sent as the calling number suppression attribute.

Associating option SUPPRESS with a line Option SUPPRESS is associated with an individual DN using the following basic SERVORD commands:

- NEW (add new line)
- ADO (add option)
- DEO (delete option)

The SERVORD processing activated by option SUPPRESS creates individual line control records (recorded as tuples in table DNATTRS) that are accessed

CLASS Line Office Data (continued)

when the CLASS base call processing software assembles the DN attributes for an outgoing call.

An individual line record supplies a NO value for the DN attribute for all calls that

- originate from a line with an internal DN that matches the key field
- are sent out over the specified network (for CLASS calls, the network is always specified as PUBLIC)

The following table shows the SERVORD prompts used to assign the option SUPPRESS to CLASS Line Office Data.

Service order prompts for option SUPPRESS

Prompt	Valid input	Explanation
OPTION	SUPPRESS	Specifies option SUPPRESS
NETNAME	PUBLIC	Specifies the network name. Enter PUBLIC, since the network is always PUBLIC for CLASS calls
SUPPRESS_DN	Y or N	Specifies the suppression of the calling DN. Enter Y to suppress the calling DN.
SUPPRESS_NAME	Y or N	Specifies the suppression of the calling name. Enter Y to suppress the calling name.

SERVORD example for adding option SUPPRESS

The following example shows how to add option SUPPRESS using the ADO command. It shows the inputs required to set up an individual line control record (recorded as a tuple in table DNATTRS) to suppress the calling number display for calls originating from a line with an internal DN of 6211172.

The following SERVORD example shows how the option SUPPRESS for CLASS Line Office Data is added to an existing line using the ADO command.

CLASS Line Office Data (continued)

SERVORD example for adding option SUPPRESS to CLASS Line Office Data in prompt mode

```
> SERVORD
SO:
> ADO
SONUMBER: NOW 87 11 23 AM
>
DN_OR_LEN:
>6211172
OPTION:
> SUPPRESS
NETNAME:
>PUBLIC
NETNAME:
>$
SUPPRESS_DN:
>Y
SUPPRESS_NAME:
> Y
OPTION:
> $
COMMAND AS ENTERED:
ADO NOW 87 11 23 AM 6211172 ( SUPPRESS ( PUBLIC) $ Y Y )$
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
>Y
```

SERVORD example for adding option SUPPRESS to CLASS Line Office Data in no-prompt mode

```
> ADO $ 6211172 SUPPRESS PUBLIC $  Y Y $ Y:
```

NONUNIQUE option

The calling DN supplied to the destination switch is accompanied by a uniqueness attribute showing whether the DN supplied is unique to a calling line. When the DN is not uniquely associated with one line, the uniqueness attribute is sent with a value of NONUNIQUE.

Option NONUNIQUE code generates the uniqueness attribute. Where the NONUNIQUE option code is associated with the calling DN, a uniqueness attribute value of NONUNIQUE is sent. Otherwise, a uniqueness attribute value of UNIQUE is sent.

CLASS Line Office Data (continued)

Option NONUNIQUE can be allocated to the following:

- An individual DN, where the LCC or a line option affects the one-to-one relationship between the line and its internal DN. Option NONUNIQUE is automatically allocated to an individual line when the LCC or line option is entered using SERVORD.
- A range of DNs, where a substitute DN is to be supplied to the call destination for all calls originating from lines within a group. The input of the substitute DN and option NONUNIQUE is described in "Assigning attributes to a range of DNs".

NAME option

The NAME option code associates a calling name with a DN. A name datafilled by means of SERVORD can be any combination of characters or spaces that does not exceed 15 characters in length. The name can consist of any uppercase letter from A to Z as well as any digit from zero to nine. Lowercase letters are not allowed.

Spaces must be entered as underscores (_). There are no language restrictions, but accent characters are not included in the allowed character set.

Permanent name suppression is in effect for all subscribers whose names have not been assigned to their DNs by means of option NAME. To suppress the name of a subscriber whose name is assigned to a DN, use the DEO command to delete option NAME from the line.

Assigning option NAME to a line Use the following basic SERVORD commands to add, delete, or modify option NAME:

- ADO (add option)
- DEO (delete option)
- CHF (change option)

The SERVORD processing activated by option NAME creates data that is added to individual line control records in table DNATTRS.

CLASS Line Office Data (continued)

The following table shows the SERVORD prompts for assigning option NAME.

Service order prompts for option NAME

Prompt	Valid input	Explanation
OPTION	NAME	Specifies option NAME
NETNAME	PUBLIC	Specifies the network name. Enter PUBLIC, since the network is always PUBLIC for CLASS calls.
DISPLAYNAME	alphanumeric string	Specifies the calling name. Enter a string of up to 15 characters to be displayed with the calling DN.

SERVORD example for adding option NAME

The following example shows how the ADO command assigns the name John Smith to the DN 5554725. The SERVORD input in this example causes the name data to be recorded in table DNATTRS.

SERVORD example for adding option NAME to CLASS Line Office Data in prompt mode

```
> SERVORD
  SO:
> ADO
  SONUMBER: NOW 87 11 23 AM
>
  DN_OR_LEN:
> 5554725
  OPTION:
> NAME
  NETNAME:
> PUBLIC
  DISPLAYNAME:
> JOHN_SMITH
  NETNAME:
> $
  OPTION:
> $
  COMMAND AS ENTERED:
> ADO NOW 87 11 23 AM 5554725 (NAME (PUBLIC JOHN_SMITH) $)$
  ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
> Y
```

CLASS Line Office Data (continued)

SERVORD example for adding option NAME to CLASS Line Office Data in no-prompt mode

```
> ADO $ 5554725 NAME PUBLIC JOHN_SMITH $  $ Y
```

SERVORD example for deleting option NAME

The following example shows how the name John Smith, assigned to DN 5554725, is suppressed by using option DEO to delete option NAME. Deleting option NAME allows the permanent suppression of the subscriber name. The SERVORD input in this example causes the name data to be deleted from table DNATTRS.

SERVORD example for deleting option NAME from CLASS Line Office Data in prompt mode

```
>SERVORD
SO:
>DEO
SONUMBER:  NOW 87 11 23 AM
>
DN_OR_LEN:
>5554725
OPTION:
>NAME
OPTION:
>$
COMMAND AS ENTERED:
ADO NOW 87 11 23 AM 5554725 ( NAME ) $
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
>Y
```

SERVORD example for deleting option NAME from CLASS Line Office Data in no-prompt mode

```
>DEO $ 5554725 NAME $ Y
```

SERVORD example for changing option NAME

The following example shows how to change the name assigned to DN 5554725 from John Smith to Mary Brown using the CHF command. The SERVORD input shown in this example causes the name data to be changed from John Smith to Mary Brown in table DNATTRS.

CLASS Line Office Data (continued)

SERVORD example for changing option NAME of CLASS Line Office Data in prompt mode

```
> SERVORD
SO:
> CHF
SONUMBER: NOW 87 11 23 AM
>
DN_OR_LN
> 5554725
OPTION:
> NAME
NETNAME:
> PUBLIC
DISPLAYNAME:
> MARY_BROWN
NETNAME:
> $
OPTION:
> $
COMMAND AS ENTERED:
CHF NOW 87 11 23 AM 5554725 (NAME (PUBLIC MARY_BROWN) $)$
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
> Y
```

SERVORD example for changing option NAME of CLASS Line Office Data in no-prompt mode

```
>CHF $ 5554725 NAME PUBLIC MARY_BROWN $ $ Y
```

Assigning attributes to a range of DNs

Options ADDRESS, NAME, NONUNIQUE, and SUPPRESS can be assigned to a group of DNs using the SDNA (set up directory number attributes) service order command. The option codes allocated to the attributes are shown in the following table.

Service order option codes allocated to group DN attributes (Sheet 1 of 2)

Option code	DN attribute
SUPPRESS	Suppression
ADDRESS	Substitute DN

CLASS Line Office Data (continued)

Service order option codes allocated to group DN attributes (Sheet 2 of 2)

Option code	DN attribute
NONUNIQUE	Uniqueness
NAME	Name

ADDRESS option

Each line is allocated an internal DN. This internal DN is the access key to identify the line and is the standard calling DN sent to the call destination.

Option ADDRESS provides a substitute DN to be sent in place of all or part of the standard calling DN.

Option ADDRESS can be coded as follows:

- an entire DN, for example, 6137271234
- a partial DN, for example, 61372NNNNN, which sends 61372 in place of the first five digits of the standard calling DN

How the SDNA command works

The SDNA processing creates DN group control records (recorded as tuples in table DNGRPS) that are accessed when the CLASS base call processing software assembles the DN attributes for an outgoing call.

A DN group control record can supply values for one, two, or all of the substitute DN, uniqueness, and calling number suppression DN attributes for calls that meet both of the following criteria:

- the calls originate from lines with internal DNs within the specified range
- the calls are sent out over the specified network (for CLASS calls, the network is always specified as PUBLIC)

The SDNA command supports the following functions:

- ADD (add option code)
- CHA (change the value associated with option ADDRESS)
- DEL (delete option code)

For detailed information on how the values supplied by these options are used in CLASS base call processing, see “Generating calling DN and DN attributes" in “Preparing to datafill network base".

CLASS Line Office Data (continued)

Using the SDNA command

The SDNA command involves several inputs values. To add, change, or delete options for a group of DNs, enter SDNA and respond to the prompts listed in the table below.

Input prompts for the SDNA command

Prompt	Valid input	Explanation
SONUMBER	A service order number and date; $ or carriage return to default to current date and time	Specifies the unique number of the service order to be entered
AREACODE	The area code for the station	Specifies the area code for the station
OFCCODE	up to 7 digits	Specifies the office code for DNs
FROMDIGS	1 to 8 digits	Specifies the lower bounds of a range of DNs to which the network attributes are assigned
TODIGS	1 to 8 digits	Specifies the upper bounds of a range of DNs to which the network attributes are to be assigned
NETNAME	PUBLIC	Specifies the network name. Enter PUBLIC, since the network is always PUBLIC for CLASS calls.
FUNCTION	ADD, CHA, DEL	Specifies the function of adding, changing, or deleting the network attributes
OPTION	ADDRESS, NAME, NONUNIQUESUPPRESS	Specifies the options associated with a service to be added, changed, or deleted If ADDRESS is entered, the system prompts for the address digits: AREACODE—area code OFCCODE—office code STNCODE—number ***Note:*** Digits in the area code, office code, or number can be specified using the wild card digit N. Each occurrence of this wild card digit in the address field indicates that in this place the N should be replaced by the corresponding digit in the internal DN.
NAME	Y or N	Specifies suppression of originating subscriber's name

CLASS Line Office Data (continued)

SERVORD example for internal DNs

The following examples illustrate the inputs required to set up a DN control record for calls originating from lines with internal DNs in the range 613 621 1170 to 613 621 1179 for calls on the PUBLIC network.

Option ADDRESS is entered to send 613 621 1234 always as the address DN attribute, and option NONUNIQUE is entered to cause the unique DN attribute to be sent as NONUNIQUE (to indicate that the address DN attribute does not identify a specific line).

Note: The SDNA command must be used twice to set both of these attributes.

The following example shows how to assign option ADDRESS to a range of DNs.

CLASS Line Office Data (continued)

SERVORD example for assigning option ADDRESS to CLASS Line Office Data in prompt mode

```
> SERVORD
  SO:
> SDNA
  SONUMBER: NOW 87 11 23 AM
>
  AREACODE:
> 613
  OFCCODE:
> 621
  FROMDIGS:
> 1170
  TODIGS:
> 1179
  NETNAME:
> PUBLIC
  FUNCTION:
> ADD
  OPTION:
> ADDRESS
  AREACODE:
> 613
  OFC:
> 621
  STNCODE:
> 1234
  COMMAND AS ENTERED:
  SDNA NOW 87 11 23 AM 613 621 1170 1179 PUBLIC
  ADD ADDRESS 613 621 1234
  ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
> Y
```

SERVORD example for assigning option ADDRESS to CLASS Line Office Data in no-prompt mode

```
> SDNA  $ 613 621 1170 1179 PUBLIC ADD ADDRESS 613 621 1234 Y
```

The following SERVORD example shows how to assign option NONUNIQUE to a range of DNs.

CLASS Line Office Data (continued)

SERVORD example for assigning option NONUNIQUE to CLASS Line Office Data in prompt mode

```
> SERVORD
SO:
> SDNA
SONUMBER: NOW 87 11 23 AM
>
AREACODE:
> 613
OFCCODE:
>621
FROMDIGS:
> 1170
TODIGS:
> 1179
NETNAME:
> PUBLIC
FUNCTION:
> ADD
OPTION:
> NONUNIQUE
COMMAND AS ENTERED:
SDNA NOW 87 11 23 AM 613 621 1170 1179
PUBLIC ADD NONUNIQUE
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
> Y
```

SERVORD example for assigning option NONUNIQUE to CLASS Line Office Data in no-prompt mode

```
> SDNA  $ 613 621 1170 1179 PUBLIC ADD NONUNIQUE Y
```

The following example shows the inputs required to change option ADDRESS set up in a previous example from 613 621 1234 to 613 621 1222. Note that only the new option ADDRESS value is entered.

SERVORD example for changing option ADDRESS to a range of DNs in prompt mode

```
> SERVORD
SO:
> SDNA
SONUMBER: NOW 87 11 23 AM
>
AREACODE:
> 613
OFCCODE:
> 621
FROMDIGS:
> 1170
TODIGS:
>1179
NETNAME:
> PUBLIC
FUNCTION:
> CHA
OPTION:
> ADDRESS
AREACODE:
> 613
OFCCODE:
> 621
STNCODE:
> 1222
COMMAND AS ENTERED:
SDNA NOW 87 11 23 AM 613 621 1170 1179
PUBLIC CHA ADDRESS 613 621 1222
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
> Y
```

SERVORD example for changing option ADDRESS to a range of DNs in no-prompt mode

```
> SDNA  $ 613 621 1170 1179 PUBLIC CHA ADDRESS 613 621 1222 Y
```

Feature not allowed announcement

Prior to BCS31, when subscribers dialed a feature access code for a feature that was not assigned to their lines, they were routed to FNAL treatment. With

CLASS Line Office Data (continued)

the CLASS base package, the operating company can route these calls to an FNAL announcement.

Note: Before datafilling announcements for FNAL, read Appendix on Datafilling announcements for Subscriber Services general announcement information.

FNAL announcements can be defined for the following features:

- Calling Number Delivery (CND)
- Calling Number Delivery Blocking (CNDB)
- Calling Name Delivery Blocking (CNAB)
- Dialable Number Delivery (DDN)
- Customer Originated Trace (COT)
- Automatic Call Back (ACB)
- Automatic Recall (AR)
- Calling Name Delivery (CNAMD)
- Selective Call Rejection (SCRJ)
- Selective Call Forwarding (SCF)
- Distinctive Ringing/Call Waiting (DRCW)
- Selective Call Acceptance (SCA).

The FNAL announcement played depends on the feature access code dialed by the subscriber. The same announcement and access code are used for the CNAMD, DDN, CND and display features. A change made to the table that updates the announcement option of any one of these features automatically updates the option for the other two features.

The option to route subscribers to an announcement when they dial a feature access code for a feature to which they are not presubscribed is datafilled in table RESOFC.

FNAL announcement example

An FNAL announcement is required for each CLASS feature datafilled in table RESOFC. The announcements are defined by the operating company and are standard, broadcast-type, prerecorded digital recorded announcement machine (DRAM) announcements. An example of such an announcement is as follows:

"You have dialed the Automatic Call Back feature. If you wish to subscribe to this service, please contact your local phone center."

Limitations and restrictions for FNAL announcement

The following restrictions apply when routing a call to an FNAL announcement when a subscriber dials a feature access code for a feature to which he or she is not presubscribed.

- The number of dialed digits for screening of CLASS feature activation for the POTS environment is restricted to two digits.
- The datafill in subfield POTS_ACCESS of table RESOFC should correspond to the datafill for the feature activation codes datafilled in table IBNXLA.
- Duplicate access codes cannot be datafilled in subfield POTS_ACCESS, except for the CNAMD, DDN, and CND features. The CNAMD, DDN, and CND features use the same announcement CLLI.
- If field ENABLED in table RESOFC is set to N, calls receive FNAL treatment or partial dial (PDIL) treatment, even if subfield FNAL_CLLI is datafilled.
- Secondary language and variable DNs are not supported for FNAL announcements.

Datafill sequence for FNAL announcement

The following table lists the tables that must be datafilled for the FNAL announcement. These tables are listed in the order in which they should be datafilled.

The operating company must define its own announcements for each CLASS feature for which announcements are supplied when the subscriber attempts to access a CLASS feature that is not assigned to the subscriber line.

For complete information on datafilling for announcements, refer to *DRAM and EDRAM Guide*.

Datafill tables required for CLASS Line Office Data (Sheet 1 of 2)

Table	Purpose of table
DRAMS	Digital Recorded Announcement Machine. This table lists information for the trunk cards that constitute a digital recorded announcement machine (DRAM).
CLLI	Common Language Location Identifier. This table is used to uniquely identify the far end of each announcement, tone, trunk group, test trunk, national milliwatt test lines, and service circuit.

CLASS Line Office Data (continued)

Datafill tables required for CLASS Line Office Data (Sheet 2 of 2)

Table	Purpose of table
ANNS	Announcement. This table contains data for each announcement, analog and digital, that is assigned in the switching unit.
ANNMEMS	Announcement Member. This table lists the assignments for each of the members assigned to the announcements listed in table ANNS.
DRAMTRK	Digital Recorded Announcement Machine Track. This table lists the names assigned to the phrases (up to a maximum of 16) that are assigned to each track of an announcement.
IBNXLA	IBN Translation. This table stores data for the digit translation of calls from an IBN station, attendant console, incoming IBN trunk group, or incoming side of a two-way IBN trunk group.
RESOFC	Residential Line CLASS Office Data. This table contains data pertaining to custom local area signaling services (CLASS) features.

The FNAL announcements must be datafilled before table RESOFC is datafilled to route calls to announcement (subfield FNAL_ANN). If the announcements are not datafilled prior to datafilling table RESOFC, a high-pitched tone is generated in place of the announcement.

The following procedures explain how to datafill for FNAL announcements. The examples used in each procedure use the DRAM controller card that has a CLLI of DRAM2 and is located on MTM 4. The physical layout of the DRAM controller and its FNAL card of the examples are as follows:

- MTM 4 0—DRAM controller
- MTM 4 2—spare
- MTM 4 4—CLASS announcement DRAM card 1
- MTM 4 6—CLASS announcement DRAM card 2
- MTM 4 8—FNAL announcement 1
- MTM 4 10—FNAL announcement 2

Note: The DRAM memory cards can be configured in any slot.

When configuring the system, ensure that the cards for the DRAMs are offline. For the examples discussed, the procedure begins with ensuring that the MTM 4 is offline.

Datafill procedure for table DRAMS

Table DRAMS (Digital Recorded Announcement Machines) defines the actual FNAL announcement cards. For more information on this table, refer to the *Customer Data Schema Reference Manual* for a description of the other fields.

Datafill sequence

The following table lists the tables that require datafill to implement CLASS Line Office Data. The tables are listed in the order in which they are to be datafilled.

Datafill example for table DRAMS

The following example shows sample datafill for the FNAL announcement in table DRAMS.

MAP display example for table DRAMS

```
DRAMCARD     TMTYPE     TMNO   TMCKT    CARDCODE CARDINFO
-------------------------------------------------------------
2 0          MTM          4      0      1X75BA   DRAM2
2 1          MTM          4      2      1X79AA   EEPROM 1 2
2 2          MTM          4      4      1X79AA   EEPROM 3 4
2 3          MTM          4      6      1X79AA   EEPROM 5 6
2 4          MTM          4      8      1X79AA   EEPROM 7 8
2 5          MTM          4      10     1X79AA   EEPROM 9 10
2 6          MTM          4      12     1X79AA   EEPROM 9 12
```

Datafill procedure for table CLLI

Table CLLI (Common Language Location Identifier) contains the codes that uniquely identify the far end of each announcement (tone or trunk group). For more information on this table, refer to the *Customer Data Schema Reference Manual* for a description of the other fields.

Datafill example for table CLLI

The following example shows sample datafill for the DRAM CLLI in table CLLI. In the example, DRAM2 is added to table CLLI, and datafilled for ten trunks.

CLASS Line Office Data (continued)

MAP display example for table CLLI

```
CLLI       ADNUM   TRKGRSIZ          ADMININF
-------------------------------------------------
DRAM2        524   10                DRAM_MTM_4
ARFNAL       61    10                AR_ANNOUNCEMENT
ACBFNAL      55    10                ACB_ANNOUNCEMENT
COTFNAL      113   10                COT_ANNOUNCEMENT
CNDBFNAL     62    10                CNBB_ANNOUNCEMENT
CNDFNAL      63    10                CND_ANNOUNCEMENT
SCRJFNAL     83    10                SCRJ_ANNOUNCEMENT
```

Datafill procedure for table ANNS

Table ANNS (Announcements) contains data for each announcement (analog and digital) assigned in the switching unit. Table ANNS defines the FNAL announcement CLLIs and announcement types. The FNAL_ANN entries for the example are as follows (the announcement type is STD [standard]):

- ARFNAL
- ACBFNAL
- COTFNAL
- CNDFNAL
- CNDBFNAL
- SCRJFNAL.

For more information on this table, refer to the *Customer Data Schema Reference Manual* for a description of the other fields.

Datafill example for table ANNS

The following example shows sample datafill for the FNAL announcement in table ANNS.

MAP display example for table ANNS

```
CLLI       ANTYPE    TRAFSNO   MAXCONN   CYTIME   MAXCYC
ARFNAL     STND      30        30        0        1
ACBFNAL    STND      30        30        0        1
COTFNAL    STND      30        30        0        1
CNDFNAL    STND      30        30        0        1
CNDBFNAL   STND      30        30        0        11
SCRJFNAL   STND      30        30        0        1
```

Datafill example for table ANNMEMS

Table ANNMEMS (Announcement Members) contains the assignments for each member assigned to the announcement CLLI in table ANNS. For more information on this table, refer to the data schema section of this document

The following example shows sample datafill for the FNAL announcement in table ANNMEMS. For FNAL announcements, two cards are required.

MAP display example for table ANNMEMS

```
ANNMEM       HDWTYPE      CARD   MEMINFO
ARFNAL1      DRAM         DRA    ( 0 MTM 4 8 )
ACBFNAL3     DRAM         DRA    ( 0 MTM 4 10)
COTFNAL2     DRAM         DRA    ( 0 MTM 4 12 )
CNDFNAL4     DRAM         DRA    ( 0 MTM 4 14 )
CNDBFNAL1    DRAM         DRA    ( 0 MTM 4 16 )
SCRJFNAL3    DRAM         DRA    ( 0 MTM 4 18 )
```

Assigning logical phrase names to physical phrases using DRAMREC

Once tables DRAMS, CLLI, ANNS, and ANNMEMS have been datafilled, the logical phrase names can be assigned to the physical phrases. To assign the physical phrases, enter the DRAMREC utility at the MAP (maintenance and administration position) and use the RECORD command to record and the ASSIGN command to assign the phrase names to the location on the DRAM. If the phrase is prerecorded, use the ASSIGN command; if not, use the RECORD command. Note that all phrases to be combined into announcements must reside under the same DRAM controller. The 1X79AA cards must be used for EEPROM recordings. The following is a sample DRAMREC session.

CLASS Line Office Data (continued)

```
DRAMREC:
<command><dram><phrasename><length><block><phraseno>

RECORD 2 FNALANNC1   9  2   5
RECORD 2 FNALANNC2   9  2   6
RECORD 2 FNALANNC3   5  2   7
RECORD 2 FNALANNC4  10  2   8
RECORD 2 FNALANNC5   8  2   9
RECORD 2 FNALANNC6   5  2   A
RECORD 2 FNALANNC7   6  2   B
RECORD 2 FNALANNC8   5  2   C
RECORD 2 FNALANNC9   9  2   D
RECORD 2 FNALANNC10  1  2   E
RECORD 2 FNALANNC11  7  3   4
RECORD 2 FNALANNC12  8  3   5
RECORD 2 FNALANNC13  8  3   6
RECORD 2 FNALANNC14 10  3   7
RECORD 2 FNALANNC15 10  4   4
RECORD 2 FNALANNC16  3  4   5
RECORD 2 FNALANNC17  5  4   6
```

Datafilling table DRAMTRK

Table DRAMTRK (Digital Recorded Announcement Machine Track) contains all FNAL announcements. Once the phrases have been assigned using DRAMREC, the announcement phrases can be built. Each announcement is accessed by the assigned CLLI.

Datafill example for table DRAMTRK

The following example shows sample datafill for the FNAL announcement in table DRAMTRK.

MAP display example for table DRAMTRK

ANNTRACK	PHSLIST
ARFNAL 0	FNALANNC1
ACBFNAL 0	FNALANNC14
COTFNAL 0	FNALANNC2
CNDBFNAL 0	FNALANNC3

Datafilling table IBNXLA

Table IBNXLA (IBN Translations) contains the data for the digit translations of calls from an MDC station, attendant console, incoming trunk group, or incoming side of a two-way MDC trunk group.

Datafill example for table IBNXLA

The following example shows sample datafill for table IBNXLA.

MAP display example for table IBNXLA

```
            KEY                RESULT
_______________________________________________________
 RXCFN    57        FEAT N N N  COT
 RXCFN    66        FEAT N N N  ACBA
 RXCFN    69        FEAT N N N  ARA
```

Datafilling table RESOFC

Table RESOFC (Residential Line CLASS Office Data) contains data on CLASS features. Field FNALANN controls whether an announcement or treatment is provided. If field FNALANN is left blank, the handling of calls is unchanged. FNALANN contains these subfields: POTS_ACCESS and FNAL_CLLI.

The following table shows the datafill specific to CLASS Line Office Data for table RESOFC. Only those fields that apply directly to CLASS Line Office

CLASS Line Office Data (continued)

Data are shown. Refer to the *Customer Data Schema Reference Manual* for a description of the other fields.

Datafilling table RESOFC (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
FNALANN		see subfields	Feature Not Allowed Announcement. This field gives the operating company the option to route a call from a subscriber who dials a feature access code for a feature not associated with his or her line to an FNAL announcement or FNAL treatment. If the call is to be routed to an FNAL announcement, complete the subfields POTS_ACCESS and FNAL_CLLI. These subfields are described below. If the subscriber is to be sent to an FNAL tone, enter $ to terminate the field. Calls on MDC and Subscriber Services lines are then routed to an FNAL treatment, and calls on POTS lines are routed to a PDIL treatment.
	POTS_ACCESS	00 to 99.(see below)	POTS Access. This field specifies a 2-digit feature code screening so that POTS calls can be routed to the appropriate CLASS announcement. Enter a 2-digit feature code from 00 to 99. Unlike call forwarding, call waiting, cancel call waiting, and speed calling, which are accessed through specially defined feature codes, field POTS_ACCESS allows the operating company to define its own 2-digit access code. Thus, with field POTS_ACCESS and proper datafill in table IBNXLA, the entire office (MDC, Subscriber Services, and POTS lines) can share a common operating company-defined, 2-digit access code and receive the proper FNAL announcement. The access code is limited to 2 digits. Asterisks (*) and 11 dialing are automatically supported.

CLASS Line Office Data (continued)

Datafilling table RESOFC (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	POTS_ ACCESS	66	Automatic Call Back (ACB)
		69	Automatic Recall (AR)
		65	Calling Name Delivery (CNAMD)
		65	Calling Number Delivery (CND)
		67	Calling Number Delivery Blocking (CNDB)
		57	Customer Originated Trace (COT)
		61 or 81	Distinctive Ringing/Call Waiting (DRCW)
		68 or 88	Selective Call Acceptance (SCA)
		63 or 83	Selective Call Forwarding (SCF)
		60 or 80	Selective Call Rejection (SCRJ)
	FNAL_CLLI	alphanumeric (see below)	Announcement CLLI. This field specifies the announcement CLLIs for the given feature. The announcement itself is datafilled in tables ANNS and DRAMTRK, where the actual phrases of the announcement are defined. Enter an alphanumeric announcement CLLI.
	FNAL_CLLI	ACBFNAL	Automatic Call Back
		ARFNAL	Automatic Recall
		CNAMDFNAL	Calling Name Delivery
		CNDFNAL	Calling Number Delivery
		CNDBFNAL	Calling Number Delivery Blocking
		COTFNAL	Customer Originated Trace
		DRCWFNAL	Distinctive Ringing Call Waiting
		SCAFNAL	Selective Call Acceptance
		SCFFNAL	Selective Call Forwarding
		SCRJFNAL	Selective Call Rejection ***Note:*** The same CLLI must be specified for Calling Number Delivery and Calling Name Delivery.

The following example shows sample datafill for table RESOFC.

CLASS Line Office Data (end)

MAP display example for table RESOFC

```
KEY      ENABLED                        FEATDATA
             FNALANN
_____________________________________________________________

COT      Y        SUBSCR       COT ONELEVEL
              ( 57 COTFNAL) $

ACB      Y        SUBSCR  ACB 5 3 30 180 60 5 5 2
Y DENY DENY DENY
              ( 66 ACBFNAL) $

AR  Y        SUBSCR  AR ONELEVEL 5 3 30 180
60 5 5 2 Y DENY DENY DENY
          ( 69 ARFNAL)  $
```

COIN on RES

Ordering codes

Functional group ordering code: RES00006

Functionality ordering code: not applicable

Release applicability

BCS34 and up

Prerequisites

To operate, COIN on RES has the following prerequisites:

- BAS Generic, BAS00003
- RES Advanced Custom Calling, RES00002
- MDC Standard, MDC00003
- MDC Minimum, MDC00001

Description

The COIN on RES feature provides coin service in the Residential Enhanced Services (RES) environment. This feature introduces the ability for automatic conversion between plain old telephone service (POTS) coin lines and RES coin lines.

Operation

The automatic conversion between POTS and RES coin lines is done through the Service Order System (SERVORD) only when field RES_AS_POTS of office parameter RES_SO_SIMPLIFICATION in table OFCVAR is set to Y. The conversion from POTS to RES takes place when a RES-specific option is added to the option list for the POTS lines using the NEW (establish new service), ADO (add option), or CHF (change feature) commands. The conversion from RES to POTS occurs when all RES-specific options have been deleted from the RES line using the DEO (delete option) or CHF commands.

Note: When field RES_AS_POTS of office parameter RES_SO_SIMPLIFICATION in table OFCVAR is set to N, automatic conversion does not take place.

The POTS coin line class codes (LCC) supported in the RES environment include the following:

- CCF—coin service, coin first
- CFD—coin service, free dialing

COIN on RES (continued)

- CDF—coins service, dial tone first
- CSP—coin service, semi-post pay

Timed-release disconnect

Timed-release disconnect (TRD) is a capability where a line is disconnected if the calling party fails to go on-hook in a specified time after the called party has gone on-hook. TRD timing is not performed on line-originated calls terminating on RES lines, when a terminating line disconnect signal is detected before an originating line disconnect signal. For a line-to-RES line call, when a RES line disconnect signal is detected before an originating line disconnect signal, the network connection between the two lines is released. The originating line is placed in exit off-hook timing. Likewise, during a trunk-to-RES line call, when a RES line disconnect signal is detected before a clear forward signal, the network connection between the trunk and line is released. The originating trunk is placed in guard timing.

TRD is performed on RES line-originated calls terminating on other POTS lines and on trunks that support TRD timing, when a terminating line or trunk disconnect signal is detected before an originating line disconnect signal.

Translations table flow

The COIN on RES feature does not affect translations data flow.

Limitations and restrictions

The following limitations and restrictions apply to COIN on RES:

- The SERVORD commands EST and ADD cannot be used to create a RES coin line.
- When RES_AS_POTS is set to N, the SERVORD commands NEW, ADO, and CHF cannot be used to create a RES coin line.
- When RES_AS_POTS is set to Y, the SERVORD command CHG cannot be used to change the LCC of any POTS coin line to RES.
- Once a POTS coin line is converted to RES, no TRD timing takes place where the coin line is the terminator of a call and the subscriber goes on-hook before the originator.

Interactions

COIN on RES has no functionality interactions.

Activation/deactivation by the end user

COIN on RES requires no activation or deactivation by the end user.

Billing

COIN on RES does not affect billing.

Station Message Detail Recording

COIN on RES does not affect Station Message Detail Recording.

Datafilling office parameters

The following table shows the office parameters used by COIN on RES. For more information about office parameters, refer to *Office Parameters Reference Manual.*

Office parameters used by COIN on RES

Table name	Parameter name	Explanation and action
OFCVAR	RES_SO_SIMPLIFICATION	This parameter provides the ability to consider RES lines as POTS lines from within SERVORD. When field RES_AS_POTS is set to Y, during execution of SERVORD commands ADO, DEO, and CHF, a line can automatically be changed from a POTS line to a RES line or a RES line to a POTS line. (The default setting is Y.) When field ENHANCED_POTS_OPTIONS is set to N, additional call forwarding prompts do not appear. (The default setting is N.)

COIN on RES (continued)

Datafill sequence

The following table lists the tables that require datafill to implement COIN on RES. The tables are listed in the order in which they are to be datafilled.

Datafill tables required for COIN on RES

Table	Purpose of table
LINEATTR	Line Attribute. This table defines line attribute indexes applicable to an office. It determines indexing into screening tables and initially defines the type of line generating the call. It provides the pretranslator name used to access table STDPRTCT.
IBNLINES	IBN Line Assignment. This table contains line assignments for each 500/2500 set assigned to an IBN, RES, and Multiple Appearance Directory Number (MADN) station number. This table also contains line assignments for IBN attendant consoles. ***Note:*** This table is datafilled through SERVORD; therefore, no datafill procedure or example is provided. Refer to “SERVORD" for an example of using SERVORD to datafill this table.

Datafilling table LINEATTR

The following table shows the datafill specific to COIN on RES for table LINEATTR. Only those fields that apply directly to COIN on RES are shown. For a description of the other fields, refer to the data schema section of this document.

Table LINEATTR associates translation attributes to lines with different LCCs.

Datafilling table LINEATTR (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
LNATTIDX		0 to 31 999	Line attribute index. This field defines the line attribute index number.
LCC		CCF, CFD, CDF, CSP	Line class code. This field specifies the LCC. Enter one of the following coin service types: • CCF for coin service, coin first • CFD for coin service, free dialing • CDF for coin service, dial tone first • CSP for coin service, semi-post pay

Datafilling table LINEATTR (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
RESINF		see subfield	RES information. This field consists of the subfield RESINFO.
	RESINFO	Y	RES information. This subfield specifies whether the tuple is needed to support Subscriber Services RES lines. Enter Y, and datafill subfields CUSTGRP, SUBGRP, and NCOS. ***Note:*** Subfield RESINFO can be changed from N to Y, but cannot be changed from Y to N.
	CUSTGRP	RESGRP	Customer group. This subfield specifies the customer group name defined in table CUSTENG. This entry associates Subscriber Services lines with this customer group. See the planning chart in Chapter 1. Enter RESGRP.
	SUBGRP	0	Subgroup. This subfield is not used for Subscriber Services lines. Enter 0.
	NCOS	0 to 511	Network class of service. This subfield associates Subscriber Services lines with this NCOS in the customer group. See the planning chart described in Chapter 1. Enter a value from 0 to 511.

Datafill example for table LINEATTR

The following example shows sample datafill for table LINEATTR.

MAP display example for table LINEATTR

```
LNATTIDX LCC CHGCLSS COST SCRNCL LTG STS  PRTNM LCANAME ZEROMPOS
TRAFSO MRSA   SFC  LATANM  MDI IXNAME DGCLNAME FANIDIGS
RESINF              OPTIONS
_____________________________________________________________
4   CDF  NONE    LO   FRO1   0  613  P621   L613     TSPS
10  NIL  NILSFC  NILLATA   0   NIL     NIL    00
Y RESGRP 0   0     $
```

Translation verification tools

COIN on RES does not use translation verification tools.

COIN on RES (continued)

SERVORD

SERVORD is used to add, delete, or change a RES coin line.

Field RES_AS_POTS is datafillable in the office parameter RES_SO_SIMPLIFICATION in table OFCVAR. This field controls the automatic change of LCC capability and the query display of RES or POTS lines and RES-specific options. When RES_AS_POTS is set to Y, the NEW, ADO, or CHF commands can be used to create a RES coin line. When RES_AS_POTS is set to N, the CHG command can be used to change a POTS coin line to a RES coin line.

Creating a RES coin line when RES_AS_POTS is set to Y

The NEW, ADO, or CHF commands are used to create a RES coin line when field RES_AS_POTS is set to Y.

Note: When RES_AS_POTS is set to Y, the CHG command cannot change the LCC of POTS lines to RES.

With the NEW command a RES coin line is created when the appropriate POTS coin LCC is entered at the LCC prompt, and at least one RES-specific option is present in the option list.

With the ADO and CHF commands, a RES coin line is created by automatically converting an existing POTS coin line into a RES coin line by adding a RES-specific option to the option list. The CHF command can change an LCC automatically when a change is made to a POTS option. When the prompt appears for additional information and a non-POTS value is added, the LCC is automatically changed.

A RES coin line automatically reverts to a POTS coin line when all RES-specific features are removed using the DEO or CHF command.

Creating a RES coin line when RES_AS_POTS is set to N

The CHG command is used to create a RES coin line when field RES_AS_POTS is set to N.

Although it is possible to change a POTS coin line to a RES coin line by using the CHG command, it is not possible to change one type of POTS coin line into a different type of RES coin line. For example, a POTS CCF coin line can be converted to a RES CCF coin line only. Likewise, a RES CCF coin line cannot be changed to a RES CDF coin line.

Note 1: It is not possible to create a RES coin line by using the NEW command when field RES_AS_POTS is set to N. When RES is entered at

the LCC prompt, the resulting RES line defaults to a one-party flat rate (RES 1FR) line.

Note 2: It is not possible to convert a POTS coin line to a RES coin line by using the ADO and CHF commands when field RES_AS_POTS is set to N. If a RES-specific option is added to the options list when field RES_AS_POTS is set to N, the SERVORD is rejected because of LCC-option compatibility checking.

SERVORD limitations and restrictions

Field RES_AS_POTS set to Y is required for automatic conversion between POTS and RES coin lines. If field RES_AS_POTS is set to N, the CHG command is used to change a POTS coin line to a RES coin line.

SERVORD example for adding COIN on RES

The following SERVORD example shows how COIN on RES is added to a new line using the NEW command.

Note: Although option CNDB is used in the following SERVORD examples, any RES-specific option entered at the OPTION prompt has the effect of converting the line from POTS to RES or RES to POTS.

COIN on RES (continued)

SERVORD example for COIN on RES in prompt mode using NEW command

```
>SERVORD
SO:
> NEW
SONUMBER: NOW 91 5 12 AM
>
DN:
> 6211002
LCC:
> CDF
LATANAME:
> NILLATA
LTG: 0
>
LEN_OR_LTID:
> 00 0 00 09
OPTION:
> DGT CNDB $
COMMAND AS ENTERED:
NEW NOW 91 5 12 AM 6211002 CDF NILLATA 0 HOST 00 0 00 09
(DGT) (CNDB) $
There is a RES specific option in the option set.
Line will become a RES line.
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
> Y
```

SERVORD example for COIN on RES in no-prompt mode

```
> NEW $ 6211002 CDF NILLATA $ 00 0 00 09  DGT CNDB $ Y
```

The following SERVORD example shows how COIN on RES is added to a line using the ADO command.

COIN on RES (continued)

SERVORD example for COIN on RES in prompt mode using ADO command

```
>SERVORD
SO:
> ADO
SONUMBER: NOW 91 5 12 AM
>
DN:
> 6211002
OPTION:
> CNDB
OPTION:
> $
COMMAND AS ENTERED:
NEW NOW 91 5 12 AM 6211002 (CNDB) $
There is a RES specific option in the option set.
Line will become a RES line.
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
> Y
```

SERVORD example for COIN on RES in no-prompt mode

```
> ADO $ 6211002 CNDB  $ Y
```

The following SERVORD example shows how COIN on RES is deleted from a line using the DEO command.

COIN on RES (end)

SERVORD example for COIN on RES in prompt mode using DEO command

```
>SERVORD
SO:
> DEO
SONUMBER: NOW 85 07 08 AM
>
DN_OR_LEN:
> 6211002
OPTION:
> CNDB
OPTION:
> $
COMMAND AS ENTERED:
DEO NOW 91 5 12 AM 6211002 (CNDB) $
No RES specific option left on line.
Line will become a POTS CDF line.
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
> Y
```

SERVORD example for COIN on RES in no-prompt mode

```
>DEO $ 6211002 CNDB $ Y
```

Group Intercom (GIC)

Ordering codes

Functional group ordering code: RES00006

Functionality ordering code: not applicable

Release applicability

BCS26 and up

Prerequisites

To operate, Group Intercom (GIC) has the following prerequisites:

- BAS Generic, BAS00006
- RES Advanced Custom Calling, RES00002
- MDC Standard, MDC00003
- MDC Minimum, MDC00001

Description

The Group Intercom (GIC) feature allows members of a given GIC group to call other group members by dialing their intercom member number. This number consists of fewer digits than a directory number (DN).

Operation

Intercom groups can be configured in four different sizes. In the following table, the four group sizes are defined, as well as the digits that are used to dial the members in each group.

GIC group size limitations and member numbers

Group size (in numbers)	Digits used to dial member numbers
0-10	0-9 (single digit)
11-100	00-99 (2 digits)
101-1000	000-999 3 digits)
1001-10,000	0000-9999 (4 digits)

Compatible features

The GIC feature is compatible with the following features:

- Three-Way Calling (3WC)
- Call Transfer (CXR)

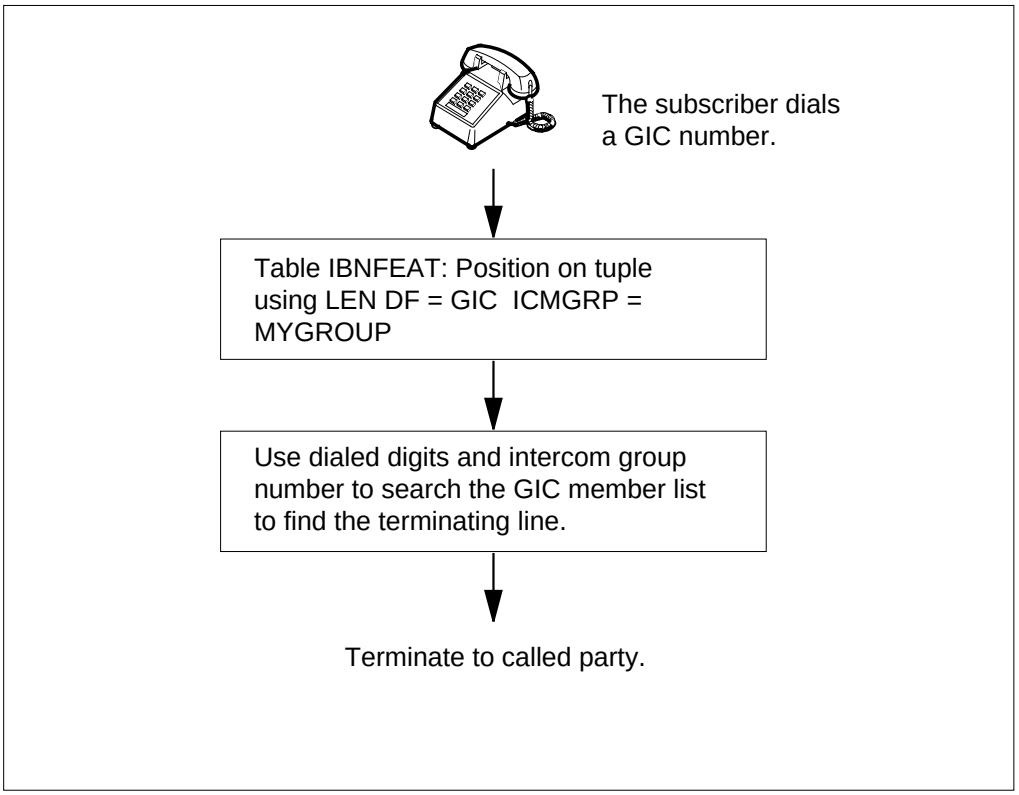
Group Intercom (GIC) (continued)

- Call Hold (CHD)
- Call Waiting (CWT)
- Call Waiting Origination (CWO)
- Dial Call Waiting (CWD)
- Call Forwarding Busy Line (CFBL)
- Directed Call Pickup - Non Barge-in (DCPU)

Translations table flow

The Group Intercom (GIC) translation process is shown in the flowchart that follows.

Table flow for Group Intercom (GIC)



Group Intercom (GIC) (continued)

Limitations and restrictions

The following limitations and restrictions apply to Group Intercom (GIC):

- The GIC feature can only be used to complete calls between members of the same GIC group.
- GIC dialing is restricted to DMS-100 RES or Integrated Business Network (IBN) line class codes (LCC).
- A maximum of 4095 GIC groups are allowed on a DMS-100 switch.
- The GIC groups on a switch can be placed in one customer group, or they can be split between several customer groups.
- All members added to a GIC group must belong to the same customer group as the first member of the group and must have the same number of digits in their member numbers.
- A station can only be a member of one GIC group.

The following features are incompatible with GIC:

- Multiple Appearance Directory Number (MADN) feature (all types)
- Speed Calling Short List (SC1), Speed Calling Long List (L30) (SC2), Speed Calling Long List L50 (SC3), and Network Speed Calling

Interactions

The following paragraphs describe the interactions between Group Intercom (GIC) and other functionalities.

Call Forward

Call Forwarding cells cannot store the octothorpe (#) that precedes all GIC member group numbers. The regular DN must be used as the call forward number instead of the GIC member number for Call Forwarding Universal (CFU) and Call Forwarding Intragroup (CFI).

Call Pickup

The Call Pickup (CPU) feature can be used to pick up a GIC call provided the called party and the subscriber attempting CPU are in the same pickup group.

Denied Incoming and Denied Termination

The GIC feature can be assigned to a Subscriber Services line with the Denied Incoming (DIN) or Denied Termination (DTM) features. Although incoming calls are not allowed by DIN or DTM, the subscriber can use the GIC feature to call other GIC members.

Group Intercom (GIC) (continued)

Denied Origination

The GIC feature can be assigned to a Subscriber Services line with the Denied Origination (DOR) feature. Although outgoing calls are not allowed by DOR, the subscriber can receive GIC calls.

Hunt Groups

The pilot of a Multiline Hunt (MLH) group, Distributed Line Hunt (DLH) group, or Directory Number Hunt (DNH) group can be a member of a GIC group. Each member of a DNH group can also be a member of a GIC group; however, if a call is terminated on a GIC member, hunting does not take place.

Activation/deactivation by the end user

The following procedure shows how to activate GIC.

Activation/deactivation of Group Intercom (GIC) by the end user

At your telephone

1 Lift the hand set and wait for dial tone.

2 Dial an octothorpe (#), followed by the intercom member number of the party that is being called.

3 The call proceeds as if the terminating DN had been dialed, and the called party simply goes off-hook to answer the call.

Billing

Group Intercom (GIC) does not affect billing.

Station Message Detail Recording

Group Intercom (GIC) does not affect Station Message Detail Recording.

Datafilling office parameters

Group Intercom (GIC) does not affect office parameters.

Group Intercom (GIC) (continued)

Datafill sequence

The following table lists the tables that require datafill to implement Group Intercom (GIC). The tables are listed in the order in which they are to be datafilled.

Note: The following table is datafilled through SERVORD. Therefore, no datafill procedure or example is provided. Refer to “SERVORD" for an example of using SERVORD to datafill this table.

Datafill tables required for Group Intercom (GIC)

Table	Purpose of table
IBNFEAT	IBN Line Features. This table defines the functionalities assigned to each MDC or RES lines.

Translation verification tools

Refer to “Translations table flow" in this feature description for more information on verification tools.

SERVORD

SERVORD is used to add or delete GIC members to or from a GIC group with the ADO (add option) and DEO (delete option) service order commands.

Table IBNFEAT (IBN Line Feature) is datafilled through SERVORD and defines the features assigned to each RES line.

SERVORD limitations and restrictions

Group Intercom (GIC) has no SERVORD limitations and restrictions.

SERVORD prompts

The following table shows the SERVORD prompts used to assign Group Intercom (GIC) to a line.

SERVORD prompts for Group Intercom (GIC) (Sheet 1 of 2)

Prompt	Valid input	Explanation
OPTION	GIC	Specifies the service to be established, modified, or deleted
GICNAME	Any name, up to 8 characters	Specifies the designated name of the Group Intercom Line

Group Intercom (GIC) (continued)

SERVORD prompts for Group Intercom (GIC) (Sheet 2 of 2)

Prompt	Valid input	Explanation
GICMEMNO	A vector of up to 4 digits	Specifies the member number of the line
GICSMDR	Y or N	Specifies whether or not Station Message Detail Recording is required
GICNOMSB	Y or N	Specifies whether or not Make Set Busy is ignored

SERVORD example for <adding/deleting/changing> Group Intercom (GIC)

The following SERVORD example shows how a line with DN 7334401 is added to intercom group 41. In this example, SMDR records are not to be produced for GIC calls made from this line.

SERVORD example for setting up Group Intercom (GIC) using ADO with input in prompt mode

```
>SERVORD
SO:
> ADO
SONUMBER:  NOW 89 09 12 AM
>
DN_OR_LEN:
> 7334401
OPTION:
> GIC
GICNAME:
> MYGROUP
GICMENO:
> 41
GICSMDR:
> N
GICNOMSB:
> N
OPTION:
> $
COMMAND AS ENTERED:
ADO NOW 89 09 1 AM 7334401 (GIC MYGROUP 41 N N) $
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
> Y
```

Group Intercom (GIC) (end)

SERVORD example for setting up Group Intercom (GIC) using ADO with input in no-prompt mode

```
>ADO $ HOST 7334401 GIC MYGROUP 41 N N $Y
```

RES Base

Ordering codes

Functional group ordering code: RES00006

Functionality ordering code: not applicable

Release applicability

BCS32 and up

Prerequisites

To operate, RES Base has the following prerequisites:

- BAS Generic, BAS00003
- MDC Standard, MDC00003
- MDC Minimum, MDC00001

Description

The RES Base feature package includes the features and tables required to complete the Subscriber Services RES Base datafill.

Operation

RES base provides the platform for the implementation of sophisticated phone services to residential subscribers and small businesses previously serviced on plain old telephone service (POTS) lines (one-party flat rate [1FR], one-party message rate [1MR], wide area telephone service [WATS]), or Integrated Business Network (IBN) lines.

RES Base provides access to most of the features available to POTS, plus additional features available in Meridian Digital Centrex (MDC). The Residential Enhanced Services (RES), or Subscriber Services, line class code (LCC) supports the standard dial pulse and Digitone sets.

Translations table flow

Refer to “Translation verification tools" for information on the RES Base translation process.

Limitations and restrictions

RES Base has no limitations or restrictions.

Interactions

RES Base has no functionality interactions.

Activation/deactivation by the end user

RES Base requires no activation or deactivation by the end user.

Billing

RES Base does not affect billing.

Station Message Detail Recording

RES Base does not affect Station Message Detail Recording.

Datafilling office parameters

Office parameter RES_SO_SIMPLIFICATION in table OFCVAR controls the changes to Service Order System (SERVORD) prompts. This office parameter contains two fields: RES_AS_POTS and ENHANCED_POTS_OPTIONS.

- Setting RES_AS_POTS to Y activates the prompts needed to implement the simplified service order input facility. (The default setting is Y.)
- Setting ENHANCED_POTS_OPTIONS to Y activates the prompts needed to assign additional call forwarding options to lines through SERVORD. (The default setting is N.)

Refer to “Enabling service order simplification" for more information on how the RES_SO_SIMPLIFICATION office parameter affects SERVORD prompts.

The following table shows the office parameters used by RES Base. For more information about office parameters, refer to *Office Parameters Reference Manual.*

Office parameters used by RES Base

Table name	Parameter name	Explanation and action
OFCVAR	RES_SO_SIMPLIFICATION	This parameter provides the ability to consider RES lines as POTS lines from within SERVORD. When field RES_AS_POTS is set to Y, during execution of SERVORD commands ADO, DEO, and CHF, a line can automatically be changed from a POTS line to a RES line or a RES line to a POTS line. (The default setting is Y.) When field ENHANCED_POTS_OPTIONS is set to N, additional call forwarding prompts do not appear. (The default setting is N.)

RES Base (continued)

Datafill sequence

The following table lists the tables that require datafill to implement RES Base. The tables are listed in the order in which they are to be datafilled.

Datafill tables required for RES Base

Table	Purpose of table
OFCVAR	Variable Office Parameter. This table contains data on variable office parameters for the office. Refer to “Datafilling office parameters" for how RES Base affects office parameters.
XLANAME	List of Translator Names. This table sets up translators.
CUSTENG	Customer Group Engineering. This table sets values for engineering parameters and options for each of the customer groups.
DIGCOL	IBN Digit Collection. This table specifies what action the switch takes upon receipt of the first digit dialed.
CUSTHEAD	Customer Group Head. This table creates values and options for customer groups.
NCOS	Network Class of Service. This table assigns network class of service (NCOS).
IBNXLA	IBN Translations. This table stores data for digit translation of calls from a station.
CUSTSTN	Customer Group Station Option Table. This table assigns station options to each of the customer groups.
IBNTREAT	IBN Treatment. This table routes calls that fall through the translators that have no default.
LINEATTR	Line Attribute. This table associates customer groups, subgroups, and NCOS with lines. Table LINEATTR must be datafilled for a POTS office before adding Subscriber Services lines. Table LINEATTR datafill must be modified after table CUSTENG is datafilled.
CUSTNTWK	Customer Group Network. This table specifies network names for each different customer group in the office (affects both the customer groups being added for Subscriber Services and all other customer groups).

Datafilling table XLANAME

Table XLANAME (Translator Name) contains the names of the Subscriber Services translators. The main translator is RXCMNn, where n is the line attribute index (LAI). This translator has a default translation specifying that

all Subscriber Services calls are sent to POTS translations through the NET and GEN selectors.

Note: There are always two tuples for every LAI: a main translator and a secondary translator. Use the LAIs established in the planning chart for field LINEATTR. This entry must match the LNATTIDX entry in table LINEATTR.

The following table shows the datafill specific to RES Base for table XLANAME. Only those fields that apply directly to RES Base are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table XLANAME (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
XLANAME		RXCMN200	Translator name. This field specifies the 1- to 8-character name assigned to the translator in the planning chart. Enter RXCMN200.
DEFAULT		see subfields	Defaults. This field consists of subfields TRSEL, ACR, SMDR, , NO_ACCODE_DIGITS, SECOND_DIAL_TONE, DGCOLNM, CRL, INTRAGRP, NET_TYPE, OPTION, and LINEATTR.
	TRSEL	NET	Translation selector. This subfield specifies the translation selector. Enter NET.
	ACR	Y or N	Account code entry. This subfield specifies whether to dial the general network access code in field DGLIDX. Enter Y or N. The recommended value is N.
	SMDR	Y or N	Station Message Detail Recording. This subfield specifies whether SMDR is required for calls originated by a customer group station or an attendant console. Enter Y or N. The recommended value is N.
	NO_ACCODE_ DIGITS	0 to 7	Number of access code digits. This subfield specifies the number of digits in the general network access code. Enter a value from 0 to 7.
	SECOND_ DIAL_TONE	Y or N	Second dial tone. This subfield specifies whether a second dial tone is required. Enter Y or N. The recommended value is N.

RES Base (continued)

Datafilling table XLANAME (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	DGCOLNM	NDGT	Digit collection name. This subfield specifies the name assigned in table DIGCOL for digit collection for MDC lines. Enter the name. (The recommended value is NDGT.)
	CRL	Y or N	Code restriction level. This subfield specifies whether code restrictions apply. Enter Y or N. The recommended value is N.
	INTRAGRP	Y	Intragroup. This subfield specifies whether calls can go beyond customer group boundaries. Enter Y.
	NET_TYPE	GEN	Network type. This subfield specifies the network type. Enter GEN.
	OPTION	LATTR	Option. This subfield specifies the option. Enter LATTR.
	LATTR	0 to 4095	Line attribute. This subfield specifies the LAI to be used. To ensure that the LAI matches throughout the tables, enter the LAI specified in the planning chart.
MAXDIGS		9, C, or F	Maximum digits. This field specifies the allowable values for the digilator field (DGLIDX) of table IBNXLA. The MAXDIGS value for a particular tuple is associated with the translator for that tuple. Enter 9 to allow digits 0 to 9; enter C to allow digits 0 to 9 and B to C; enter F to allow digits 0 to 9 and B to F. Default value is 9.

Datafill example for table XLANAME

The following example shows sample datafill for table XLANAME.

MAP display example for table XLANAME

```
XLANAME                                          DEFAULT MAXDIGS
_____________________________________________________________
NILXLA                                             $    9
RXCFN                                              $    9
RESXLA                                             $    9
RXCMN200
(NET N N N 0 N NDGT N Y GEN ( LATTR 200) $ )       $    9

RXCML200
(NET N N N 0 N NDGT N Y GEN ( LATTR 200) $ )       $    9

RXCMN201
(NET N N N 0 N NDGT N Y GEN ( LATTR 201) $ )       $    9

RXCML201
(NET N N N 0 N NDGT N Y GEN ( LATTR 201) $ )       $    9
```

This example shows the datafill required to assign Subscriber Services lines that are in the same serving numbering plan area (SNPA) but have a different LAI. This is done by using multiple NCOSs within one customer group. The same result is achieved by datafilling multiple customer groups with only one NCOS.

The translators in this example follow:

- NILXLA is used as a nil customer group translator.
- RXCFN is the feature translator.
- RESXLA is a dummy customer group translator. (This translator is used for feature translation for lines belonging to either NCOS. It is assigned at the customer group level.)
- RXCMxxxx is the main translator, where xxx is the LAI to be used by the translator. (This translator has a default translation specifying that all Subscriber Services calls are sent to POTS translations through the NET and GEN selectors. Option LATTR of the network GEN selector specifies the LAI used by the translator. The two main translators datafilled in this example are RXCMN200 and RXCMN201. They are assigned in table NCOS.)
- RXCMLxxx is the secondary translator, where xxx is the LAI specified in the network GEN selector. (This translator is used for the ambiguous translation of dialed numbers depending on the initial digit dialed and on the total number of digits dialed. The two secondary translators datafilled

RES Base (continued)

in this example are RXCML200 and RXCML201. They are assigned in table NCOS.)

Datafilling table CUSTENG

Table CUSTENG (Customer Group Engineering) contains line engineering information about a customer group.

The following table shows the datafill specific to RES Base for table CUSTENG. Only those fields that apply directly to RES Base are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table CUSTENG (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
CUSTNAME		RESGRP	Customer group name. This field specifies the name assigned to the customer group. Use the name in the planning chart. Enter RESGRP.
NONCOS		0 to 511	Number of Network Class Of Service Numbers. This field specifies the number of NCOS numbers for the customer group. This value is one more than the number of NCOS numbers entered in the planning chart. There is one NCOS number for every LAI with a line class code (LCC) of 1FR. For example, if you have three LAIs with an LCC of 1FR, set the NONCOS value to 3 (that is, the number of rows in your planning chart). Enter a value from 0 to 511.
NOIBNTMT		0 to 63	Number of IBN treatments. This field specifies the number of MDC treatments required for this customer group. Enter a value from 0 to 63.
CONSOLES		N	Attendant consoles. This field specifies whether attendant consoles are supported. Subscriber Services lines do not support attendant consoles. Enter N.
DOMAIN		PUBLIC	Customer group type. This field specifies the customer group type (public or private). Enter PUBLIC.

Datafilling table CUSTENG (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
GROUPID		0 to 4095	MDC group ID range. This field specifies the MDC group ID. Enter the range of the MDC group IDs. Enter a value from 0 to 4095.
OPTIONS		see explanation	Options list. This field specifies the options assigned to the customer group. Enter the options.

Datafill example for table CUSTENG

The following example shows sample datafill for table CUSTENG. The example indicates that there are no attendant consoles for the Subscriber Services customer group.

MAP display example for table CUSTENG

```
CUSTNAME NONCOS NOIBNTMT CONSOLES DOMAIN GROUPID  OPTIONS
_____________________________________________________________
RESGRP     2         1       N    PUBLIC     0        $
```

Datafilling table DIGCOL

Table DIGCOL (IBN Digit Collection) contains the specified action that the switch is to take on receipt of the first digit or the octothorpe (#).

RES Base (continued)

The following table shows the datafill specific to RES Base for table DIGCOL. Only those fields that apply directly to RES Base are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table DIGCOL

Field	Subfield or refinement	Entry	Explanation and action
DGKEY		see subfields	Digit key. This field consists of the subfields DATNAME and DIGIT.
	DATNAME	1- to 8-alphanumeric	Name digit collection table. This subfield specifies the name assigned to the block of data in table DIGCOL. Enter the 1- to 8-alphanumeric name.
	DIGIT	0 to 9 or OCT	Digit. This subfield specifies the digit. Enter a value from 0 to 9, or OCT (for octothorpe).
DGDATA		see subfield	Digit collection data. This field consists of the subfield DGCOLSEL.
	DGCOLSEL	RES	Digit collection selector. This subfield specifies the digit collection selector. Enter RES.

Datafill example for table DIGCOL

The following example shows sample datafill for table DIGCOL.

MAP display example for table DIGCOL

```
DGKEY      DGDATA
_____________________________________________________________
RESDC        0         RES
RESDC        1         RES
RESDC        2         RES
RESDC        3         RES
RESDC        4         RES
RESDC        5         RES
RESDC        6         RES
RESDC        7         RES
RESDC        8         RES
RESDC        9         RES
RESDC       OCT       COL       L       2
```

Datafilling table CUSTHEAD

Table CUSTHEAD (Customer Group Head) contains information that applies to all lines in a customer group. This table specifies the name for the Subscriber Services digit collection. Option VACTRMT is added to direct calls when the system fails to match the digits dialed to a tuple in the translator that has no default.

The following table shows the datafill specific to RES Base for table CUSTHEAD. Only those fields that apply directly to RES Base are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table CUSTHEAD (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
CUSTNAME		RESGRP	Customer group name. This field specifies the name assigned to the customer group. For Subscriber Services customer groups, the customer group name is the same for all LAIs. For Subscriber Services lines there is only one customer group. Enter RESGRP.
CUSTXLA		RESXLA	Customer translator. This field specifies the name of the dummy customer group translator assigned in table IBNXLA. Enter RESXLA.
DGCOLNM		RES	Digit collection name. This field specifies the digit collection name. Enter RES.
IDIGCOL		NIL	International digit collection. This field specifies the international digit collection name. Enter NIL.
OPTIONS		VACTRMT	Options. This field specifies the options assigned to the customer group. Enter VACTRMT.
	VACTRMT	0	Vacant treatment. This subfield specifies the vacant number treatment. Enter 0.
OPTIONS		EXTNCOS	Options. This field specifies the options assigned to the customer group. Enter EXTNCOS.
	EXTNCOS	0	External Network Class Of Service. This subfield specifies the NCOS assigned to calls originating outside the customer group. Enter 0.

RES Base (continued)

Datafilling table CUSTHEAD (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
OPTIONS		FEATXLA	Options. This field specifies the options assigned to the customer group. Enter FEATXLA.
	XLANAME	RXCFN	Translator name. This subfield specifies the feature translator name in table IBNXLA. Enter RXCFN.

Datafill example for table CUSTHEAD

The following example shows sample datafill for table CUSTHEAD.

MAP display example for table CUSTHEAD

```
 RESGRP    RESXLA     RES       NIL
      (VACTRMT 0) (EXTNCOS 0)
(FEATXLA  RXCFN) $
```

Datafilling table NCOS

Table NCOS (Network Class of Service) assigns the NCOS for each line individually. The main translators are assigned in table NCOS.

The following table shows the datafill specific to RES Base for table NCOS. Only those fields that apply directly to RES Base are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table NCOS (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
CUSTGRP		RESGRP	Customer group name. This field specifies the name assigned to the customer group. Use the name in the planning chart. Enter RESGRP.
NCOS		0 to 511	Network class of service. This field specifies the NCOS number. Enter a value from 0 to 511.

Datafilling table NCOS (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
NCOSNAME		see explanation	Network class of service name. This field specifies the NCOS name. Enter a unique name for each NCOS.
LSC		0	Line screening code. This field specifies the line screening code. Enter 0.
TRAFSNO		0 or 10 to 27	Traffic separation number. This field specifies the traffic separation number. If this is the first record for the NCOS number, enter the traffic separation number assigned to the NCOS in table TFANINT. Enter 0 or a value from 10 to 27.
OPTIONS		XLAS	Translator and digit collection option. This field specifies the option. Enter XLAS. This field also consists of subfields PRELMXLA, FEATXLA, and DGCOLNM
	PRELMXLA	RXCMN200	Preliminary translator. This subfield specifies the name of the translator assigned to the NCOS number. Enter RXCMN200.
	FEATXLA	NXLA	Feature translator. This subfield specifies the name of the feature translator. Enter NXLA.
	DGCOLNM	RES	Digit collection name. This subfield specifies the digit collection name. Enter RES.

Datafill example for table NCOS

The following example shows sample datafill for table NCOS. In this example, the NCOS name is RNCOSA0, the line screening code is 0, and the traffic separation number is 0.

MAP display example for table NCOS

```
CUSTGRP      NCOS    NCOSNAME    LSC     TRAFSNO
   OPTIONS
_____________________________________________________
RESGRP         0      RNCOS0       0    0
   (XLAS RXCMN200 NXLA RES) $
```

RES Base (continued)

Datafilling table IBNXLA

Table IBNXLA (IBN Translations) contains the data for the digit translations of calls from an MDC station, attendant console, or incoming side of a two-way IBN trunk group. All codes that are not feature codes are sent to POTS translations.

The three distinct translators that must be datafilled for table IBNXLA follow:

- RXCFN is the office-wide feature translator. Enter one tuple for each feature code that is assigned. In each of these tuples, the value should be set to RXCFN. Use the same name used in table CUSTHEAD for the feature code translator, for example, RXCFN.
- STAR is the star (asterisk) translator. Enter one tuple for each LAI.
- AMBIG is the ambiguous translator. Enter one tuple for each digit that can use the AMBIG translator for each LAI.

  Note: Attendent Consoles with selector Ambig datafill, do not use the table DIGCOL, instead the time duration for dialing is set by a hardcodded statement in Module ACSET which sets the duration to 10 seconds.

Feature access codes

The operating company must assign feature access codes to features such as Call Pickup (CPU) that do not have access codes determined by the LATA Switching System Generic Requirements (LSSGR). The following table lists the feature access codes that are provided in the dial plan and are based on the LSSGR. For each access code, there must be one tuple in table IBNXLA based on the following datafill procedure.

Note: 11 is equivalent to * on dial pulse phone sets.

Feature access codes

Access code	Feature	Feature code
*70 or 70	Cancel Call Waiting	CCW
*72 or 72	Call Forwarding Programming	CFWP
*73 or 73	Call Forwarding Cancel	CFWC
*74 or 74	Speed Call Short Program	SCPS
*75 or 75	Speed Call Long Program	SCPL

Datafilling table IBNXLA for the FEAT translator

The FEAT translation selector is required in a feature translator when the digit or digits dialed is the access code for a Subscriber Services feature.

Note: Datafill one tuple for each feature access code listed in the previous table, “Feature access codes." For each tuple, enter the feature access code used in subfield DGLIDX and datafill subfield FEATURE with the feature code that corresponds to the access code shown in the table. For example, feature code CCW corresponds to access code 70.

The following table shows the datafill specific to RES Base for table IBNXLA for the FEAT translator. Only those fields that apply directly to RES Base are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table IBNXLA for the FEAT translator

Field	Subfield or refinement	Entry	Explanation and action
KEY		see subfields	Key. This field consists of the subfields XLANAME and DGLIDX.
	XLANAME	RXCFN	Translator name. This subfield specifies the 1- to 8-character name assigned to the translator in the planning chart. Enter RXCFN.
	DGLIDX	digits	Digilator index. This subfield specifies the digit or digits assigned to the index. Enter the digits.
RESULT		see subfields	Result. This field consists of the subfields TRSEL, ACR, SMDR, and FEATURE.
	TRSEL	FEAT	Translation Selector. This subfield specifies the translation selector. Enter FEAT.
	ACR	Y or N	Account code entry. This subfield specifies whether the account code entry is required. Enter Y or N.
	SMDR	Y ore N	Station Message Detail Recording. This subfield specifies whether SMDR is required for calls originated by a customer group station or an attendant console. Enter Y or N.
	FEATURE	see explanation	Feature. This subfield specifies the name of the feature to which the code is assigned. Enter SCPL, for example.

RES Base (continued)

Datafill example for table IBNXLA for the FEAT translator

The following example shows sample datafill for table IBNXLA for the FEAT translator.

MAP display example for table IBNXLA for the FEAT translator

```
              KEY                 RESULT
________________________________________________________________________
RXCFN      75   FEAT   N   N   N SCPL
```

Datafilling table IBNXLA for the STAR translator

The STAR translation selector is used to specify digits on a dial pulse phone that are equivalent to the asterisk button on a Digitone phone.

The following table shows the datafill specific to RES Base for table IBNXLA for the STAR translator. Only those fields that apply directly to RES Base are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table IBNXLA for the STAR translator

Field	Subfield or refinement	Entry	Explanation and action
KEY		see subfields	Key. This field consists of the subfields XLANAME and DGLIDX.
	XLANAME	alphanumeric	Translator name. This subfield specifies the 1- to 8-character name assigned to the translator. Enter the name.
	DGLIDX	numeric	Digilator index. This subfield specifies the digit or digits assigned to the index.
RESULT		see subfield	Result. This field consists of numerous subfields. However, only subfield TRSEL is affected.
	TRSEL	STAR	Translation selector. This subfield specifies the translation selector. Enter STAR.

Datafill example for table IBNXLA for the STAR translator

The following example shows sample datafill for table IBNXLA for the STAR translator.

MAP display example for table IBNXLA for the STAR translator

```
                KEY          RESULT

_____________________________________________________________

RXCMN200        11           STAR
```

Datafilling table IBNXLA for the AMBIG translator

The AMBIG translation selector allows ambiguity in the dialing plan, depending on the initial digit dialed and the total number of digits dialed.

The following table shows the datafill specific to RES Base for table IBNXLA for the AMBIG translator. Only those fields that apply directly to RES Base are shown. For a description of the other fields, refer to the data schema section of this document.

Note: Attendent Consoles with selector Ambig datafill, do not use the table DIGCOL, instead the time duration for dialing is set by a hardcoded statement in Module ACSET which sets the duration to 10 seconds.

Datafilling table IBNXLA for the AMBIG translator (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
KEY		see subfields	Key. This field consists of the subfields XLANAME and DGLIDX.
	XLANAME	alphanumeric	Translator name. This subfield specifies the 1- to 8-character name assigned to the translator. Enter the name.
	DGLIDX	numeric	Digilator index. This subfield specifies the digit or digits assigned to the index. Enter the recommended value of 7. If the feature access codes (FEAT selector) are datafilled in the 60s, an extra tuple is required with an ambiguous code set to 6.

RES Base (continued)

Datafilling table IBNXLA for the AMBIG translator (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
RESULT		see subfields	Result. This field consists of the subfields TRSEL, ACR, SMDR, and FEATURE. Only TRSEL is described below.
	TRSEL	AMBIG	Translation selector. Enter AMBIG. This subfield consists of the subfields SHORTXLA, MAXSHDIG, and LONGXLA when TRSEL is set to AMBIG.
	SHORTXLA	see explanation	Short translator name. This subfield specifies the translator when the number of digits dialed is less than or equal to that specified in field MAXSHDIG. Enter RXCFN, for example.
	MAXSHDIG	2	Maximum short digits. This subfield specifies the maximum number of digits in the short digit string. Enter 2.
	LONGXLA	see explanation	Long translator name (secondary translator). This subfield specifies the translator when the number of digits dialed is greater than that specified in field MAXSHDIG. See the entry for the 2NDTRAN column in the planning chart.

Datafill example for table IBNXLA for the AMBIG translator

The following example shows sample datafill for table IBNXLA for the AMBIG translator.

MAP display example for table IBNXLA for the AMBIG translator

```
        KEY                        RESULT
________________________________________________________
RXCMN200    7   AMBIG RXCFN 2 RXCML200
```

If feature access codes are in the range 60 to 69, the following tuple should be datafilled for each main translator.

```
                KEY                          RESULT

_____________________________________________________

RXCMN200        6     AMBIG RXCFN 2 RXCML200
```

Datafilling table CUSTSTN

Table CUSTSTN (Customer Group Station Option) contains the station options assigned to each customer group. The available options follow:

- Option AMBISC (variable speed calling access code) permits users to dial speed call access codes and abbreviations without the “*" prefix.
- Option CFDATIM (call forwarding don't answer time-out) sets the time before a call is forwarded to a default value of 30 s.
- Option CFWVAL (call forwarding validation) is enforced on Subscriber Services lines.
- Option CFXFEAT (call forwarding feature) indicates that a splash ring is to be applied to the base station when a call from outside the Subscriber Services group is forwarded and the base station is idle. (A splash ring, a 0.5-s ring, is always given to the base station when a call from within the customer group is forwarded.)
- Option CFXOPT (call forwarding options) sets various call forwarding options.
- Option CRRNOKSH (call request retrieve/keyset short hunt interaction control) can set the call hunting for CRR according to KSH.
- Option CXFER indicates that Call Transfer (CXR) is not allowed in Subscriber Services customer groups as a group option. CXR is a Subscriber Services line option.
- Option CXFERSUP (call transfer enhanced) provides supervision for transferred calls to prevent undetected disconnections.
- Option RAGTIM (ring again timer) sets the time to alert a line that the called party is now idle to a default value of 8 s.

RES Base (continued)

- Option SCVAL (speed calling validation) provides validation when programming speed call cells.
- Option SOR (station origination restrictions) allows a DN with option SOR to apply a restriction level against another DN or group of DNs in the same customer group.

The following table shows the datafill specific to RES Base for table CUSTSTN. Only those fields that apply directly to RES Base are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table CUSTSTN

Field	Subfield or refinement	Entry	Explanation and action
CUSTNAME		RESGRP	Customer group name. This field specifies the name assigned to the customer group. Use the name in the planning chart. Enter RESGRP.
OPTNAME		AMBISC, CFDATIM, CFWVAL, CFXFEAT, CFXOPT, CRRNOKSH, CXFER, CXFERSUP, RAGTIM, SCVAL, or SOR	Option name. This field specifies the name of the customer group station option. Enter AMBISC, CFDATIM, CFWVAL, CFXFEAT, CFXOPT, CRRNOKSH, CXFER, CXFERSUP, RAGTIM, SCVAL, or SOR.
OPTION		AMBISC, CFDATIM, CFWVAL, CFXFEAT, CFXOPT, CRRNOKSH, CXFER, CXFERSUP, RAGTIM, SCVAL, or SOR	Option. This field specifies the option to be added. Enter AMBISC, CFDATIM, CFWVAL, CFXFEAT, CFXOPT, CRRNOKSH, CXFER, CXFERSUP, RAGTIM, SCVAL, or SOR.

Datafill example for table CUSTSTN

The following example shows sample datafill for table CUSTSTN.

```
CUSTNAME    OPTNAME                                      OPTION
_____________________________________________________________

RESGRP      AMBISC                                   AMBISC L8 Y
RESGRP      CFDATIM                                  CFDATIM 30
RESGRP      CFWVAL                                    CFWVAL Y
RESGRP      CFXFEAT                                   CFXFEAT Y
RESGRP      CFXOPT                    CFXOPT N N N Y N N N N
RESGRP      CRRNOKSH                                  CRRNOKSH
RESGRP      CXFER                     CXFER   CTALL  N    STD
RESGRP      CXFERSUP   CXFERSUP ALLIBN CONF ALLPOTS CONF N
RESGRP      RAGTIM                                   RAGTIM 30 1
RESGRP      SCVAL                                    SCVAL
RESGRP      SOR                                      SOR
```

Datafilling table IBNTREAT

Table IBNTREAT (IBN Treatment) routes calls that do not have a default translator.

The following table shows the datafill specific to RES Base for table IBNTREAT. Only those fields that apply directly to RES Base are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table IBNTREAT (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
CUSTGRP		RESGRP	Customer group name. This field specifies the name assigned to the customer group. Use the name in the planning chart. Enter RESGRP.
IBNTRTMT		0	IBN treatment number. This field specifies the treatment number. Enter 0.
ITDATA		see subfields	IBN treatment data. This field consists of the subfields LOG, RTESEL and TRMTID.
	LOG	Y or N	Log. This subfield specifies whether a printout of a trunk or line message is required. Enter Y or N. The recommended value is N.

RES Base (continued)

Datafilling table IBNTREAT (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	RTESEL	TRMT	Route selector. This subfield specifies the route selector. Enter TRMT.
	TRMTID	PDIL	Treatment identifier. This subfield specifies the identifier or the treatment to which a call is routed from subtable TMTCNTL.TREAT. Enter the identifier. See the data schema section of this document for more information on subtable TMTCNTL.TREAT. The recommended value is PDIL (for partial dial treatment).

Datafill example for table IBNTREAT

The following example shows sample datafill for table IBNTREAT. In this example, a Subscriber Services line call is rerouted to partial dial time-out (PDIL) treatment.

MAP display example for table IBNTREAT

```
CUSTGRP     IBNTRTMT                        ITDATA
_____________________________________________________

RESGRP            0                  N TRMT PDIL
```

Datafilling table LINEATTR

Table LINEATTR (Line Attributes) associates translation attributes to a line of a different line class code (LCC). The one-party flat rate (1FR) and one-party message rate (1MR) tuples in the table form the link between the following:

- the POTS line information (used to handle calls from 1FR, 1MR, ETW, EOW, INW, OWT, and 2WW lines)
- the Meridian Digital Centrex (MDC) line information (used to handle calls from Subscriber Services lines)

Field RESINF and its subfields make the creation of RES lines identical to the creation of 1FR lines.

RES Base (continued)

Each 1FR and 1MR tuple in table LINEATTR must be amended to set subfield RESINFO to Y and to add the customer group and NCOS information required by MDC feature translations. Following is the MDC information required:

- CUSTGRP (customer group name)—This subfield must be set to a customer group name datafilled in table CUSTHEAD, field CUSTNAME. Refer to the data schema section of this document for details.
- SUBGRP (customer subgroup)—This subfield must be set to a subgroup datafilled in table SUBGRP. Refer to the data schema section of this document for details. The subgroup datafilled must be one of the subgroups associated with the customer group datafilled in field CUSTGRP. The recommended value is 0.
- NCOS (network class of service)—This subfield must be set to an NCOS datafilled in table NCOS, field NCOS. Refer to the data schema section of this document for details. The NCOS entered must be one of the NCOSes associated with the customer group datafilled in subfield CUSTGRP.

Note 1: Only tuples with an LCC of 1FR or 1MR accept an input with subfield RESINFO set to Y. Inserting Y in subfield RESINFO initiates prompts for the following subfields: CUSTGRP, SUBGRP, and NCOS.

Note 2: In table LINEATTR, subfield RESINFO can be changed from N to Y but cannot be changed from Y to N.

Note 3: Subfields CUSTGRP, SUBGRP, and NCOS in field RESINF cannot be modified by table editor commands.

The following table shows the datafill specific to RES Base for table LINEATTR. Only those fields that apply directly to RES Base are shown. For

RES Base (continued)

a description of the other fields, refer to the data schema section of this document.

Datafilling table LINEATTR

Field	Subfield or refinement	Entry	Explanation and action
LNATTIDX		0 to 31 999	Line attribute index. There are two tuples for every line attribute index: a main translator and a secondary translator. Enter the value according to the planning chart.
RESINF		see subfields	RES information. This field consists of the subfield RESINFO. When RESINFO is set to Y, the following subfields must be datafilled: CUSTGRP, SUBGRP, and NCOS. When RESINFO is set to N, the subfields should be left blank.
	RESINFO	Y or N	RES information. This subfield specifies whether the tuple is needed to support Subscriber Services RES lines. Enter Y.
	CUSTGRP	RESGRP	Customer group. This subfield specifies the customer group name defined in table CUSTENG. This entry associates Subscriber Services lines with this customer group. See the planning chart. Enter RESGRP.
	SUBGRP	0	Subgroup. This subfield is not used for Subscriber Services lines. Enter 0.
	NCOS	0 to 511	Network Class Of Service. This subfield associates Subscriber Services lines with this NCOS within the customer group. See the planning chart. Enter a value from 0 to 511.

Datafill example for table LINEATTR

The following example shows sample datafill for table LINEATTR.

MAP display example for table LINEATTR

```
LNATTIDX LCC CHGCLSS COST SCRNCL LTG STS  PRTNM LCANAME  ZEROMPOS
TRAFSO MRSA  SFC   LATANM  MDI IXNAME DGCLNAME FANIDIGS
RESINF              OPTIONS
_____________________________________________________________________
200      1FR  NONE    NT   FRO1   0  613  PKDK   L613    TSPS
10     NIL  NILSFC  NILLATA   0   NIL     NIL    00
Y  RESGRP  0   0      $
```

Datafilling table CUSTNTWK

Table CUSTNTWK (Customer Group Network) associates a customer group with

- a network name that identifies the dial plan used for outgoing calls and provides a link to table NETNAMES
- a network identifier used to identify the network in Common Channel Signaling No. 7 (CCS7) signaling messages (this field is not used for PUBLIC network calls)
- control information for calls received over that network, including
  - — the reverse translator name used to convert the ten-digit number received with an incoming call to a dialable DN format (required for Custom Local Area Signaling Services [CLASS], Dialable Number Delivery [DDN], and Automatic Recall [AR] features, but not required for RES Base)
  - — the ability to voice back DNs that are less than ten digits long for Screening List Editing (SLE) features
  - — information that determines whether the calling number should be shown on display phones for calls terminating within the customer group

For the implementation of Subscriber Services, a tuple is required in table CUSTNTWK to link the Subscriber Services customer group (RESGRP) with the public network dial plan (enter PUBLIC). The network identifier is mandatory but is not used for PUBLIC network calls. Option CLID must also be datafilled as follows.

RES Base (continued)

To ensure the correct operation of RES Base features, option CLID must be datafilled in the RESGRP tuple with a value of OFFNET, as shown in the following example.

Note: When adding the RES tuple to table CUSTNTWK, ensure that only tuples for groups using a public dial plan are datafilled with a network name of PUBLIC. Public dial plan users (such as Subscriber Services and Multiline Variety Package [MVP] subscribers) dial NXX-XXXX for local calls, 1 + NXX-XXXX for toll calls within their numbering plan area (NPA), and 1 + NPA-NXX-XXXX for other toll calls. The tuples for groups using a private dial plan should show a network name other than PUBLIC. Private dial plan users must dial a public network access code (usually 9) to access the public network.

The following table shows the datafill specific to RES Base for table CUSTNTWK. Only those fields that apply directly to RES Base are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table CUSTNTWK (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
CUSTNAME		RESGRP	Customer group name. This field specifies the name assigned to the customer group. Use the name in the planning chart. Enter RESGRP.
NETNAME		see explanation	Network name. This field specifies the name of the network. Enter PUBLIC for the Subscriber Services customer group. Enter a different name for other customer groups in the office.
NETCGID		1 to 4096	Network customer group identifier. This field is not used for Subscriber Services lines. Enter a value from 1 to 4096.
DNREVXLA		see subfields	DN reverse translators. This field consists of the subfields NETNAME, RXLANAME, and NUMDIGS.
	NETNAME	alphanumeric	Network name. This subfield specifies the 1- to 32-character name of the network. Enter PUBLIC for the Subscriber Services customer group. Enter a different name for other customer groups in the office.

Datafilling table CUSTNTWK (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	RXLANAME	DN10DXLA	Reverse translator name. This subfield specifies the reverse translator for Subscriber Services. Enter DN10DXLA.
	NUMDIGS	1 to 10	Number of digits. This subfield specifies the number of digits used in reverse translations process. Enter a value from 1 to10.
OPTIONS		CLID	Options. This field specifies the reverse translator name that identifies the tuples in table DNREVXLA that are used for reverse translations. Enter CLID.
	CLIDOPT	OFFNET	CLID options. This subfield specifies whether to display the calling number for all calls. Enter OFFNET to display the calling number for all calls.

Datafill example for table CUSTNTWK

The following example shows sample datafill for table CUSTNTWK.

MAP display example for table CUSTNTWK

```
CUSTNAME    NETNAME    NETCGID    DNREVXLA
   OPTIONS
_____________________________________________________________
RESGRP      PUBLIC       23      (PUBLIC DN10DXLA 10) $
   (CLID OFFNET)  $
```

Translation verification tools

The online tool for verifying the datafill of the RES Base feature package is the translations verification (TRAVER) application.

TRAVER

A TRAVER command simulates a call and displays the translation and routing tables accessed by the call. When calls should go to treatment (route, tone, or announcement), or do not follow their intended route, TRAVER allows the

RES Base (continued)

user to determine how the calls can be routed by displaying the following information:

- the tables used to translate and route a call
- each element of the route list with digits outpulsed
- each alternate conditional route

The TRAVER command displays the format of the RES tuple in table IBNLINES as well as the tuple in table LINEATTR that is referenced by the LAI stored in table IBNLINES. This format shows translations for calls originated from a Subscriber Services line.

Line-to-line call where lines have different LAIs

The TRAVER tool can be used to show the different translations of line-to-line calls originated from two Subscriber Services lines with different line attribute entries (LAI).

The following example shows the output from TRAVER when it is used to verify RES Base. It is an example of a simple line-to-line call. The originator is a Subscriber Services line belonging to NCOS 0 of customer group RESGRP. The destination is a 1FR line that is reached by going over a trunk. The class of service assigned through the LAI is FR01.

TRAVER output example for RES Base

```
>TRAVER L 6216051 6221234 'B47' B
  TABLE IBNLINES
  HOST 00 0 19 16 DNNO DT STN RES 6216051 200 $
  TABLE LINEATTR
  200 RES NONE NT FR01 0 613 P621 L613 TSPS 10 NIL NILSFC
        NILLATA 0 NIL NIL 00 Y RESGRP 0 0 $
  TABLE DNATTRS
  TUPLE NOT FOUND
  TABLE DNGRPS

  TUPLE NOT FOUND
  TABLE NCOS
  RESGRP 0 RNCOS 0 0  (XLAS RXCMN200 NXLA RES)$
  TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA,
      VACTRMT, AND DIGCOL
  RESGRP NXLA NILXLA RXCFN 0 RES
  TABLE DIGCOL
  RES SPECIFIED: RES DIGIT COLLECTION
  TABLE IBNXLA: XLANAME RXCMN200
  TUPLE NOT FOUND
  DEFAULT FROM TABLE XLANAME:
  RXCMN200
      (NET N N 0 N NDGT N Y GEN ( LATTR 200) $)$

  TABLE DIGCOL
  NDGT SPECIFIED: DIGITS COLLECTED INDIVIDUALLY.
  TABLE LINEATTR
  200 RES NONE NT FR01 0 613 P621 L613 TSPS 10 NIL NILSFC
        NILLATA 0 NIL NIL 00 Y RESGRP 0 0 $
  TABLE STDPRTCT
  P621 ( 1) ( 0)
   .  SUBTABLE STDPRT
   .  622 624 N NP 0 NA
   .  SUBTABLE AMAPRT
   .  KEY NOT FOUND
   .  DEFAULT VALUE IS:   NONE   N
```

RES Base (continued)

TRAVER output example for RES Base (continued)

```
TABLE HNPACONT
613 199 1 ( 47) ( 1) ( 84)
 .  SUBTABLE HNPACODE
 .  622 622 LRTE 2
 .  SUBTABLE RTEREF
 .   2 S D OTDP1
 .  EXIT TABLE RTEREF
EXIT TABLE HNPACONT
TABLE LCASCRCN
613 L613 ( 12) MNDT N
 .  SUBTABLE LCASCR
 .  622 622

TABLE PFXTREAT
MNDT NP Y NP UNDT
TABLE CLSVSCRC
KEY NOT FOUND
DEFAULT IS TO LEAVE XLA RESULT UNCHANGED

+++ TRAVER: SUCCESSFUL CALL TRACE +++

DIGIT TRANSLATION ROUTES
1 OTDP1                 6221234            ST
TREATMENT ROUTES.  TREATMENT IS: GNCT
1 *OFLO
2 LKOUT

+++ TRAVER: SUCCESSFUL CALL TRACE +++
```

The following example is the same as the preceding one except that the originator belongs to a different NCOS within the same customer group. The line has a different LAI, and the class of service is E613 instead of FR01. The class of service E613 does not allow the call to terminate on lines whose NXX is 622. Therefore, the call routes to a reorder treatment.

TRAVER output example (different NCOS call)

```
>TRAVER L 6216052 6221234 'B47' B
 TABLE IBNLINES
 HOST 00 0 19 03 DNNO DT STN RES 6216052 201 $
 TABLE LINEATTR
 201 RES NONE NT E613 1 613 P621 L613 TSPS 0 NIL NILSFC
    NILLATA 0 NIL NIL 00 Y RESGRP 0 1 $
 TABLE DNATTRS
 TUPLE NOT FOUND
 TABLE DNGRPS
 TUPLE NOT FOUND
 TABLE NCOS
 RESGRP 1 RNCOS2 0 0  ( XLAS RXCMN201 NXLA RES)$
 TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA,
     VACTRMT, AND DIGCOL
 RESGRP NXLA NILXLA RXCFN 0 RES

 TABLE DIGCOL
 RES SPECIFIED: RES DIGIT COLLECTION
 TABLE IBNXLA: XLANAME RXCMN201
 TUPLE NTABLE DIGCOL
 RES SPECIFIED: RES DIGIT COLLECTION
 TABLE IBNXLA: XLANAME RXCMN201
 TUPLE NOT FOUND
 DEFAULT FROM TABLE XLANAME:
 RXCMN201
     (NET N N 0 N NDGT N Y GEN ( LATTR 201) $)$
 TABLE DIGCOL
 NDGT SPECIFIED: DIGITS COLLECTED INDIVIDUALLY.
 TABLE LINEATTR
 201 RES NONE NT E613 1 613 P621 L613 TSPS 10 NIL NILSFC
    NILLATA 0 NIL NIL 00 Y RESGRP 0 1 $
 TABLE STDPRTCT
 P621 ( 1) ( 0)
  .  SUBTABLE STDPRT
  .  622 624 N NP 0 NA
  .  SUBTABLE AMAPRT
  .  KEY NOT FOUND
  .  DEFAULT VALUE IS:   NONE   NOT FOUND
  .
```

RES Base (continued)

TRAVER output example (different NCOS call) (continued)

```
TABLE HNPACONT
613 199 1 ( 47) ( 1) ( 84)
 .  SUBTABLE HNPACODE
 .  622 622 LRTE 2
 .  SUBTABLE RTEREF
 .   2 S D OTDP1
 .  EXIT TABLE RTEREF
EXIT TABLE HNPACONT

TABLE LCASCRCN
613 L613 ( 12) MNDT N
 .  SUBTABLE LCASCR
 .  622 622
TABLE PFXTREAT
MNDT NP Y NP UNDT
TABLE CLSVSCRC
613 E613 NP 2 N NONE ( 1)
 .  SUBTABLE CLSVSCR
 .  622 622 D RODR
TABLE TMTCNTL
LNT ( 106)

 .  SUBTABLE TREAT
 .  RODR Y T OFRT 55
 .  TABLE OFRT
 .  55 S D *OFLO
 .     S D LKOUT
 .  EXIT TABLE OFRT
TREATMENT ROUTES.  TREATMENT IS:
RODR
1 *OFLO
2 LKOUT

+++ TRAVER: SUCCESSFUL CALL TRACE
+++
```

Local Subscriber Services call

The following example shows a local line-to-line call.

TRAVER output example (local call)

```
>TRAVER L 6210017 6210019 'B47' B
 TABLE IBNLINES
 HOST 00 0 01 09 DNNO DT STN RES 6210017 1021 (COT) (ACB) (AR) $
 TABLE LINEATTR
 1021 1FR NONE NT NSCR 0 613 NCLN NLCA NONE 0 NIL NILSFC LATA1 0 NIL
 NIL 00 Y RESGRP 0 1 $
 TABLE DNATTRS
 TUPLE NOT FOUND
 TABLE DNGRPS
 TUPLE NOT FOUND
 TABLE NCOS
 RESGRP 0 RNCOS0 0 0 ( XLAS RXCMN375 NXLA NDGT)$
 TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT, AND
 DIGCOL
 RESGRP NXLA RXCMN375 RXCFN375 0 RES
 TABLE DIGCOL
 RES SPECIFIED: RES DIGIT COLLECTION
 TABLE IBNXLA: XLANAME RXCMN375
 TUPLE NOT FOUND
 DEFAULT FROM TABLE XLANAME:
 RXCMN375
      (NET N N 0 N RES N Y GEN ( LATTR 375) $)$
```

RES Base (continued)

TRAVER output example (local call) (continued)

```
TABLE DIGCOL
RES SPECIFIED: RES DIGIT COLLECTION
TABLE LINEATTR
375 1FR NONE NT FR01 0 513 NCLN L613 TSPS 10 NIL NILSFC
LATA1 0 NIL NIL 00 N $
TABLE STDPRTCT
NCLN ( 1) ( 0)
 .  SUBTABLE STDPRT
 .  62 635 N NP 0 NA
 .  SUBTABLE AMAPRT
 .  KEY NOT FOUND
 .  DEFAULT VALUE IS:  NONE  N
TABLE HNPACONT
613 203 2 ( 100) ( 1) ( 86)
 .  SUBTABLE HNPACODE
 .  621 621 DN 613 621

 TABLE TOFCNAME
 613 621 0 Y C
 TABLE DNINV
 613 621 0019 H 569 0
 TABLE DNATTRS
 TUPLE NOT FOUND
 TABLE DNGRPS
 TUPLE NOT FOUND
 TABLE HUNTGRP
 569 613 6210019 DNH N N N RCVD N N Y MDC Y N N N N N 5 $
```

TRAVER output example (local call) (continued)

```
TABLE HUNTMEM
569 0 N D 6210019 N
TABLE LCASCRCN
613 L613 ( 2) OPTL N
 .  SUBTABLE LCASCR
 .  621 621
TABLE PFXTREAT
OPTL NP Y NP UNDT
TABLE CLSVSCRC
KEY NOT FOUND
DEFAULT IS TO LEAVE XLA RESULT UNCHANGED
OVERLAP CARRIER SELECTION (OCS) APPLIES

TABLE OCCINFO
CRD1 1204 EAP Y Y Y Y N N Y Y Y Y INTRAS LONG 12 NONE N
 N Y N Y N TABLE EASAC N N Y N N N
TUPLE NOT FOUND
TABLE LATAXLA
TUPLE NOT FOUND
ASSUMED TO BE DEFAULT INTRALATA, INTRASTATVER:
SUCCESSFUL CALL TRACE+

DIGIT TRANSLATION ROUTES

1 LINE                  6136210019

TREATMENT ROUTES.  TREATMENT IS: GNCT
1 T120

+++ TRAVER: SUCCESSFUL CALL TRACE +++
```

Inter-LATA call from a Subscriber Services line

The following example shows an inter-LATA call from a Subscriber Services line.

RES Base (continued)

TRAVER output example (inter-LATA call)

```
>TRAVER  L  6210017 13124811234 'B47' B

 TABLE IBNLINES
 HOST 00 0 01 09 DT STN RES 6210017 1021 (COT) (ACB) (AR) $
 TABLE LINEATTR
 1021 1FR NONE NT NSCR 0 613 NCLN NLCA NONE 0 NIL NILSFC LATA1 0 NIL
 NIL 00 Y RESGRP 0 1
 TABLE DNATTRS
 TUPLE NOT FOUND
 TABLE DNGRPS
 TUPLE NOT FOUND
 TABLE NCOS
 RESGRP 0 RNCOS0 0 0 (XLAS RXCMN375 NXLA NDGT) $
 TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT, AND
 DIGCOL
 RESGRP NXLA RXCMN375 RXCFN375 0 RES
 TABLE DIGCOL
 RES SPECIFIED: RES DIGIT COLLECTION
 TABLE IBNXLA: XLANAME RXCMN375
 TUPLE NOT FOUND
 DEFAULT FROM TABLE XLANAME:
 RXCMN375
      (NET N N 0 N RES N Y GEN ( LATTR 375) (EA MCI Y O) $)$
 TABLE DIGCOL
 RES SPECIFIED: RES DIGIT COLLECTION
 TABLE LINEATTR
 375 1FR NONE NT FR01 0 613 NCLN L613 TSPS 10 NIL NILSFC LATA1 O NIL NIL 00
 N
 TABLE STDPRTCT
 NCLN ( 1) (0)
  .  SUBTABLE STDPRT
  .  1312 1316 N DD 1 NA
  .  SUBTABLE AMAPRT
  .  KEY NOT FOUND
  .  DEFAULT VALUE IS:  NONE  N
```

TRAVER output example (inter-LATA call) (continued)

```
TABLE HNPACONT
613 203 2 ( 100) ( 1) ( 86)
 .  SUBTABLE HNPACODE
 .  312 312 FRTE 97
 .  SUBTABLE RTEREF
 .  97 N D OLAMADCM 6 621 N
 .  EXIT TABLE RTEREF
EXIT TABLE HNPACONT
TABLE LCASCRCN
613 L613 ( 2) OPTL N
 .  SUBTABLE LCASCR
 .  TUPLE NOT FOUND.  DEFAULT IS NON-LOCAL

 TABLE PFXTREAT
 OPTL DD N DD UNDT
 TABLE CLSVSCRC
 KEY NOT FOUND
 DEFAULT IS TO LEAVE XLA RESULT UNCHANGED
 TABLE IBNFEAT
 HOST 00 0 01 09 PIC PIC CARD1 Y
 OVERLAP CARRIER SELECTION (OCS) APPLIES
 TABLE OCCINFO
 CARD1 120 EAP Y Y Y Y N N Y Y Y Y LONG 12 NONE N N Y N Y N TABLE
 EASAC N N Y N N N
 TUPLE NOT FOUND

 TABLE LATAXLA
 LATA1 312 INTER INTER STD
 TABLE STDPRTCT
 NCLN ( 1) ( 0)
  .  SUBTABLE STDPRT
  .  10120 10120 EA DD 5 P CARD1 CARD1 N
  .  TABLE STDPRTCT
  .  .  SUBSTABLE STDPRT
  .  .  13 14 EA DD 1 T NA CARD1 Y OFRT 362 1 1 N
  .  .  .  TABLE OFRT
  .  .  .  362 N D FASTATC2W 0 N N
  .  .  .  EXIT TABLE OFRT

 +++ TRAVER: SUCCESSFUL CALL TRACE+++
```

RES Base (continued)

TRAVER output example (inter-LATA call) (continued)

```
DIGIT TRANSLATION ROUTES

1 FASTATC2W             3124811234


TREATMENT ROUTES.  TREATMENT IS: GNCT
1 T120

+++ TRAVER: SUCCESSFUL CALL TRACE +++
```

SERVORD

SERVORD provides operating companies with a rapid means of performing such operations as

- adding or removing subscriber service from lines
- adding or deleting line service options
- changing the line equipment numbers (LEN) or DNs of existing lines

SERVORD simplification

Service order simplification allows Subscriber Services lines to be accessed as if they were 1FR or 1MR lines.

Service order simplification allows the user to

- use 1FR-like feature codes when adding Subscriber Services options
- display 1FR-like option codes when the user queries Subscriber Services lines
- have an automatic change of LCC from 1FR to RES

Enabling SERVORD simplification

Office parameter RES_SO_SIMPLIFICATION in table OFCVAR controls the changes to SERVORD prompts. This office parameter contains two fields: RES_AS_POTS and ENHANCED_POTS_OPTIONS.

- Setting RES_AS_POTS to Y activates the prompts needed to implement the simplified SERVORD input facility. (The default setting is Y.)
- Setting ENHANCED_POTS_OPTIONS to Y activates the prompts needed to assign additional call forwarding options to lines through SERVORD. (The default setting is N.)

When office parameter RES_SO_SIMPLIFICATION, field ENHANCED_POTS_OPTIONS is datafilled Y, the following prompts are given:

- CFDACNTL appears when adding option CFDA to a 1FR or Subscriber Services line.
- CFBLCNTL appears when adding option call forwarding busy line (CFBL) to a 1FR or Subscriber Services line.
- FWD_INTERNAL appears when adding option call forwarding group don't answer (CFGDA) to a 1FR or Subscriber Services hunt group pilot.

SERVORD limitations and restrictions

The following limitation applies to adding CFWF (call forwarding fixed) and CFBL (call forwarding busy line) to RES lines.

During SERVORD, the POTS (1FR) options CFWF and CFBL are screened for codes such as 911, 611, 411, 0+, 0-, 010, and 011 to prevent them from being assigned as valid forward-to DNs. The MDC (IBN) options CFF (call forwarding fixed) and CFB (call forwarding busy) are *not* screened for these codes, and the codes can be assigned as valid forward-to DNs.

RES lines operate internally like MDC lines; therefore, screening for these codes does not take place and they are allowed to be assigned as valid forward-to DNs.

RES Base (continued)

SERVORD prompts

SERVORD prompts for RES Base

Prompt	Valid input	Explanation
OPTION	option code	See the section “Option codes for assigning options" for a list of options that can be assigned to 1FR and RES lines.

Service orders to create a new Subscriber Services line

With service order simplification, the DMS-100 switch automatically creates a RES line when a Subscriber Services RES-specific option code is included in

- a SERVORD command to create a new 1FR or 1MR line
- a SERVORD command to add options to a 1FR or 1MR line

When a service order input creates a new line, a new Subscriber Services entry is added to table IBNLINES. The information required to create the Subscriber Services entry is obtained as shown below in “Processing steps to create a Subscriber Services line from NEW service order input."

When a RES-specific option is added to a 1FR or 1MR line, the entry in table LENLINES is deleted, and a new Subscriber Services entry is added to table IBNLINES. The information to create the Subscriber Services entry is obtained from the table LENLINES entry and the associated table LINEATTR entry.

The following fields are always set to default values:

- LATANM (Local Access and Transport Area Name) defaults to NILLATA.
- FANIDIGS (Flexible Automatic Number Identification Information Digit Pair) defaults to 0.

Processing steps to create a Subscriber Services line from NEW service order input

When a service order command to create a new 1FR or 1MR line includes a RES-specific option code, the DMS-100 switch carries out the following steps

to obtain the values required to create a new Subscriber Services line entry in table IBNLINES.

- The following information is taken from the service order input:
  - — LEN
  - — DN
- The LAI is copied from the appropriate table LINEATTR entry. The DMS-100 switch uses the following information from the service order input to access an entry table LINEATTR with subfield RESINF set to Y:
  - — LCC, which can be 1FR or 1MR
  - — line treatment group (LTG)

    Note: When the office parameter SO_PROMPT_FOR_LTG is set to N, the LTG defaults to 0.
- The serving translation scheme (STS) is copied from the SNPA field in an appropriate entry in table DN. The DMS-100 switch uses the three-digit exchange number from the DN in the service order input to access the first entry for a Subscriber Services or 1FR line in table DN with the same three-digit exchange number. The SNPA in table DN is copied into field STS for the new Subscriber Services line.

The following sections describe service order commands for Subscriber Services lines.

Creating a new Subscriber Services line

The NEW command creates a Subscriber Services line in the same way as it creates a POTS line; except that the LCC must be assigned 1FR, not RES. A value of RES is not accepted as input to the LCC prompt for the NEW command.

The following example shows how to use service order commands to create a new Subscriber Services line.

RES Base (continued)

SERVORD example for setting up a Subscriber Services line using the NEW command in prompt mode

```
>SERVORD
SO:
> NEW
SONUMBER: NOW   87   7 31 PM
>
DN:
> 6211234
LCC:
> 1FR
LATANAME:
> L123
LTG:
>1
LEN_OR_LTID
> 0 0 4 16
CABLE_PAIR
> 12 3456
OPTION:
> $
COMMAND AS ENTERED:
> NEW NOW 87 7 31 PM 6211234 1FR
L123 1 HOST 00 0 04 16 123456 $
ENTER Y TO CONFIRM, N TO REJECT OR
E TO EDIT
Y
```

SERVORD example for setting up a Subscriber Services line using the NEW command in no-prompt mode

```
> NEW $ 6211234 1FR L123 1 0 0 4 16 123456 $ Y
```

Establishing a DN hunt group in Subscriber Services

The establish (EST) command establishes a hunt group or a call pickup group. The LCC can be assigned either 1FR or RES, because service orders determine the line type (1FR or RES) necessary to support the options requested in the input option list.

The following example shows how to use service orders to establish a DN hunt (DNH) group in Subscriber Services.

SERVORD example for setting up a DNH group in Subscriber Services using the EST command in prompt mode

```
>SERVORD
SO:
> EST
SONUMBER: NOW  87 10 23 PM
>
GROUPTYPE:
> DNH
PILOT_DN:
>6216051
LCC:
>1FR
LATANAME:
>L123
LTG:
> 0
PILOT_LEN:
> 0 0 01 02
DN_LEN:
>6216051 0 0 0 19
KEY:
>1
> 6216052 0 0 0 14
KEY:
> 1
DN_LEN:
>6216052 0 0 0 14
OPTION:
> $
GROUPSIZE:
> 10
COMMAND AS ENTERED:
EST NOW 87 10 23 PM DNH 6216050 1FR L123 0 HOST 00 0 01
02 (6216051 HOST 00 0 00 19 1)( 6216052 HOST 00 0 00 14
1) $  $ 10
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
>Y
```

SERVORD example for setting up a DNH group in Subscriber Services using the EST command in no-prompt mode

```
> EST $ DNH 6216051 1FR L123  0 0 0 01 02  6216051 0 0 0 19 1  6216052
 0 0 0 14  $  10  Y
```

RES Base (continued)

Adding an option to a Subscriber Services line

The ADO (add option) command is used to add options to lines, to add existing lines to hunt groups, or to add options to hunt group lines specified by a LEN. When the user adds RES-specific options to a POTS 1FR line, the system automatically changes the line type to RES.

Note: The automatic change takes place only if field RES_AS_POTS is set to Y in the RES_SO_SIMPLIFICATION office parameter.

The following example shows how to use service orders to add an option to a Subscriber Services line.

SERVORD example for adding an option to a Subscriber Services line using the ADO command in prompt mode

```
>SERVORD
SO:
>ADO
SONUMBER: NOW  87 10 23 P
>
DN_OR_LEN:
> 6216051
OPTION:
> ACB
OPTION:
> PIC
CARRIER:
> C111
CHOICE:
> Y
OPTION:
> $
COMMAND AS ENTERED:
ADO NOW 87 10 23 PM (ACB) $
There is a RES specific option in the option set.
Line will become a RES line.
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
>Y
```

SERVORD example for adding an option to a Subscriber Services line using the ADO command in no-prompt mode

```
> ADO $ 6216051 ACB PIC C111 Y $ Y
```

Deleting an option from a Subscriber Services line

The DEO (delete option) command is used to delete options from lines or to delete options from hunt group lines specified by a LEN. When a user deletes all RES-specific options from a RES line, the system automatically changes the line type to POTS.

Note: The automatic change takes place only if field RES_AS_POTS is set to Y in the RES_SO_SIMPLIFICATION office parameter.

The following example shows how to use service orders to delete an option from a Subscriber Services line.

SERVORD example for deleting an option from a Subscriber Services line using the DEO command in prompt mode

```
>SERVORD
SO:
> DEO
SONUMBER: NOW  87 10 23 PM
>
DN_OR_LEN:
> 6216051
OPTION:
>ACB
OPTION
> $
COMMAND AS ENTERED:
DEO NOW 87 10 23 PM (ACB) $
No RES specific option left on
line.
Line will become a POTS line.
ENTER Y TO CONFIRM, N TO REJECT OR
E TO EDIT
>Y
```

SERVORD example for deleting an option from a Subscriber Services line using the DEO command in no-prompt mode

```
> DEO $ 6216051 ACB $ Y
```

Changing the line treatment group of a line

The change line treatment group (CLTG) command allows the user to select a specific LAI for a line or to change an LAI associated with a line.

RES Base (continued)

To change the LTG of a Subscriber Services line, the following occur:

- The system finds a new tuple in table LINEATTR based on the following rules:
  - — Fields LCC, STS, LATANM, and FANIDIGS must be the same as those of the previously determined tuple.
  - — Field LTG of the new LAI is the LTG that was specified in the LTG command.
- The new LAI is then used to alter the line's entry in table IBNLINES.

The following example shows how to use service orders to change the LTG of a line.

SERVORD example for changing the line treatment group of a Subscriber Services line using the CLTG command in prompt mode

```
>SERVORD
SO:
> CLTG
SONUMBER: NOW 76 1 3 PM
> $
LTG:
> 1
DN:
> 6216051
DN:
> $
COMMAND AS ENTERED:
CLTG NOW 76 1 3 PM 1 (6216054) $
ENTER Y TO CONFIRM, N TO REJECT OR
E TO EDIT
>Y
```

SERVORD example for changing the line treatment group of a Subscriber Services line using the CLTG command in no-prompt mode

```
> CLTG $ 1 6216051 $ Y
```

Changing an option on a Subscriber Services line

The CHG (change) command is used to change the LCC assigned to a line. When the user changes an LCC from RES to IBN, prompts appear for a customer group, subgroup, and NCOS.

When the user changes an LCC from IBN to RES, the line attribute index (LAI) of the RES line is determined by the system as if it were newly created.

Note: When field RES_AS_POTS is set to N, the user can change a line from 1FR to RES or RES to 1FR by using the CHG command.

The CHG command cannot be used for changes to subfields CUSTGRP, SUBGRP, and NCOS when the LCC is 1FR. The CLTG command must be used instead to achieve the same result by a change in the LTG.

Option codes for assigning options

This section defines the option codes that are needed to assign Subscriber Services RES Base features through service orders.

1FR feature options not available on Subscriber Services RES lines

The following 1FR options can exist on POTS 1FR lines only; they are not available on Subscriber Services RES lines.

1FR feature option codes

Code	Feature
CFW U	Call Forward Usage Sensitive
CUSD	Call Forward Usage Sensitive Denial
ESL	Emergency Service (911) with Ringdown Trunk
FSR	Frequency Selective Ringing
MAN	Manual Service
MPB	Multiparty Bridging

RES Base (continued)

Subscriber Services RES Base feature option codes

The following table shows the service order option codes used to add base features to Subscriber Services lines.

Note: The enhancements for call forwarding are available only if field ENHANCED_POTS_OPTIONS in office parameter RES_SO_SIMPLIFICATION is set to Y.

Subscriber Services RES Base features (Sheet 1 of 4)

Feature	Code
Automatic Line	AUL
Automatic Message Accounting Test	AMATEST
Automatic Time and Charges	ATC
Bridged Night Number	BNN
Call Forwarding Busy Line	CFBL
Call Forwarding Don't Answer	CFDA
Call Forwarding Fixed	CFW F
Call Forwarding Group Don't Answer	CFGDA
Call Forwarding Intragroup	CFI
Call Forwarding Universal	CFW C
Calling Line Identification with Flash	CLF
Calling Line Identification	CLI
Call Waiting	CWT
Call Waiting Ringback	CWR
Cancel Call Waiting	CCW
Carrier Toll Denied	CTD
Circular Hunt	CIR
Custom IBN Disconnect Treatment	CDT
Cutoff on Disconnect	COD
Denied Origination	DOR

Subscriber Services RES Base features (Sheet 2 of 4)

Feature	Code
Denied Termination	DTM
Digitone	DGT
Directory Number Hunt	DNH
Distributed Line Hunt	DLH
Enhanced WATS Access Line	EWATS (Note)
Essential Line	ELN
Feature Group	FTRGRP
Feature Group A	FGA
Fire Reporting System	FRS
Fire Reporting System, Origination	FRO
Flash Ignore	FIG
Flexible Automatic Number Identification	FANI
Free Number Terminating	FNT
Ground Start	GND
Hotel/Motel	HOT
Inhibit Line Busy	ILB
Inhibit Make Busy	IMB
Inhibit Ring Reminder	IRR
Intercom	INT
Intra-LATA PIC	LPIC
Line Overflow to Directory Number	LOD
Line Overflow to Route	LOR
Line Study	SDY
Local Call Detail Recording	LCDR

RES Base (continued)

Subscriber Services RES Base features (Sheet 3 of 4)

Feature	Code
Make Busy Key	MBK
Message Waiting	MWT
Multiple Appearance Directory Number	MDN
Name	NAME
No Double Connect	NDC
No Line Insulation Testing	NLT
No Receiver Off-hook Tone	NOH
Operator Number Identification	ONI
OUTWATS	OUTWT (Note)
Overflow Register	OFR
Overflow Register, Software	OFS
Pilot Billing for Hunt Group	PILOT
Plug Up	PLP
Preferential Hunt	PRH
Primary Inter-LATA Carrier	PIC
Random Make Busy	RMB
Received (Billing to Digits Received by the Terminating Office)	RCVD
Remote Message Register for Local Calls	RMR
Remote Meter Pulsing	RMP
Requested Suspension	RSUS
Restricted Sent Paid	RSP
Secondary Language	SL
Series Completion	SCMP
Short Timed Release Disconnect	STRD

Subscriber Services RES Base features (Sheet 4 of 4)

Feature	Code
Special Billing	SPB
Speed Calling Long List (L30)	SC2
Speed Calling Long List (L50)	SC3
Speed Calling Short List	SC1
Speed Call User	SCU
Stop Hunt	SHU
Subscriber Line Usage Peg Count	SLU
Suppress Number/Name Display	SUPPRESS
Suspended Service	SUS
Teen Service (Secondary Directory Number)	SDN
Terminator (Hunt Group)	TERM
Terminating Billing Option	TBO
Terminating Billing Option on Hunt Group	TRMBOPT
Terminating Fault Option	TFO
Three-Way Calling	3WC
Toll Essential Service	TES
Warm Line	WML
Note: These features are automatically assigned when the line becomes a WATS line. They are included here for completeness.	

Note 1: Subscriber Services line hunt groups cannot support multiple simultaneous call forwarding (that is, a CFGDA with a number of calls [NUMCALLS] value greater than 1).

Note 2: Subscriber Services line hunt groups support a screening class (SCRNCL) of no screening (NSCR) only.

RES Base (continued)

Speed Calling Long List (L50) (SC3)

The Subscriber Services option Speed Calling Long List L50 (SC3) is identical to Speed Calling Long List L30 (SC2), except that the range of abbreviation codes (20 to 69) available to the subscriber is extended.

Feature SC3 is compatible with feature Speed Calling Short List (SC1) (abbreviation code range 2 to 9) but is not compatible with feature SC2 (abbreviation code range 20 to 49).

SC3 abbreviation codes in the range 60 to 69 may be incompatible, from a translation standpoint, with RES line feature access codes. In such cases, option SC3 should not be assigned to a Subscriber Services line.

Subscriber Services enhanced call forwarding

The Subscriber Services processing duplicates the types of CFDA, CFB, and CFGDA available to POTS subscribers. In addition, Subscriber Services call forwarding offers enhanced options to each type of call forwarding, as described in the following sections. The enhancements for call forwarding are available only if field ENHANCED_POTS_OPTIONS in office parameter RES_SO_SIMPLIFICATION is set to Y.

Call Forwarding Don't Answer (CFDA)

The option CFDA is used to add the CFDA feature to Subscriber Services lines. Three types of CFDA lines are available with Subscriber Services:

- N (none)—No activation or deactivation is required by the subscriber. Like POTS 1FR implementations, the feature is set up and activated by the operating company.
- F (fixed)—The forward-to DN is set up by the operating company and is always the same. Activation and deactivation are carried out by the subscriber.
- C (customer programmable)—The forward-to DN can be programmed as part of the activation procedure carried out by the subscriber.

Call Forwarding Busy Line (CFBL)

The option CFBL is used to add the CFBL feature to Subscriber Services lines. Three types of CFBL lines are available with Subscriber Services:

- N (none)—No activation or deactivation is required by the subscriber. Like POTS 1FR implementations, the feature is set up and activated by the operating company.
- F (fixed)—The forward-to DN is set up by the operating company and is always the same. Activation and deactivation are carried out by the subscriber.
- C (customer programmable)—The forward-to DN can be programmed as part of the activation procedure carried out by the subscriber.

Call Forwarding Group Don't Answer (CFGDA)

The option CFGDA allows the system administrator to assign call forwarding to a hunt group. In the basic Subscriber Services implementation, calls to idle hunt group stations ring for a predetermined amount of time before being forwarded to a DN outside the hunt group.

When field ENHANCED_POTS_OPTIONS in office parameter RES_SO_SIMPLIFICATION is set to Y, the additional option FWD_INTERNAL is prompted for. Setting FWD_INTERNAL to Y implements CFGDA within the hunt group. Unanswered calls to idle hunt group stations are forwarded to the next station in the hunt sequence.

RES Platform Enhancements Phase 2

Ordering codes

Functional group ordering code: RES00006

Functionality ordering code: not applicable

Release applicability

BCS35 and up

Prerequisites

To operate, RES Platform Enhancements Phase 2 has the following prerequisites:

- BAS Generic, BAS00003
- RES Advanced Custom Calling, RES00002
- MDC Standard, MDC00003
- MDC Minimum, MDC00001

Description

The RES Platform Enhancements Phase 2 feature provides compatibility in the Residential Enhanced Services (RES) environment for the line class codes (LCC) ZMD (zero minus denied service) and ZMZPA (zero minus zero plus allowed). This feature allows automatic conversion between plain old telephone service (POTS) ZMD and ZMZPA lines and RES ZMD and ZMZPA lines.

Operation

POTS and RES ZMD and ZMZPA lines are automatically converted through the Service Order System (SERVORD) only when field RES_AS_POTS of office parameter RES_SO_SIMPLIFICATION in table OFCVAR is set to Y. The conversion from POTS to RES takes place when a RES-specific option is added to the option list for the POTS lines using the NEW (establish new service), ADO (add option), or CHF (change feature) commands. The conversion from RES to POTS occurs when all RES-specific options are deleted from the RES line using the DEO (delete option) or CHF commands.

Note: When field RES_AS_POTS of office parameter RES_SO_SIMPLIFICATION in table OFCVAR is set to N, automatic conversion does not take place.

RES Platform Enhancements Phase 2 (continued)

Remote Message Toll

RES Platform Enhancements Phase 2 also allows option Remote Message Toll (RMT) to be assigned to RES lines. Option RMT provides tip and ring reversal on answer for toll calls. Option RMT provides an indication on the terminal end of the loop that a call from a line with option RMT has been answered. Option RMT is used on hotel lines to indicate that a charge is due for a toll call.

Note: A line with option RMT must have one of the following line cards: NT2X18AC, NT2X18AD, NT2X18AE, NT6X18AA, or NT6X18AB.

As with the other RES-specific options, when option RMT is added to a POTS line and field RES_AS_POTS is set to Y, the POTS line becomes a RES line. If RMT is the last RES-specific option deleted from a RES line, the line reverts to a POTS line.

Translations table flow

The RES Platform Enhancements Phase 2 feature does not affect translations data flow.

Limitations and restrictions

The following limitations and restrictions apply to RES Platform Enhancements Phase 2:

- The SERVORD commands EST and ADD cannot be used to create RES ZMD and ZMZPA lines.
- When RES_AS_POTS is set to N, the SERVORD commands NEW, ADO, and CHF cannot be used to create RES ZMD and ZMZPA lines.
- When RES_AS_POTS is set to Y, the SERVORD command CHG cannot be used to change the LCC of any POTS ZMD and ZMZPA line to RES.
- Hunt group options cannot function on RES ZMD and ZMZPA lines, since these lines cannot be part of hunt groups.

Interactions

RES Platform Enhancements Phase 2 has no functionality interactions.

Activation/deactivation by the end user

RES Platform Enhancements Phase 2 requires no activation or deactivation by the end user.

Billing

RES Platform Enhancements Phase 2 does not affect billing.

RES Platform Enhancements Phase 2 (continued)

Station Message Detail Recording

RES Platform Enhancements Phase 2 does not affect Station Message Detail Recording.

Datafilling office parameters

The following table shows the office parameters used by RES Platform Enhancements Phase 2. For more information about office parameters, refer to *Office Parameters Reference Manual.*

Office parameters used by RES Platform Enhancements Phase 2

Table name	Parameter name	Explanation and action
OFCVAR	RES_SO_SIMPLIFICATION	This parameter provides the ability to consider RES lines as POTS lines from within service orders. When field RES_AS_POTS is set to Y, during execution of SERVORD commands ADO, DEO, and CHF, a line can automatically be changed from a POTS line to a RES line or a RES line to a POTS line. (The default setting is Y.) When field ENHANCED_POTS_OPTIONS is set to N, additional call forwarding prompts do not appear. (The default setting is N.)

Datafill sequence

The following table lists the tables that require datafill to implement RES Platform Enhancements Phase 2. The tables are listed in the order in which they are to be datafilled.

Datafill tables required for RES Platform Enhancements Phase 2

Table	Purpose of table
LINEATTR	Line Attribute. This table assigns line attributes to MDC stations and attendant consoles.
IBNLINES (note)	IBN Line Assignments. This table contains line assignments for each 500/2500 set assigned to an IBN, RES, and Multiple Appearance Directory Number (MADN) station number. This table also contains line assignments for IBN attendant consoles.
Note: This table is datafilled through SERVORD; therefore, no datafill procedure or example is provided. Refer to “SERVORD" for an example of using SERVORD to datafill this table.	

Datafilling table LINEATTR

Table LINEATTR associates translation attributes to lines with different line class codes (LCC).

The following table shows the datafill specific to RES Platform Enhancements Phase 2 for table LINEATTR. Only those fields that apply directly to RES Platform Enhancements Phase 2 are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table LINEATTR (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
LNATTIDX		0 to 31 999	Line attribute index. Enter a value from 0 to 31 999.
LCC		ZMD or ZMZPA	Line class code. This field specifies the LCC. Enter ZMD for zero minus dialing or ZMZPA for zero minus zero plus allowed dialing.
RESINF		see subfields	RES information. This field consists of the subfield RESINFO. When RESINFO is set to Y, the following subfields must be datafilled: CUSTGRP, SUBGRP, and NCOS. When RESINFO is set to N, the subfields should be left blank.
	RESINFO	Y	RES information. This subfield specifies whether the tuple is needed to support Subscriber Services RES lines. Enter Y. If RESINFO is Y, subfields CUSTGRP, SUBGRP, and NCOS require datafill. ***Note:*** Subfield RESINFO can be changed from N to Y, but cannot be changed from Y to N.
	CUSTGRP	RESGRP	Customer group. This subfield specifies the customer group name defined in table CUSTENG. This entry associates Subscriber Services lines with this customer group. See planning chart. Enter RESGRP.

RES Platform Enhancements Phase 2 (continued)

Datafilling table LINEATTR (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	SUBGRP	0	Subgroup. This subfield is not used for Subscriber Services lines. Enter 0.
	NCOS	0 to 511	Network class of service. This subfield associates Subscriber Services lines with this NCOS in the customer group. See the planning chart. Enter a value from 0 to 511.

Datafill example for table LINEATTR

The following example shows sample datafill for table LINEATTR.

MAP display example for table LINEATTR

```
LNATTIDX LCC CHGCLSS COST SCRNCL LTG STS  PRTNM LCANAME ZEROMPOS
TRAFSO MRSA   SFC  LATANM  MDI IXNAME DGCLNAME FANIDIGS
            RESINF                                          OPTIONS
_____________________________________________________________________
25      ZMD  NONE    LO   FRO1   0  613  P621   L613    TSPS
10           NIL  NILSFC  NILLATA   0   NIL     NIL   00
          Y  RESGRP  0   0     $
```

Translation verification tools

RES Platform Enhancements Phase 2 does not use translation verification tools.

SERVORD

SERVORD is used to add, delete, or change RES ZMD and ZMZPA lines.

Field RES_AS_POTS is datafillable in the office parameter RES_SO_SIMPLIFICATION in table OFCVAR. This field controls the automatic change of LCC capability and the query display of RES or POTS lines and RES-specific options. When RES_AS_POTS is set to Y, the NEW, ADO, or CHF commands can be used to create RES ZMD and ZMZPA lines. When RES_AS_POTS is set to N, the CHG command can be used to change POTS ZMD and ZMZPA lines to RES ZMD and ZMZPA lines.

RES Platform Enhancements Phase 2 (continued)

Creating RES ZMD and ZMZPA lines when RES_AS_POTS is set to Y

The NEW, ADO, or CHF commands are used to create RES ZMD and ZMZPA lines when RES_AS_POTS is set to Y.

Note: When RES_AS_POTS is set to Y, the CHG command cannot change the LCC of POTS lines to RES.

The NEW command is used to create a RES ZMD or ZMZPA line when the appropriate POTS ZMD or ZMZPA LCC is entered at the LCC prompt. At least one RES-specific option must be present in the option list.

The ADO and CHF commands are used to create a RES ZMD or ZMZPA line. The commands automatically convert an existing POTS ZMD or ZMZPA line into a RES ZMD or ZMZPA line by adding a RES-specific option to the option list. The CHF command is used to automatically change the LCC when a change is made to a POTS option and a prompt is given for additional information and a non-POTS value is added for this information.

A RES ZMD or ZMZPA line automatically reverts back to a POTS ZMD or ZMZPA line when all RES-specific features are removed using the DEO or CHF command.

Creating RES ZMD and ZMZPA lines when RES_AS_POTS is set to N

The CHG command is used to create RES ZMD and ZMZPA lines when RES_AS_POTS is set to N.

Note 1: It is not possible to create a RES ZMD or ZMZPA line by using the NEW command when RES_AS_POTS is set to N. When RES is entered at the LCC prompt, the resulting RES line defaults to one-party flat rate (RES 1FR).

Note 2: It is not possible to convert a POTS ZMD or ZMZPA line to a RES ZMD or ZMZPA line by using the ADO and CHF commands when RES_AS_POTS is set to N. If a RES-specific option is added to the options list when RES_AS_POTS is set to N, the service order is rejected due to LCC-option compatibility checking.

SERVORD limitations and restrictions

The field RES_AS_POTS in office parameter RES_SO_SIMPLIFICATION in table OFCVAR must be set to Y for automatic conversion between POTS and RES ZMD and ZMZPA lines. If field RES_AS_POTS is set to N, the CHG command must be used to change a POTS ZMD or ZMZPA line to a RES ZMD or ZMZPA line.

RES Platform Enhancements Phase 2 (continued)

SERVORD example for adding RES Platform Enhancements Phase 2-RMT option

The following SERVORD example shows how RES Platform Enhancements Phase 2 is added to a line using the NEW command.

Note: A line with option RMT must have one of the following line cards: NT2X18AC, NT2X18AD, NT2X18AE, NT6X18AA, or NT6X18AB.

SERVORD example for RES Platform Enhancements Phase 2 in prompt mode

```
>SERVORD
SO:
> NEW
SONUMBER: NOW 91 5 12 AM
>
DN:
> 6211002
LCC:
> 1FR
LATANAME:
> NILLATA
LTG: 0
>
LEN_OR_LTID:
> 00 0 00 09
OPTION:
> RMT $
COMMAND AS ENTERED:
NEW NOW 91 5 12 AM 6211002 1FR NILLATA 0 HOST 00 0 00 09
(RMT) $
There is a RES specific option in the option set.
Line will become a RES line.
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
> Y
```

SERVORD example for RES Platform Enhancements Phase 2 in no-prompt mode

```
> NEW $ 6211002 1FR NILLATA $ 00 0 00 09 RMT $ Y
```

SERVORD example for adding RES Platform Enhancements Phase 2-ZMD and ZMZPA

The following SERVORD examples show how to create, add, and delete the RES-specific option RMT on a RES ZMD line using the NEW command.

RES Platform Enhancements Phase 2 (continued)

Field RES_AS_POTS in office parameter RES_SO_SIMPLIFICATION is set to Y in the following examples.

Note: Although option RMT is used in the following SERVORD examples, any RES-specific option entered at the OPTION prompt has the effect of converting the line from POTS to RES or RES to POTS.

SERVORD example for RES Platform Enhancements Phase 2 in prompt mode

```
>SERVORD
SO:
> NEW
SONUMBER: NOW 91 5 12 AM
>
DN:
> 6211002
LCC:
> ZMD
LATANAME:
> NILLATA
LTG: 0
>
LEN_OR_LTID:
> 00 0 00 09
OPTION:
> RMT $
COMMAND AS ENTERED:
NEW NOW 91 5 12 AM 6211002 ZMD NILLATA 0 HOST 00 0 00 09
(RMT) $
There is a RES specific option in the option set.
Line will become a RES line.
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
> Y
```

SERVORD example for RES Platform Enhancements Phase 2 in no-prompt mode

```
> NEW $ 6211002 ZMD NILLATA $ 00 0 00 09 RMT $ Y
```

The following example shows how a POTS ZMD line is converted to a RES ZMD line by adding a RES-specific option (RMT) using the ADO command.

RES Platform Enhancements Phase 2 (continued)

SERVORD example for RES Platform Enhancements Phase 2 in prompt mode

```
>SERVORD
SO:
> ADO
SONUMBER: NOW 91 5 12 AM
>
DN:
> 6211002
OPTION:
> RMT
OPTION:
> $
COMMAND AS ENTERED:
NEW NOW 91 5 12 AM 6211002 (RMT) $
There is a RES specific option in the option set.
Line will become a RES line.
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
> Y
```

SERVORD example for RES Platform Enhancements Phase 2 in no-prompt mode

```
> ADO $ 6211002 RMT  $ Y
```

The following example shows how a RES ZMD line is converted to a POTS ZMD line by deleting the last RES-specific option (RMT) using the DEO command.

RES Platform Enhancements Phase 2 (end)

SERVORD example for RES Platform Enhancements Phase 2 in prompt mode

```
>SERVORD
SO:
> DEO
SONUMBER: NOW 85 07 08 AM
>
DN_OR_LEN:
> 6211002
OPTION:
> RMT
OPTION:
> $
COMMAND AS ENTERED:
DEO NOW 91 5 12 AM 6211002 (RMT) $
No RES specific option left on line.
Line will become a POTS ZMD line.
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
> Y
```

SERVORD example for RES Platform Enhancements Phase 2 in no-prompt mode

```
> DEO $ 6211002 RMT $ Y
```

RES Translations Simplification

Ordering codes

Functional group ordering code: RES00006

Functionality ordering code: RES00083

Release applicability

NA009 and up

Prerequisites

RES Translations Simplification has no prerequisites.

Description

RES (residential enhanced services) is a cross between public and private translations which provides public and residential customers with features that were previously only available to private and business customers.

RES lines enter private translations through table LINEATTR, and re-enter public translations through the same table. However, despite the fact that a RES line already has a LINEATTR index (LAI) when it enters private translations, this index must be explicitly datafilled in private translations. The amount of datafill required is considered to be high. However, this datafill is required to ensure that the call uses the originator's LAI when it re-enters public translations.

This excess datafill represents a high cost of ownership to the operating company. In this feature, RES translations are simplified so that the RES call retains the LAI. When the call returns to public translations, the call is associated with this retained LAI and the extensive and redundant datafill is not required. RES translations retains the originator LAI when it encounters the new option RES in the NET GEN selector of tables XLANAME and IBNXLA.

Simplification reduces the operating company cost of ownership by removing the excess datafill that is required without the simplification.

Operation

RES translations simplification removes the need to datafill the LAI in table XLANAME. By removing this datafill requirement, RES datafill is simplified. This datafill simplification is transparent to the caller.

RES Translations Simplification (continued)

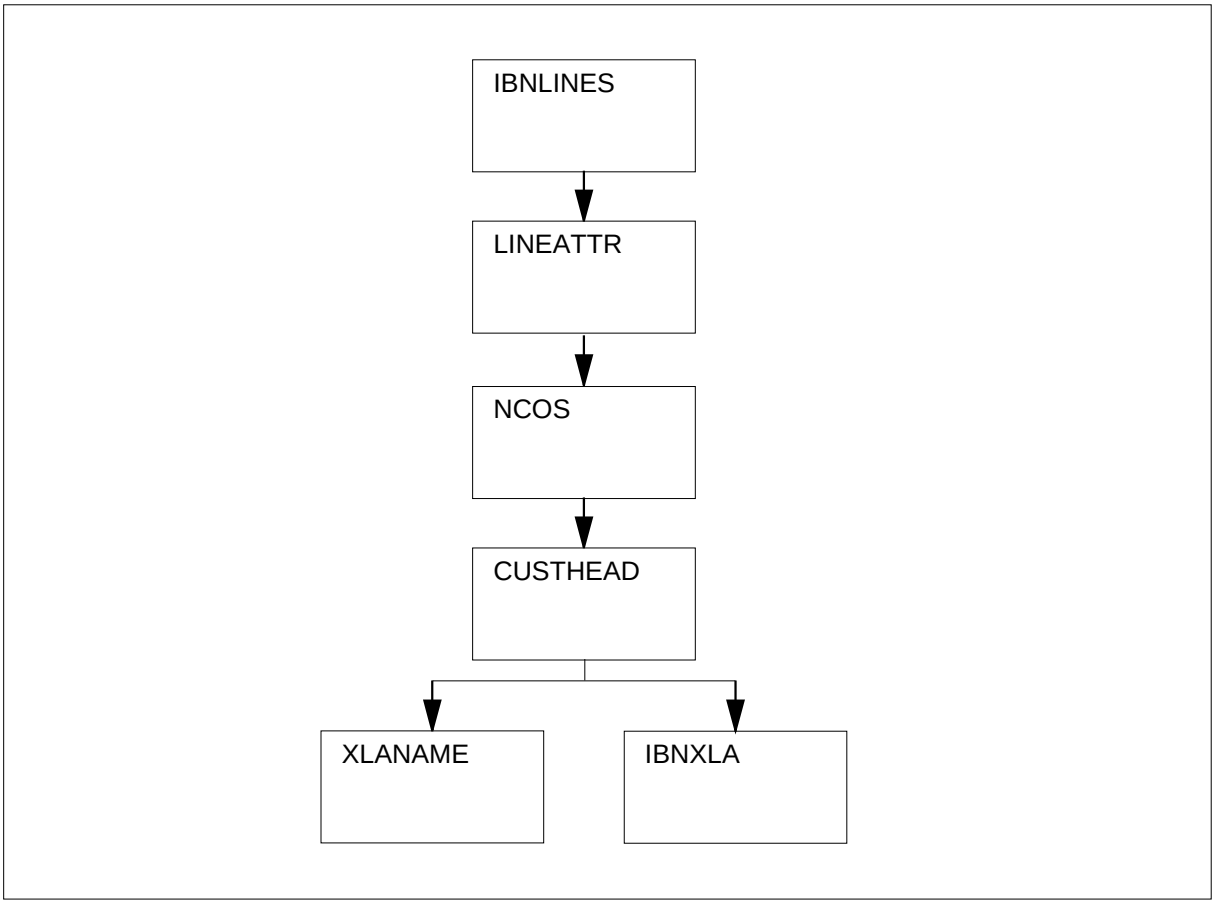
Translations table flow

The RES Translations Simplification translations tables are described in the following list:

- Table IBNLINES
- Table LINEATTR
- Table NCOS
- Table CUSTHEAD
- Table XLANAME
- Table IBNXLA

The RES Translations Simplification translation process is shown in the flowchart that follows.

Table flow for RES Translations Simplification



RES Translations Simplification (continued)

The following table lists the datafill content used in the flowchart.

Datafill example for RES Translations Simplification

Datafill table	Example data
IBNLINES	HOST 00 0 00 16 0 DT STN RES 6631029 404 $
LINEATTR	404 1FR NONE NT NSCR 0 613 PUB L613 TSPS 10 NIL NILSFC LATA1 0 NIL NIL 00 Y RESG613 0 0 $
NCOS	RESG613 0 0 0 RNCOS $
CUSTHEAD	RESG613 NXLA RX613 RESGSTAR 0 RES
XLANAME	RX613 (NET N N 0 N NDGT N Y GEN (RES) (EA NILC Y 0) $ $)$ 9
IBNXLA	not datafilled for this example

Note: While the translations process involves several tables, only tables XLANAME and IBNXLA require datafill that is specific to RES translations simplification. The following sections focus on tables XLANAME and IBNXLA. The other tables are not discussed.

Limitations and restrictions

The following limitations and restrictions apply to RES Translations Simplification:

- Option RES on the NET GEN selector cannot be used with IBN agents. IBN agents must use option LATTR of the NET GEN selector. Unlike RES agents, IBN agents do not have a LAI in table IBNLINES. If an IBN agent does use the RES option, the call fails with the datafill error (DFIL) treatment.
- Option RES on the NET GEN selector cannot be used with KSETs and attendant consoles. This restriction is because KSETs are datafilled in table KSETLINE, in which there is no LINEATTR field. Also, attendant consoles are datafilled in table ATTCONS, in which there is no LINEATTR field. Like IBN lines, if a KSET encounters the NET GEN RES option, the call fails with the datafill error (DFIL) treatment.
- Not all RESGRPs can fully convert to the new schema. There may be differences between their network class of service (NCOS) other than the NCOS preliminary translator. In these cases, the RESGRP can only collapse to the number of the distinct NCOSs which it contains. This behavior is desired since NCOSs that provide different translation results must continue to do so after converting to the new schema.

RES Translations Simplification (continued)

Interactions

RES Translations Simplification has no functionality interactions.

Activation/deactivation by the end user

RES Translations Simplification requires no activation or deactivation by the end user.

Billing

RES Translations Simplification does not affect billing.

Datafilling office parameters

The following table shows the office parameters used by RES Translations Simplification. For more information about office parameters, refer to *Office Parameters Reference Manual.*

Office parameters used by RES Translations Simplification

Table name	Parameter name	Explanation and action
OFCVAR	RES_CHK_OOS	Office parameter RES_CHK_OOS is added to table OFCVAR. When RES_CHK_OOS is set to N for a RES line, the NCOS for the line can be modified through the Table Editor (in table LINEATTR). By default, the RES_CHK_OOS parameter is set to Y. When this parameter is set to Y, any RES line that is using a given LINEATTR tuple must be taken out of service before changing the NCOS in that tuple.

RES Translations Simplification (continued)

Datafill sequence

The following table lists the tables that require datafill to implement RES Translations Simplification. The tables are listed in the order in which they are to be datafilled.

Datafill tables required for RES Translations Simplification

Table	Purpose of table
XLANAME	Table XLANAME stores the default data, including the allowable digilator range, for each translator. If no access code is found in table IBNXLA for a particular translator, default data from table XLANAME is used.
IBNXLA	Table IBNXLA stores the data for the digit translation of calls from the following sources: • Integrated Business Network (IBN) station • attendant console • incoming trunk • incoming side of a two-way IBN trunk group • Integrated Services Digital Network (ISDN) line Each tuple defines a translator. Each translator is assigned a 1- to 8-alphanumeric character name. This name is assigned in table XLANAME (Translator Names). One to 18 digits can be translated.

Datafilling table XLANAME

The following table shows the datafill specific to RES Translations Simplification for table XLANAME. Only those fields that apply directly to RES Translations Simplification are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table XLANAME

Field	Subfield or refinement	Entry	Explanation and action
DEFAULT			Default data.
	GEN_NET_ OPTION	RES	NET GEN selector, option RES. Enter RES to direct call processing to use the LINEATTR index on the RES line found in table IBNLINES.

Datafill example for table XLANAME

The following example shows sample datafill for table XLANAME.

MAP display example for table XLANAME

```
DEFAULT
MAXDIG
_____________________________________________________________________

RESXLA (NET N N 0 N NDGT N Y GEN (RES) (EA NILC Y 0) $ $)$ 9
```

Error messages for table XLANAME

There are no error messages for table XLANAME.

Datafilling table IBNXLA

The following table shows the datafill specific to RES Translations Simplification for table IBNXLA. Only those fields that apply directly to RES Translations Simplification are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table IBNXLA

Field	Subfield or refinement	Entry	Explanation and action
RESULT			Result. ***Note:*** NET GEN option RES is mutually exclusive with NET GEN option LATTR. Table control procedures for table XLANAME enforces exclusivity.
	GEN_NET_ OPTION	RES	NET GEN selector, option RES.

Datafill example for table IBNXLA

The following example shows sample datafill for table IBNXLA.

RES Translations Simplification (continued)

MAP display example for table IBNXLA

```
KEY
                                          RESULT
------------------------------------------------------------
RX613 (NET N N 0 N NDGT N Y GEN (RES) (EA NILC Y 0) $ $)$
9
```

Error messages for table IBNXLA

There are no error messages for table IBNXLA.

Translation verification tools

The following example shows the output from TRAVER when it is used to verify RES Translations Simplification.

RES Translations Simplification (continued)

Call takes ARS default route to VFG

```
>traver l 4771051 94731051 b
TABLE IBNLINES
REM3 01 1 04 23 0 DT STN IBN 4771051 COMKODAK 0 0 416 $
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TUPLE NOT FOUND
TABLE IBNFEAT
TUPLE NOT FOUND
TABLE CUSTSTN
COMKODAK AIN AIN CDPCODE
TABLE OFCVAR
AIN_OFFICE_TRIGGRP OFCTRIG
AIN Orig Attempt TDP: no subscribed trigger.
TABLE NCOS
COMKODAK 0 0 0 KDK0 ( OHQ 0 TONE_OHQ) ( CBQ 0 3 N 2)$
TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT, AND
DIGCOL
COMKODAK PXDK CXDK CUSTFEAT 0 KDK
TABLE DIGCOL
KDK 9 RPT
TABLE IBNXLA: XLANAME PXDK
TUPLE NOT FOUND
Default is to go to next XLA name.
TABLE IBNXLA: XLANAME CXDK
CXDK 9 NET N Y 1 Y POTS Y N DOD N 999 NONE $
TABLE DIGCOL
POTS specified: POTS digit collection
TABLE LINEATTR
999 1FR NONE NT NSCR 0 001 P621 NLCA NONE 10 NIL NILSFC NILLATA 0 NIL
NIL 00 N $
LCABILL OFF – BILLING DONE ON BASIS OF CALLTYPE
TABLE STDPRTCT
P621 ( 1) (65021) 1
 . SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING.  CALL TYPE DEFAULT IS NP.  PLEASE REFER TO
DOCUMENTATION.
 . KEY NOT FOUND
 . DEFAULT VALUE IS:   N NP 0 NA
```

RES Translations Simplification (continued)

Call takes ARS default route to VFG (continued)

```
 . SUBTABLE AMAPRT
 . KEY NOT FOUND
 . DEFAULT VALUE IS:   NONE OVRNONE  N
TABLE HPCPATTN
TUPLE NOT FOUND
TABLE HNPACONT
001 Y 20 1 ( 5) ( 1) ( 3) ( 0) 1 (ARS (DEFAULT_RTEREF 5)$)$
 . SUBTABLE HNPACODE
 . USING DEFAULT ARS RTEREF, DIGITS UNCHANGED.
AIN Info Collected TDP: no subscribed trigger.
TABLE FNPA7DIG
TUPLE NOT FOUND
TABLE TRIGGRP
CDPCODE INFOANAL
 . CDPCODE ( DG CDPDIG)$ NIL
Trigger AIN CDPCODE is applicable to customer group.
 . CDPCODE ( DG CDPTRAF)$ NIL
Trigger AIN CDPCODE is applicable to customer group.
TABLE TRIGGRP
OFCTRIG INFOANAL
 . N11 ( DG N11DIG)$ NIL
Trigger AIN N11 is applicable to office.
 . PODP ( DG PODPDIG)$ NIL
Trigger AIN PODP is applicable to office.
 . N11 ( DG N11TRAF)$ NIL
Trigger AIN N11 is applicable to office.
 . PODP ( DG PODPTRAF)$ NIL
Trigger AIN PODP is applicable to office.
 . LNP ( DG LNPDIG) (ESCEA ) (ESCOP ) (ESCDN ) (ESCQR )$ NIL
Trigger AIN LNP is applicable to office.
AIN Info Analyzed TDP: trigger criteria not met.
 . SUBTABLE RTEREF
 .    5 T IBNRTE 710
 .  . TABLE IBNRTE
 .  .  710 VFG N N N VFG613 0
 .  . EXIT TABLE IBNRTE
 . EXIT TABLE RTEREF
EXIT TABLE HNPACONT
LNP Info: DN residency check bypassed for ARS originator.
LNP Info: HNPA results are used.

+++ TRAVER: SUCCESSFUL CALL TRACE +++


DIGIT TRANSLATION ROUTES
```

RES Translations Simplification (continued)

Call takes ARS default route to VFG (continued)

```
1 VFG: VFG613           4731051            ST

TREATMENT ROUTES.  TREATMENT IS: GNCT
1 *OFLO
2 LKOUT

+++ TRAVER: SUCCESSFUL CALL TRACE +++
```

Thge following example shows a call that takes the ARS default route to VFG, and the 'rtevfg' option is used to show the VFG leg of the call, terminating to the called line.

Call takes ARS default route to VFG, with 'rtevfg' option

```
>traver l 4771051 94731051 b rtevfg all
TABLE IBNLINES
REM3 01 1 04 23 0 DT STN IBN 4771051 COMKODAK 0 0 416 $
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TUPLE NOT FOUND
TABLE IBNFEAT
TUPLE NOT FOUND
TABLE CUSTSTN
COMKODAK AIN AIN CDPCODE
TABLE OFCVAR
AIN_OFFICE_TRIGGRP OFCTRIG
AIN Orig Attempt TDP: no subscribed trigger.
TABLE NCOS
COMKODAK 0 0 0 KDK0 ( OHQ 0 TONE_OHQ) ( CBQ 0 3 N 2)$
TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT, AND
DIGCOL
COMKODAK PXDK CXDK CUSTFEAT 0 KDK
TABLE DIGCOL
KDK 9 RPT
TABLE IBNXLA: XLANAME PXDK
TUPLE NOT FOUND
Default is to go to next XLA name.
TABLE IBNXLA: XLANAME CXDK
CXDK 9 NET N Y 1 Y POTS Y N DOD N 999 NONE $
TABLE DIGCOL
POTS specified: POTS digit collection
TABLE LINEATTR
```

RES Translations Simplification (continued)

Call takes ARS default route to VFG, with 'rtevfg' option (continued)

```
999 1FR NONE NT NSCR 0 001 P621 NLCA NONE 10 NIL NILSFC NILLATA 0 NIL
NIL 00 N $
LCABILL OFF – BILLING DONE ON BASIS OF CALLTYPE
TABLE STDPRTCT
P621 ( 1) (65021) 1
 . SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING.  CALL TYPE DEFAULT IS NP.  PLEASE REFER TO
DOCUMENTATION.
 . KEY NOT FOUND
 . DEFAULT VALUE IS:   N NP 0 NA
 . SUBTABLE AMAPRT
 . KEY NOT FOUND
 . DEFAULT VALUE IS:   NONE OVRNONE  N
TABLE HPCPATTN
TUPLE NOT FOUND
TABLE HNPACONT
001 Y 20 1 ( 5) ( 1) ( 3) ( 0) 1 (ARS (DEFAULT_RTEREF 5)$)$
 . SUBTABLE HNPACODE
 . USING DEFAULT ARS RTEREF, DIGITS UNCHANGED.
AIN Info Collected TDP: no subscribed trigger.
TABLE FNPA7DIG
TUPLE NOT FOUND
TABLE TRIGGRP
CDPCODE INFOANAL
 . CDPCODE ( DG CDPDIG)$ NIL
Trigger AIN CDPCODE is applicable to customer group.
 . CDPCODE ( DG CDPTRAF)$ NIL
Trigger AIN CDPCODE is applicable to customer group.
TABLE TRIGGRP
OFCTRIG INFOANAL
 . N11 ( DG N11DIG)$ NIL
Trigger AIN N11 is applicable to office.
 . PODP ( DG PODPDIG)$ NIL
Trigger AIN PODP is applicable to office.
 . N11 ( DG N11TRAF)$ NIL
Trigger AIN N11 is applicable to office.
 . PODP ( DG PODPTRAF)$ NIL
Trigger AIN PODP is applicable to office.
 . LNP ( DG LNPDIG) (ESCEA ) (ESCOP ) (ESCDN ) (ESCQR )$ NIL
Trigger AIN LNP is applicable to office.
AIN Info Analyzed TDP: trigger criteria not met.
 . SUBTABLE RTEREF
 .    5 T IBNRTE 710
 .  . TABLE IBNRTE
```

RES Translations Simplification (continued)

Call takes ARS default route to VFG, with 'rtevfg' option (continued)

```
 .  .  710 VFG N N N VFG613 0
 .  . EXIT TABLE IBNRTE
 . EXIT TABLE RTEREF
EXIT TABLE HNPACONT
LNP Info: DN residency check bypassed for ARS originator.
LNP Info: HNPA results are used.

+++ TRAVER: SUCCESSFUL CALL TRACE +++


DIGIT TRANSLATION ROUTES

1 VFG: VFG613           4731051            ST

TREATMENT ROUTES.  TREATMENT IS: GNCT
1 *OFLO
2 LKOUT

+++ TRAVER: SUCCESSFUL CALL TRACE +++

--->
---> Resolving VFG: VFG613 Route with calling digits 4731051
--->
TABLE VIRTGRPS
VFG613 SIZE 2047 POTS 5551212 0 Y $
TABLE LINEATTR
0 1FR NONE NT FR01 0 613 P621 L613 TSPS 10 NIL NILSFC LATA1 0 NIL NIL 00
N $
LCABILL OFF – BILLING DONE ON BASIS OF CALLTYPE
TABLE STDPRTCT
P621 ( 1) (65021) 1
 . SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING.  CALL TYPE DEFAULT IS NP.  PLEASE REFER TO
DOCUMENTATION.
 . KEY NOT FOUND
 . DEFAULT VALUE IS:   N NP 0 NA
 . SUBTABLE AMAPRT
 . KEY NOT FOUND
 . DEFAULT VALUE IS:   NONE OVRNONE  N
TABLE HPCPATTN
TUPLE NOT FOUND
TABLE HNPACONT
613 Y 932 2 ( 427) ( 1) ( 84) ( 0) 2 $
 . SUBTABLE HNPACODE
```

RES Translations Simplification (continued)

Call takes ARS default route to VFG, with 'rtevfg' option (continued)

```
 . 473 473 DN 416 473
TABLE IBNFEAT
TUPLE NOT FOUND
TABLE CUSTSTN
TUPLE NOT FOUND
TABLE OFCVAR
AIN_OFFICE_TRIGGRP OFCTRIG
AIN Info Collected TDP: no subscribed trigger.
TABLE FNPA7DIG
TUPLE NOT FOUND
TABLE TRIGGRP
OFCTRIG INFOANAL
 . N11 ( DG N11DIG)$ NIL
Trigger AIN N11 is applicable to office.
 . PODP ( DG PODPDIG)$ NIL
Trigger AIN PODP is applicable to office.
 . N11 ( DG N11TRAF)$ NIL
Trigger AIN N11 is applicable to office.
 . PODP ( DG PODPTRAF)$ NIL
Trigger AIN PODP is applicable to office.
 . LNP ( DG LNPDIG) (ESCEA ) (ESCOP ) (ESCDN ) (ESCQR )$ NIL
Trigger AIN LNP is applicable to office.
 .  . TABLE TRIGDIG
 .  . LNPDIG LNP 416473 LNP EVENT TCAP R01 SS7 AINBLUES DFLT $
 .  .  . TABLE C7GTTYPE
 .  .  . AINBLUES ANSI7 11 $
 .  .  . TABLE C7GTT
 .  .  . AINBLUES 4164731051 4164731051 PCSSN (SIMTOOL_RTESET SIMTOOL 0)
$ SSN
AIN Info Analyzed TDP: trigger criteria not met.
TABLE TOFCNAME
416 473 $
TABLE DNINV
416 473 1051 L REM3 01 1 17 21
AIN Term Attempt TDP: no subscribed trigger.
TABLE DNFEAT
TUPLE NOT FOUND
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TUPLE NOT FOUND
LNP Info: Called DN is resident.
LNP Info: Called DN has native NPANXX.
LNP Info: HNPA results are used.
TABLE LCASCRCN
```

RES Translations Simplification (continued)

Call takes ARS default route to VFG, with 'rtevfg' option (continued)

```
613 L613 ( 44) OPTL N N
 . SUBTABLE LCASCR
 . 473 473
TABLE PFXTREAT
OPTL NP Y NP UNDT
TABLE CLSVSCRC
TABLE FNPA7DIG
TUPLE NOT FOUND
TABLE TRIGGRP
OFCTRIG INFOANAL
 . N11 ( DG N11DIG)$ NIL
Trigger AIN N11 is applicable to office.
 . PODP ( DG PODPDIG)$ NIL
Trigger AIN PODP is applicable to office.
 . N11 ( DG N11TRAF)$ NIL
Trigger AIN N11 is applicable to office.
 . PODP ( DG PODPTRAF)$ NIL
Trigger AIN PODP is applicable to office.
 . LNP ( DG LNPDIG) (ESCEA ) (ESCOP ) (ESCDN ) (ESCQR )$ NIL
Trigger AIN LNP is applicable to office.
 .  . TABLE TRIGDIG
 .  . LNPDIG LNP 416473 LNP EVENT TCAP R01 SS7 AINBLUES DFLT $
 .  .  . TABLE C7GTTYPE
 .  .  . AINBLUES ANSI7 11 $
 .  .  . TABLE C7GTT
 .  .  . AINBLUES 4164731051 4164731051 PCSSN (SIMTOOL_RTESET SIMTOOL 0)
$ SSN
AIN Info Analyzed TDP: trigger criteria not met.

+++ TRAVER: SUCCESSFUL CALL TRACE +++


DIGIT TRANSLATION ROUTES

1 LINE                  4164731051         ST

TREATMENT ROUTES.  TREATMENT IS: GNCT
1 *OFLO
2 LKOUT

+++ TRAVER: SUCCESSFUL CALL TRACE +++

>
```

RES Translations Simplification (end)

SERVORD

COOR: RES Translations Simplification does not affect service orders.

Screening List Editing (SLE)

Ordering codes

Functional group ordering code: RES00006

Functionality ordering code: not applicable

Release applicability

SN07 (DMS) and up

Prerequisites

To operate, Screening List Editing (SLE) has the following prerequisites:

- BAS Generic, BAS00003
- MDC Minimum, MDC00001
- MDC Standard, MDC00003
- RES Non-Display Services, RES00005

Network configuration

Common Channel Signaling No. 7 (CCS7) connectivity is required for network (interoffice) configuration of Screening List Editing. The following feature packages are required for CCS7 connectivity:

- Base ISUP, ISP70001
- TEL CCS7 Base, TEL00008

Description

Call screening lists are provided by the Screening List Editing (SLE) feature. A set of SLE audio announcements is used for all instructions and prompts. The subscriber selects actions to be performed by entering a one- or two-digit command sequence. Screening lists are made up of validated directory numbers (DN).

Operation

Feature status level

When initially accessing the feature, the subscriber enters the feature status level, where information related to the current status of the service and the size of the associated screening list is given. For Selective Call Forwarding (SCF), the DN (referred to as the remote DN or the forward-to DN) to which numbers on the list are to be forwarded is reconfirmed, provided that the service is active at the time.

Screening List Editing (SLE) (continued)

List editing level

Once this initial stage is completed, the subscriber is placed into the list editing level. From this level the subscriber can enter commands to alter the status of the service, add or delete DNs to or from the list, or review all nonprivate entries currently on the list.

When a subscriber adds a DN to any screening list, the DMS validates that number before accepting the input. Where the DN is served by a different switch, the DMS sends a transaction capability application part (TCAP) DN query message to the appropriate switch. The response to this query determines whether the number is added to the screening list.

Dual-tone multifrequency and dial pulse subscriber service

SLE services are available to both dual-tone multifrequency (DTMF) and dial pulse (DP) subscribers. DTMF subscribers can enter commands and data using the full range of tones provided on the DTMF keypad. Because some of the DTMF codes utilized in SLE are unavailable to the DP subscriber, equivalent digit sequences are defined for these codes.

In order to provide the correct syntax for command input at various stages of SLE, the system must be able to distinguish subscribers with DTMF capability from subscribers with DP capability only. This is done by checking subscriber line data for the presence of option DGT on the line.

If option DGT is present, instructions are provided using the asterisk (*) and the octothorpe (#) which are part of valid command sequences where applicable. In addition, the optional end-of-dialing digits are included in instructions for data input. All other subscribers receive DP instructions.

Note: Subscribers to DTMF service may have DP sets in addition to their DTMF sets. These subscribers continue to receive DTMF instructions, regardless of which type of set they are using.

DN input formats

While list entries actually consist of ten-digit DNs, a subscriber need not always enter ten digits to identify the DN. A number of different entry formats are supported. The only criterion is that the digits entered must be mappable to a valid ten-digit DN.

DN input formats are as follows:

- standard seven-digit DN (NXX-XXX)—As a rule, the numbering plan area (NPA) associated with this DN would be the same as that of the subscriber. However, it is possible to use seven-digit dialing within a local calling area that spans NPA boundaries. Network dial plan (NDP) tables

must be consulted to determine a ten-digit DN. If no datafill is present in these tables for SLE, the NPA of the subscriber is the default value.

- prefix code + standard seven-digit DN (P-NXX-XXXX)—This format is used by subscribers who are required to dial a prefix code to reach the called party. The prefix 1 is used to resolve conflicts where the same NXX codes may exist in neighboring NPAs.
- standard ten-digit DN (NPA-NXX-XXXX)—No mapping is required in this case.
- prefix code + standard ten-digit DN (P-NPA-NXX-XXXX)—Here the prefix digit (for example, 1) is deleted.
- optional prefix code + extension (P-extension)—The optional prefix code, if present, is deleted, and NDP tables are used to map the remaining digits (an extension) to a ten-digit DN. If no datafill is present in these tables for SLE, the corresponding digits in the subscriber's DN are used as the default value. Any DN input consisting of less than seven digits falls into this category.

Note: Group intercom (GIC) codes are not supported as a means of specifying DNs.

Remote DNs

The number to which incoming calls are forwarded when SCF is active must be entered in a way that can be dialed; that is, according to the subscriber's dial plan. The following formats are possible, depending upon the various dial plans supported within the office:

- abbreviated dialing codes (extensions)
- speed-call codes (for subscribers with speed-call options)
- necessary prefix digits (for example, 9 and 1), followed by an optional carrier code (10XXX) and seven or ten digits

Note: GIC codes are not supported as a means of specifying remote DNs.

A remote DN entered by an SCF subscriber is valid if standard translations for that subscriber, when applied to the digits entered, result in successfully determining a route (an existing line or trunk) and if no subscriber restrictions exist with respect to that route.

Exceptions are as follows:

- numbers prefixed by 0
- numbers of the form N11

Screening List Editing (SLE) (continued)

- the subscriber's own number
- 950-xxxx numbers
- 555-1212 numbers
- 800 numbers and inward wide area telephone service (INWATS) numbers
- numbers within the subscriber's office that have the following options:
  - — emergency services line (ESL)
  - — denied call forwarding (DCF)
  - — free number terminating (FNT)

The validation process used by the DMS to verify that the remote DN is a valid dialable DN utilizes the subscriber's standard translations. Based on these translations, it is possible that the remote DN may be altered prior to the remote DN being stored against the subscriber, and/or voiced back to the subscriber.

Screening incoming calls

When incoming calls are received for a subscriber who has one or more screening features active, the DN of the originating party (provided it is available) is compared with the list of DNs identified for special treatment. If a match is found, the call is treated as determined by the particular feature.

For calls within the same central office (CO), the originating DN can be obtained directly from line data. For interoffice calls, the originating DN must be obtained from the originating line's office.

The originating DN can be obtained from the originating office provided there is trunking between the offices that supports the following:

- Common Channel Signaling No. 7 (CCS7)—The calling number is provided in the optional calling party address parameter in the initial address message (IAM).
- Integrated Services Digital Network (ISDN) primary rate access (PRA)—The calling number is provided in the calling party information element of the setup message.
- Stored Program Control/Call Management Services—These trunks originate from SP-1 or #1-ESS offices. They provide the calling number in the calling line information message using the CCS7 TCAP.

Screening List Editing (SLE) (continued)

Screening lists

For each call screening feature, a list of DNs identifying incoming calls for special treatment is maintained by the switch. Each entry on the list records a ten-digit DN in the standard NPA-NXX-XXXX format.

The physical limit to the size of any one screening list is 8191 entries. However, the actual limit can be set by the operating company in table RESOFC for each screening service. SLE supports up to 31 entries for each list due to digital recorded announcement machine (DRAM) announcement limitations.

Managing SLE data store allocation

The data store needed by call screening lists is organized into *segments*, each containing *items*. Each item contains all the information required for one entry in an SLE list. All the items for one list are arranged sequentially within one segment.

The amount of data store allocated for SLE data is controlled by two office parameters in table OFCENG:

- SLE_MAX_SEGMENT_COUNT, which ranges from 0 to 2047, controls the number of segments that can be allocated for SLE data.
- SLE_ITEMS_IN_SEGMENT, which ranges from 1024 to 8191, controls the number of items within each segment.

Note: Since all the items for one list must be located in the same segment, the maximum size of lists is determined accordingly.

Data store is only allocated when it is required. It is not reclaimed when data is not assigned, although it is reused when possible. This can lead to data store fragmentation, resulting in inefficient data store use. An audit style process, referred to as the *compaction process*, is scheduled to run on a daily basis to eliminate the fragmentation. It runs at the time specified by office parameter SLE_WAKEUP_TIME in table OFCENG. It is recommended that this time be set for a period of very low traffic. The default value for this time is 1:37 a.m.

A second level of fragmentation control is available through office parameter SLE_TRANSACTION_THRESHOLD in table OFCENG. This parameter defines the maximum number of SLE transactions (list additions and deletions) that can occur before the compaction process is run, regardless of the time of day, to avoid excessive fragmentation on days when the SLE load is heavy. Refer to “Datafilling office parameters" in this feature description for more information.

Screening List Editing (SLE) (continued)

List editing session timers

At various points in a SLE session, the system is waiting for subscriber input, such as a list editing command, a remote DN, a DN to be added to or deleted from a list, or confirmation of input data. Timers are defined to control how long the system should wait for such input once the instruction announcement has been completed.

In addition, timers are defined for the following:

- the maximum time permitted within any one SLE session
- interdigit time-out between digits in an input command

These timers are defined on a customer group basis in table CUSTSTN (described in detail in the data schema section of this document).

DRAM requirements

All instructions and command-input prompts are implemented through a set of customized announcements prerecorded in programmable read-only memory (PROM).

While a certain degree of flexibility exists for combining various portions of these announcements, it should be noted that many of the enhancements to SLE do not have accompanying announcement texts. They therefore appear as “hidden" options. These options can be made “visible" to the subscriber in any written documentation provided to subscribers. A list of the recommended editing codes is provided in “Datafill procedure for table IBNXLA" in this feature description.

Note: All customized announcements used within SLE are interruptible.

SLE multi-DRAM access

SLE uses many customized announcements to guide a subscriber through SLE functions. These announcements exceed the memory capacity of a single DRAM. Therefore, a capability allowing announcements to be played from more than one DRAM during a single SLE session is provided for SLE.

Customized announcements are set up using the following tables (refer to the corresponding “Datafill procedure" sections of this feature description.

- Table ANNS lists announcement types.
- Table ANNMEMS lists the physical announcement circuits used to play a specific announcement type.
- Table DRMUSERS lists the phrases that are played back when a specific announcement is called.

Screening List Editing (SLE) (continued)

Multiple language support

Provision is made for supporting announcements in two languages within a given office. These languages are referred to as LANG1 and LANG2.

For each office, a primary and secondary language (either LANG1 or LANG2) can be defined by office parameter SLE_LANGUAGE in table OFCVAR.

By default, subscribers hear announcements in the primary language defined for the office. Subscribers can choose to receive announcements in the secondary language by having option SL added to their lines using standard service orders.

Translations table flow

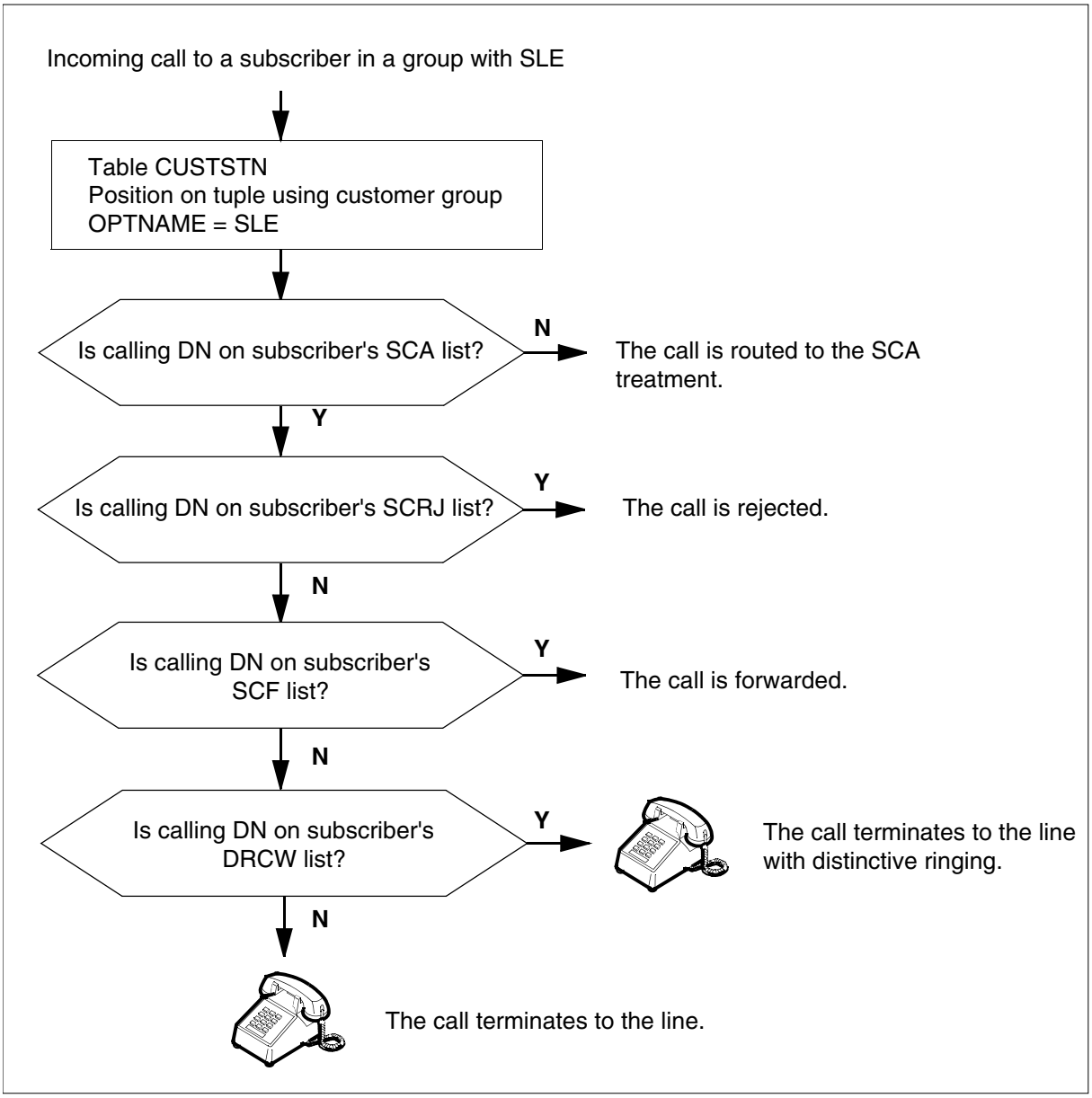
The Screening List Editing (SLE) translations tables are described in the following list:

- Table CUSTSTN contains information about customer groups.
- Table XLANAME contains information about translator name.
- Table IBNXLA contains information about translator name and dialed digits.

The precedence for incoming calls to SLE subscribers is shown in the flowchart that follows.

Screening List Editing (SLE) (continued)

Table flow for an incoming call to a SLE subscriber



Screening List Editing (SLE) (continued)

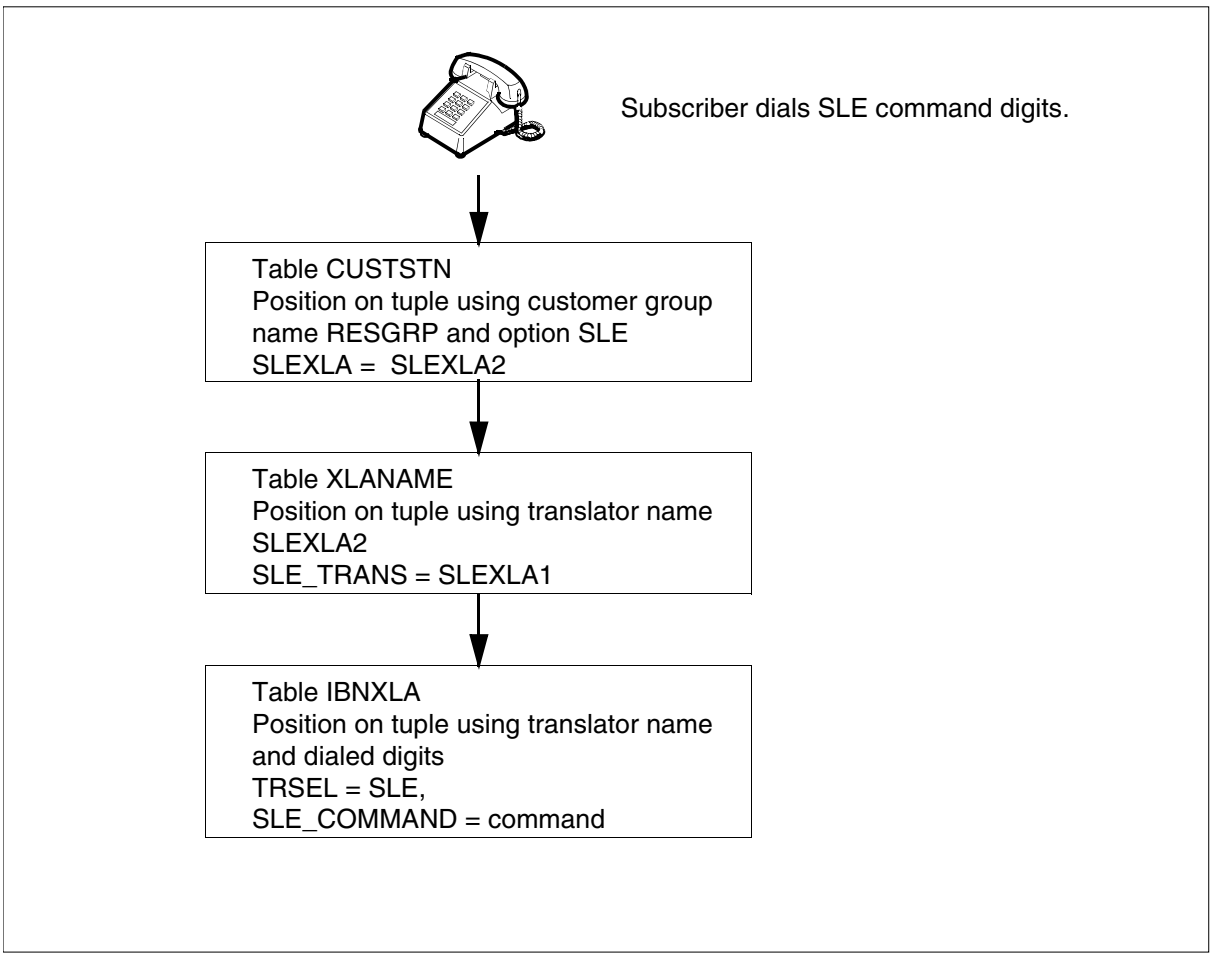
The following table lists the datafill content used in the flowchart. This information pertains to Customer group RESGRP.

Datafill example for an incoming call to a customer group with Screening List Editing (SLE)

Datafill table	Example data
CUSTSTN	RESGRP SLE SLE 30 1 0 SLEXLA2 VSLEXLA2 2 Y LISTADD LISTDEL Y 3 50 50 50 50 50 50 30 11 7 11 N 30

The SLE translation process is shown in the following figure.

Translations data flow for SLE commands



Recommended SLE commands

The following table contains the full list of the recommended SLE editing commands and codes. The command name and corresponding Bellcore values (where applicable) are also shown. One- or two-digit codes can be defined for

Screening List Editing (SLE) (continued)

these commands in table IBNXLA or table XLANAME, as described in "Datafillable command menu codes" in this feature description.

SLE Commands

Command	Name	Bellcore value(s)
Nil command	NILCMD	N/A (See Note 1)
List addition	LISTADD	# or 12
List deletion	LISTDEL	* or 11
List review	LISTREV	1 (See Note 2)
Delete list entry	DELETE	07
Delete all entries	DELALL	08
Delete all private	DELPRIV	09
Activate service	ACTIVATE	N/A (See Note 1)
Deactivate service	DEACTIVATE	N/A (See Note 1)
Change status	CHGSTATUS	3
Program remote DN	PROGRDN	N/A (See Note 1)
Query service	QSERVICE	N/A (See Note 1)
Cancel command	CANCEL	N/A (See Note 1)
Last DN	LASTDN	01
Extension	EXTN	02
Next entry	NEXTDN	N/A (See Note 1)
First entry	FIRSTDN	N/A (See Note 1)
Previous entry	PREVDN	N/A (See Note 1)

Note 1: These command codes are Northern Telecom enhancements. They are not described by the Bellcore specifications and Bellcore-recommended announcements. Appropriate response announcements are provided when enhanced commands are used.

Note 2: Digits 0 and 1 must be assigned with the secondary translator name used in table XLANAME to avoid ambiguity.

Screening List Editing (SLE) (continued)

SLE Commands

Command	Name	Bellcore value(s)
Current entry	PREVDN	N/A (See Note 1)
Help	HELP	0 (See Note 2)

Note 1: These command codes are Northern Telecom enhancements. They are not described by the Bellcore specifications and Bellcore-recommended announcements. Appropriate response announcements are provided when enhanced commands are used.

Note 2: Digits 0 and 1 must be assigned with the secondary translator name used in table XLANAME to avoid ambiguity.

Datafillable command menu codes

With the exception of the menu codes # and *, the menu codes for SLE are evaluated using a specific translation mechanism. This mechanism is actually made up of two translators that are datafilled in table IBNXLA. Each translator evaluates the digits dialed by the subscriber, and the result of the translation is the desired SLE command. There can be more than one menu code assigned to correspond to any given SLE command. These translators are chained together such that if translation using the primary translator is unable to determine a result, the secondary translator is used. The name of the primary translator to be used for a given customer is datafilled in table CUSTSTN. The name of the secondary translator is obtained from table XLANAME which is specified as the default result field in this table.

The SLE translation selector, used by both table IBNXLA and table XLANAME, allows refinement of the translation result. The result information for the SLE selector consists of one of the following:

- the SLE command that corresponds to digits dialed by the SLE subscriber specified in field RESULT of table IBNXLA tuples
- the name of the secondary translator specified in field DEFAULT of table XLANAME.

The # and * menu codes are datafilled in table CUSTSTN. Field OCTOCODE and STARCODE are datafilled to contain the SLE commands that are mapped to these digits.

Each command entered is evaluated by SLE to determine the validity of the command during a given level of SLE processing (that is, list editing level, status level, or list review level). Refer to the preceding table for a summary of the SLE subscriber commands and a description of the applications of the commands this feature supports.

Screening List Editing (SLE) (continued)

Because the SLE feature provides several enhanced commands in addition to those defined by the Bellcore (TR), the use of menu codes that can be datafilled allows each office to choose the commands and corresponding menu codes to be supported. As a minimum, those commands defined by Bellcore should be supported. However, the menu code used for a particular command can be different than that specified by Bellcore. Table SLE indicates which commands are Bellcore defined and which are enhanced commands defined by the SLE feature.

Although the menu code for a particular command can be specified through datafill in the SLE translator, certain considerations must be addressed in choosing menu codes or allowing enhanced command input. Primarily, the restrictions pertain to the announcements provided to a subscriber during a SLE session.

First, the SLE feature does not support modification the announcement text for a particular office. The announcement text provided as part of this feature reflects the command menu codes and announcements defined by Bellcore. Therefore, changing a menu code for a Bellcore-defined command is strongly discouraged until the capability to modify these announcements can be provided. This is due to the unavoidable confusion caused to the SLE subscriber who would be given incorrect instructions for the use of SLE.

Second, the SLE feature does not support announcements for enhanced commands. Therefore, although the commands may be allowed in a particular office, instruction announcements are not provided for the use of these commands. Use of enhanced commands, however, can be described in written documentation provided to the SLE subscriber. Therefore, the provision of these commands is recommended because it enhances usability.

In addition to the above considerations, the choice of menu codes affects the way these codes are datafilled in the SLE translator, and certain rules must be followed in order for the datafill to operate correctly. These rules are as follows:

- The length of menu codes is limited to one or two digits.
- Single-digit menu codes that are also used as the first digit of a two-digit menu code are handled as ambiguous codes. That is, when this type of code is entered by a SLE subscriber, SLE requires that the subscriber indicate end-of-dialing (that is, octothorpe or time-out) in order to determine that the digit is to be evaluated as a single-digit code. These single-digit codes are datafilled in the secondary translator in table IBNXLA. The SLE translation selector is used in the same way as the primary translator, where the result data is the SLE command to which the single-digit code corresponds. Single-digit codes that are not used as the

first digit of a two-digit code are not ambiguous and can be datafilled if they are in the primary translator in table IBNXLA.

In addition to ambiguous single-digit codes, a two-digit command code can be datafilled in the secondary translator. In this case, dialing the two-digit code requires that the code be followed by an end-of-dialing indication. Note that the two-digit code must not start with the same digit as any of the ambiguous single-digit codes datafilled in table IBNXLA.

- The menu codes # and * are datafilled differently than the other menu codes. The commands to which each of these codes corresponds are datafilled in table CUSTSTN in subfield OCTOCODE and subfield STARCODE, respectively.

The following datafill examples for an office support only the menu codes and commands defined by Bellcore. Note that the menu codes 0 and 1 are used as the first digit of all the other two-digit codes, and are datafilled in the secondary translator in table IBNXLA, BELL2. The menu code 3, which is not used in this way, is datafilled in the primary translator in table IBNXLA, BELL1. The name of the secondary translator is datafilled in table XLANAME as the DEFAULT result from using the primary translator.

Note: Refer to “Datafill procedure" sections in this feature description for a more detailed description of the fields and subfields in tables CUSTSTN, XLANAME, and IBNXLA.

Datafill example for table CUSTSTN

The tuple shown in the following example provides the mapping of the # and * menu codes as well as the SLE menu code translator name. Note that menu codes 11 and 12 are defined by Bellcore as * and # equivalent codes to be used by DP lines, and are datafilled in the primary translator. Only those fields and subfields that are relevant to this section are shown (subfields appear in parentheses).

MAP display example for table CUSTSTN

```
CUSTNAME     OPTNAME      OPTION
                          (OCTOCODE    STARCODE     SLEXLA)
_____________________________________________________________
RESGRP       SLE          LISTADD      LISTDEL      BELL1
```

Datafill example for table XLANAME

The following example shows sample SLE secondary translator name datafill for Bellcore-defined codes in table XLANAME. Only those fields and

Screening List Editing (SLE) (continued)

subfields that are relevant to this section are shown (subfields appear in parentheses).

MAP display example for table XLANAME

```
XLANAME                  DEFAULT
                        (TRSEL       SLETRANS)
_____________________________________________________
BELL1                    SLE         TBELL2
```

Datafill example for table IBNXLA

The following example shows sample SLE menu code datafill for Bellcore-defined codes in table IBNXLA. Only those fields and subfields that are relevant to this section are shown (subfields appear in parentheses).

MAP display example for table IBNXLA

```
XLANAME          RESULT
                (DGLIDX      TRSEL   SLESEL      SLECOM)
_____________________________________________________
BELL1            01          SLE     C           LASTDN
BELL1            02          SLE     C           EXTN
BELL1            07          SLE     C           DELETE
BELL1            08          SLE     C           DELALL
BELL1            09          SLE     C           DELPRIV
BELL1            11          SLE     C           LISTDEL
BELL1            12          SLE     C           LISTADD
BELL1            3           SLE     C           CHGSTATUS
```

The following example shows ambiguous SLE menu code datafill for Bellcore-defined codes in table IBNXLA.

MAP display example for table IBNXLA, ambiguous SLE menu codes

```
XLANAME          RESULT
                (DGLIDX      TRSEL   SLESEL      SLECOM)
_____________________________________________________
BELL2            0           SLE     C           HELP
BELL2            0           SLE     C           LISTREV
```

Limitations and restrictions

The following limitations and restrictions apply to Screening List Editing (SLE):

- During a SLE session, all switchhook flashes are ignored by the switch. Therefore, flash activation of features is not allowed within SLE.
- A SLE session cannot be initiated as the second leg of a three-way call.
- SLE features are available to subscribers with an LCC of RES. These services are also available to subscribers with an LCC of 1FR or 1MR, provided that the office parameter RES_SO_SIMPLIFICATION in table OFCENG has field RES_AS_POTS set to Y.

  For information about the availability of SLE features to subscribers with an LCC of MDC, refer to “CLASS on MDC."
- Certain SLE capabilities are available to DTMF subscribers only. These include the ability to correct input errors and to specify the end of input.
- In order to initiate a SLE session for a particular SLE feature, the feature must first be enabled for the office in table RESOFC and all SLE office parameters must be appropriately datafilled.
- SLE services are accessed through defined access codes for each SLE feature—SCRJ, SCF, DRCW, and SCA—and must be assigned to the subscriber's line.
- The number of simultaneous SLE sessions within any given office is limited by the value of office parameter SLE_MAX_PROGRAMMERS in table OFCENG. This parameter is initially set to zero.
- Subscriber access to SLE is also controlled by the customer group. This requires the SLE datafill be present in table CUSTSTN for the subscriber's customer group. (Refer to the data schema section of this document for more information.) This datafill includes timers, error thresholds, and an appropriate translator from tables IBNXLA and XLANAME for mapping menu codes to SLE commands.
- The availability of SLE commands within a SLE session depends on the extent to which these commands have been datafilled against the appropriate translator name in tables IBNXLA and XLANAME. If a corresponding command code has not been defined, the capability provided by that command is not present. A default set of command codes is not defined; however, Bellcore does provide a set of recommended codes.
- The announcements that guide a subscriber through a SLE session must be datafilled correctly in tables ANNS, ANNMEMS, and DRMUSERS. Refer to the data schema section of this document and to the *Digital*

Screening List Editing (SLE) (continued)

Recorded Announcement Machine DRAM and EDRAM Guide for more information on datafilling announcements.

- Minimum announcement hardware supports voiceback of list sizes up to a maximum of 12 entries only. Twenty nine entries are available if the following PROM cards are purchased:
  - NT1X76GA
  - NT1X76GB
  - NT1X76GC
  - NT1X76GE
  - NT1X76GF
  - NT1X76GG
  - NT1X76GH
  - NT1X76GJ
  - NT1X76GK
  - NT1X76GL
  - NT1X76GM
  - NT1X76 (personality card)
- It is possible to define SLE commands that, due to hardware limitations, have no corresponding announcements. When entered by the subscriber, these commands are still processed as described in this document, despite the lack of appropriate announcements for instructions and subscriber feedback.
- For multiple-language support, a secondary language must be defined for the office by the office parameter SLE_LANGUAGE in table OFCVAR.
- Screening lists consist of ten-digit DNs defined within the public network only.
- TCAP facilities and ISDN user part (ISUP) trunking (CLASS connectivity) are required in order to be able to include DNs outside the subscriber's own switch on a screening list. Therefore, CCS7 connectivity must exist between the offices.
- No operational measurements specific to SLE are implemented.

Interactions

The following paragraphs describe the interactions between Screening List Editing (SLE) and other functionalities.

Call Waiting

Call Waiting (CWT) is disabled during a SLE session, since the subscriber cannot flash to answer the waiting call.

Executive Busy Override and Directed Call Barge In

All features that “barge in" to an existing call, such as Executive Busy Override and Directed Call Barge In, are disabled during a SLE session, since the session cannot be conferenced.

Group Intercom

Group Intercom (GIC) codes cannot be entered into screening lists or used to specify a remote DN.

Activation/deactivation by the end user

The activation/deactivation procedures described in this section include the following:

- Adding entries to a screening list
- Deleting entries from a screening list
- Reviewing entries in a screening list
- Changing the status of a SLE feature
- Activating a SLE feature
- Deactivating a SLE feature
- Querying a SLE feature

All procedures include information for both Digitone subscribers, “DTMF subscribers" and rotary phone subscribers, “DP subscribers."

Note 1: Selective Call Forwarding (SCF) allows SCF-specific activation and programming of a remote DN. See “Activation/deactivation by the end user" in “Selective Call Forwarding (SCF)" for more information.

Note 2: Selective Call Rejection (SCRJ) allows SCRJ-specific entering of service. See “Activation/deactivation by the end user" in “Selective Call Rejection (SCRJ)" for more information.

Screening List Editing (SLE) (continued)

Adding entries to a screening list

At your telephone:

1 Enter a valid feature access code.

Response:

1. Subscribers hear “Your <SCF, SCA, SCRJ, DRCW> service is now <on, off>." Subscribers then hear one of the following four statements:
   - “There (is) are (one . .) entr(y)ies on your list, including (one . .) private entr(y)ies."
   - “There (is) are (one . .) entr(y)ies on your list."
   - “There (is) are (one . .) private entr(y)ies on your list."
   - “There are no entries on your list."

   Subscribers then hear “You may dial during the announcements for faster service. When you have finished, hang up."

   Note: If the feature is on and the subscriber wants to get to the option to turn it off immediately, the subscriber dials 1 at the “for faster service" prompt. Then the subscriber can dial 3 to turn the feature off.

   A subscriber who does not dial during the announcements or dials anything but 1 will hear “Your calls will be forwarded to XXX-XXXX if correct dial 1, if not correct dial 0." The subscriber must dial a 1 or a 0.
2. DTMF subscribers hear the following:
   - “To turn this service <on, off>, dial 3
   - To add an entry, press the number sign key.
   - To remove one or more entries, press the star key.
   - To hear the entries on your list, dial 1.
   - To hear these instructions repeated, dial 0.
   - Please dial now."
3. DP subscribers hear the following:
   - “To turn this service <on, off>, dial 3
   - To add an entry, dial 1, 2.
   - To remove one or more entries, dial 1, 1.
   - To hear the entries on your list, dial 1.
   - To hear these instructions repeated, dial 0.
   - Please dial now."

2 Press the number sign key (DTMF subscribers) or dial 1, 2 (DP subscribers to add an entry to the screening list.

Note: If the screening list is full, subscribers hear “We're sorry. Your list is full. You must remove an entry before adding another. Please continue, or dial 0 for instructions."

Screening List Editing (SLE) (continued)

Response:

1. DTMF subscribers hear the following:
   - "Dial the number to be added, then press the number sign key again. (Go to step 3.)
   - To add the last calling party, dial 0, 1 then press the number sign key again. (Go to step 4.)
   - Please dial now."
2. DP subscribers hear:
   - "Dial the number to be added. (Go to step 3.)
   - To add the last calling party, dial 0, 1. (Go to step 4.)
   - Please dial now."

3 Dial the DN plus the number sign key (DTMF subscribers) or the DN (DP subscribers) to add an entry to the screening list.

Note: If the DN is not valid, subscribers hear "We're sorry. The number you have dialed is incorrect. Please start again, or dial 0 for instructions."

Response:

1. If the DN is not on the screening list, subscribers hear "The number you have added is <DN>. Please dial 0 for instructions, or hang up."
2. If the DN is on the screening list, subscribers hear "This number is already on your list. <DN>. Please continue, dial 0 for instructions, or hang up."

4 Dial 0, 1.

Note: If the last calling party is not available, subscribers hear "We're sorry. The number of the last calling party is not available. Please start again, or dial 0 for instructions."

Response:

1. If the DN is not on the screening list, subscribers hear "The number you have added is <DN>. Please continue, dial 0 for instructions, or hang up."
2. If the DN is a private entry, subscribers hear "The number you have added is a private entry. Please continue, dial 0 for instructions, or hang up."
3. If the DN is on the screening list, subscribers hear "This number is already on your list. <DN> . Please continue, dial 0 for instructions, or hang up."

Screening List Editing (SLE) (continued)

Deleting entries from a screening list

At your telephone:

1 Enter a valid feature access code.

Response:

1. Subscribers hear “Your <SCF, SCA, SCRJ, DRCW> service is now <on, off>." Subscribers then hear one of the following four statements:
   - “There (is) are (one . .) entr(y)ies on your list, including (one . .) private entr(y)ies."
   - “There (is) are (one . .) entr(y)ies on your list."
   - “There (is) are (one . .) private entr(y)ies on your list."
   - “There are no entries on your list."

   Subscribers then hear “You may dial during the announcements for faster service. When you have finished, hang up."
2. DTMF subscribers hear the following:
   - “To turn this service <on, off>, dial 3
   - To add an entry, press the number sign key.
   - To remove one or more entries, press the star key.
   - To hear the entries on your list, dial 1.
   - To hear these instructions repeated, dial 0.
   - Please dial now."
3. DP subscribers hear the following:
   - “To turn this service <on, off>, dial 3.
   - To add an entry, dial 1, 2.
   - To remove one or more entries, dial 1, 1.
   - To hear the entries on your list, dial 1.
   - To hear these instructions repeated, dial 0.
   - Please dial now."

2 Press the star key (DTMF subscribers) or dial 1, 1 (DP subscribers) to remove one or more entries form the screening list.

Note: If the DN is not on the list, subscribers hear “The number to be removed is not on your list. Please start again, dial 0 for instructions, or hang up."

Screening List Editing (SLE) (continued)

Response:

1. DTMF subscribers hear the following:
   - "Dial the number to be removed, then press the star key again. (Go to step 3.)
   - To remove all entries, dial 0, 8, then press the star key again. (Go to step 4.)
   - To remove just the private entries, dial 0, 9, then press the star key again. (Go to step 5.)
   - To hear these instructions repeated, dial 0.
   - Please dial now."
2. DP subscribers hear the following:
   - "Dial the number to be removed. (Go to step 3.)
   - To remove all entries, dial 0, 8. (Go to step 4.)
   - To remove just the private entries, dial 0, 9. (Go to step 5.)
   - To hear these instructions repeated, dial 0.
   - Please dial now."

3 Enter DN and star key (DTMF subscribers) or DN (DP subscribers) to remove one or more entries form the screening list.

Note: If there are no private entries on the list, subscribers hear "There are no more private entries on your list. Please continue, dial 0 for instructions, or hang up."

Response:

1. If the DN is a private number, subscribers hear "The number you have removed is a private entry. If this number is correct, dial 1. If this number is not correct, dial 0. Please continue, dial 0 for instructions, or hang up."
2. If the DN is not a private entry, subscribers hear "The number you have removed is <DN>. If this number is correct, dial 1. If this number is not correct, dial 0. Please continue, dial 0 for instructions, or hang up."

4 Press 0, 8 plus the star key (DTMF subscribers) or 0, 8 (DP subscribers) to remove one or more entries from the screening list.

Note: If the DN is not on the list, subscribers hear "The number to be removed is not on your list. Please start again, dial 0 for instructions, or hang up."

Response:

Subscribers hear "There are no more entries on your list. Please continue, dial 0 for instructions, or hang up."

5 Press 0, 9 plus the star key (DTMF subscribers) or 0, 9 (DP subscribers) to remove one or more entries form the screening list.

Note 1: If the DN is not on the list, subscribers hear "The number to be removed is not on your list. Please start again, dial 0 for instructions, or hang up."

Note 2: If there are no private entries on the list, subscribers hear "There are no more private entries on your list. Please continue, dial 0 for instructions, or hang up."

Screening List Editing (SLE) (continued)

Response:

Subscribers hear “There are no more private entries on your list. Please continue, dial 0 for instructions, or hang up."

Reviewing entries in a screening list

At your telephone:

1 Enter a valid feature access code.

Response:

1. Subscribers hear “Your <SCF, SCA, SCRJ, DRCW> service is now <on, off>." Subscribers then hear one of the following four statements:
   - “There (is) are (one . .) entr(y)ies on your list, including (one . .) private entr(y)ies."
   - “There (is) are (one . .) entr(y)ies on your list."
   - “There (is) are (one . .) private entr(y)ies on your list."
   - “There are no entries on your list."

   Subscribers then hear “You may dial during the announcements for faster service. When you have finished, hang up."
2. DTMF subscribers hear the following:
   - “To turn this service <on, off>, dial 3.
   - To add an entry, press the number sign key.
   - To remove one or more entries, press the star key.
   - To hear the entries on your list, dial 1.
   - To hear these instructions repeated, dial 0.
   - Please dial now."
3. DP subscribers hear the following:
   - “To turn this service <on, off>, dial 3.
   - To add an entry, dial 1, 2.
   - To remove one or more entries, dial 1, 1.
   - To hear the entries on your list, dial 1.
   - To hear these instructions repeated, dial 0.
   - Please dial now."

2 Dial 1 (both DTMF and DP subscribers) to review list.

Note 1: If the screening list is empty, subscribers hear “We're sorry, There are no entries on your list. Please try other options or dial 0 for instructions."

Note 2: If there are no public entries on the list, subscribers hear “There (is) are (one . .) private entr(y)ies on your list. Please try other options or dial 0 for instructions."

Screening List Editing (SLE) (continued)

Response:

1. Subscribers hear “There (is) are (one. .) entr(y)ies on your list, including (one. .) private entr(y)ies. After hearing an entry, you may dial 0, 7 to delete it and continue reviewing your list."
2. “There (is) are (one . .) entr(y)ies on your list. After hearing an entry, you may dial 0, 7 to delete it and continue reviewing your list."

3 Listen for beginning of list.

Subscribers hear “The first entry on your list is :

- “<DN>"
- “Next, <DN>"
- “Repeating, <DN>"

4 Press 0, 7 to delete an entry.

Response:

1. Deleting public entries:

   Subscribers hear “The number you have removed is <DN>."

   Note: The following phrase is optional. It is only heard if CONFOPT is set to Y in table CUSTSTN.

   “If this number is correct, dial 1. If this number is not correct, dial 0."
2. If the subscriber presses 0 to remove an entry, he or she hears “The number you have removed is <DN>. Please continue, dial 0 for instructions or hang up." Go to step 3.
3. If the subscriber presses 1 to keep the entry, he or she is returned to step 3.

5 Press 1, 4 to go to the next DN.

Note: This number is only the recommended activation number for this procedure. Use the activation number datafilled in table IBNXLA.

Response:

Subscribers hear “The first entry on your list is :

- “<DN>"
- “Next, <DN>"
- “Repeating, <DN>"

6 Press 1, 5 to go to the previous DN.

Note: This number is only the recommended activation number for this procedure. Use the activation number datafilled in table IBNXLA.

Response:

Subscribers hear “The first entry on your list is :

- “<DN>"
- “Next, <DN>"
- “Repeating, <DN>"

Screening List Editing (SLE) (continued)

7 Press 1, 3 to go to the current DN.

Note: This number is only the recommended activation number for this procedure. Use the activation number datafilled in table IBNXLA.

Response:

Subscribers hear “The first entry on your list is :

- “<DN>"
- “Next, <DN>"
- “Repeating, <DN>"

8 Press any key to go to the first DN.

Note: This number is only the recommended activation number for this procedure. Use the activation number datafilled in table IBNXLA.

Response:

Subscribers hear “The first entry on your list is :

- “<DN>"
- “Next, <DN>"
- “Repeating, <DN>"

9 The list is complete.

Response:

Subscribers hear “This is the end of your list."

Screening List Editing (SLE) (continued)

Changing the status of a SLE feature

At your telephone:

1 Enter a valid feature access code.

Response:

1. Subscribers hear “Your <SCF, SCA, SCRJ, DRCW> service is now <on, off>." Subscribers then hear one of the following four statements:
   - “There (is) are (one . .) entr(y)ies on your list, including (one . .) private entr(y)ies."
   - “There (is) are (one . .) entr(y)ies on your list."
   - “There (is) are (one . .) private entr(y)ies on your list."
   - “There are no entries on your list."

   Subscribers then hear “You may dial during the announcements for faster service. When you have finished, hang up."
2. DTMF subscribers hear the following:
   - “To turn this service <on, off>, dial 3.
   - To add an entry, press the number sign key.
   - To remove one or more entries, press the star key.
   - To hear the entries on your list, dial 1.
   - To hear these instructions repeated, dial 0.
   - Please dial now."
3. DP subscribers hear the following:
   - “To turn this service <on, off>, dial 3.
   - To add an entry, dial 1, 2.
   - To remove one or more entries, dial 1, 1.
   - To hear the entries on your list, dial 1.
   - To hear these instructions repeated, dial 0.
   - Please dial now."

2 Dial 3 (both DP and DTMF subscribers) to change the status of the feature.

Response:

If the status of the feature is active, the status of the feature is changed to inactive, and subscribers hear “Your <SCF, SCA, SCRJ, DRCW> service is now off. Please continue, dial 0 for instructions, or hang up."

3 Dial 3 to change the status.

Response:

Screening List Editing (SLE) (continued)

If the status of the feature is inactive the following occurs:

1. If the list is not empty, the status of the feature is changed to active, and subscribers hear “Your <SCF, SCA, SCRJ, DRCW> service is now on. Please continue, dial 0 for instructions, or hang up."
2. If the list is empty, subscribers hear “To turn on this service, you must add an entry to your list. To add an entry, please (DTMF subscribers) press the number sign key (DP subscribers) dial 1, 2."

   Instructions for adding entries to a screening list are provided in the procedure “Adding entries to a screening list."

   If the addition is successful, subscribers hear “Your <SCF, SCA, SCRJ, DRCW> service is now on. Please continue, dial 0 for instructions, or hang up."

   If the addition is not successful, subscribers go to step 1.

Note: Direct activation is a Northern Telecom enhancement to the Bellcore-specified SLE procedures.

Screening List Editing (SLE) (continued)

Activating a SLE feature

At your telephone:

1 Enter a valid feature access code.

Response:

1. Subscribers hear "Your <SCF, SCA, SCRJ, DRCW> service is now <on, off>." Subscribers then hear one of the following four statements:
   - "There (is) are (one . .) entr(y)ies on your list, including (one . .) private entr(y)ies.
   - "There (is) are (one . .) entr(y)ies on your list."
   - "There (is) are (one . .) private entr(y)ies on your list."
   - "There are no entries on your list."

   Subscribers then hear "You may dial during the announcements for faster service. When you have finished, hang up."
2. DTMF subscribers hear the following:
   - "To turn this service <on, off>, dial 3.
   - To add an entry, press the number sign key.
   - To remove one or more entries, press the star key.
   - To hear the entries on your list, dial 1.
   - To hear these instructions repeated, dial 0.
   - Please dial now."
3. DP subscribers hear the following:
   - "To turn this service <on, off>, dial 3.
   - To add an entry, dial 1, 2.
   - To remove one or more entries, dial 1, 1.
   - To hear the entries on your list, dial 1.
   - To hear these instructions repeated, dial 0.
   - Please dial now."

2 Press 05.

Note: This number is only the recommended activation number for this procedure. Use the command codes datafilled in table IBNXLA.

Screening List Editing (SLE) (continued)

Response:

1. If the status of the feature is active, the status of the feature is changed to inactive, and subscribers hear “Your <SCF, SCA, SCRJ, DRCW> service is now off. Please continue, dial 0 for instructions, or hang up."
2. If the status of the feature is inactive:
   - If the list is not empty, the status of the feature is changed to active, and subscribers hear “Your <SCF, SCA, SCRJ, DRCW> service is now on. Please continue, dial 0 for instructions, or hang up."
   - If the list is empty, subscribers hear “To turn on this service, you must add an entry to your list. To add an entry, please (DTMF subscribers) press the number sign key (DP subscribers) dial 1, 2."

     Instructions for adding entries to a screening list are provided in the procedure “Adding entries to a screening list."

     If the addition is successful, subscribers hear “Your <SCF, SCA, SCRJ, DRCW> service is now on. Please continue, dial 0 for instructions, or hang up."

     If the addition is not successful, subscribers go to step 1.

Screening List Editing (SLE) (continued)

Deactivating a SLE feature

At your telephone:

1 Enter a valid feature access code.

Note: This number is only the recommended deactivation number for this procedure. Use the deactivation number datafilled in table IBNXLA.

Response:

1. Subscribers hear “Your <SCF, SCA, SCRJ, DRCW> service is now <on, off>." Subscribers then hear one of the following four statements:
   - “There (is) are (one . .) entr(y)ies on your list, including (one . .) private entr(y)ies."
   - “There (is) are (one . .) entr(y)ies on your list."
   - “There (is) are (one . .) private entr(y)ies on your list."
   - “There are no entries on your list."

   Subscribers then hear “You may dial during the announcements for faster service. When you have finished, hang up."
2. DTMF subscribers hear the following:
   - “To turn this service <on, off>, dial 3.
   - To add an entry, press the number sign key.
   - To remove one or more entries, press the star key.
   - To hear the entries on your list, dial 1.
   - To hear these instructions repeated, dial 0.
   - Please dial now."
3. DP subscribers hear the following:
   - “To turn this service <on, off>, dial 3.
   - To add an entry, dial 1, 2.
   - To remove one or more entries, dial 1, 1.
   - To hear the entries on your list, dial 1.
   - To hear these instructions repeated, dial 0.
   - Please dial now."

2 Press 06.

Response:

Subscribers hear “Your <SCF, SCA, SCRJ, DRCW> service is now off. Please continue, dial 0 for instructions, or hang up."

Note: Querying service is a Northern Telecom enhancement to the Bellcore-specified SLE procedures.

Screening List Editing (SLE) (continued)

Querying a SLE feature

At your telephone:

1 Enter a valid feature access code.

Response:

1. Subscribers hear “Your <SCF, SCA, SCRJ, DRCW> is now <on, off>." Subscribers then hear one of the following four statements:
   - “There (is) are (one . .) entr(y)ies on your list, including (one . .) private entr(y)ies."
   - “There (is) are (one . .) entr(y)ies on your list."
   - “There (is) are (one . .) private entr(y)ies on your list."
   - “There are no entries on your list."

   Subscribers then hear “You may dial during the announcements for faster service. When you have finished, hang up."
2. DTMF subscribers hear the following:
   - “To turn this service <on, off>, dial 3.
   - To add an entry, press the number sign key.
   - To remove one or more entries, press the star key.
   - To hear the entries on your list, dial 1.
   - To hear these instructions repeated, dial 0.
   - Please dial now."
3. DP subscribers hear the following:
   - “To turn this service <on, off>, dial 3.
   - To add an entry, dial 1, 2.
   - To remove one or more entries, dial 1, 1.
   - To hear the entries on your list, dial 1.
   - To hear these instructions repeated, dial 0.
   - Please dial now."

2 Press 04.

Note: This number is only the recommended activation number for the this procedure. Use the activation number datafilled in table IBNXLA.

Response:

Subscribers hear:

- “Your <SCA, SCRJ, DRCW> service is now <on, off>."
- “Your <SCF> service is now on. Your calls will be forwarded to <DN>."
- “Your <SCF> service is now off."

Billing

Billing for SLE features may be subscription, usage sensitive, or both. For usage sensitive billing, automatic message accounting (AMA) records must be written for each of the following actions:

- activating a service
- deactivating a service
- aborting a session

Criteria for generating AMA records

A single AMA record is generated for each SLE session for subscribers to screening list editing services with the AMA billing option. This record reflects any change resulting from the session.

The status of the service and size of the corresponding screening list are recorded at the beginning of every new SLE session. The status and list size at the end of the session are compared with those at the beginning of the session to determine the appropriate setting for the CLASS function field in the AMA record.

Information fields specific to screening list editing services

To generate AMA records, call code 330 and structure code 1030 are utilized by call screening services (SCRJ, SCF, and DRCW) when operating in the usage-sensitive pricing environment.

The AMA record information fields specific to screening list editing services are as follows:

- service feature—SCF, SCRJ, SCA, or DRCW
- elapsed time—total time in SLE session (in 10-ms units)
- CLASS function—reflects the changes resulting from the SLE session
- feature status: not applicable—(defaults to zero)
- screening list size for SCF—not applicable (defaults to zero)
- screening list size for SCRJ—not applicable (defaults to zero)
- screening list size for SCA—not applicable (defaults to zero)
- screening list size for DRCW—not applicable (defaults to zero)

The following figure is an example of an AMA record generated for call code SCF.

Screening List Editing (SLE) (continued)

Example of a SLE AMA record

```
HEX ID:AA STRUCTURE CODE:01030C CALL CODE:330C SENSOR TYPE:036C
SENSOR ID:0200200C  REC OFFICE TYPE:036C  REC OFC ID:0200200C
DATE:90815C SERVICE FEAT:052C ORIG NPA:613C ORIG NUMBER:7654166C
OVERSEAS IND:0C TERM NPA:00613C TERM NUMBER:7652275C
CONNECT TIME:0932061C ELAPSED TIME:000150000C CLASS FUNCTION:004C
FEATURE STATUS:000C SCRN LIST SCF:000C SCRN LIST SCR:000C
SCRN LIST DRCW:000C
```

Subscription usage sensitive pricing (SUSP)

SUSP provides the capability to bill for the SLE-based features according to usage. It does not affect the ability to bill on a subscription basis; both methods can be used simultaneously within the same office.

SUSP generates billing records each time the subscriber accesses a SLE usage sensitive pricing (USP) feature screening list or activates or deactivates a SLE USP feature. Billing records are not generated each time a terminating call is screened by a subscriber's SLE USP feature. In addition, the usage sensitive pricing is on a subscription basis rather than a casual feature basis. This means that the feature must be assigned to the subscriber line with a special indication that USP is in effect for that feature on that line. This is accomplished through a service order.

To enable USP, the following steps must be performed:

- Enable the feature(s) in table RESOFC.
- Assign the feature(s) to a line.
- Set the SUSP entry in table AMAOPTS to ON to enable usage sensitive billing records and the billing option prompt in the service order system (SERVORD) (performed once to activate SUSP).
- Select the AMA billing option for the feature(s).

Station Message Detail Recording

Screening List Editing (SLE) does not affect Station Message Detail Recording.

Datafilling office parameters

The following table shows the office parameters used by Screening List Editing (SLE). For more information about office parameters, refer to *Office Parameters Reference Manual.*

Office parameters used by Screening List Editing (SLE)

Table name	Parameter name	Explanation and action
OFCENG	SLE_ITEMS_ IN_SEGMENT	Identifies the number of items in one segment of SLE data. This parameter operates with office parameter SLE_MAX_SEGMENT_COUNT to affect the size of tables RESFEAT and SLELIST. This parameter can only be reset when tables RESFEAT and SLELIST are empty and office parameter SLE_MAX_SEGMENT_COUNT has been activated and set to 0. Therefore, it should be set only on initial load build or during a dump and restore, before office parameter SLE_MAX_SEGMENT_COUNT is set. The value of office parameter SLE_ITEMS_IN_SEGMENT also limits the maximum length of any screening list, as all items for one list must be stored within the same segment. Because office parameter SLE_ITEMS_IN_SEGMENT can only be set when no store is allocated for SLE data, it is recommended that this parameter be set to the highest expected value, before the next dump and restore occurs. Set this parameter to the highest of the following values: • 1024 (the default value), which is the lowest value allowed; 8191 is the highest value allowed • the largest expected size of any screening list • (10L + I) / 2048 where — L = the number of screening lists in the office; this is the sum of all instances of SLE features, and becomes the number of tuples in table RESFEAT pertaining to SLE. — I = the total number of all entries in all screening lists in the office; this is the number of tuples in table SLELIST.

Screening List Editing (SLE) (continued)

Office parameters used by Screening List Editing (SLE)

Table name	Parameter name	Explanation and action
OFCENG	SLE_ TRANSACTION_ THRESHOLD	Identifies the number of screening list additions or deletions allowed before the compaction process runs autonomously. This process ensures that data store does not become too fragmented as subscribers program their lists. values allowed: 1024 to 32,767 32,767 is the default value
OFCENG	SLE_WAKEUP_ TIME	Identifies the time of day, using a 24-hour clock, at which the compaction process is to run. This parameter should be set to the beginning of a low-traffic period, allowing the compaction process to run as quickly as possible. values allowed: 0:0 to 23:59 1:37 is the default value
OFCENG	SLE_MAX_ SEGMENT_ COUNT	Defines the maximum data store that can be allocated for SLE lists. This parameter can be increased or decreased; a warm restart is required to activate the change. This parameter does not reflect the amount of data store actually assigned, as the system only allocates data store as required, and has the means to ensure that data store is used efficiently. Decreasing this parameter does not mean that data store is reclaimed; no data is lost by the decrease. Data store is not released until it has been unassigned, and new data store cannot be allocated above the set value. A value of 0 means that no data store is allocated. ***Note:*** Set office parameter SLE_ITEMS_IN_SEGMENT before setting this parameter. values allowed: 0 to 2047 0 is the default value
OFCENG	SLE_MAX_ PROGRAMMERS	Defines the maximum number of simultaneous SLE sessions supported in an office. In an office with DTMF receivers, an additional number of receivers equal to this parameter value should be added. The value must equal the trunk module circuit number specified in table ANNMEMS. values allowed: 0 to 225 0 is the default value

Screening List Editing (SLE) (continued)

Office parameters used by Screening List Editing (SLE)

Table name	Parameter name	Explanation and action
OFCENG	SLE_TCAP_ RESPONSE_ TIME	Defines the amount of time, in seconds, a SLE session is to wait for a response to a TCAP query. valued allowed: 1 to 10 3 is the default value
OFCVAR	SLE_LANGUAGE	Specifies the language in which announcements are to be given. The parameter has two fields: PRIMARY and SECONDARY. Most announcements are given in the language specified by field PRIMARY. The exception is for subscribers who have the SL (Secondary Language) line option; these subscribers receive announcements in the language specified by field SECONDARY. Set field PRIMARY to be the default language in which subscribers receive announcements. Set field SECONDARY to be the language in which subscribers with line option SL receive announcements. If there is only one language being used for the office, set this field to NIL values allowed: LANG1, LANG2, and NIL LANG1 and LANG2 are the default values
OFCVAR	SLE_VOICEBACK _PUBLIC_ICM	Enables or disables the voiceback of DNs added to a SLE subscriber's screening list from incoming call memory. It provides the option of preventing the use of SLE features to identify calling numbers, especially in areas where calling number identification services are not permitted. This office parameter has no effect on the voiceback of DNs that are added to screening lists manually. values allowed: Y or N Y is the default value

Screening List Editing (SLE) (continued)

Datafill sequence

The following table lists the tables that require datafill to implement Screening List Editing (SLE). The tables are listed in the order in which they are to be datafilled.

Datafill tables required for Screening List Editing (SLE)

Table	Purpose of table
CUSTSTN	Customer group station option table
DRAMS	Digital recorded announcement machine table
CLLI	Common language location identifier table
ANNS	Announcement table
ANNMEMS	Announcement member table
DRMUSERS	Digital recorded announcement machine users table
IBNXLA	IBN translation table
XLANAME	List of translator
DNREVXLA	Directory number reverse translation table

Datafilling table CUSTSTN

Table CUSTSTN (Customer Group Station Option) contains the station options assigned to each customer group. SLE is a valid option in Table CUSTSTN. The information contained in this tuple defines the SLE environment for subscribers to SLE-based features in that customer group. This tuple must be present before subscribers in the group can access the SLE-based features.

The following table shows the datafill specific to Screening List Editing (SLE) for table CUSTSTN. Only those fields that apply directly to Screening List

Screening List Editing (SLE) (continued)

Editing (SLE) are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table CUSTSTN

Field	Subfield or refinement	Entry	Explanation and action
CUSTNAME		RESGRP	Customer name. This field specifies a customer group name. Enter RESGRP.
OPTNAME		SLE	Option name. This field specifies an option name. Enter SLE.
OPTION		see subfields	Option. This field consists of the subfields MAXTIME, CONFCODE, RJCTCODE, SLEXLA, VSLEXLA, TIMEOUTS, ENABLED, OCTOCODE, STARCODE, CONFOPT, INVINPUT, CONFIRM, REMOTEDN, COMMAND, DATA, DTREVIEW, DPREVIEW, DTINTERD, DPINTERD, MINSLEDN, MAXSLEDN, NON10ICM, and VSLETIMEOUT. These subfields are described below.
	MAXTIME	Numeric	Maximum time. This subfield specifies the maximum amount of time, in minutes, for which a SLE session can be invoked. Enter a value from 5 to 60. ***Note:*** The timer values apply only to the use of standard DTMF receivers. Use of DP lines or universal tone receivers (UTR) result in office standard interdigit timing as defined in table OFCENG office parameters LN_SHORT_PARTIAL_DIAL_TIME and LN_LONG_PARTIAL_DIAL_TIME.
	CONFCODE	Numeric	Confirmation code. This subfield specifies a single-digit code to indicate YES when SLE prompts for confirmation of any action. Enter a value from 0 to 9.
	RJCTCODE	Numeric	Rejection code. This subfield specifies a single-digit code to indicate NO when SLE prompts for confirmation of any action. Enter a value from 0 to 9.

Screening List Editing (SLE) (continued)

Datafilling table CUSTSTN

Field	Subfield or refinement	Entry	Explanation and action
	SLEXLA	Text	SLE translator. This subfield specifies the translator that is used once a SLE session is invoked. Enter the XLANAME.
	VSLEXLA	Text	Visual screen list editing translator. This subfield specifies the translator that is used to decode VSLE softkey commands once a VSLE session is invoked. The translator must be datafilled to correspond to the softkey return string data defined in table SOFTKEY. Enter the XLANAME.
	TIMEOUTS	Numeric	Timeouts. This subfield specifies the number of consecutive times a subscriber can time out during a SLE session. Enter a value from 1 to 7.
	ENABLED	Y or N	Enabled. This subfield specifies whether or not the feature is enabled in the office. Enter Y or N.
	OCTOCODE	Text	Octothorpe code. This subfield specifies the SLE command name corresponding to the octothorpe (#). Enter the command name.
	STARCODE	Text	Star code. This subfield specifies the SLE command name corresponding to the asterisk (*). Enter the command name.
	CONFOPT	Y or N	Confirmation option. This subfield specifies that confirmation is prompted for if commands might potentially destroy or alter data. Enter Y or N.
	INVINPUT	Numeric	Invalid input. This subfield specifies the number of consecutive times a subscriber can enter invalid commands during a SLE session. Enter a value from 1 to 7.
	CONFIRM	Numeric	Confirmation. This subfield specifies the amount of time, in tenths of a second, that SLE waits before timing out after prompting for confirmation. Enter a value from 10 to 100.

Screening List Editing (SLE) (continued)

Datafilling table CUSTSTN

Field	Subfield or refinement	Entry	Explanation and action
	REMOTEDN	Numeric	Remote directory number. This subfield specifies the amount of time, in tenths of a second, that SLE waits before timing out after prompting for a remote DN (the forward-to DN). Enter a value from 10 to 100.
	COMMAND	Numeric	Command. This subfield specifies the amount of time, in tenths of a second, that SLE waits before timing out after prompting for a command to be entered. Enter a value from 10 to 100.
	DATA	Numeric	Data. This subfield specifies the amount of time, in tenths of a second, that SLE waits before timing out after prompting for data to be entered. Enter a value from 10 to 100.
	DTREVIEW	Numeric	Digitone review. This subfield specifies the amount of time (for Digitone subscribers), in tenths of a second, that SLE pauses between entries during list review. Enter a value from 10 to 50.
	DPREVIEW	Numeric	Dial pulse review. This subfield specifies the amount of time (for DP subscribers), in tenths of a second, that SLE pauses between entries during list review. Enter a value from 10 to 50.
	DTINTERD	Numeric	Digitone digits entered. This subfield specifies the amount of time (for Digitone subscribers), in tenths of a second, that SLE waits for subsequent digits after the first digit has been entered. Enter a value from 10 to 90.
	DPINTERD	Numeric	Dial pulse digits entered. This subfield specifies the time (for DP subscribers), in tenths of a second, that SLE waits for subsequent digits after the first digit has been entered. Enter a value from 10 to 90.

Screening List Editing (SLE) (continued)

Datafilling table CUSTSTN

Field	Subfield or refinement	Entry	Explanation and action
	MINSLEDN	Numeric	Minimum SLE directory number. This subfield specifies the minimum length of the DNs that can be added to a SLE list. This field should be set to the length of the shortest extension DN available for the customer group. Enter a value from 2 to 24.
	MAXSLEDN	Numeric	Maximum SLE directory number. This subfield specifies the maximum length of the DNs that can be added to a SLE list. This field should be set to the length of the longest extension DN available for the customer group. Enter a value from 2 to 24.
	NON10ICM	Numeric	NON10ICM. This subfield specifies whether or not DNs are added from incoming call memory that have the feedback count set according to the number of digits in the dialable DN. The dialable DN is determined by reverse translations. Enter Y or N.
	VSLETIMEOUT	Numeric	Visual screen list editing timeout. This subfield specifies the number of seconds, in 10-s increments, that VSLE waits for input after prompting the subscriber. Enter a value from 0 to 60.

Datafill example for table CUSTSTN

The following example shows sample datafill for table CUSTSTN.

MAP display example for table CUSTSTN

```
CUSTNAME     OPTNAME                                  OPTION
_____________________________________________________________
RESGRP       SLE          SLE 30 1 0 SLEXLA2 VSLEXLA2 2 Y
                          LISTADD LISTDEL  Y  3  50  50
                          50  50  50  50  30  11  7 11 N 30
```

Datafilling table DRAMS, CLLI, ANNMEMS, DRMUSERS

Datafill for these tables, in conjunction with datafill for table ANNS, defines the French and English announcements for SLE editing commands.

Datafilling table ANNS

Table ANNS (Announcements) contains data for each announcement (analog and digital) assigned in the switching unit. The field ANTYPE is changed to allow a multi-DRAM announcement type that can have more than one CLLI datafilled against it.

The following table shows the datafill specific to Screening List Editing (SLE) for table ANNS. Only those fields that apply directly to Screening List Editing (SLE) are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table ANNS

Field	Subfield or refinement	Entry	Explanation and action
CLLI		Alphanumeric	Announcement CLLI key. This field specifies the CLASS announcement in table CLLI. Enter the announcement CLLI .
ANTYPE		Text	Announcement type. This field specifies the announcement type, which permits more than one CLLI to be datafilled against it. Enter SLEENG.
TRAFSNO		Numeric	Traffic separator number. This field specifies the outgoing traffic separation number assigned to the announcement. Enter a value from 0 to 127.
MAXCONN		Numeric	Maximum connections. This field specifies the maximum number of simultaneous connections permitted for the announcement. Enter a value from 1 to 255.
CYTIME		Numeric	Cycle time. This field specifies the length of time, in seconds, assigned for one announcement cycle on one channel. Enter a value from 0 to 18.
MAXCYC		Numeric	Maximum cycles. This field specifies the maximum number of times the complete announcement is heard before the call is advanced to the next route in the route list. Enter a value from 1 to 3.

Datafill example for table ANNS

The following example shows sample datafill for table ANNS.

Screening List Editing (SLE) (continued)

MAP display example for table ANNS

```
CLLI     ANTYPE  TRAFSNO     MAXCONN CYTIME  MAXCYC
_____________________________________________________
SLEENG1  SLEENG  23          1       1       2
```

Datafilling table IBNXLA

Table IBNXLA (IBN Translations) contains the data for the digit translations of calls from an MDC station, attendant console, incoming trunk group, or incoming side of a two-way MDC trunk group. SLE is added as a translation selector to allow the translation of command menu codes. This selector is added to field RESULT of table IBNXLA as well as to field DEFAULT of table XLANAME.

The SLE selector has a subselector, SLE_COM_OR_TRAN, which indicates whether the translation result contains the name of a command or the name of a secondary translator. In table IBNXLA, SLE_COM_OR_TRAN must be set to indicate that the result is a command.

Refer to table SLE for the full list of recommended SLE editing commands and codes. To define these codes, datafill table IBNXLA. This allows translations to recognize these codes and trigger the appropriate software.

The following table shows the datafill specific to Screening List Editing (SLE) for table IBNXLA. Only those fields that apply directly to Screening List Editing (SLE) are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table IBNXLA

Field	Subfield or refinement	Entry	Explanation and action
KEY		see subfields	Key number. This field consists of the subfields XLANAME and DGLIDX. These subfields are described below and must be entered in succession.
	XLANAME	Text	Translator name. This subfield specifies the 1-to 8-character name assigned to the translator. Enter the translator name.
	DGLIDX	Text	Digilator index. This subfield specifies the digit or digits assigned to the index. Enter the access code assigned to the digilator index.

Datafilling table IBNXLA

Field	Subfield or refinement	Entry	Explanation and action
RESULT		see subfields	Result. This field consists of the subfields TRSEL, SLE_COM_OR_TRAN, and SLE_COMMAND. These subfields are described below.
	TRSEL	SLE	Translation selector. This subfield specifies the translation selector for SLE menu codes. Enter SLE.
	SLE_ COM_OR_ TRAN	C	SLE Command or translator. This subfield specifies the data subfield that applies for this tuple; always set to C (for command) in this table. Enter C.
	SLE_ COMMAND	Text	SLE Command.This subfield specifies the command name associated with the digits in field DGLIDX. Enter the command name.

Datafill example for table IBNXLA

The following example shows sample datafill for table IBNXLA.

MAP display example for table IBNXLA

```
           KEY                                     RESULT
_______________________________________________________________
SLEXLA2    01        SLE           C               LASTDN
SLEXLA1    0         SLE           C               HELP
```

Datafilling table XLANAME

Table XLANAME (Translator Name) contains the names of the Subscriber Services translators. SLE is added as a translation selector to allow the translation of command menu codes. This selector is added to field DEFAULT of table XLANAME as well as to field RESULT of table IBNXLA. (See “Datafill procedure for table IBNXLA" in this feature description for more information.)

The SLE selector has a subselector, SLE_COM_OR_TRAN, which indicates whether the translation result contains the command name or the name of a secondary translator. In table XLANAME, SLE_COM_OR_TRAN must be set to indicate that the result is a secondary translator name.

Screening List Editing (SLE) (continued)

The following table shows the datafill specific to Screening List Editing (SLE) for table XLANAME. Only those fields that apply directly to Screening List Editing (SLE) are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table XLANAME

Field	Subfield or refinement	Entry	Explanation and action
XLANAME		Numeric	Translator name. This field specifies the alphanumeric name assigned to the primary translator.
DEFAULT		see subfields	Default. This field consists of the subfields TRSEL, SLE_COM_OR_TRAN, and SLE_TRANS. These subfields are described below.
	TRSEL	Text	Translation selector. This subfield specifies the translation selector for SLE menu codes. Enter SLE.
	SLE_COM_ OR_TRAN	Text	SLE Command or translator. This subfield determines the data subfield that applies for this tuple; always set to T (for translator) in this table. Enter T.
t	SLE_TRANS	Text	SLE Translator. This subfield specifies the secondary translator name used to translate menu code digits when no results are obtained from the primary translator. The primary translator is obtained from table CUSTSTN. It is used for single-digit ambiguous menu codes. Enter the translator name.
MAXDIGS		alphanumeric	Maximum digits. This field specifies the allowable values for the digilator field (DGLIDX) of table IBNXLA. The MAXDIGS value for a particular tuple is associated with the translator for that tuple. Enter 9 to allow digits 0 to 9; enter C to allow digits 0 to 9 and B to C; enter F to allow digits 0 to 9 and B to F. ***Note:*** The MAXDIGS field defaults to 9 if no value is specified.

Datafill example for table XLANAME

The following example shows sample datafill for table XLANAME.

MAP display example for table XLANAME

```
XLANAME                                DEFAULT        MAXDIGS
-------------------------------------------------------------
SLEXLA2            SLE       T      SLEXLA1  $         9
SLEXLA1                                      $         9
```

Datafilling table DNREVXLA

Table DNREVXLA (Directory Number Reverse Translations) is used by SLE to obtain a ten-digit DN when a subscriber enters a seven-digit number that, due to the dialing plan of the serving office, results in crossing an NPA boundary to perform DN validation. The ten-digit DN is used by TCAP to obtain the DN attributes (for example, uniqueness) to determine if the DN can be added to the SLE list.

SLE uses a specific reverse translator name for this purpose. This translator, DN10DXLA, is shared by the SLE feature and Automatic Call Back (ACB) feature. Prior to this feature, the translator name for ACB was ACB; all tuples in table DNREVXLA associated with the ACB translator have been changed to DN10DXLA. Table DNREGION, also used by DN reverse translations, is unaffected by this change.

For a detailed description of reverse translations as used by SLE, refer to “Automatic Call Back reverse translations" in “Automatic Call Back/Automatic Recall (ACB/AR)."

The following table shows the datafill specific to Screening List Editing (SLE) for table DNREVXLA. Only those fields that apply directly to Screening List Editing (SLE) are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table DNREVXLA

Field	Subfield or refinement	Entry	Explanation and action
RXLANAME		DN10DXLA	Reverse translations name. This field specifies the reverse translation algorithm name shared by the SLE and ACB features. Enter DN10DXLA.
FROMDIGS		Numeric	From digits. This field specifies the low end of the digit range. Enter the low end of digit range.
TODIGS		Numeric	To digits. This field specifies the high end of the digit range. Enter the high end of digit range.

Screening List Editing (SLE) (continued)

Datafilling table DNREVXLA

Field	Subfield or refinement	Entry	Explanation and action
RESULTS		see subfields	Translations results. This field consists of the subfields REGION, DELDIGS, PRFXDIGS, and OPTPRFX. These subfields are described below.
	REGION	Text	DN Region name. This subfield specifies the DN region name, previously defined in table DNREGION. Enter the region name. ***Note:*** The DEFAULT region name can be specified in this subfield. DEFAULT specifies a region that includes all possible DNs.
	DELDIGS	Numeric	Delete digits. This subfield specifies the number of leading digits to be deleted from the calling DN. Enter the number of digits to be deleted.
	PRFXDIGS	Numeric	Prefixed digits. This subfield specifies the digits to be prefixed to the DN. Enter the digits to be prefixed to the DN.
	OPTPRFX	Text	Optional digits. This subfield specifies the optional digits to be prefixed to the DN. Enter the optional digit. If there are no optional digits, enter N.

Datafill example for table DNREVXLA

The following example shows sample datafill for table DNREVXLA.

MAP display example for table DNREVXLA

```
RXLANAME    FROMDIGS        TODIGS               RESULTS
-------------------------------------------------------
DN10DXLA    621             623     (DNR1  0   819   N)
```

Translation verification tools

Refer to the individual SLE feature descriptions for examples of the output from the translations verification (TRAVER) command when it is used to verify translations.

SERVORD

Refer to the individual SLE feature descriptions for service order information applying to each feature.

History

SN07 (DMS)

Paragraph added to section “Remote DNs” to clarify validation process used by the DMS. This was prompted by CR Q00760256.

This History section added.

3 Datafilling RES Signaling, Routing, and OAM

The following chapter describes the RES Signaling, Routing, and OAM, RES00007, functionality.

CLASS NPA Split

Ordering codes

Functional group ordering code: RES00007

Functionality ordering code: not applicable

Release applicability

BCS35 and up

Prerequisites

To operate, CLASS NPA Split has the following prerequisites:

- BAS Generic, BAS00003
- MDC Minimum, MDC00001
- MDC Standard, MDC00003
- RES Service Enablers, RES00006
- RES Non-Display Services, RES00005

Description

The CLASS NPA Split feature provides the capability for the following Custom Local Area Signaling Services (CLASS) features to operate successfully through a numbering plan area (NPA) split:

- Automatic Call Back (ACB)
- Automatic Recall (AR)
- Distinctive Ringing/Call Waiting (DRCW)
- Selective Call Acceptance (SCA)
- Selective Call Forwarding (SCF)
- Selective Call Rejection (SCRJ)
- Screening List Editing (SLE)

Operation

CLASS NPA Split contains no operating procedure.

Translations table flow

The CLASS NPA Split translations table is described in the following paragraph.

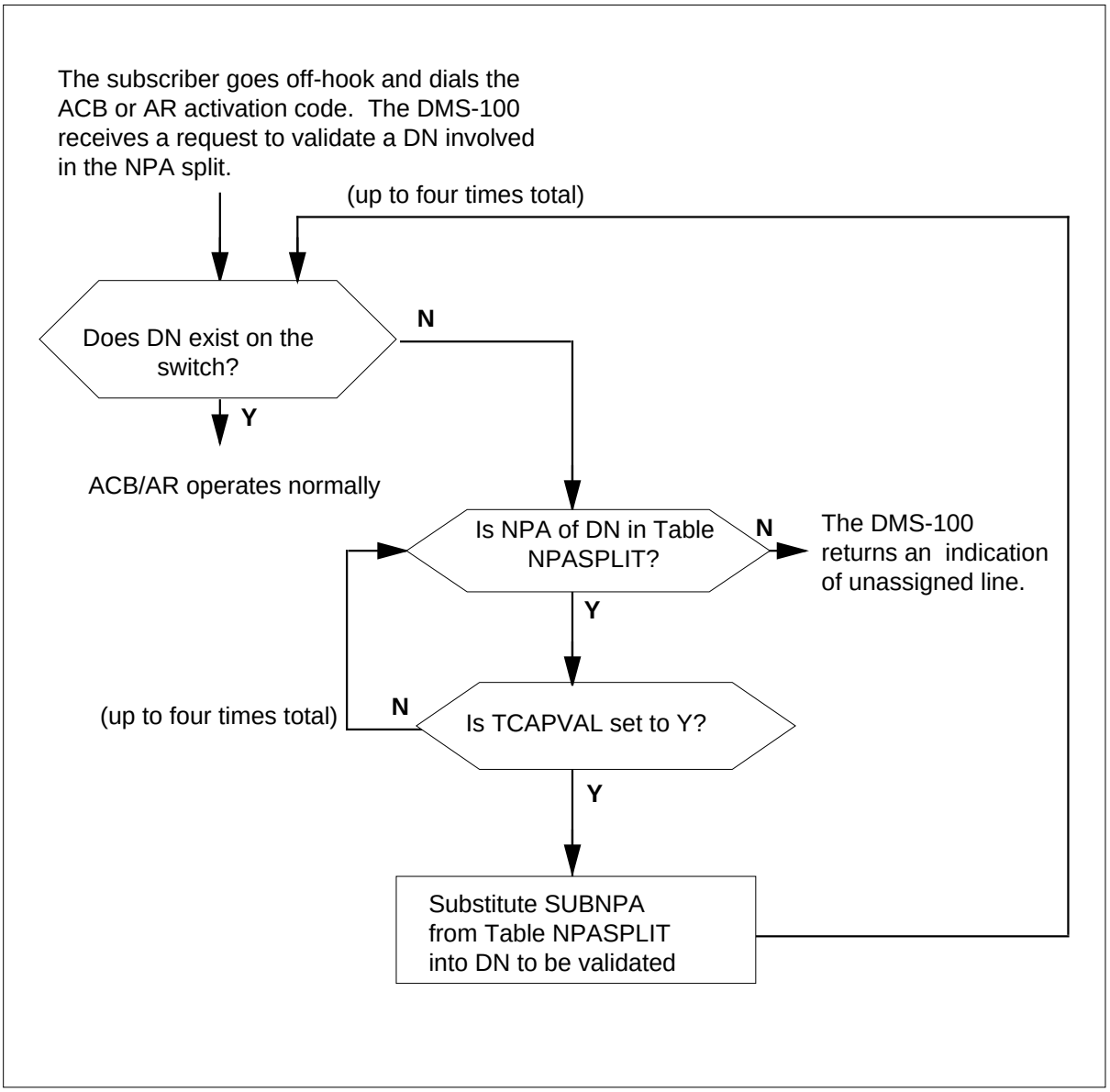
Table NPASPLIT contains six fields which are NPA, SUBNPA, TCAPVAL, SCREEN, SLEDEL, and SLEADD. Fields NPA and SUBNPA are datafilled

CLASS NPA Split (continued)

with the old and new NPAs of the NPA split pair. The remaining four fields control the interactions of the NPA split with the CLASS features.

The CLASS NPA Split translation process is shown in the flowchart that follows.

Table flow for CLASS NPA Split



The CLASS NPA Split feature also allows the Screening List Editing (SLE) features to screen the ACB or AR subscriber's DN against the SCA, SCRJ or SCF list entries recognizing both the new and old NPAs are interchangeable.

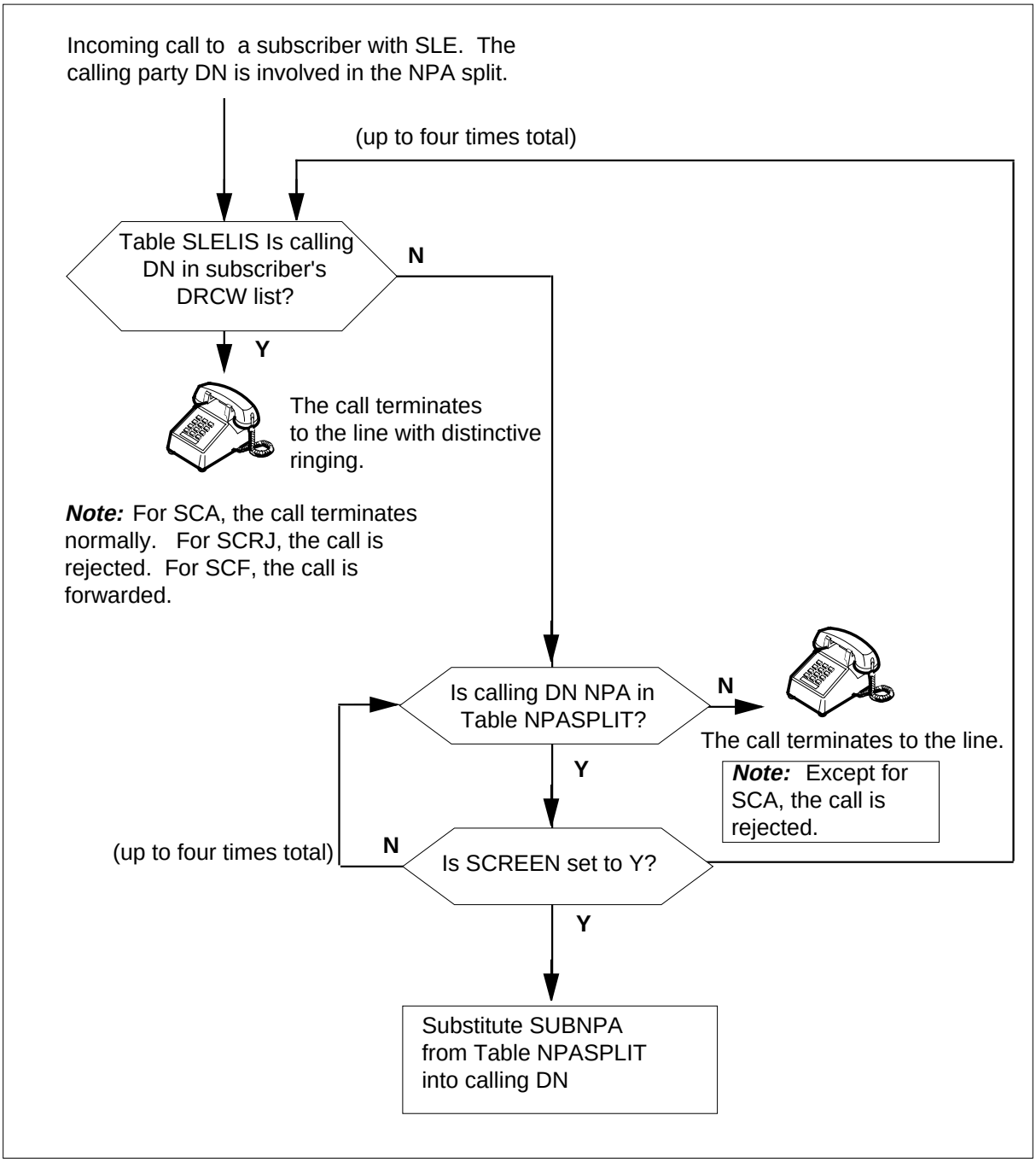
CLASS NPA Split (continued)

The subscriber's screening list features will conform to both the old and new dialing arrangements even if their screening lists do not conform to both arrangements.

The CLASS NPA Split translations process for the SLE features is shown in the following flowcharts.

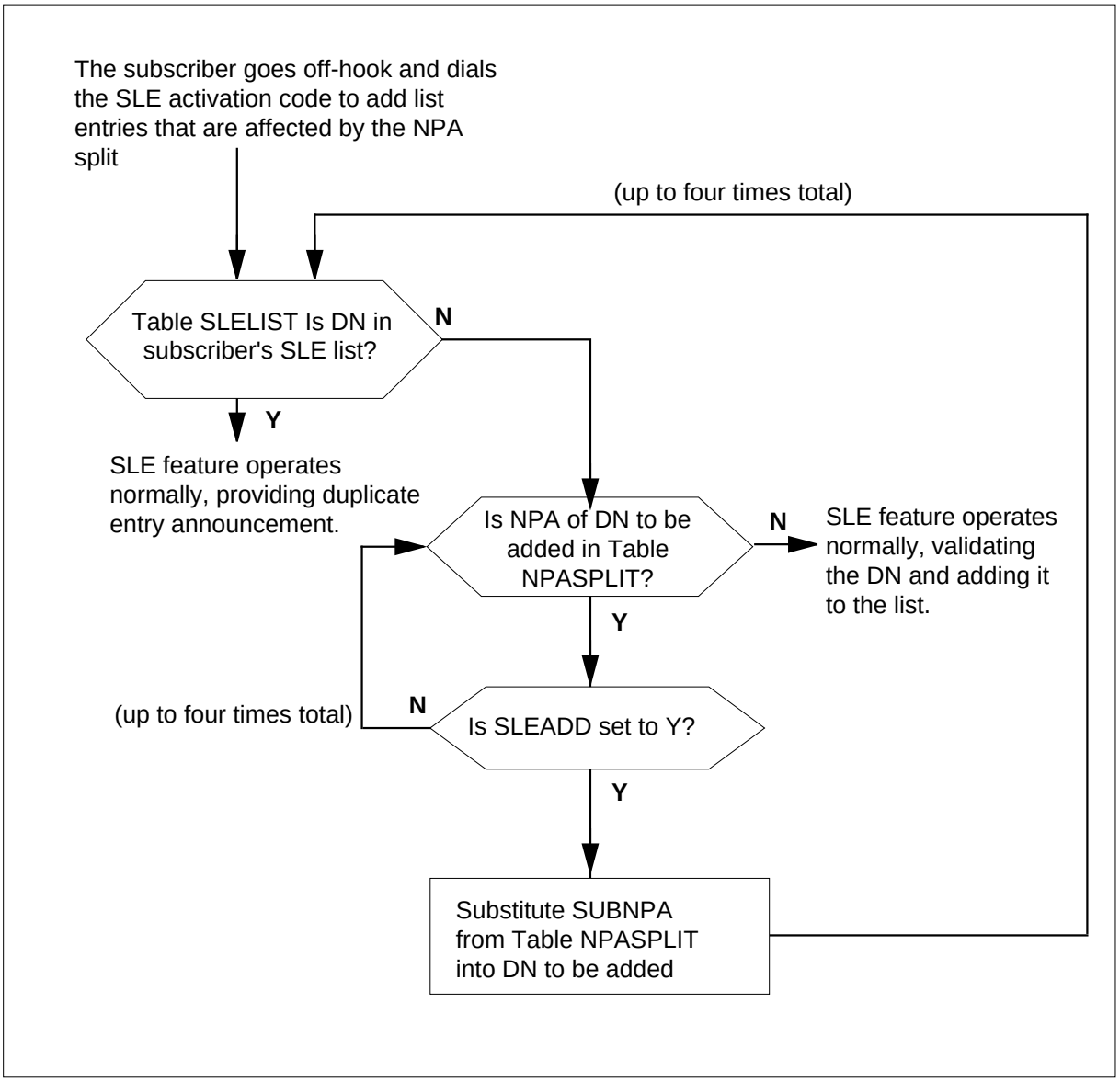
CLASS NPA Split (continued)

Translations data flow for an incoming call to a SLE subscriber



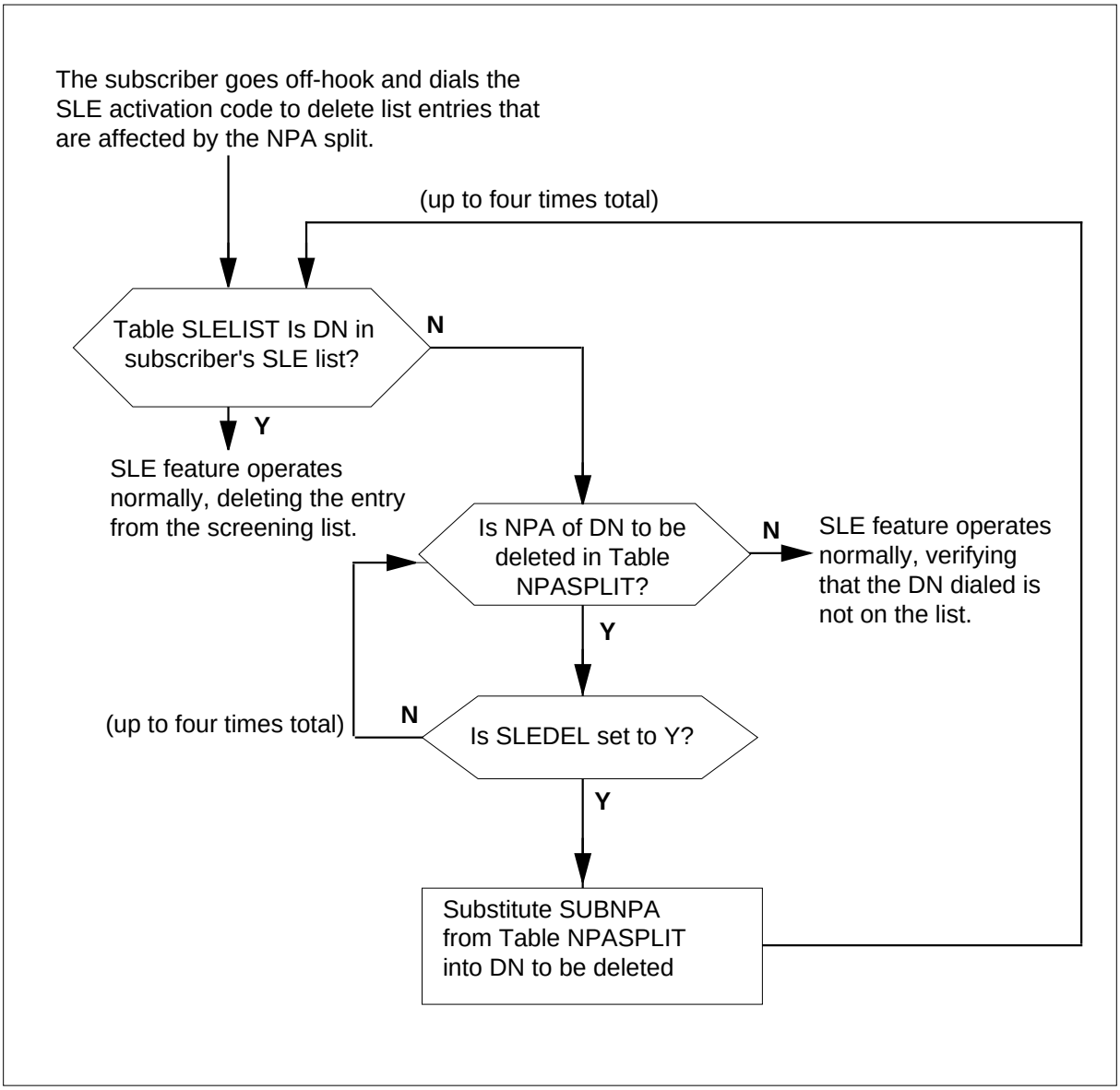
CLASS NPA Split (continued)

Translations data flow to add a DN to a SLE list



CLASS NPA Split (continued)

Translations data flow to delete a DN from a SLE list



The following table lists the datafill content used for Table NPASPLIT during the permissive dialing period. Two tuples are required for any NPA being split into two NPAs. One tuple has the existing NPA datafilled in field NPA. The other tuple has the new NPA datafilled in field NPA. A substitute NPA (SUBNPA) must be datafilled for each NPA datafilled. Table NPASPLIT has

CLASS NPA Split (continued)

a maximum of 64 tuples, allowing 32 NPA split pairs. The DN dialed is 213-555-1234 and the DN reached is 310-555-1234.

Datafill example for CLASS NPA Split

Datafill table	Example data
NPASPLIT	213 310 Y Y Y Y 310 213 Y Y Y Y

Limitations and restrictions

The following limitations and restrictions apply to CLASS NPA Split:

- This feature can handle up to five NPA splits.
- A tuple will need to be deleted and re-datafilled to change either field NPA or SUBNPA of Table NPASPLIT.
- Currently, there is no need to audit the NPASPLIT table periodically.
- The feature status will not be displayed by table control functions of this feature. However, all tuples in Table NPASPLIT can be listed. If any option for any tuple is set to Y, then the feature status is operational.
- The DMS-100 implementation of SCA does not contain the option of forwarding unaccepted calls.
- Due to the real-time impact on call processing operations, the SPC switch cannot change the NPA of an entry on a subscriber's screening list to the NPA of the calling DN.

Interactions

The following paragraphs describe the interactions between CLASS NPA Split and other functionalities.

Automatic Call Back

The ACB feature interacts with options TCAPVAL and SCREEN of the CLASS NPA Split feature.

The called DN is validated under any of the following conditions:

- the CLASS NPA Split feature is non-operational
- the NPA of the called DN is not datafilled in field NPA for any tuple in Table NPASPLIT
- option TCAPVAL is inactive for all tuples for which the NPA of the called DN is datafilled as field NPA

CLASS NPA Split (continued)

When a called DN is validated in response to an internodal transaction capability application part (TCAP) or intranodal ACB request, the ACB feature indicates to the originating SPC switch that the called DN matches the actual DN under all of the following conditions:

- option TCAPVAL is active for at least one tuple in Table NPASPLIT, which includes the NPA of the called DN as field NPA
- the called DN or any of its duplicate DNs for which TCAPVAL is active must match an actual DN served by the terminating DMS-100

The ACB feature will indicate “no match" when neither the called DN nor any of its duplicate DNs match an actual DN served by the terminating DMS-100.

The ACB feature requires the terminating DMS-100 to check the calling DN against any screening list features (SCRJ, SCF, and SCA) that connect the ACB subscriber to a rejection announcement or forward the subscriber to another line.

Forwarding the calling DN with SCF active

When validating a calling DN in response to an ACB request, the terminating DMS-100 indicates to the originating SPC switch that the calling DN is normally forwarded under all of the following conditions:

- the called party has SCF active
- option SCREEN is active for at least one tuple in Table NPASPLIT, which includes the NPA of the calling DN as field NPA
- either the calling DN or any of its duplicate DNs for which SCREEN is active must match an entry on the called party's SCF list.

Rejecting the calling DN with SCRJ active

The terminating DMS-100 will indicate to the originating SPC switch that the calling DN is normally rejected under all of the following conditions:

- the called party has SCRJ active
- option SCREEN is active for at least one tuple in Table NPASPLIT, which includes the NPA of the calling DN as field NPA
- the calling DN or any of its duplicate DNs for which SCREEN is active must match an entry on the called party's SCRJ list.

CLASS NPA Split (continued)

Rejecting the calling DN with SCA active

The terminating DMS-100 will indicate to the originating SPC switch that the calling DN is normally rejected under all of the following conditions:

- the called party has SCA active with a terminating treatment that rejects unaccepted calls
- option SCREEN is active for at least one tuple in Table NPASPLIT, which includes the NPA of the calling DN as field NPA
- neither the calling DN nor any of its duplicate DNs for which SCREEN is active may match an entry on the called party's SCA list

Automatic Recall

The AR feature interacts with options TCAPVAL and SCREEN of the CLASS NPA Split feature.

The called DN is validated under any of the following conditions:

- the CLASS NPA Split feature is non-operational
- the NPA of the called DN is not datafilled in field NPA for any tuple in Table NPASPLIT
- option TCAPVAL is inactive for all tuples for which the called DN NPA is datafilled as field NPA

When a called DN is validated in response to an internodal TCAP or intranodal AR request, the AR feature indicates to the originating SPC switch that the called DN matches the actual DN under all of the following conditions:

- option TCAPVAL is active for at least one tuple in Table NPASPLIT, which includes the NPA of the called DN as field NPA
- the called DN or any of its duplicate DNs for which TCAPVAL is active must match an actual DN served by the terminating DMS-100

The AR feature will indicate “no match" when neither the called DN nor any of its duplicate DNs match an actual DN served by the terminating DMS-100.

The AR feature requires the terminating DMS-100 to check the calling DN against any screening list features (SCRJ, SCF, and SCA) that connect the ACB subscriber to a rejection announcement or forward the subscriber to another line.

Forwarding the calling DN with SCF active

When validating a calling DN in response to an AR request, the terminating DMS-100 indicates to the originating SPC switch that the calling DN is normally forwarded under all of the following conditions:

- the called party has SCF active
- option SCREEN is active for at least one tuple in Table NPASPLIT, which includes the NPA of the calling DN as field NPA
- either the calling DN or any of its duplicate DNs for which SCREEN is active must match an entry on the called party's SCF list.

Rejecting the calling DN with SCRJ active

The terminating DMS-100 will indicate to the originating SPC switch that the calling DN is normally rejected under all of the following conditions:

- the called party has SCRJ active
- option SCREEN is active for at least one tuple in Table NPASPLIT, which includes the NPA of the calling DN as field NPA
- the calling DN or any of its duplicate DNs for which SCREEN is active must match an entry on the called party's SCRJ list.

Rejecting the calling DN with SCA active

The terminating DMS-100 will indicate to the originating SPC switch that the calling DN is normally rejected under all of the following conditions:

- the called party has SCA active with a terminating treatment that rejects unaccepted calls
- option SCREEN is active for at least one tuple in Table NPASPLIT, which includes the NPA of the calling DN as field NPA
- neither the calling DN nor any of its duplicate DNs for which SCREEN is active may match an entry on the called party's SCA list

Screening list features

Option SCREEN of the CLASS NPA Split feature interacts with CLASS screening list features when the terminating DMS-100 receives a request to setup a call with a subscriber who has a screening list feature active. On a call setup attempt, the terminating DMS-100 screening list feature checks the called party's line for active screening list features. If a screening list feature

CLASS NPA Split (continued)

is active, the screening list feature checks the calling DN for a match with an entry on the associated screening list, and performs one of the following:

- if the calling DN is identical to a screening list entry, the caller receives a specific type of terminating treatment
- if there is no match, the calling DN receives a different type of terminating treatment

In the terminating DMS-100 the calling DN will be compared to the called party's screening list under any of the following conditions:

- the CLASS NPA Split feature is non-operational
- the NPA of the calling DN is not datafilled in field NPA for any tuple in Table NPASPLIT
- option SCREEN is inactive for all tuples for which the NPA of the calling DN is datafilled as field NPA

When processing a screening list feature, the terminating DMS-100 determines that a calling DN matches a screening list entry if all of the following items are true:

- the called party has the screening list feature active
- option SCREEN is active for at least one tuple in Table NPASPLIT, which includes the NPA of the calling DN as field NPA
- either the calling DN or any of its duplicate DNs for which SCREEN is active must match an entry on the screening list

Screening List Editing

Screening List Editing interacts with options TCAPVAL, SLEDEL, and SLEADD of the CLASS NPA Split feature. TCAPVAL and SLEADD affect adding screening list entries, and SLEDEL affects deleting screening list entries.

In the terminating DMS-100, dialed DNs will be compared under any of the following conditions:

- the CLASS NPA Split feature is non-operational
- the NPA of the dialed DN is not datafilled in field NPA for any tuple in Table NPASPLIT
- option TCAPVAL is inactive for all tuples for which the NPA of the dialed DN is datafilled in field NPA

SLE interactions with TCAPVAL

When validating a called DN in response to either an internodal TCAP or intranodal request to add a DN to a screening list, the terminating DMS-100 indicates to the originating SPC switch that the dialed DN matches the actual DN under any of the following conditions:

- option TCAPVAL is active for at least one tuple in Table NPASPLIT, which includes the NPA of the dialed DN as field NPA
- either the dialed DN or any of its duplicate DNs for which TCAPVAL is active must match an actual DN served by the terminating DMS-100

The terminating DMS-100 will indicate “no match" when neither the called DN nor any of its duplicate DNs match an actual DN served by the terminating DMS-100.

SLE interactions with SLEDEL

SLE interacts with SLEDEL when a request is received from an SLE subscriber to delete a specific entry on a screening list.

List entry deletion occurs under any of the following conditions:

- the CLASS NPA Split feature is non-operational
- the NPA of the dialed DN is not datafilled in field NPA for any tuple in Table NPASPLIT
- option SLEDEL is inactive for all tuples for which the NPA of the dialed DN is datafilled as field NPA

The SLE feature deletes a DN entry from a subscriber's screening list under both of the following conditions:

- option SLEDEL is active for at least one tuple in Table NPASPLIT, which includes the NPA of the dialed DN as field NPA
- either the dialed DN or any of its duplicate DNs for which SLEDEL is active must match an entry on the subscriber's screening list

SLE interactions with SLEADD

SLEADD interacts with SLE when a subscriber requests an additional entry on a screening list.

CLASS NPA Split (continued)

The list entry addition occurs under any of the following conditions:

- the CLASS NPA Split feature is non-operational
- the NPA of the dialed DN is not datafilled in field NPA for any tuple in Table NPASPLIT
- option SLEADD is inactive for all tuples for which the NPA of the dialed DN is datafilled as field NPA

When a subscriber attempts to add a DN to a screening list, the SLE feature will not attempt to validate the DN under all of the following conditions:

- option SLEADD is active for at least one tuple in Table NPASPLIT, which includes the NPA of the dialed DN as field NPA
- either the dialed DN or any of its duplicate DNs for which SLEADD is active must match an entry on the subscriber's screening list

If the above conditions are met, the following will occur:

- the DN will not be added to the subscriber's screening list
- the subscriber will receive the standard SLE duplicate entry treatment
- the NPA on the customer's screening list will be replaced by the NPA of the dialed DN
- the NPA of the dialed DN is the implied NPA if the subscriber dialed a seven-digit DN

Activation/deactivation by the end user

CLASS NPA Split requires no activation or deactivation by the end user. Refer to the individual CLASS feature descriptions for activation and deactivation procedures specific to each feature. The following table lists the location of CLASS feature descriptions in this document.

Billing

CLASS NPA Split does not affect billing.

Station Message Detail Recording

CLASS NPA Split does not affect Station Message Detail Recording.

Datafilling office parameters

CLASS NPA Split does not affect office parameters.

CLASS NPA Split (continued)

Datafill sequence

The following table lists the tables that require datafill to implement CLASS NPA Split. The tables are listed in the order in which they are to be datafilled.

Datafill tables required for CLASS NPA Split

Table	Purpose of table
NPASPLIT	NPA Split. Table NPASPLIT allows CLASS features to operate successfully during the permissive dialing period of an NPA split.

Datafilling table NPASPLIT

Table NPASPLIT (NPA Split) allows CLASS features to operate successfully during the permissive dialing period of an NPA split. Table NPASPLIT contains six fields which are NPA, SUBNPA, TCAPVAL, SCREEN, SLEDEL, and SLEADD. Fields NPA and SUBNPA are datafilled with the old and new NPAs of the NPA split pair. The remaining four fields control the interactions of the CLASS NPA Split with the CLASS features.

For each office with CLASS features, the following NPAs involved in any CLASS NPA Split permissive dialing period should be datafilled in field NPA of Table NPASPLIT:

- any existing NPA that has had NXXs moved out of the NPA
- any newly created NPA that has had existing NXXs moved to the NPA

Therefore, two tuples are required in Table NPASPLIT for any NPA that is being split into two NPAs. One tuple will have the existing NPA datafilled in field NPA, and the other tuple will have the new NPA datafilled in field NPA. Table NPASPLIT has a maximum size of 64 tuples which allows for 32 NPA split pairs.

For each NPA datafilled, a substitute NPA (SUBNPA) must also be datafilled. Thus, for an existing NPA that has had NXXs moved out, field SUBNPA would be the newly created NPA where those NXXs were moved into. For a newly created NPA, field SUBNPA would be the NPA where the newly created NPA's NXXs were moved from.

The following table shows the datafill specific to CLASS NPA Split for table NPASPLIT. Only those fields that apply directly to CLASS NPA Split are

CLASS NPA Split (continued)

shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table NPASPLIT

Field	Subfield or refinement	Entry	Explanation and action
NPA		three digit NPA	NPA. This field consists of a three digit NPA involved in an NPA split.
SUBNPA		three digit NPA	Substitute NPA. This field consists of a three digit NPA involved in an NPA split which can be used interchangeably with the value datafilled in field NPA. The NPA and SUBNPA are known as an NPA split pair. There can be a maximum of four SUBNPAs for each NPA datafilled.
TCAPVAL		see CLASS features	TCAP Validation. This field is used to control the interactions between Split NPA Management and the CLASS DN validation function for an NPA split pair.
SCREEN		see CLASS features	Screening. This field is used to control the interactions between Split NPA Management and the CLASS screening list features for an NPA split pair.
SLEDEL		see CLASS features	SLE Delete. This field is used to control the interactions between Split NPA Management and the CLASS Screening List Editing list entry deletion function for an NPA Split pair.
SLEADD		see CLASS features	SLE Add. This field is used to control the interactions between Split NPA Management and the CLASS Screening List Editing list entry addition function for an NPA Split pair.

Datafill example for table NPASPLIT

The following example shows sample datafill for table NPASPLIT.

CLASS NPA Split (end)

MAP display example for table NPASPLIT

```
NPA     SUBNPA     TCAPVAL     SCREEN     SLEDEL     SLEADD
_____________________________________________________________
213     310        Y           Y          Y          Y
310     213        Y           Y          Y          Y
```

Translation verification tools

CLASS NPA Split does not use translation verification tools.

SERVORD

CLASS NPA Split does not use SERVORD.

In-Session Activation (ISA)

Functionality name

In-Session Activation (ISA)

Ordering codes

Functionality ordering code: RES00069

Release applicability

NA010 and up

Prerequisites

To operate, In-Session Activation requires the following functional packages:

- BAS00003, BAS Generic
- MDC00001, MDC Basic
- MDC00003, Enhanced Call Forwarding - IBN
- RES00006, RES Base
- ISP70001, Base ISUP

Description

In-Session Activation is an end-office feature that provides operating companies with the capability to offer call completion services, such as Automatic Call Back (ACB) and Automatic Recall (AR), Call Messenger (CMSG), and Universal Voice Messaging (UVM), to end users who encounter a busy or ring/no answer (RNA) condition. In-Session Activation enables end users to access a call completion service without having to hang up.

Operation

In-Session Activation consists of three major functional stages:

- ISA activation
- ISA offer of service
- Service activation

ISA activation

Activation of ISA is performed in two steps; the first step is the detection of a valid activation point, and the second step is the successful screening of call eligibility criteria.

In-Session Activation (ISA) (continued)

ISA activation points

When the call is interoffice, ISA is invoked according to the content of either the Address Complete Message (ACM) or the Release (REL) message that is received in the originating office. The RNA activation point is detected when the ACM has the Called Party Status field set to "Subscriber free" or to Connect when free". The busy activation point is detected when the REL message is received with Cause indicating "User busy". For all interoffice calls, the ISUP indicator contained in the system message must have the "ISUP used all the way" status.

When the call is intraoffice, ISA is invoked according to the line state of the called party. The RNA activation point is detected when the called party is idle. The busy activation point is detected when the terminating party is busy.

ISA screening

To ensure that all criteria required for proper service offering are met, ISA performs the following types of screening:

- Option screening includes:
  - — verifying that ISA is available on the line, such that either the ISA option is assigned to the customer group in table CUSTSTN and the value of the STATE field is set to A, the ISA option is assigned to the line, or the ASP option is assigned to the line and the ENABLED field in table SPINFO for the corresponding service provider is set to Y
  - — verifying that the network condition and the local or toll status of the call match the ISA option attributes
  - — validating the carrier of the call against the list of unsupported carriers specified in fields UCBSYTOL, UCBSYLOC, UCRNALOC, and UCRNATOL in table ISAINFO
  - — validating the end user's customer group when the value for field CHKCGRP in table ISAINFO is set to Y
  - — verifying that the end user's line is eligible to receive ISA according to the value set in field DTRSUP in table ISAINFO
- Calling party screening ensures that ISA is not started on lines that have:
  - — either the DENYISA or ISADEACT option present
  - — ISA deactivated for the current call through CISA (Cancel ISA)
  - — ISA denied indefinitely on the line through ISACTRL (ISA Control)

In-Session Activation (ISA) (continued)

- Basic number screening analyzes the translated dialed digits in order to screen out certain known patterns. The ISA feature is not invoked for calls to the following directory numbers (DN):

  Note: The called numbers or patterns screened during the basic number screening are manually input.

  — N11 DNs, for example, 311, 411, 511, 611, 711, 811, and 911

  — 1+700 DNs

  — number service code (NSC) DNs, for example,1+800, 1+822, 1+833, 1+844, 1+855, 1+866, 1+877, 1+888, and 1+899

  — 1+900 DNs

  — 976, and 1+NPA+976 DNs

  — directory or operator assistance DNs, for example, 0+, 0-, 00-, 1+NPA-555-1212, 1+555-1212, 555-1212, 1+NPA-555-1313, 1+555-1313, and 555-1313, or 10XXX#, 10XXX0+, 10XXX0-, 101XXXX#, 101XXXX0+, 101XXXX0-, 10XXX+1+NPA+555-1212, 101XXXX+1+NPA+555-1212, 10XXX+1+NPA+555-1313, and 101XXXX+1+NPA+555-1313

    Note: Calls of a 0+ nature are screened out to ensure that ISA is not started on an RNA condition when the caller is trying to reach the operator.

  — casual access calls (CAC) DNs, for example, 10XXX+1+NPA+NXX-XXXX, or 101XXXX+1+NPA+NXX-XXXX

In-Session Activation (ISA) (continued)

— international DNs, for example, 011+CC+Address, and 01+CC+Address

— Feature Group B Equal Access calls, for example, 950-WXXX

Note 1: Feature Group B screening prevents ISA from being invoked when the caller is in session with an intermediate party.

Note 2: The W digit is a filler digit, which can be 0 or 1. In Canada, the value is 0.

Note 3: When the calling party has a primary interexchange carrier (PIC) that corresponds to an interexchange carrier (IEC) specified in table ISAINFO, the call is screened.

- Called number screening verifies that:

— the translated dialed digits are not in a list of digit ranges, associated with the DN region name specified in field DNSCRN in table ISAINFO, and located in table DNREGION, for which ISA is not to start

— for interLATA calls, the value of the INTER field is set to Y

— the called DN is not the same as the calling DN

Note: Called number screening is done on the ten-digit format (NPA+NXX-XXXX), or on a subset of the ten-digit format, and cannot be used to screen out any prefix digits.

When screening fails, ISA is aborted and the original network condition (busy or ringing) is restored.

ISA offer of service

Once ISA screening passes, ISA either proceeds immediately with the offer of service when a busy condition is encountered, or starts the RNA timer when an RNA condition is encountered, followed by the offer of service once the RNA timer expires. If the called party answers before the RNA timer expires, ISA is aborted and the connection is established as usual between the two parties.

The ISA offer of service consists of one or more menu levels. At each menu level an announcement is played, which provides options to the end user.

ISA announcements

Announcements can differ for local and toll calls that encounter a busy or RNA condition. Each announcement is differentiated by a menu identifier that is

assigned by the operating company against the customer group or line, or the ASP option in table SPINFO, upon assigning the ISA option.

At the start of an announcement, the digit acceptance period begins, which enables the end user to enter digits. These digits are validated against a set of entries defined by the operating company, which correspond to an action in table ISAMENU (see the following table "Actions defined in table ISAMENU").

Actions defined in table ISAMENU

Action	Description
PRMPT	Another announcement is played.
FEAT	A call completion service (feature) is invoked.
ROUTDN	The call is routed to a DN.
REPEAT	The current announcement is repeated.
REJECT	The end user's entry is to reject ISA and ISA terminates.
IGNORE	The entry is ignored by ISA.
STND	Defines a menu that plays standard announcements.
CUSTOM	Defines a menu that plays custom announcements.
Note: Invalid digits are either ignored, or cause the announcement to be repeated, depending on the default setting for the announcement, which is defined by the operating company in table ISAMENU. When invalid digits are entered a second time, ISA is aborted.	

The digit acceptance period lasts throughout the announcement, and can extend beyond the end of the announcement to allow more time for the end user to enter digits. The operating company sets the digit collection extension value through table ISAINFO. The operating company can also define escape keys to enable the end user to interrupt ISA at any point during the announcement.

When the end user does not enter any digits before the digit acceptance period expires, ISA is aborted and the end user is reconnected to the original network condition.

In-Session Activation allows for power usage, which enables more experienced users to skip announcements and proceed to access the desired call completion service.

In-Session Activation (ISA) (continued)

Overview of an RNA condition

From a calling party's perspective, the operation of ISA for an RNA condition is as follows:

1. The calling party goes off-hook and dials a DN.
2. The calling party hears ringback, and the RNA timer is started

If the	Then
calling party hangs up	ISA is aborted
called party answers	ISA is aborted and the call proceeds
RNA timer expires	the calling party hears the announcement (for example; “There is no answer; for options, press star”, or “There is no answer, to leave a message press 1 now”) with ringback in the background, and the digit acceptance period is started (see step 3)

3. The digit acceptance period is started.

If the	Then
calling party enters digits	the called party is disconnected, if the action is not IGNORE, and action is taken based on the digits entered (see Table 1-2)
calling party hangs up	ISA is aborted
called party answers	ISA is aborted and the call proceeds
announcement ends	depending on the point the end user is at in the offer of service, either the announcement is repeated, the extended digit collection period is started, or ISA terminates

In-Session Activation (ISA) (continued)

Overview of a busy condition

From a calling party's perspective, the operation of ISA for a busy condition is as follows:

1. The calling party goes off-hook and dials a DN.
2. The calling party hears the busy tone.

If the	Then
calling party hangs up	ISA is aborted
calling party remains on the line	the calling party hears 1 or 2 cycles of busy tone followed by the announcement (for example; “The line is busy; for options press star” or “The line is busy, to leave a message press 1 now”) with busy tone in the background, and the digit acceptance period is started (see step 3)

3. The digit acceptance period is started.

If the	Then
calling party enters digits	the called party is disconnected, if action is not IGNORE, and action is taken based on the digits entered (see Table 1-2)
calling party hangs up	ISA is aborted
announcement ends	depending on the point the end user is at in the offer of service, either the announcement is repeated, the extended digit collection period is started, or ISA terminates

Service Activation

Service activation takes place when the end user's entry corresponds to either a call completion service (feature), or a DN. When the end user's entry maps to a feature, ISA passes control for the current call to the activated feature and terminates. When the end user's entry maps to a DN, ISA routes the call to that DN and terminates.

Note: ISA does not verify whether the feature specified in table ISAMENU is a call completion service, and whether the call completion service is appropriate for the network condition. Therefore, it is the operating

In-Session Activation (ISA) (continued)

company's responsibility to specify features that are call completion services, and ensure that those call completion services are appropriate for each network condition. For example, ACB should only be offered for the busy network condition and not for the RNA network condition.

Translations table flow

In-Session Activation (ISA) does not affect translations table flow.

Limitations and restrictions

The following limitations and restrictions apply to the ISA feature:

- The ISA feature is supported on DMS SuperNode.
- Plain ordinary telephone system (POTS) lines need to be converted to the Residential Enhanced Services (RES) line class code (LCC) in order to support ISA.
- Private Branch Exchange (PBX) users connected to the end office through a trunk are not supported by ISA.
- A break in ringing may occur at the called party's end on an intraoffice call at the time the calling party is provided with the ISA offer of service announcement.
- The calling party may hear a break in the audible ringback before the ISA offer of service announcement is played.
- ISA functionality is not provided for calls over multifrequency (MF) signaling trunks.
- Multitrack announcements are only supported on EDRAM, not on DRAM. This limitation is in effect when attempting to datafill a multitrack announcement in table ISAMENU. Furthermore, multitrack announcements on EDRAM require a silence as the last track, otherwise ISA does not play the last track.
- ISA is not invoked on operator-assisted (0+) calls.
- For proper functioning of ISA on an interoffice call with a busy condition, busy treatment must be applied by the originating
- ISA may take precedence over CFD/CFDA for interoffice calls when the ISA RNA timeout period is shorter than the CFD/CFDA timeout period.
- In-Session Activation may affect calls originating from modems and automatic alarm systems. It is recommended that the DENYISA option, or the ISACTRL feature be used to deactivate ISA permanently on such lines,

or that the CISA feature be used to deactivate ISA on a per-call basis for modem lines.

- The 1 and STAR digit entries cannot be associated with an action for a given menu identifier in table ISAMENU. This prevents confusion between the digit entry 1 and the digit entry 11, which is the interpretation of the STAR when DP sets are used.

Interactions

The following paragraphs describe the interactions between the ISA feature and other functionalities.

Advanced Intelligent Network (AIN)

The AIN functionality enables end office call processing to use centralized service logic programs located at Service Control Points (SCP), which determine how AIN calls proceed for further call processing. Queries and responses are exchanged between the DMS SuperNode end office equipped with AIN functionality and the SCP using Common Channel Signaling No 7 (CCS7).

AIN 0.0

When an AIN 0.0 call is initiated, ISA behaves according to the message sent back from the SCP. When the message indicates:

- Play announcement: ISA is not started
- Play announcement and collect digits: ISA is not started
- Routing Response: ISA is started

Furthermore, ISA does not start on calls that are assigned a non-zero number service code. Such is the case for calls on which the AIN 0.0 off-hook delayed (OHD) trigger is hit.

AIN 0.1

For the TAT trigger, ISA only starts if the response does not indicate to redirect the call to another DN. However, if the call is interoffice, ISA starts in all cases since the originating office does not know about the AIN interaction in the terminating office.

ISA does not impose any restrictions on AIN 0.1 for the ISA call.

Automatic Call Back (ACB) and Automatic Recall (AR)

When the line is busy, ACB enables an end user to be called back when the called line becomes idle. AR enables an end user to make a call to the last station that called.

In-Session Activation (ISA) (continued)

In-Session Activation is started on ACB/AR initiated calls that encounter a busy or an RNA condition. ISA is also invoked on ACB-delayed calls that encounter an RNA condition.

Note: When an attempt to activate ACB through ISA is made, and ACB fails to activate because an AIN 0.1 trigger is active on the call, a busy treatment may be provided rather than an announcement.

Automatic Line (AUL)

Automatic Line makes a connection to a predetermined location when an off-hook is reported from a DN or line assigned AUL. The predetermined location is established when the AUL option assigned.

In-Session Activation is not started when the call is initiated on a line with the AUL feature.

Call Forwarding

This section provides a description of the interaction between ISA and the following call forwarding features:

- CFB/CFBL
- CFD/CFDA
- CFU/CFW

Note: When the number of simultaneous calls is exceeded, call forwarding does not take place, and ISA is started. This applies to both intraoffice and interoffice calls.

Call Forward Busy (CFB), Call Forward Busy Line (CFBL)

The CFB and CFBL features provide the end user with the ability to forward and incoming call from a base station to another station when the base station is busy.

When the original call is intraoffice and the call is forwarded by CFB/CFBL, ISA is aborted. When the original call is interoffice, ISA is invoked when the station to which the call is forwarded is busy.

Call Forward Don't Answer (CFDA/CFD)

The CFDA/CFD feature allows an end user to specify a DN to which calls are to be forwarded when the base station (dialed DN) does not answer within a specified timeout period.

In-Session Activation is not invoked when the called party is located in the same office as the calling party, and the calling party has CFDA/CFD.

For interoffice calls, the behavior of ISA is as described in the following table "Interactions between ISA and FCDA/CFD".

Interactions between ISA and CFDA/CFD

Condition	Interoffice call is forwarded over MF or ISUP trunk
ISA timer is shorter than the CFDA timer	ISA starts as if the line were idle, since the originating office is never notified that the call has been forwarded or that the line is busy. If ISA is rejected, the original connection is restored, and the calling party hears ringback or the busy tone if the call is forwarded.
ISA timer is longer than the CFDA timer	The end user hears ringback followed by busy when the call is forwarded. Once the RNA timer expires, the RNA announcement is offered, since the originating office does not get notified that the call has been forwarded or that the line is busy.
Note: When an interoffice call is forwarded intraoffice, the busy treatment is provided by the far end office and the voice path is maintained between the offices.	

Call Forward Universal (CFU) and Call Forward (CFW)

The CFU and CFW features allow stations to forward calls to defined locations inside and outside the customer group.

In-Session Activation is aborted when the call is forwarded with the CFU or CFW feature, except when the original call is interoffice and the station to which the call is forwarded is busy.

Call Pickup (CPU/DCPU/DCBI)

Call Pickup is a feature that provides the end user with the ability to pick up calls within a predefined group by dialing an access code.

For CPU, if ISA is started for an RNA condition and the called party is picked up by a member of the group, ISA is aborted, and the two parties are connected.

For DCPU and DCBI, an unanswered call cannot be picked up by a member of the group before the RNA timer expires, during playback of the ISA announcement, or during the extended digit collection period. However, the call can be picked up once the call returns to the ringing state.

In-Session Activation (ISA) (continued)

Call Waiting (CWT)

The CWT feature notifies an end user who is on the line, when another call is incoming. The end user places the current party on hold and answers the waiting call.

In-Session Activation is invoked when the call is identified as a waiting call.

Long Distance Signal (LDS)

Long Distance Signal provides the end user with a distinctive ringing pattern when the incoming call is long distance. If the caller is busy, a distinctive call waiting tone is applied.

In-Session Activation is invoked when the call is identified as an LDS call.

Cancel ISA (CISA) interaction with Cancel Call Waiting (CCW), Calling Number Delivery Blocking (CNDB), and Calling Name Delivery Blocking (CNADB)

The CCW feature allows end users to deactivate the CWT feature for the current call by dialing a vertical service access code.

The CNDB and CNADB features allow end users to restrict the display of their number and name respectively for the current call, by dialing a vertical service access code.

The CISA, CCW, CNADB, and CNDB access codes can be dialed in any order prior to making a call without affecting their functionality.

Carrier Toll Denied (CTD), and Full Carrier Toll Denied (FCTD)

The CTD feature allows a certain number of selected carriers from which toll access is denied to be assigned.

When the original call placed by an ISA end user is denied by CTD or FCTD, ISA is not started.

When a long distance call to a routing DN is originated by ISA as a result of the end user's input, the routing of the call is performed over the carrier specified in table SPINFO regardless of the carriers denied by CTD.

Display (DISP)

The DISP option indicates that a business set on a PSET line is a display business set.

When ISA is used from a set with display, the digits entered as part of the ISA session are displayed next to the dialed number. However, when a second call

is initiated by ISA as a result of the end user's input, such a ROUTDN, the DN dialed is not shown on the display. The same applies to residential CMS phone sets with display, such as Maestro and Vista).

Denied Termination (DTM)

A line with DTM can originate calls, but cannot receive any calls.

If a call attempts to terminate to a line with DTM, ISA is not invoked and the call is routed to a treatment.

Essential Line (ELN)

The ELN feature allows a line to be designated as essential. When emergency cut-off is activated, all non-essential originating calls are denied service. A line with ELN is allowed to originate calls when the switching unit has line load control active.

In-Session Activation is invoked on a line with ELN.

Emergency Service Line (ESL)

The ESL option is assigned to lines used in emergency situations.

In-Session Activation is not started on a line with ESL. However, ISA is started on a call that terminates on a line with ESL, except when the call is intraoffice and the called party does not answer.

Free Number Termination (FNT

Calls to a line with the FNT option are not billed.

In-Session Activation is started on calls that terminate on a line that has FNT. For interoffice calls, ISA starts once the RNA timer expires. If the called party answers the call before the RNA timer expires, the ISA offer of service announcement is played to the calling party, and the called party is put on hold for the duration of the announcement.

Group Intercom (GIC)

Group intercom allows an end user to call a member of a designated customer group using abbreviated dialing.

In-Session Activation is not started on a call initiated with GIC.

Hotel/Motel (HOT)

Hotel/Motel causes an ID digit to be sent to the operator to indicate that the call is from a hotel.

In-Session Activation (ISA) (continued)

In-Session Activation is not invoked on a line with HOT.

Hunt Group

A hunt group is an end user-defined group of lines. When attempting to terminate a call to a busy line within that group of lines, the switch scans the group of lines sequentially and searches for an idle line on which to terminate the call.

In-Session Activation is started for interoffice calls that terminate in a hunt group, but is not started for intraoffice calls. If an intraoffice or interoffice call terminates on a line with the Key Short Hunt (KSH) option, ISA is started.

Intercom (INT)

The Intercom feature allows different telephone sets on the same line to be used as an intercom system.

In-Session Activation is not invoked for INT calls.

Multiple Appearance Directory Number (MADN)

The MADN feature allows a single DN to be associated with a group of end user lines. A call that terminates to a MADN group is presented to all members simultaneously.

In-Session Activation is invoked for interoffice and intraoffice calls that terminate on a MADN group.

Multiparty Bridging (MPB)

Multiparty Bridging groups up to four end user lines making them appear as a multiparty line.

Once the call is answered by the called party or any other member of the MPB group, ISA is aborted.

Operator Number Identification (ONI)

Operator Number Identification allows calls to be routed to an operator to identify the calling number when the end office does not provide the information automatically. The operator is brought into the connection to verify the calling number when an end user has directly dialed a long distance number that is to charged on an itemized bill basis.

In-Session Activation is not invoked on a line with ONI.

In-Session Activation (ISA) (continued)

Remote Call Forwarding (RCF)

Remote Call Forwarding allows an end user to rent a DN in a remote location. Calls placed to this DN are automatically forwarded to the end user's primary DN.

In-Session Activation is aborted when the call is forwarded with RCF, except when the line is busy and the call is interoffice.

For interoffice calls, when the number of simultaneous forwarded calls for a given RCF DN exceeds the maximum allowed, the busy treatment is applied, and ISA is invoked.

Note: The maximum number of simultaneous forwarded calls for a given RCF DN is indicated in field MAXCALLS. This field is prompted when adding a new RCF DN, and is stored in table CFW.

Series Completion (SCMP)

Series Completion allows calls to be directed from a busy DN to another specified DN that is served by the same office.

In-Session Activation is not invoked for intraoffice calls that involve SCMP, but is invoked for interoffice calls.

Spontaneous Call Waiting Identification with Disposition (DSCWID)

Spontaneous Call Waiting Identification with Disposition allows an end user to receive calling party information for a waiting call, and provides the end user with a set of disposition options to treat the waiting call.

When the called party activates disposition ANSW, TAKE, WAIT, BUSY, DROP, or CONNECT prior to being disconnected by the calling party who either moves to a second menu level or activates a service through ISA, ISA terminates, and the call proceeds normally.

Teen Service/Secondary directory Number (SDN)

Teen service allows two DNs to be assigned to one line, and have different ringing patterns differentiate the called DN.

In-Session Activation is offered to both the primary and secondary DNs.

Three-Way Call (3WC), Call Transfer (CTF), Conference (CNF)

Three-Way Call allows an end user to add another party to an existing connection for a three-way conference.

In-Session Activation is not invoked on the second leg of a three-way call.

In-Session Activation (ISA) (continued)

Toll Denial (TDN)

Toll Denial does not allow a long distance call to originate from a given line.

In-Session Activation is invoked when a local call is originated from a line with TDN, but is not invoked when a long distance call is originated.

When the end user activates a call completion service which translates into a routing DN, and the call between the end user and the routing DN is long distance, the call goes through regardless of whether the line has TDN.

Uniform Call Distribution (UCD) and Automatic Call Distribution (ACD)

The UCD and ACD features evenly distribute calls to a number of preassigned stations. These features are used to queue incoming calls to a message desk. When calling a UCD or ACD group, the calling party hears the treatment provided by the UCD or ACD group, such as audible ringing, music, or an announcement.

In-Session Activation only starts for interoffice calls to a UCD or ACD DN that encounter a ring/no-answer (RNA) condition. The behavior of ISA for such calls is as follows:

- if the call rings and is either queued with ringing or presented to an agent, ISA is started
- if the call rings and is queued with treatment, ISA is not started
- if the call is deferred to another destination because the group is either in overflow, Night Service (NS), or in controlled overflow (CIF), the interaction of ISA is according to the new destination, which can be one of the following:
  - — if the destination is a DN, ISA is started
  - — if the destination is a treatment, ISA is not started
  - — if the destination is a trunk, the behavior of ISA is dependent upon the messages that are sent back to the calling party

Virtual Facility Group (VFG)

Virtual Facility Group provides the capability to simulate a loop-around trunk.

In-Session Activation is offered on calls with VFG if the ISA screening criteria are met.

Warm Line (WML)

Warm Line allows an end user to reach a predetermined DN by lifting the hand set only.

In-Session Activation is not started on a line with WML.

Activation and deactivation by the end user

End users can deactivate ISA indefinitely on their line by dialing the ISACTRL access code, which is also used to reactivate ISA on their line, and can deactivate ISA for each call by dialing the CISA access code prior to making the call. A confirmation tone is provided to the end user when either access code is entered to deactivate ISA.

Note: The end user is sent to the VACT (Vacant) treatment when the access code entered (CISA or ISACTRL) that is not datafilled in table IBNXLA. The end user is sent to the FNAL (Feature Not Allowed) treatment when either access code is entered, but ISA is not available on the line.

Billing

When a call is routed to a directory number (DN) through ISA, any long distance charges are billed to the DN specified in table SPINFO. If the billing DN is not found in table SPINFO, the caller is billed. To avoid billing the caller, it is the operating company's responsibility to ensure that a billing DN is specified in table SPINFO.

No billing record is produced by ISA when it is used to activate a service provided by an alternate service provider (ASP).

When Local Call Detailed Recording (LCDR) is assigned to a line, an LCDR record is produced for the original call (first leg), but not for the call initiated by ISA (second leg). This also applies to Station Message Detail Recording (SMDR).

Datafilling office parameters

The following table shows the office parameter used by ISA:

Office parameter used by ISA

Table name	Parameter name	Explanation and action
OFCENG	NO_OF_ORIG_INFO_EXT_BLKS	This parameter controls the number of existing AIN_ORIG_INFO extension blocks allocated for ISA on the switch. AIN_ORIG_INFO extension blocks are used to store the charge number and calling number information to preserve AIN 0.1 calling and charge information for redirected calls.

In-Session Activation (ISA) (continued)

Datafill sequence

The following table lists the tables that require datafill to provide ISA functionality. The tables are listed in the order in which they are to be datafilled.

Datafill tables required for In-Session Activation (ISA)

Table	Purpose of table
ISAINFO	ISAINFO is used to define the ISA attributes. ***Note:*** Tables DNREGION, OCCNAME, and CUSTENG must be datafilled before table ISAINFO.
IBNLINES	IBNLINES contains line options DENYISA and ISADEACT. ***Note 1:*** The DENYISA option is added to or deleted from table IBNLINES through the service order (SERVORD) utility, not the table editor. The table is presented here for information purposes only. ***Note 2:*** The ISADEACT option is added to the line when the end user enters the ISACTRL access code to deactivate ISA, and is removed when the end user reactivates ISA using the ISACTRL access code.
IBNXLA	IBNXLA contains feature translators CISA and ISACTRL.
ISAMENU	ISAMENU is used to map user entries to actions for ISA, and specify the announcements to be played. ***Note:*** Tables CLLI, ANNS, ANNMEMS, DRMUSERS, and DRAMTRK must be datafilled before table ISAMENU.
SPINFO	SPINFO is used to specify alternate service provider (ASP) information.
IBNFEAT	IBNFEAT contains ISA and ASP options. ***Note:*** The ISA and ASP options are added to or deleted from table IBNFEAT through the service order (SERVORD) utility, not the table editor. The table is presented here for information purposes only.
KSETFEAT	KSETFEAT contains ISA, ASP, DENYISA options. ***Note:*** The ISA, DENYISA, and ASP options are added to or deleted from table KSETFEAT through the service order (SERVORD) utility, not the table editor. The table is presented here for information purposes only.
CUSTSTN	CUSTSTN is used to datafill line option ISA for customer groups.
TMTCNTL.TREAT	TMTCNTL.TREAT is used to define the ISAX (ISA exit) treatment.

In-Session Activation (ISA) (continued)

Datafilling table ISAINFO

Use table ISAINFO to specify the attributes for ISA.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
KEY		REVXLA, XLAMETHD, INTER, DNSCRN, UCBSYLOC, UCBSYTOL, UCRNALOC, UCRNATOL, EXDIGCOL, CHKCGRP, NBEXTBLK, AUDRING, and DTRSUP	Key. This field consists of the ISA attributes.
ISADATA		see subfields	In-Session Activation data. This field consists of subfield ISAPARM, which is described below.
	ISAPARM	REVXLA, XLAMETHD, INTER, DNSCRN, UCBSYLOC, UCBSYTOL, UCRNALOC, UCRNATOL, EXDIGCOL, CHKCGRP, AUDRING, and DTRSUP	In-Session Activation parameter. Enter the parameter of the ISA attribute and datafill refinements. ***Note:*** This field must have the same value as field KEY.

In-Session Activation (ISA) (continued)

Parameter REVXLA

When parameter REVXLA is entered, the following refinement in table ISAINFO must be datafilled.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
REVXVAL		Y or N	Reverse translation value. Enter Y (yes) to use reverse translation to determine the NPA of the called DN when the NPA is not dialed. The default value is N, which indicates that the NPA of the called DN is set to the NPA of the calling DN when it is not dialed.

Parameter XLAMETHD

When parameter XLAMETHD is entered, the following refinement in table ISAINFO must be datafilled.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
XLAMETHOD		REVXLA, or RTGCHR	Translation method. Enter RTGCHR to indicate that the routing characteristics tables be used by ISA to translate the call originated by ISA when the ROUTDN selector is specified. The default value is REVXLA, which indicates that the reverse translation tables are used.

Parameter INTER

When parameter INTER is entered, the following refinement in table ISAINFO must be datafilled.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
INTERLAT		Y or N	InterLATA. Enter N (no) to indicate that ISA not be enabled on interLATA (toll) calls. The default value is Y, which indicates that ISA is enabled on toll calls.

In-Session Activation (ISA) (continued)

Parameter DNSCRN

When parameter DNSCRN is entered, the following refinement in table ISAINFO must be datafilled.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
DNREGION		1 through 16 alphanumeric characters, or VACANT	Directory number region. Enter the DN region name of the calling DN for which ISA cannot be activated. The default value is VACANT. ***Note 1:*** The value in this field (DN region name) references a tuple in table DNREGION. If the tuple in table DNREGION is removed, REGION_DELETED appears in this field, at which point either an existing value in table DNREGION, or VACANT must be specified. ***Note 2:*** DEFAULT is not a valid value.

Parameter UCBSYLOC

When parameter UCBSYLOC is entered, the following refinement in table ISAINFO must be datafilled.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
CARRLIST		1 through 16 alphanumeric characters	Carrier list. Enter the name of each carrier for which ISA is not invoked when a busy condition is encountered on a local call, and end the list with $. A maximum of 32 carrier names is allowed. The default value is $. ***Note:*** The corresponding carriers must be datafilled in table OCCNAME. Neither NILC nor USE_PREVIOUS are valid values.

In-Session Activation (ISA) (continued)

Parameter UCBSYTOL

When parameter UCBSYTOL is entered, the following refinement in table ISAINFO must be datafilled.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
CARRLIST		1 through 16 alphanumeric characters	Carrier list. Enter the name of each carrier for which ISA is not invoked on the first leg of a toll call that encounters a busy condition, and end the list with $. A maximum of 32 carrier names is allowed. The default value is $. ***Note:*** The corresponding carriers must be datafilled in table OCCNAME. Neither NILC nor USE_PREVIOUS are valid values.

Parameter UCRNALOC

When parameter UCRNALOC is entered, the following refinement in table ISAINFO must be datafilled.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
CARRLIST		1 through 16 alphanumeric characters	Carrier list. Enter the name of each carrier for which ISA is not invoked when a ring/no answer condition is encountered on a local call, and end the list with $. A maximum of 32 carrier names is allowed. The default value is $. ***Note:*** The corresponding carriers must be datafilled in table OCCNAME. Neither NILC nor USE_PREVIOUS are valid values.

In-Session Activation (ISA) (continued)

Parameter UCRNATOL

When parameter UCRNATOL is entered, the following refinement in table ISAINFO must be datafilled.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
CARRLIST		1 through 16 alphanumeric characters	Carrier list. Enter the name of each carrier for which ISA is not to be invoked on the first leg of a toll call that encounters a ring no/answer condition, and end the list with $. A maximum of 32 carrier names is allowed. The default value is $ ***Note:*** The corresponding carriers must be datafilled in table OCCNAME. Neither NILC nor USE_PREVIOUS are valid values.

Parameter EXDIGCOL

When parameter EXDIGCOL is entered, the following refinement in table ISAINFO must be datafilled.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
EXPERIOD		0, or 5 through 30	Extension period. Enter the number of seconds the digit acceptance period for the first level announcement is to be extended. When this field is set to 0, the digit acceptance period ends at the same time as the announcement. The default value is 10 s.

In-Session Activation (ISA) (continued)

Parameter CHKCGRP

When parameter CHKCGRP is entered, the following refinement in table ISAINFO must be datafilled.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
CHECKGRP		Y or N	Check customer group. Enter Y (yes) to indicate that ISA be available to a single customer group, and enter the name of the customer group in subfield GROUP. The default value is N (no), which indicates that ISA is available to all customer groups.
	GROUP		Group. Enter the name of the customer group that is to have access to ISA. ***Note:*** The corresponding customer group name must be datafilled in table CUSTENG.

Parameter AUDRING

When parameter AUDRING is entered, the following refinement in table ISAINFO must be datafilled.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
AUDRINGVAL		Y or N	Audible ringing value. Enter Y (yes) to indicate that audible ringing be provided to the caller between the time the RNA timer expires and the time the announcement begins. The default value is N (no), which indicates that audible ringing is not provided.

In-Session Activation (ISA) (continued)

Parameter DTRSUP

When parameter DTRSUP is entered, the following refinement in table ISAINFO must be datafilled.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
DTRSUPPORT		Y or N	Digital tone receiver support. Enter Y (yes) to indicate that ISA is available to end user lines in the originating office that uses DTRs. The default value is N (no), which indicates that ISA is not available to end user lines in the originating office that uses digitone receivers (DTR).

Datafill example for table ISAINFO

The following example shows sample datafill for table ISAINFO.

MAP display example for table ISAINFO

```
KEY                 ISADATA

-----------------------------------------------------
REVXLA              REVXLA      N
XLAMETHD            XLAMETHD        REVXLA
INTER               INTER       Y
DNSCRN              DNSCRN          ISADNREG
UCBSYLOC            UCBSYLOC        $
UCBSYTOL            UCBSYTOL        $
UCRNALOC            UCRNALOC        $
UCRNATOL            UCRNATOL        $
EXDIGCOL            EXDIGCOL        10
CHKCGRP             CHKCGRP     Y   RESGRP1
AUDRING             NBEXTBLK        5
DTRSUP              AUDRING     N
                    DTRSUP      N
```

In-Session Activation (ISA) (continued)

Datafilling table IBNLINES

The following table shows the datafill specific to ISA for table IBNLINES.

Note: The DENYISA option is added to or deleted from table IBNLINES through the service order (SERVORD) utility, not the table editor. The table is presented here for information purposes only.

Datafilling table IBNLINES

Field	Subfield or refinement	Entry	Explanation and action
LEN			Line equipment number. Enter the LEN of the line to which the DENYISA option is to be assigned. The LEN consists of the site, frame, unit, drawer or LSG, shelf, slot, and circuit number.
DNNO		0 through 6	Directory number number. Enter the number assigned to the DN that is being referenced on the LEN.
RESULT		see subfields	Result. This field consists of subfields SIGTYPE, FORMAT, LCC, DN, LNATTIDX, and OPTLIST, which are described below.
	SIGTYPE	DP or DT	Signaling type. Enter DP for dial pulse or DT for digitone.
	FORMAT	STN	Format. Enter STN (station) to indicate the format name for an IBN or RES station.
	LCC	IBN or RES	Line class code. Enter IBN if the line is an IBN line, and datafill refinements CUSTGRP, SUBGRP, NCOS, and SNPA. Enter RES for a residential line or a coin line with residential features, and datafill refinement LNATTIDX.
	DN	vector of up to 15 digits	Directory number. Enter the DN assigned to the IBN or RES station.
	CUSTGRP	1 through 16 alphanumeric characters	Customer group. Enter the code assigned to the customer group to which the IBN line is assigned.
	SUBGRP	0 through 7	Subgroup. Enter the subgroup within the customer group to which the IBN line is assigned.
	NCOS	0 through 255	Network class of service. Enter the NCOS number assigned to the IBN line.

In-Session Activation (ISA) (continued)

Datafilling table IBNLINES

Field	Subfield or refinement	Entry	Explanation and action
	SNPA	numeric	Serving numbering plan area. Enter the serving NPA to which the IBN line is assigned.
	LNATTIDX	0 through 1023	Line attribute identification. Enter the line attribute index number defined in table LINATTR to which the RES line is assigned.
	OPTLIST	DENYISA, ISADEACT	Option List. Enter DENYISA to deactivate ISA permanently on the line. ISADEACT is added when the end user deactivates ISA using the ISACTRL access code, and is removed when the end user reactivates ISA using the ISACTRL access code. ***Note:*** Although other options, outside of ISA, are available, only the DENYISA and ISADEACT options are shown in the Entry column for clarity.

Datafill example for table IBNLINES

The following example shows sample datafill for table IBNLINES.

MAP display example for table IBNLINES

```
LEN      DNNO       RESULT
_____________________________________________________________
HOST 00 0 03 03 0 DT STN RES 6246112 274 (ISADEACT)
HOST 00 0 03 03 0 DT STN RES 6246113 274 (DENYISA)
```

In-Session Activation (ISA) (continued)

Datafilling table IBNXLA

Use table IBNXLA to define the CISA and ISCTRL feature translators.

Datafilling table IBNXLA

Field	Subfield or refinement	Entry	Explanation and action
KEY		see subfields	Key. This field consists of subfields XLANAME and DGLIDX, which are described below.
	XLANAME	1 through 8 alphanumeric characters	Translator name. Enter the feature translator name assigned to the customer group.
	DGLIDX	vector of up to 18 digits	Digilator index. Enter the digit or digits assigned as an ambiguous code. The range of this field depends on field MAXDIG in table XLANAME. The DGLIDX can accept overdecadic digits. The allowable values for the digilator portion of DGLIDX of table IBNXLA are as follows: 9 digits 0 through 9C digits 0 through 9 and B and CF digits 0 through 9 and B through F The allowable digit range for table IBNXLA digilator values is determined for each translator.
RESULT		see subfields	Result. This field consists of subfields TRSEL, ACR, SMDR, and FEATURE, which are described below.
	TRSEL	FEAT	Translator selector. Enter the translation selector FEAT.
	ACR	Y or N	Account code entry. Enter Y (yes) if an account code entry is required for all calls to the special feature access code, otherwise, enter N (no).

In-Session Activation (ISA) (continued)

Datafilling table IBNXLA

Field	Subfield or refinement	Entry	Explanation and action
	SMDR	Y or N	Station message detail recording. Enter Y if all calls from a customer group station or attendant console to any station in the block of station numbers are recorded. Enter N if recording is not required.
	FEATURE	CISA, ISACTRL	Feature. Enter CISA to provide the end user with the capability of cancelling ISA on a per-call basis. Enter ISACTRL to provide the end user with the capability of deactivating ISA indefinitely on the line, or reactivating ISA. ***Note:*** Although other features, outside of ISA, are available, only the CISA and ISACTRL features are shown in the Entry column for clarity.

Datafill example for table IBNXLA

The following example shows sample datafill for table IBNXLA.

MAP display example for table IBNXLA

```
           KEY                                    RESULT
______________________________________________________________
RESXAL     91                        FEAT N N N ISACTRL
RESXLA     92                        FEAT N N N CISA
```

In-Session Activation (ISA) (continued)

Datafilling table ISAMENU

Use table ISAMENU to map user entries to actions for ISA, and to specify the announcements to be played.

Datafilling table ISAMENU

Field	Subfield or refinement	Entry	Explanation and action
KEY		see subfields	Key. This field consists of subfields MENUID and DIGIT, which are described below.
	MENUID	1 through 16 alphanumeric characters	Menu identifier. Enter the menu identifier of the announcement to be played to the end user. A maximum of 15 menu identifiers is allowed. NILLMENU is not a valid value.
	DIGIT	0 through 9, STAR, OCTO, or MENU	Digit. Enter the key to be pressed by the end user, which is associated with the menu identifier specified in field MENUID. When set to MENU, a new menu identifier is defined.
MENUDATA		see subfield	Menu data. This field consists of subfield SELECTOR, which is described below.
	SELECTOR	PRMPT, FEAT, ROUTDN, REPEAT, REJECT, IGNORE, STND, or CUSTOM	Selector. Enter PRMPT to provide the end user with another menu level, FEAT to have the feature, which is associated with the end user's entry, started, ROUTDN to have the call routed to the specified DN, REPEAT to replay the announcement, REJECT to stop ISA and return the call to the original state, IGNORE to ignore the end user's entry, STND to define a menu that can play standard announcements, or CUSTOM to define a menu that can play custom announcements.

In-Session Activation (ISA) (continued)

Selector PRMPT

When selector PRMPT is entered, the following field in table ISAMENU must be datafilled.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
MENUID		1 through 16 alphanumeric characters	Menu identifier. Enter the menu identifier of the next announcement to be played.

Selector FEAT

When selector FEAT is entered, the following field in table ISAMENU must be datafilled.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
FAC		vector of up to 4 digits	Feature access code. Enter a string of digits that correspond to a digilator index used to index a feature access code in table IBNXLA.
INFO		0 through 32 characters	Information. Enter the name of the feature to which the access code specified in field FEATCODE, is associated.

Selector ROUTDN

When selector ROUTDN is entered, the following field in table ISAMENU must be datafilled.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
DN		10-digit directory number	Directory number. Enter the 10-digit directory number to which the call is to be routed.

In-Session Activation (ISA) (continued)

Selector STND

When selector STND is entered, the following field in table ISAMENU must be datafilled.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
REPEAT		Y or N	Repeat. Enter Y (yes) to indicate that the announcement be repeated once when the announcement ends without the end user having entered any digits, otherwise, enter N (no).
PRILCLLI		1 through 16 characters	Primary language CLLI. Enter the CLLI code of the announcement to be played in the primary language. ***Note:*** The corresponding CLLI code must be datafilled in tables CLLI, ANNS, ANNMEMS, and DRAMTRK.
SECLCLLI		1 through 16 characters, or NILCLLI	Secondary language CLLI. Enter the CLLI code of the announcement to be played in the secondary language when the SL option is assigned to the end user's line. ***Note:*** The corresponding CLLI code must be datafilled in tables CLLI, ANNS, ANNMEMS, and DRAMTRK.
INVDIG		REP or IGN	Invalid digit. Enter IGN to have invalid digits ignored and the announcement continue to play. Enter REP to have the announcement repeated using either the announcement specified in field ERCLLI or SERCLLI, when datafilled, on the first unsuccessful attempt On the second unsuccessful attempt, the call is returned to the original call state at the first level announcement, or is routed to the ISAEXIT treatment at the second level announcement.

In-Session Activation (ISA) (continued)

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
	ERCLLI	1 through 16 alphanumeric characters	Primary CLLI code error. Enter the CLLI code of the announcement to be played in the primary language when the end user enters an invalid digit during the digit acceptance period.
	SERCLLI	1 through 16 alphanumeric characters	Secondary CLLI code error. Enter the CLLI code of the announcement to be played in the secondary language when the end user enters an invalid digit during the digit acceptance period.

Selector CUSTOM

When selector CUSTOM is entered, the following fields in table ISAMENU must be datafilled.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
REPEAT		Y or N	Repeat. Enter Y (yes) to indicate that the announcement be repeated once when the announcement ends without the end user having entered any digits, otherwise, enter N (no).
ANNCLLI		1 through 16 alphanumeric characters	Announcement CLLI. Enter the CLLI code of the next announcement to be played. ***Note:*** The corresponding CLLI code must be datafilled in tables DRMUSERS.
ANNIND		1 through 255	Announcement index. Enter the index code of the announcement, which corresponds to the announcement in table DRMUSERS, that is to be played. ***Note:*** The announcement played is the announcement associated with the index code specified in this field.

In-Session Activation (ISA) (continued)

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
INVDIG		IGN or REP	Invalid digit. Enter IGN to have invalid digits ignored and the announcement continue to play. Enter REP to have the announcement repeated using the announcement specified in field ERIND, when datafilled, on the first unsuccessful attempt. On the second unsuccessful attempt, the call is returned to the original call state at the first level announcement, or is routed to the ISAEXIT treatment at the second level announcement.
	ERRIND	1 through 255	Error index. Enter the index code of the announcement to be played when the end user enters and invalid digit and the value in field INVSEL is set to REP. ***Note:*** The index code must be datafilled in table DRMUSERS, otherwise, the ISA announcement is repeated.

Datafill example for table ISAMENU

The following example shows sample datafill for table ISAMENU.

MAP display example for table ISAMENU

```
          KEY                                          MENUDATA
_____________________________________________________________
ISABSY1     STAR
                PRMPT     ISABSY2
ISABSY1     1
                FEAT   44 AUTOMATIC_CALL_BACK
ISABSY12     2
                ROUTDN    5147658888
ISABSY1   MENU
                STND   N    ISAENGB1   ISAFREB1 IGN
ISABSY1   MENU
                CUSTOM    Y    ISACUST1    1    REP     2
```

Datafilling table SPINFO

Use table SPINFO to specify alternate service provider (ASP) information.

Datafilling table SPINFO

Field	Subfield or refinement	Entry	Explanation and action
SPINFKEY		see subfields	Service provider key. This field consists of subfields PROVNAME and SERVICE, which are described below.
	PROVNAME	1 through 16 alphanumeric characters, PRIMARY, or NIL_PROV	Provider name. Enter the name of the service provider. A maximum of 255 service providers is allowed. PRIMARY represents the usual provider for the office. ***Note:*** Although NIL_PROV appears in the range of values, it cannot be used.

In-Session Activation (ISA) (continued)

Datafilling table SPINFO

Field	Subfield or refinement	Entry	Explanation and action
	SERVNAME	ISA	Service. Enter ISA to indicate the service offered by the service provider. ***Note:*** Although other features, outside of ISA, are available, only the ISA and ASP features are shown in the Entry column for clarity.
DATA		see subfields	Data. This field consists of subfields SERVSEL, ENABLED, CARRIER, and BILLNGDN, which are described below.
	SERVSEL	ISA	Service selector. Enter ISA to indicate the name of the service. ***Note:*** Although other features, outside of ISA, are available, only the ISA and ASP features are shown in the Entry column for clarity.
	ENABLED	Y or N	Enabled. Enter Y (yes) to enable for the service provider specified in field PROVINAME, otherwise, enter N (no).
	CARRIER	1 through 16 alphanumeric characters, or NILC	Carrier. Enter the service provider's preferred carrier that is to carry toll calls.
	BILLNGDN	10-digit directory number, or NILDN	Billing Directory Number. Enter the 10-digit directory number to which the call is to be charged.
	BSYLOCAL	1 through 16 alphanumeric characters, or NILMENU	Busy local. Enter the menu identifier that corresponds to the announcement to be played when a busy condition is encountered for a local call. Enter NILMENU to prevent ISA from starting on a busy condition for a local call.
	BSYTOLL	1 through 16 alphanumeric characters, or NILMENU	Busy toll. Enter the menu identifier that corresponds to the announcement to be played when a busy condition is encountered for a toll call. Enter NILMENU to prevent ISA from starting on a busy condition for a toll call.

In-Session Activation (ISA) (continued)

Datafilling table SPINFO

Field	Subfield or refinement	Entry	Explanation and action
	RNALOCAL	1 through 16 alphanumeric characters, or NILMENU	Ring/no answer local. Enter the menu identifier that corresponds to the announcement to be played when an RNA condition is encountered for a local call. Enter NILMENU to prevent ISA from starting on an RNA condition for a local call.
	RNATOLL	1 through 16 alphanumeric characters, or NILMENU	Ring/no answer toll. Enter the menu identifier that corresponds to the announcement to be played when an RNA condition is encountered for a toll call. Enter NILMENU to prevent ISA from starting on an RNA condition for a toll call.
	RNATIMER	12 through 72	Ring/no answer timer. Enter the number of seconds before ISA is started when an RNA condition is encountered. ***Note:*** This field only appears when the value in either RNALOCAL or RNATOLL is other than NILMENU.

Datafill example for table SPINFO

The following example shows sample datafill for table SPINFO.

MAP display example for table SPINFO

```
SPINFOKEY   SERVSEL   ENABLED   BILLNGDN    CARRIER
_____________________________________________________
PRIMARY ISA ISA      Y         6136891234 CAR1
PROV_A  ISA ISA      Y         8197658888 CAR2
```

In-Session Activation (ISA) (continued)

Datafilling table IBNFEAT

The following table shows the datafill specific to ISA for table IBNFEAT.

Note: The ISA and ASP options are added to or deleted from table IBNFEAT through the service order (SERVORD) utility, not the table editor. The table is presented here for information purposes only.

Datafilling table IBNFEAT

Field	Subfield or refinement	Entry	Explanation and action
LEN			Line equipment number. Enter the LEN of the line to which the DENYISA or ISADEACT line options are to be assigned. The LEN consists of the site, frame, unit, drawer or LSG, shelf, slot, and circuit number.
DNNO			Directory number number. Enter the number assigned to the DN that is being referenced on the LEN.
DF		ISA, ASP	Data feature. Enter ISA for the In-Session Activation feature, or ASP for the Alternate Service Provider feature. ***Note:*** Although other features, outside of ISA, are available, only the ISA and ASP features are shown in the Entry column for clarity.
FEATURE		ISA, ASP	Feature. Enter ISA for the In-Session Activation feature, or ASP for the Alternate Service Provider feature. ***Note:*** Although other features, outside of ISA, are available, only the ISA and ASP features are shown in the Entry column for clarity.

In-Session Activation (ISA) (continued)

Feature ISA

When feature ISA is entered, the following fields in table IBNFEAT must be datafilled.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
	BSYLOCAL	up to 16 alphanumeric characters, or NILMENU	Busy local. Enter the menu identifier that corresponds to the announcement to be played when a busy condition is encountered for a local call. Enter NILMENU to suppress ISA invocation on a busy condition for a local call.
	BSYTOLL	up to 16 alphanumeric characters, or NILMENU	Busy toll. Enter the menu identifier that corresponds to the announcement to be played when a busy condition is encountered for a toll call. Enter NILMENU to prevent ISA from starting on a busy condition for a toll call.
	RNALOCAL	up to 16 alphanumeric characters, or NILMENU	Ring/no answer local. Enter the menu identifier that corresponds to the announcement to be played when an RNA condition is encountered for a local call. Enter NILMENU to prevent ISA from starting on a ring/no answer condition for a local call.
	RNATOLL	up to 16 alphanumeric characters, or NILMENU	Ring/no answer toll. Enter the menu identifier that corresponds to the announcement to be played when an RNA condition is encountered for a toll call. Enter NILMENU to prevent ISA from starting on a ring/no answer condition for a toll call.
	RNATIMER	12 through 72	Ring/no answer timer. Enter the number of seconds before the ISA announcement is started when an RNA condition is encountered. ***Note:*** This field only appears when the value in either RNALOCAL or RNATOLL is other than NILMENU.

In-Session Activation (ISA) (continued)

Feature ASP

When feature ASP is entered, the following fields in table IBNFEAT must be datafilled.

Datafilling table IBNFEAT

Field	Subfield or refinement	Entry	Explanation and action
	PROVNAME	1 through 16 alphanumeric characters	Provider name. Enter the name of the service provider.
	SERVICE	ISA	Service. Enter ISA to indicate the service offered by the service provider. ***Note:*** Although other services, outside of ISA, are available, only the ISA service is shown in the Entry column for clarity.

Datafill example for table IBNFEAT

The following example shows sample datafill for table IBNFEAT.

MAP display example for table IBNFEAT

```
LEN
                DNNO DF FEATURE  DATA
_____________________________________________________________
HOST 00 0 03 03 0 ISA ISA MENU1 MENU2 MENU3 NILMENU 12
HOST 00 0 03 03 0 ASP ASP PROV_A ISA $ $
```

Datafilling table KSETFEAT

The following table shows the datafill specific to ISA for table KSETFEAT.

Note: The ISA, DENYISA, and ASP options are added to or deleted from table IBNLINES through the service order (SERVORD) utility, not the table editor. The table is presented here for information purposes only.

Datafilling table KSETFEAT

Field	Subfield or refinement	Entry	Explanation and action
FEATKEY		see subfields	KSET feature key. This field consists of subfields LEN, KEY, and FEAT, which are described below.
	LEN		Line equipment number. Enter the LEN of the line to which the DENYISA or ISADEACT options are to be assigned. The LEN consists of the site, frame, unit, drawer or LSG, shelf, slot, and circuit number.
	KEY	1	Key. Enter 1 to indicate that the feature is activated by code access.
	FEAT	ISA, ASP, DENYISA	Feature. Enter the feature; ISA for In-Session Activation, ASP for Alternate Service Provider, DENYISA to deactivate ISA permanently on the line.
FEATURE		ISA, ASP, DENYISA	Feature. Enter the feature; ISA for In-Session Activation, ASP for Alternate Service Provider, DENYISA to deactivate ISA permanently on the line.
KVAR			KSET variable. This field consists of different subfields depending on the feature entered in field FEATURE. The subfields that require datafill for the ISA and ASP features are provided in the following pages.

In-Session Activation (ISA) (continued)

Feature ISA

When feature ISA is entered, the following fields in table KSETFEAT must be datafilled.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
	BSYLOCAL	1 through 16 alphanumeric characters, or NILMENU	Busy local. Enter the menu identifier that corresponds to the announcement to be played for the end user when a busy condition is encountered on a local call. Enter NILMENU to prevent ISA from starting on a busy condition for a local call.
	BSYTOLL	1 through 16 alphanumeric characters, or NILMENU	Busy toll. Enter the menu identifier that corresponds to the announcement to be played for the end user when a busy condition is encountered on a toll call. Enter NILMENU to prevent ISA from starting on a busy condition for a toll call.
	RNALOCAL	1 through 16 alphanumeric characters, or NILMENU	Ring/no answer local. Enter the menu identifier that corresponds to the announcement to be played for the end user when an RNA condition is encountered on a local call. Enter NILMENU to prevent ISA from starting on an RNA condition for a local call.
	RNATOLL	1 through 16 alphanumeric characters, or NILMENU	Ring/no answer toll. Enter the menu identifier that corresponds to the announcement to be played for the end user when an RNA condition is encountered for a toll call. Enter NILMENU to prevent ISA from starting on an RNA condition for a toll call.
	RNATIMER	12 through 72	Ring/no answer timer. Enter the number of seconds before the ISA announcement is started when an RNA condition is encountered. ***Note:*** This field only appears when the value in either RNALOCAL or RNATOLL is other than NILMENU.

In-Session Activation (ISA) (continued)

Feature ASP

When feature ASP is entered, the following fields in table KSETFEAT must be datafilled.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
	PROVNAME	1 through 16 alphanumeric characters	Provider name. Enter the name of the service provider.
	SERVICE	ISA	Service. Enter ISA to indicate the service offered by the service provider. ***Note:*** Although other services, outside of ISA, are available, only the ISA service is shown in the Entry column for clarity.

Datafill example for table KSETFEAT

The following example shows sample datafill for table KSETFEAT.

MAP display example for table KSETFEAT

```
FEATKEY     FEATURE                                        KVAR
_____________________________________________________________
HOST 00 0 00 07 1 ISA ISA MENU1 MENU2 MENU3 NILMENU 12
HOST 00 0 00 07 1 ASP ASP PROV_B ISA $ $
HOST 00 0 00 07 1 DENYISA DENYISA
HOST 00 0 00 07 1 ISADEACT ISADEACT
```

In-Session Activation (ISA) (continued)

Datafilling table CUSTSTN

Use table CUSTSTN to assign ISA to customer groups.

Datafilling table CUSTSTN

Field	Subfield or refinement	Entry	Explanation and action
CUSTNAME		1 through 16 alphanumeric characters	Customer group name. Enter the name of the customer group.
OPTNAME		ISA	Option name. Enter ISA to indicate the In-Session Activation option. ***Note:*** Although other options, outside of ISA, are available, only the ISA option is shown in the Entry column for clarity.
OPTION			Option. This field consists of subfield OPTION, which is described below.
	OPTION	ISA	Option. Enter ISA to indicate the In-Session Activation option and datafill refinements STATE, BSYLOCAL, BSYTOLL, RNALOCAL, RNATOLL, and RNATIMER, which are described below. ***Note:*** Although other options, outside of ISA, are available, only the ISA option is shown in the Entry column for clarity.
	STATE	A or I	State. Enter A to make ISA active for the whole customer group, or enter I to make ISA inactive.
	BSYLOCAL	1 through 16 alphanumeric characters, or NILMENU	Busy local. Enter the menu identifier that corresponds to the announcement to be played for the end user when a busy condition is encountered on a local call. Enter NILMENU to prevent ISA from starting on a busy condition for a local call.
	BSYTOLL	1 through 16 alphanumeric characters, or NILMENU	Busy toll. Enter the menu identifier that corresponds to the announcement to be played for the end user when a busy condition is encountered on a toll call. Enter NILMENU to prevent ISA from starting on a busy condition for a toll call.

In-Session Activation (ISA) (continued)

Datafilling table CUSTSTN

Field	Subfield or refinement	Entry	Explanation and action
	RNALOCAL	1 through 16 alphanumeric characters, or NILMENU	Ring/no answer local. Enter the menu identifier that corresponds to the announcement to be played for the end user when an RNA condition is encountered on a local call. Enter NILMENU to prevent ISA from starting on an RNA condition for a local call.
	RNATOLL	1 through 16 alphanumeric characters, or NILMENU	Ring/no answer toll. Enter the menu identifier that corresponds to the announcement to be played for the end user when an RNA condition is encountered for a toll call. Enter NILMENU to prevent ISA from starting on an RNA condition for a toll cal.
	RNATIMER	12 through 72	Ring/no answer timer. Enter the number of seconds before the ISA announcement is started when an RNA condition is encountered. ***Note:*** This field only appears when the value in either RNALOCAL or RNATOLL is other than NILMENU.

Datafill example for table CUSTSTN

The following example shows sample datafill for table CUSTSTN.

MAP display example for table CUSTSTN

```
 CUSTNAME   OPTNAME   OPTION
_____________________________________________________
RESGRP      ISA       ISA A MENU1 MENU2 NILMENU MENU3 12
```

In-Session Activation (ISA) (continued)

Datafilling table TMTCNTL.TREAT

Use table TMTCNTL.TREAT to define the ISAX (ISA exit) treatment.

Datafilling table TMTCNTL.TREAT

Field	Subfield or refinement	Entry	Explanation and action
TREATMT		1 through 4 alphanumeric characters	Treatment. Enter ISAX for the ISA exit treatment.
LOG		Y or N	Log. Enter Y (yes) for a trunk or line message 138 printout each time translation is routed to the treatment. Otherwise, enter N (no).
FSTRTE		see subfields	First route. This field consists of subfields FSTRTSEL and CLLI, which are described below.
	FSTRTSEL	S	First route selector. Enter the first route selector S.
	CLLI	1 through 16 alphanumeric characters	Common language location identifier. Enter the CLLI code of the tone to which translation routes.

Datafill example for table TMTCNTL.TREAT

The following example shows sample datafill for table TMTCNTL.TREAT.

MAP display example for table TMTCNTL.TREAT

```
 TREATMT          LOG          FSTRTE
_____________________________________________________
ISAX              N            S     TRK120T
```

Translation verification tools

The ISA feature does not modify the translation verification tools.

SERVORD

The ISA, DENYISA, and ASP options can be assigned to, changed, and deleted from an end user's line through the service order (SERVORD) utility.

SERVORD prompts

The following table shows the SERVORD prompts used to add the DENYISA, ASP, and ISA options to a RES line.

SERVORD prompts for the DENYISA option

Prompt	Valid input	Explanation
DN_OR_LEN	7-digit DN	Enter the 7-digit DN to which the DENYISA option is to be assigned.
OPTION	DENYISA	Enter DENYISA to deactivate ISA permanently on the end user's line.

SERVORD prompts for the ASP option

Prompt	Valid input	Explanation
DN_OR_LEN	7-digit DN	Enter the 7-digit DN to which the ASP option is to be assigned.
OPTION	ASP	Enter ASP to assign the ASP (Alternate Service Provider) option to the line.
PROVNAME	1 through 16 alphanumeric characters	Enter the name of the service provider. A maximum of four providers can be datafilled.
SERVICE	ISA	Enter ISA for In-Session Activation.

SERVORD prompts for the ISA option

Prompt	Valid input	Explanation
DN_OR_LEN	7-digit DN	Enter the 7-digit DN to which the ISA option is to be assigned.
OPTION	ISA	Enter ISA for In-Session Activation.
BSYLOCAL	1 through 16 alphanumeric characters, or NILMENU	Enter the menu identifier that corresponds to the announcement to be played when a busy condition is encountered for a local call. Enter NILMENU to prevent ISA from starting.

In-Session Activation (ISA) (continued)

SERVORD prompts for the ISA option

Prompt	Valid input	Explanation
BSYTOLL	1 through 16 alphanumeric characters, or NILMENU	Enter the menu identifier that corresponds to the announcement to be played when a busy condition is encountered for a toll call. Enter NILMENU to prevent ISA from starting.
RNALOCAL	1 through 16 alphanumeric characters, or NILMENU	Enter the menu identifier that corresponds to the announcement to be played when an RNA condition is encountered for a local call. Enter NILMENU to prevent ISA from starting.
RNATOLL	1 through 16 alphanumeric characters, or NILMENU	Enter the menu identifier that corresponds to the announcement to be played when an RNA condition is encountered for a toll call. Enter NILMENU to prevent ISA from starting.
RNATIMER	12 through 72	Enter the number of seconds before ISA is started when an RNA condition is encountered. ***Note:*** This prompt only appears when the value in either RNALOCAL or RNATOLL is other than NILMENU.

SERVORD example for adding the DENYISA option to a RES line

The following SERVORD example shows how the DENYISA option is added to a RES line using the ADO command.

In-Session Activation (ISA) (continued)

SERVORD example for DENYISA in prompt mode

```
>SERVORD
SO:
> ADO
SONUMBER:              NOW 96 04 10 PM
>
DN_OR_LEN:
> 6216076
OPTION:
> DENYISA
OPTION:
$
COMMAND AS ENTERED:
ADO NOW 96 04 10 PM 6216076 (DENYISA) $
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
> Y
```

SERVORD example for DENYISA in no-prompt mode

```
> ADO  $  6216076  DENYISA  $
```

SERVORD example for adding the ASP option to a RES line

The following SERVORD example shows how the ASP option is added to a RES line using the ADO command.

In-Session Activation (ISA) (continued)

SERVORD example for ASP in prompt mode

```
>SERVORD
SO:
> ADO
SONUMBER:              NOW 96 04 10 PM
>
DN_OR_LEN:
> 6216076
OPTION:
> ASP
PROV_SERV_NAMES:
> PROVL–ISA
PROV_SERV_NAMES:
> $
OPTION:
> $
COMMAND AS ENTERED:
ADO NOW 96 04 10 PM 6216076 (ASP (PROV1 ISA) $ ) $
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
> Y
```

SERVORD example for ASP in no-prompt mode

```
> ADO  $  6216076  ASP  PROVL–ISA $ $
```

SERVORD example for adding the ISA option to a RES line

The following SERVORD example shows how the ISA option is added to a RES line using the ADO command.

In-Session Activation (ISA) (end)

SERVORD example for ISA in prompt mode

```
>SERVORD
SO:
> ADO
SONUMBER:              NOW 96 04 10 PM
>
DN_OR_LEN:
> 6216076
OPTION:
> ISA
BSYLOCAL:
> MILMENU
BSYTOLL:
> NILMENU
RNALOCAL:
> MENU2
RNATOLL:
> NILMENU
RNATIMER:
12
COMMAND AS ENTERED:
ADO NOW 96 04 10 PM 6216076 (ISA NILMENU NILMENU MENU2
NILMENU 12) $) $
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
> Y
```

SERVORD example for ISA in no-prompt mode

```
> ADO 6216076 ISA NILMENU NILMENU MENU2 NILMENU 12 $
```

4 Datafilling In-Session Activation

The following chapter describes the In-Session Activation, RES00069, functionality.

5 Datafilling RES Automatic Recall with Name

The following chapter describes the RES Automatic Recall with Name, RES00089, functionality.

Automatic Recall with Name

Ordering codes

Functional group ordering code: RES00089

Functionality ordering code: not applicable

Release applicability

NA012 and up

NA012 introduced Automatic Recall with Name.

Requirements

This document includes all the data table information for Automatic Bring back with Name. Complete use of this functionality can require software or hardware not described in this document.

Description

Automatic Bring back with Name (ARN) is an enhancement to the existing two-level Automatic Recall (AR) feature. The ARN feature adds an audible name of the last caller to the two-level AR announcement. The ARN feature begins a connection to the service node (SN). When the ARN receives the audible information, the AR feature continues.

Operation

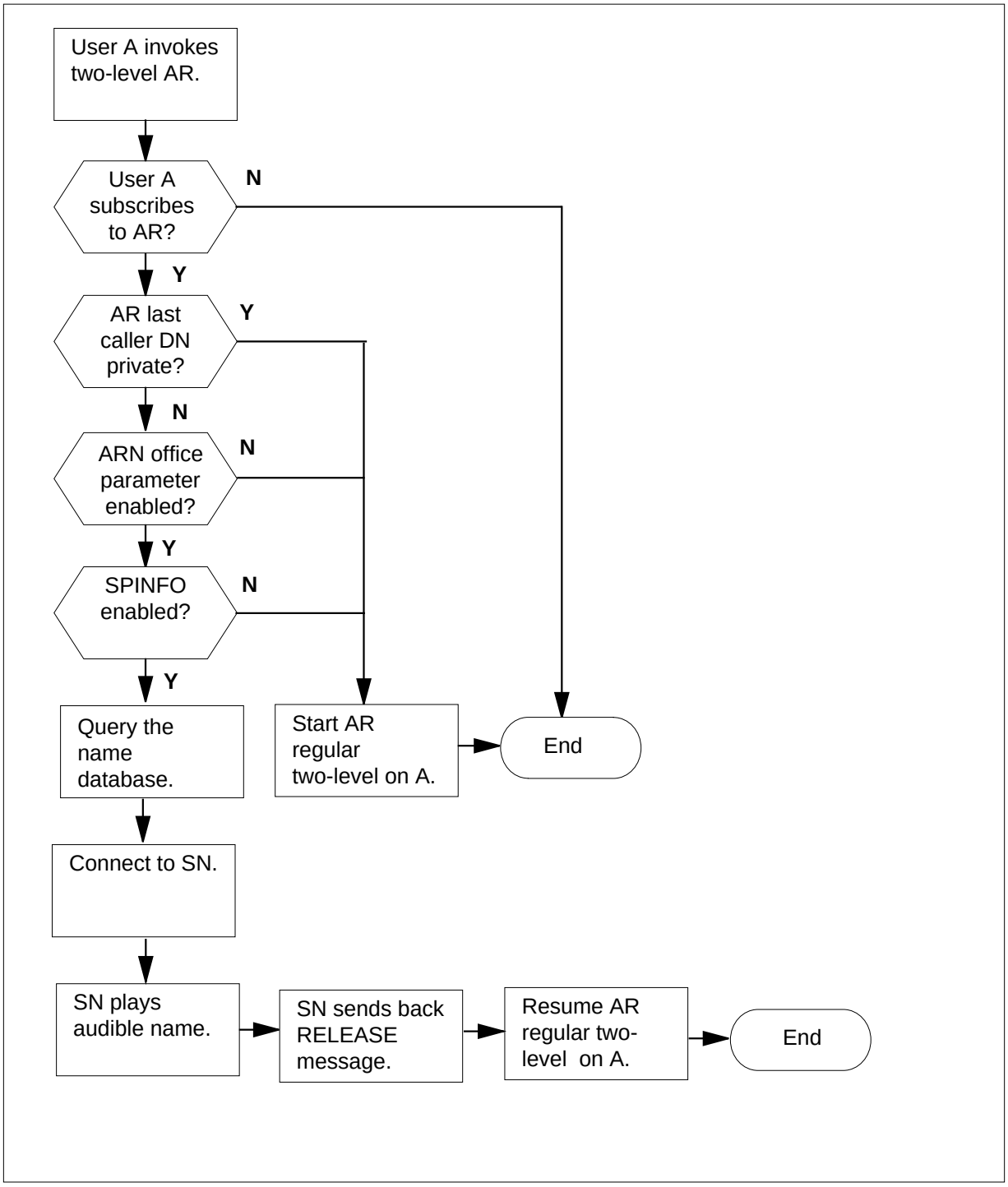
When the end user activates two-level AR, the ARN feature becomes active. The ARN functionality instructs the SN to provide the name of the last called party. Then ARN terminates and AR continues to provide the two-level announcement.

Feature operation diagram

The feature flow diagram provides a description of the ARN feature. In the diagram, the SN provides the name of the calling party.

Automatic Recall with Name (continued)

Feature operation for ARN



Automatic Recall with Name (continued)

Remote SS7 connection to the SN

The end office retrieves the name of the last called party by activating the parameter calling party in the initial address message (IAM). IAM has the last caller directory number (DN) and display status from the incoming call memory (ICM) slot. The display status of the calling DN indicates if the system can display the caller's identity to the called party.

The ARN service office adds parameter generic name (GN) to the ISDN User Part (ISUP) IAM to protect the name privacy of the last caller. Parameter GN contains information for the name, name availability and the display status for the name. The NAME field BRI/PRI SETUP, BRI INFO, or PRI Facility filters the information. The ARN serving office protects the last caller number privacy by using the Calling Number (CGN) display parameter in the ISUP IAM. The CGN presentation parameter filters through field CGN_PI of SETUP or INFO/FACILITY message.

The end office connects the last caller party's DN with a name and sends the DN to the SN. Also, the end office determines the privacy of the call from the IAM and the name database.

The following describes operation of the remote SS7 connection to the SN:

- The SN host office receives the IAM and begins a call to the SN.
- The ARN serving office receives the ANSWER message (ANM), and connects the voice path between the subscriber and the SN.
- The SN plays the audible last caller's name as converted. This connection is one way only.
- The SN sends back a RELEASE message to release the connection. The ARN feature is not running on the call when the switch receives the RELEASE message and AR continues.
- The ARN serving office must receive the RELEASE message within the time indicated by the T2 timer, or ARN terminates.
- The switch releases the connection to the SN if the subscriber dials digit 1 while connected to the SN. The ARN feature terminates and the AR feature continues the processing of the call.

Local BRI/PRI connection to the SN

The Basic Rate Interface (BRI)/Primary Rate Interface (PRI) connection to the SN uses parameters NAME and CGN_PI of the BRI/PRI messages to the SN.

The privacy status of the incoming call uses parameters NAME and CGN_PI to determine the privacy status of the incoming call.

Note: The rest of the operation for Local BRI/PRI connection to the SN is the identical to the SS7 connection to the SN.

Feature control

There are three different levels of ARN feature control:

- Operating company control
- End-user control
- Provisioning

Operating company control

The operating company personnel must datafill the following tuples in table SPINFO:

- Field ENABLED determines the availability of the ARN feature.
- Field CARRIER routes the call to the SN.
- Fields BILLING and BILLINGDN determine the billing.
- Field SNDN routes the SN DN.
- Fields SNT1 and SNT2 determine the connection time limit to the SN.

The field ENABLED allows the operating company personnel to control the availablitity of the ARN functionality for each service provider. Set the ENABLED field to yes so end users can use the ARN service with the service provider. The value of no disables the ARN functionality for any lines subscribed to the service provider.

Feature ARN introduces office parameter AR_WITH_NAME_ENABLED, which controls the availability of ARN feature office wide. When the operating company sets office parameter to Y, the ARN feature is available office wide to subscribers.

The operating company personnel can use field CARRIER to indicate the carrier that routes the call to the SN. When the operating company defines a carrier in table SPINFO, it replaces the necessary carrier information code (CIC) for the call to the SN. If no CIC applies to the call to the SN, the operating company personnel can use the carrier in table SPINFO.

When the operating company personnel does not datafill field CARRIER, the CIC for the call to the SN is removed. The call continues with no carrier and

Automatic Recall with Name (continued)

may not complete based on the translations datafill. Table datafill LATAXLA effects call completion depending on if the call is intra-lata or inter-lata.

> ***Note:*** The ARN functionality does not block inter-lata calls when the operating company personnel does not indicate a carrier.

The fields BILLING and BILLINGDN allow the operating company personnel to select the billing method for the call to the SN. The BILLING field controls when the switch generates a billing record (local and toll) for a call. A value of Y generates billing records and a value of N does not generate billing records.

The BILLINGDN field indicates the DN that receives the toll charges for the call to the SN. Feature ARN does not generate any new billing records. If the operating company sets field BILLING Y, then the switch only generates necessary billing records.

The SNDN field allows the operating company personnel to indicate the DN to use to reach the SN platform.

The operating company personnel uses field SNT1 to indicate the maximum delay before receiving the ANSWER message from the SN. The SNT1 timer stops once it receives the ANSWER message from the SN.

The operating company personnel uses field SNT2 to indicate the maximum time of the SN audible announcement. The SNT2 timer expires once it receives the RELEASE message from the SN.

End-user control

The ARN end user can use the Automatic Recall Deactivation (ARD) feature to cancel the ARN feature. ARD cancels both AR and ARN for the current call. The end-user can not disable ARN for each call without cancelling AR.

Provisioning

If the end user subscribes to ARN and wants to select their alternate service provider for each line, then the operating company can assign the ARN feature to an end user through the ASP (Alternate Service Provider) line option.

The operating company does not have to assign ARN to ASP line option if PRIMARY is the end user's service provider in table SPINFO. Service provider PRIMARY is the default in table SPINFO.

The ASP line option gives the end user the audible last caller name provided by an alternate service provider. The ARN service is made available to Residential (RES 1FR/1MR) lines only.

Automatic Recall with Name (continued)

The operating company can assign the ARN service to a line that has option AR. The ASP line option requires the operating company to datafill the fields PROVIDER and SERVICE in table SPINFO. The SERVICE field is always ARN when assigning ARN. The PROVIDER field identifies the service provider according to table SPINFO.

The operating company receives an error message when the AR option is not on a line when trying to assign the ARN 1 service through ASP. When the operating company removes the AR line option while the ARN option is assigned they receive an error message. The operating company can not remove AR from the line.

Screening

The ARN feature performs screening on the SNDNs during table control and runtime.

The following table shows the DN types that the ARN feature screens. The yes value means the ARN feature performs screening on the DN and no value means the ARN feature rejects the DN. For runtime, rejection of the DN can generate a log.

ARN SNDNs screened out

DN types	Table control	Runtime
Operator assisted calls	N	Y
SNDNs containing `*', `#', a, b,c, d or e	Y	N
800 numbers (Note)	N	Y
FGB (1-950-WXXXX and 950-WXXX (Note)	N	Y
DNs less than 4 or more than 30 digits	Y	N
DNs that find no valid route (Note)	N	Y
Note: The switch generates log ARN600.		

Timing and tolerances

The ARN feature uses timers to limit the delays in call processing. The first timer controls delays in connecting the subscriber to the SN. The second timer

Automatic Recall with Name (continued)

limits the time connection between the subscriber and the SN, while the switch provides the audible information.

Timer T1 expires

The T1 timer indicates the delay between the setup of the call to the SN and the reception of the ANSWER message from the SN. The purpose of the timer is to make sure the connection to the SN does not extend an amount of time when the SN does not respond.

When the T1 timer expires before the SN receives the ANSWER message, the ARN feature generates information log ARN601. The switch marks operational measurement (OM) register ARNT1 in the ARN OM group.

Timer T2 expires

The T2 timer indicates the maximum time of the SN audible announcement. The time out represents the delay between the reception of the ANSWER and the RELEASE messages from the SN. When the SN is not releasing the connection, the T2 timer makes sure that an extended period of time does not interrupt the speech path between the end user and the other party.

The SN provides the automatic recall tone and plays the audible calling party's information. The switch does not receive the RELEASE message before the T2 timer expires, but the ARN feature generates information log ARN601 and marks the OM register ARNT2 in the ARN OM group. Then the ARN feature releases the connection to the SN and terminates. The AR feature provides the first alerting cycle.

Translations table flow

Automatic Recall with Name does not affect translations table flow.

Limitations and restrictions

Automatic Recall with Name has no limitations or restrictions.

Interactions

The paragraphs that follow describe how Automatic Recall with Name interacts with other functionalities.

Local Call Name Delivery (CNAMD)

Local CNAMD does not search TCAP name queries when the name is available through other methods. The operating company personnel sets the suboption TCAPNM to LOCAL. The DNs that have an entry in the local switch database or party information parameter (PIP) of IAM do not perform a TCAP query.

Automatic Recall with Name (continued)

ARN functions the same when using local CNAMD, proprietary name delivery, or network name delivery.

Network level privacy

The option SUPPRESS in table NETNAMES (internal logic network names) controls network level name suppression. The suppression overrides each call blocking feature. The SUPPRESS option applies to the calling party's name and/or number.

The privacy status of the network between the end user and the calling party determines the privacy status of the call to the SN. If the switch controls the network privacy status of the calling party to the end-user call, then the switch restricts the privacy status of the call to the SN. If the switch allows network privacy status between the end user and the SN, then the switch allows the privacy status of the calling party to the end-user call.

Per-call privacy

Privacy features Calling Name and Number Delivery (CNND), Calling Number Delivery Blocking (CNDB), Calling Name Delivery Blocking (CNAB), and Calling Name and Number Blocking (CNNB) determine the per-call privacy status.

The end user can enter a star code to activate the following four features on the calling party:

- The CNND feature allows the end user to override the permanent privacy status and makes the name and number available for the current call.
- The CNNB feature allows the end user to override the permanent privacy status and to make the name and number private for the current call.
- The CNDB feature allows the end user to override the permanent privacy status and to make the number private for the current call.
- The CNAB feature toggles the permanent privacy status of the name for the current call.

Permanent privacy

The centralized name database stores the permanent privacy status for an end user against a ten-digit DN for TCAP CNAMD. The privacy status is a pre-selected value for a calling party's name. The permanent privacy status has a value of public or private.

Once the terminating switch receives the TCAP response, the terminating switch determines the privacy status of the call and extends it to the SN. The SUPPRESS line option blocks name delivery in the proprietary CNAMD context.

Automatic Recall with Name (continued)

Proprietary name delivery

Proprietary name delivery uses a proprietary name database located in the switch. If TCAP CNAMD and proprietary name delivery are available to the SN, then the SN uses TCAP CNAMD to fill the calling name parameter. If TCAP CNAMD is inactive, then the SN uses proprietary name delivery and takes the name from the proprietary name database.

When using the proprietary name delivery, and the ARN serving switch is the terminating switch, the ARN serving switch searches the local name database. Also, the ARN serving switch populates the BRI/PRI SETUP message with the name received from the calling DN.

An interswitch call uses network name display to provide the name information across the common channel signaling system 7 (CCS7) network. The PIP carries the name information across the CCS7 network.

The following ISUP messages include PIP:

- initial address message (IAM)
- address complete message (ACM)
- answer message (ANM)
- information message (INF)

When using the network name display, and the ARN serving switch connects to the SN host through SS7, the ARN serving switch searches the local name database. Also, the ARN serving switch populates PIP of the IAM. The terminating switch sets the name from the IAM to the BRI/PRI SETUP message to the SN.

Third Calling Party Call Name Delivery (TCAP CNAMD)

Third Calling Party (TCAP) CNAMD uses a centralized name database located at a service-control point (SCP) to retrieve the calling name information based on the calling DN. The terminating switch receives the calling name and the permanent privacy status from the centralized database and delivers the information to the CNAMD end user.

When using TCAP CNAMD, the terminating switch is responsible for querying the name database and filling the BRI INFO or PRI FACILITY message to provide the name to the SN.

Activation and deactivation by the user

Automatic Recall with Name does not require activation or deactivation by the user.

Automatic Recall with Name (continued)

Billing

The ARN feature does not generate billing records or changes, but the ARN feature can control the billing generated when completing a call to the SN.

The following fields in table SPINFO control the billing to a SN:

- Billing does not generate billing for a SN if the field is set to N.
- BillingDN indicates a DN to charge the billing for a call to the SN.
- Carrier indicates a carrier to route the call to the SN. This is the carrier that appears on the billing report for the outgoing call to the SN.

Station Message Detail Recording

Automatic Recall with Name does not require Station Message Detail Recording.

Office parameters used by Automatic Recall with Name

The table that follows lists the office parameters used by Automatic Recall with Name. For additional information about office parameters, refer to the *Office Parameters Reference Manual*.

Office parameters used by Automatic Recall with Name

Table name	Parameter name	Explanation and action
OFCENG	AR_WITH_NAME_ENABLED	This parameter controls the availability of ARN office wide. The default value is N.

Datafill sequence

The table that follows list the table that requires datafill to put Automatic Recall with Name into operation.

Datafill requirements for Automatic Recall with Name

Table	Purpose of table
SPINFO	The Service Provider Information table contains information for each provider.

Automatic Recall with Name (continued)

Datafill related to Automatic Recall with Name for table SPINFO

The table that follows provides the datafill related to Automatic Recall with Name for table SPINFO. This table includes only those fields that apply directly to Automatic Recall with Name.

Datafill related to table SPINFO

Field	Subfield	Entry	Explanation and action
SPINFKEY	SERVNAME	ARN	Service provider information key. This field specifies the name of the service offered by the service provider.
DATA		see subfields	Data. This field consists of subfields SERVSEL, BILLING, SNDN, SNT1, and SNT2.
	SERVSEL	ARN	Service selector. This field specifies the name of the service.
	BILLING	boolean	Billing. This field controls the billing on the calls placed to the SN.
	SNDN	4 to 30 digits DN	Service node directory number. This field contains the DN to route to the SN to provide the regular call waiting tone.
	SNT1	integer from 1 to 10	Service node timer 1. This field contains the time-out value for the T1 timer in seconds.
	SNT2	integer from 10 to 100	Service node timer 2. This field contains the time-out value for the T2 timer in tenths of seconds.

Datafill example for table SPINFO

The figure that follows shows sample datafill for table SPINFO.

MAP example for table SPINFO

```
PROVNAME SERVNAME SERVSEL
------------------------------------------------------------------------
PRIMARY   ARN      ARN     Y   NILC   NILDN   N   5146215555  2   25
  SP1     ARN      ARN     Y   NILC    NILDN   Y   5146211234  2  25
```

Translation verification tools

Automatic Recall with Name does not use translation verification tools.

SERVORD

Automatic Recall with Name modifies the Alternate Service Provider (ASP) line option. The ARN feature enhances the Service Order System (SERVORD) to support the ARN service through line option ASP.

SERVORD limitations and restrictions

The SERVORD limitations and restrictions that follow apply to Automatic Recall with Name:

- The AR option is present on the line before assigning option ARN or the ARN service through ASP. SERVORD displays an error message if the operating company personnel tries to add the ARN line option on a line not subscribed to the AR option.
- To remove AR from a line subscribed to ASP with ARN service, the operating company personnel needs to remove ARN. SERVORD displays an error message if the operating company personnel attempts to remove AR before removing ARN.
- When removing ASP with the ARN service from a line, AR is not removed automatically.

SERVORD prompts

Feature ARN does not introduce any new prompts.

SERVORD example to add Automatic Recall with Name

The SERVORD example that follows shows how to add Automatic Recall with Name to line option ASP with the ADO command in prompt mode.

Automatic Recall with Name (end)

SERVORD example for Automatic Recall with Name in prompt mode

```
>ADO
SONUMBER:  NOW 92 4 7 AM
> $
DN_OR_LEN:
> 6211521
OPTION:
> ASP
PROVNAME:
> ALTPROV
SERVICE:
> ARN
PROVNAME:
> $
OPTION:
> $
```

The SERVORD example that follows shows how to add Automatic Recall with Name to line option ASP with the ADO command in no-prompt mode.

SERVORD example for Automatic Recall with Name in no-prompt mode

```
> ADO $ 6211521 ASP ALTPROV ARN $ $
```

6 Datafilling Malicious Call Tracking Logs

The following chapter describes the Malicious Call Tracking Logs, BAPL0001 and SBVI0001, functionality.

Malicious Call Tracking Logs

Ordering codes

Functional group ordering codes: BAPL0001 (Call Presentation MCT Log) and SVBA0001 (SVBA MCT Log)

Release applicability

Call Presentation MCT Log was introduced in EUR006.

MCT Log on Cut-Through was introduced in EUR008.

Requirements

Call Presentation MCT Log has no prerequisites.

To operate, MCT Log on Cut-Through requires Call Presentation MCT Log in order code BAPL0001.

Description

The Call Presentation MCT Log feature provides a Malicious Call Trace (MCT) log on incoming calls to lines that have the MCT feature assigned. A log is generated for such a call when ringing begins. The log is generated just as ringing starts, so a log exists even if the call is not answered.

MCT Log on Cut-Through enhances this facility so that all call attempts to lines that have the MCT feature assigned are logged, whether ringing is established or not. For example, lines with Call Diversion still generate an MCT log.

Both features cannot be active on the same DMS-100 switch at the same time.

Operation

MCT is the collective term for the Calling Line Identity with Flash (CLF) and the Malicious Call Hold (MCH) features. CLF is available to Centrex (IBN) and POTS subscribers. MCH is available to subscribers with Meridian Business Set (MBS) stations.

With Call Presentation MCT Log, the terminating exchange logs various details of a call made to a line that has the MCT feature assigned. This information is stored in the terminating exchange. If the called subscriber activates the MCT feature, the information is retrieved for inclusion in a log. If the called subscriber does not activate the MCT feature and the call terminates normally the information is cleared.

Malicious Call Tracking Logs (continued)

The logs generated for standard MCT are:

- LINE125 for non-BTUP trunk to line MCT logs and LINE126 for line to line MCT logs
- MCT103 and MCT104 for BTUP trunk MCT logs

For call presentation and cut-through MCT, the log is:

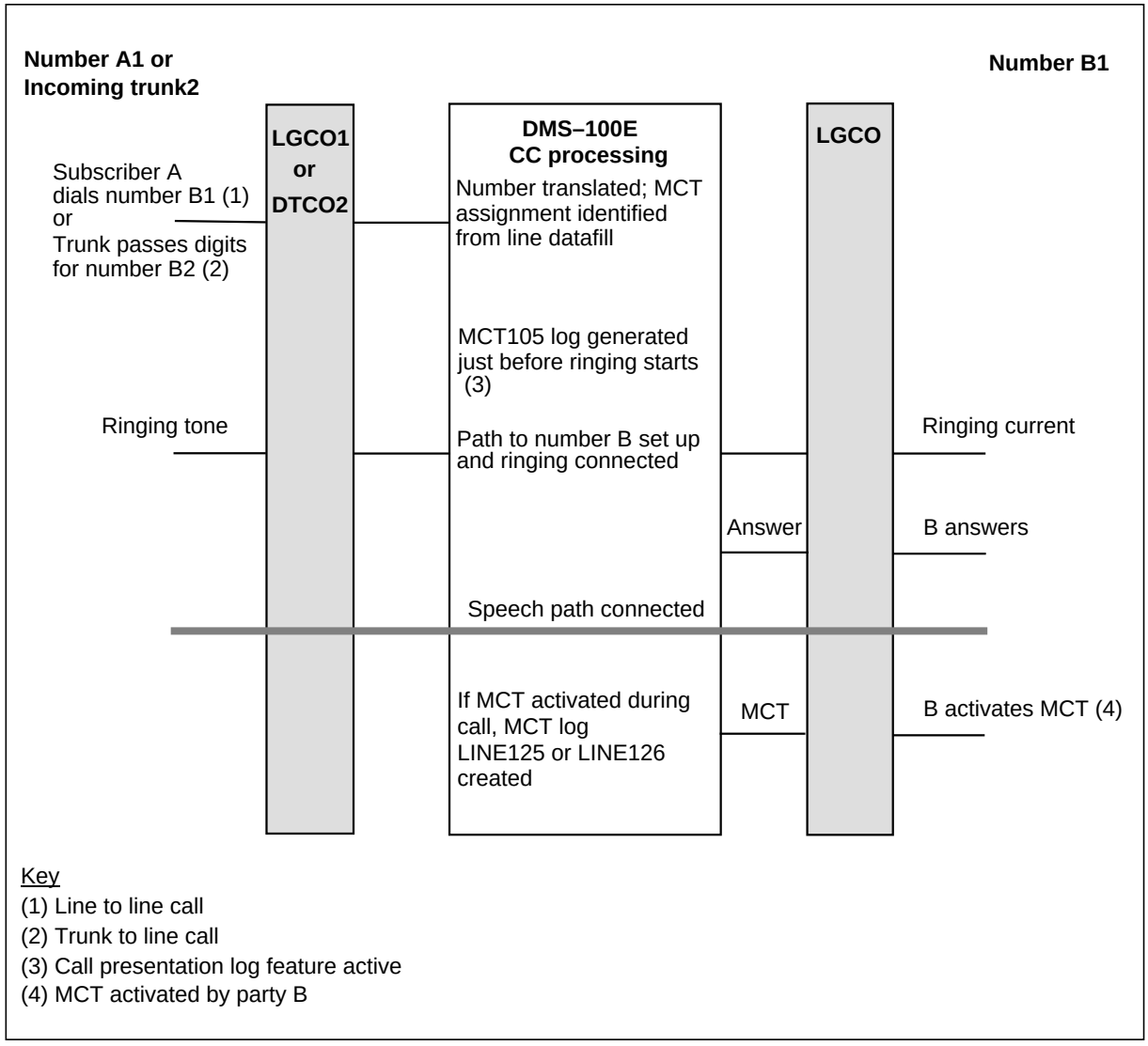
- MCT105

For details of all logs, see the *Log Report Reference Manual*.

The following illustration shows the call flow for standard and Call Presentation MCT Log. Both line to line and trunk to line calls to a destination number (number B) are shown.

Malicious Call Tracking Logs (continued)

Call presentation MCT Log call flow



When the call reaches the DMS-100 switch, it translates the number and checks the line MCT assignment. If MCT is assigned, it stores the call information.

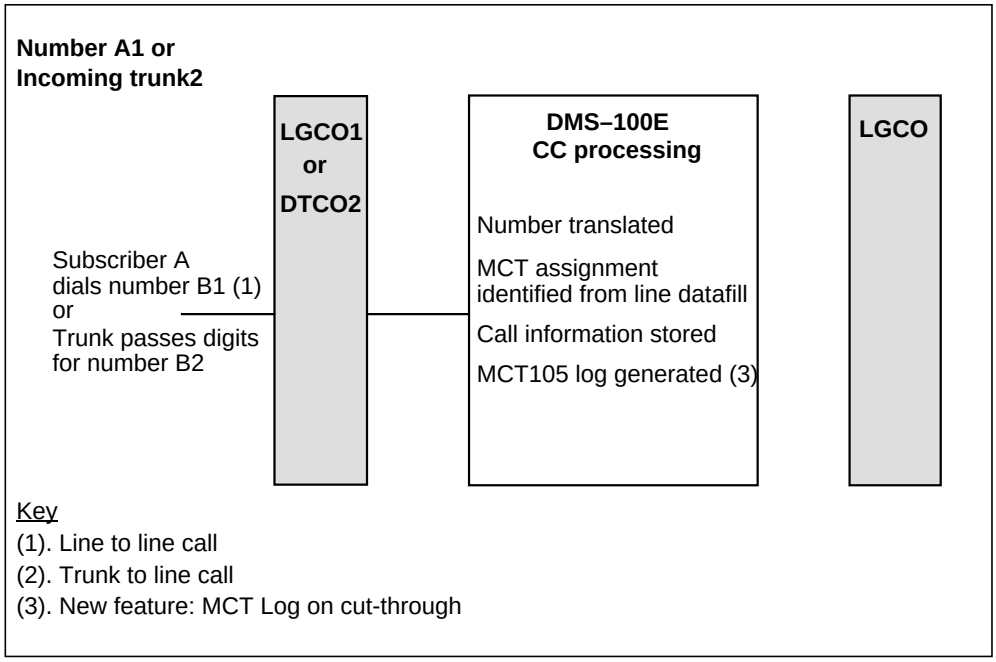
If the Call Presentation MCT Log feature is active on this switch and the MCT feature has been assigned to the line then, as ringing starts, the DMS-100 switch generates log MCT105.

If the subscriber activates the MCT feature after answering the call, the switch generates another MCT log (for example, LINE125 or LINE126) for the call.

Malicious Call Tracking Logs (continued)

MCT Log on Cut-Through differs from Call Presentation MCT Log in that it produces an MCT log for all call attempt to lines that have the MCT feature assigned to them. Ringing does not have to be established (for example, on lines with Call Diversion activated).

The following figure illustrates the MCT feature:



If the subscriber activates the MCT feature after answering the call, the switch generates another MCT log (for example, LINE125 or LINE126) for the call.

Log MCT105

The MCT105 log captures the following information:

- Log ID: an ID identifying the type of MCT log created.
- Date and time when the log was created.
- Originating agent details. The contents of these fields in MCT105 depend on whether it is a line to line call or a trunk to line call.

  For a line to line call, originating agent details are the Line Equipment Number (LEN) and Directory Number (DN).

Malicious Call Tracking Logs (continued)

For a trunk to line call, originating agent details are:

— the Calling Line Identification (CLI), if available

— the trunk's Common Language Location Identification (CLLI) and ID number

- Terminating line details: the called line identification, LEN and DN

Alarm generation

When MCT105 is generated, the system alarm MCTALARM can be started in the terminating exchange. It is activated by the MCT_PRESENTATION_LOG parameter.

The alarm functions are:

- MCTALARM details are datafilled in table SFWALARM. The severity defaults to MJ (major), but can be altered.
- There is a MAPCI command level for MCTALARM. Alarms of this type are flagged in the EXT column of the MAPCI alarm bar. To access the EXT command level from the MAPCI command level, select the MTC option and then the EXT option. To access it from another command level, enter the following CI command:

```
MAPCI;MTC;EXT
```

- The following CI command turns off the MCT alarm:

```
MCTOFF
```

Translations table flow

The Malicious Call Tracking Logs features do not affect translations tables.

Limitations and restrictions

The following limitations and restrictions apply to Malicious Call Tracking Logs:

- No MCT105 log is generated for a call that is routed to treatment, for example, BUSY.
- A call terminating to an engaged line that has the Call Waiting (CWT) and MCT features assigned does not generate an MCT105 log, even though the call originator receives ringing tone. This is because the terminating line is Call Processing Busy (CPB), and does not receive ringing current.

Interactions

Malicious Call Tracking Logs has no interactions.

Malicious Call Tracking Logs (end)

Activation and deactivation by the user

The feature is controlled by the MCT_PRESENTATION_LOG parameter in table OFCVAR. Refer to the "Datafilling office parameters" section.

Billing

Malicious Call Tracking Logs does not affect billing.

Station Message Detail Recording

Malicious Call Tracking Logs does not affect Station Message Detail Recording.

Datafilling office parameters

The following table shows the office parameters used by Malicious Call Tracking Logs. For more information about office parameters, refer to *Office Parameters Reference Manual.*

Table name	Parameter name	Explanation and action
OFCVAR	MCT_PRESENTATION_LOG	This parameter consists of two boolean options: MCT_PRESENTATION_LOG_ACT. If set to Y, the Call Presentation MCT Log feature is activated. The default value is N. MCT_PRES_LOG_ALARM_OPTION. If set to Y, this activates MCT alarm generation. The default value is N. MCT_PRES_LOG_ALARM_OPTION can be set to Y only if MCT_PRESENTATION_LOG_ACT is set to Y.

Translation verification tools

Malicious Call Tracking Logs does not use translation verification tools.

SERVORD

Malicious Call Tracking Logs does not use SERVORD.

7 Appendix A: Datafilling announcements

Subscriber Services DRAM information

Several software features within the Subscriber Services product require or use announcements. Announcements must be stored in the digital recorded announcement machine (DRAM) and datafilled in specific translations tables. This chapter discusses recording and datafilling standard and customized announcements and provides examples of datafill for announcements.

For information on announcements and recommended datafill for a specific Subscriber Services feature, refer to the feature description in this document.

For more information on DRAMs, datafill for DRAMs, and the DRAMREC (DRAM recording) utility, refer to the following NTPs:

- *Digital Recorded Announcement Machine DRAM and EDRAM Guide*, 297-1001-527
- *Translations Guide*

Standard and customized announcements

Announcements can be of two types: *standard* or *customized*. Some features, such as Call Forwarding Remote Access (CFRA), use both standard and customized announcements.

Standard type

Standard announcements are datafilled as type standard (STND) in the ANTYPE field in table ANNS. Standard announcements can be pre-recorded by Nortel Networks and stored in programmable read-only memory (PROM) NT1X76XX cards. Standard announcements can also be recorded on-site using the DRAMREC utility. An electrically erasable programmable

read-only memory (EEPROM) card, NT1X79AA, is used for on-site recording.

Note: Announcements recorded on-site can also be stored in random access memory (RAM) NT1X77XX cards. Because RAM data is volatile and not permanent, using an EEPROM card is recommended.

Standard type announcements need datafill in table DRAMTRK. For more information, refer to "Announcement datafill sequence" in this document.

Customized type

Customized announcements are datafilled as one of the following types, depending on the feature, in the ANTYPE field in table ANNS: CFRA, SPP, SACB, SLEANN, or CLASS. The customized announcements can be either pre-recorded (as in the case of screening list editing [SLE] announcements) or recorded on-site, using the DRAMREC utility.

Customized type announcements need datafill in table DRMUSERS, instead of table DRAMTRK. For more information, refer to "Announcement datafill sequence" in this document.

Recording announcements

The number of announcements possible for a switch is determined by the number of NT1X79AA EEPROM cards provided. Each card has a recording capacity of 31.74 seconds. Diagnostic tests must be run on each card before it can be used.

Procedure 7-1 Procedure for recording announcements

At your location

1 Install the NT1X79AA EEPROM card, if not already present, and run a diagnostic test on the card.

2 To record announcement phrases, determine the text of the announcement and divide it into phrases. Whenever possible, use phrases that already exist in the system if the announcements are recorded in the same voice. A single phrase cannot be longer than 18 seconds. An announcement longer than 18 seconds, but not exceeding 31.74 seconds, can be created by putting shorter announcements together. To put announcements together, datafill table ANNMEMS with the location of each announcement.

3 Name each phrase. This name identifies the phrase in table DRMUSERS. The name must be unique. Use appropriate table control commands to determine whether there are any phrase-name conflicts.

4 Determine the location, DRAM, and the length of the announcement.

5 Ensure the common language location identifier (CLLI) for the announcement trunk is datafilled in table CLLI. The following example shows tuples in table CLLI.

Figure 7-1 MAP display example for table CLLI

```
CLLI        ADNUM   TRKGRSIZ    ADMININF

DISARAC     353     5       RAC_ANNOUNCEMENTS
CFRAANN     354     9       CFRA_ANNOUNCEMENTS
```

6 Ensure the announcement trunk is datafilled table ANNS. The following example shows tuples in table ANNS.

Figure 7-2 MAP display example for table ANNS

```
CLLI        ANTYPE   TRAFSNO  MAXCONN CYTIME MAXCYC

DISARAC     STND       25      30     12      2
CFRAANN     CFRA       25      1      0       1
```

7 Add the announcement index to table ANNMEMS. The following example shows tuples in table ANNMEMS.

Figure 7-3 MAP display example for table ANNMEMS

```
ANNMEM  HDWTYPE CARD        MEMINFO              CKT

DISARAC  1     DRAM DRA ( 0 DTM 1 2 1 DTM 1) 3$
CFRAANN  1     DRAM DRA           ( 0 DTM 1) 4$
```

8 Make the phrase data available by recording or assigning the phrase using the DRAMREC (DRAM recording) utility.

Using the DRAMREC utility

The DRAMREC utility allows the operating company to record, to play back, and to print a display of the announcements. DRAMREC also allows the assignment of both customized and standard announcements to a specific DRAM and block of data.

The commands for the command interpreter (CI) utility DRAMREC are used to inform the DMS-100 switch of the pre-recorded phrases in the PROM card and to record phrases in RAM and the EEPROM card. The utility can be accessed by typing DRAMREC at the CI level of the MAP display. Entering ABORT stops the prompting and prevents execution of the command. To exit the DRAMREC utility, enter QUIT.

For an abbreviated description of the commands available and their functions, enter Q DRAMREC. To obtain the parameters of a specific command, enter Q followed by the desired command name; for example, Q ASSIGN.

Note: All announcements must be recorded or assigned using the DRAMREC utility before datafilling information in table DRAMTRK or table DRMUSERS.

The following procedure lists the steps for using the DRAMREC utility.

Procedure 7-2 Procedure for using DRAMREC utility

At the MAP terminal

1 Access DRAMREC (DRAM recording utility) at the MAP terminal, by typing

>DRAMREC

and pressing the Enter key.

Example of a MAP response:

```
DRAM:
```

2 Connect an idled (IDL) headset trunk to the DRAM controller circuit by typing

>CONNECT <DRAM_controller_no> <headset_CLLI><member_no>

and pressing the Enter key.

Example input:

>CONNECT 0 HSET 0

Example of a MAP response:

```
CONNECTION MADE
```

3 Display the DRAM phrases and speech memory contents of a specific card of a specific DRAM by typing

>DISPLAY <DRAM_controller_no> < DRAM_card_no>

and pressing the Enter key.

Example input:

>DISPLAY 0 1

Example of a MAP response:

Figure 7-4 MAP display example

```
CARD 1 PROM    SPACE:  MAX  CONTIG 0 TOTAL 0

PHRASE_EXT     PHRASE_EXT     LENGTH
----------     ----------     ------
ENG1               48          1
ENG2               49          1
ENG3               50          1
ENG4               51          1
ENG5               52          1
ENG6               53          1
ENG7               54          1
ENG8               55          1
ENG9               56          1
ENG0               47          1
NCAENG             40         10
PSPDENG            41          9
VCAENG             42         13
EA3ENG             43         10
BLKDNENG           44          7
NOD1ENG            45         11
```

There will also be a list of phrases if the card displayed already has recordings stored in it. Refer to *Feature Description Reference Manual* to interpret the DRAM phrases listed.

4 Obtain a list of the phrases that are on the NT1X77 card or the NT1X79 card from your office records.

5 Record the first phrase by typing

>RECORD <name_of_phrase> <length_of_phrase_in_seconds>

and pressing the Enter key.

Example input:

>RECORD VCAENG 10

6 After three prompt tones, make the announcement by speaking clearly into the mouthpiece.

7 Play back the phrase by typing

>PLAYBACK <DRAM_controller_no> <name_of_phrase>

and pressing the Enter key.

Example input:

>PLAYBACK 0 VCAENG

Determine if the phrase is recorded correctly. If you need to record the phrase again, re-enter the RECORD command above. Listen for the three prompt tones and re-record the message. After finishing recording, use the PLAYBACK command to play back the message. Repeat these steps for all the phrases to be recorded on the NT1X77 card or the NT1X79 card.

8 Before quitting DRAMREC, print a display of the announcements. Use the display command, and route to a printer by typing

>DISPLAY <DRAM_controller_no> < DRAM_card_no>

and pressing the Enter key.

Example input:

>DISPLAY 0 1

Example of a MAP response:

Figure 7-5 MAP display example

```
CARD 1 PROM    SPACE:  MAX  CONTIG 0 TOTAL 0

PHRASE_EXT     PHRASE_EXT     LENGTH
----------     ----------     ------
ENG1               48          1
ENG2               49          1
ENG3               50          1
ENG4               51          1
ENG5               52          1
ENG6               53          1
ENG7               54          1
ENG8               55          1
ENG9               56          1
ENG0               47          1
NCAENG             40         10
PSPDENG            41          9
VCAENG             42         13
EA3ENG             43         10
BLKDNENG           44          7
NOD1ENG            45         11
```

Note: Refer to *Feature Description Reference Manual* to interpret the DRAM phrases listed above.

9 Quit DRAMREC by typing

>QUIT

and pressing the Enter key.

10 File the printouts for future use upon software upgrade procedures.

Note: For more information on recording or correcting announcements, refer to *Digital Recorded Announcement Machine DRAM and EDRAM Guide,* 297-1001-527.

Assigning phrases using DRAMREC utility

To assign all the phrases on each DRAM, the ASSIGN command can be used in the DRAMREC utility. These phrases make up the actual contents of each virtual phrase listed in table DRMUSERS.

The following procedure lists the steps for assigning phrases using the DRAMREC utility.

Procedure 7-3 Procedure for assigning phrases using the DRAMREC utility

At the MAP terminal

1 Assign the phrase by typing

```
>ASSIGN<DRAM_controller_no><name_of_phrase>
<length_of_phrase_in_seconds><block><phrase_no>
```

and pressing the Enter key.

Example input:

```
>ASSIGN  0   CFRASILENCE   1 1 0
>ASSIGN  0   CFRAEFWD1     4 1 4
>ASSIGN  0   CFRAEFWD2     9 1 5
>ASSIGN  0   CFRAEERR1     3 1 6
>ASSIGN  0   CFRAEERR2     3 1 7
>ASSIGN  0   CFRAEDNPIN3   5 1 8
>ASSIGN  0   CFRAEFWDN     6 1 9
>ASSIGN  0   DISAENG       4 1 10
>ASSIGN  0   CFRAEFAC      5 2 4
>ASSIGN  0   CFRAEDNPIN1   2 2 5
>ASSIGN  0   CFRAETENDIG   1 2 6
>ASSIGN  0   CFRAEDNPIN2   4 2 7
>ASSIGN  0   CFRAEONEDIG   1 2 8
>ASSIGN  0   CFRAETWODIG   1 2 9
>ASSIGN  0   CFRAETHREEDIG 1 2 10
>ASSIGN  0   CFRAEFOURDIG  1 2 11
>ASSIGN  0   CFRAEFIVEDIG  1 2 12
>ASSIGN  0   CFRAESIXDIG   1 2 13
>ASSIGN  0   CFRAESEVENDIG 1 2 14
>ASSIGN  0   CFRAEEIGHTDIG 1 2 15
>ASSIGN  0   CFRAENINEDIG  1 2 16
>ASSIGN  0   ONEPLUSE      1 2 17
>QUIT
```

Sample method of entering digital recorded announcements from a cassette tape

Procedure 7-4 Procedure for establishing a connection between the DRAM

machine and a HEADSET trunk

At the MAP terminal

1 Establish a connection between the DRAM machine and a HEADSET trunk by typing:

```
>CONNECT
```

and pressing the Enter key.

2 Access the DRAMREC utility by typing:

```
>DRAMREC
```

and pressing the Enter key.

3 Connect the tape recorder output to the transmit side of the HEADSET trunk, using a suitable adapter cable.

4 Set the switch on the LOGIC 20 phone set to HANDSET and press the HSET button on the panel. At this point, a Digital Recorded Announcement (DRA) RECORD session can be started.

5 Set the switch on the LOGIC 20 phone set to HEADSET and, when the prompt tones are heard, set the tape recorder to play.

6 Start the Digital Recorded Announcement (DRA) RECORD session by setting the switch on the LOGIC 20 phone set to HEADSET.

7 When the prompt tones are heard, set the tape recorder to play.

8 At the end of the recording interval, prompt tones are heard again and the DRA initiates a playback of the announcement.

Helpful hints on DRAM operation

The following section describes the DRAM recording quality, optional card parameters, phase structures, multitrack announcements, announcement spreading, the repeat command., and announcement spreading.

Recording quality

At some DMS-100 sites, the MAP terminals are located in areas with background noise, which may affect recording quality. One solution is to record in a quiet location. Recording may be on any trunk. If the site does not contain a MAP terminal but is within viewing range of a MAP terminal, the MAP personnel can signal when the recording will begin. The DRAM always pauses a couple of seconds before giving the prompt tone.

Optional card parameters

Some of the commands in the recording and back-up facilities have optional card parameters. Use of these parameters is not recommended, since leaving them out allows the system to make the most efficient use of storage space. The optional parameters are provided only for those users who wish to dedicate memory cards to a specific use, at the possible expense of storage space.

Phrase structures

Use the phrase structure of announcements to save recording space. A phrase that is common to two or more announcements need be stored only once. However, the announcements sharing the phrase should be recorded in the same voice.

The phrase structure allows the definition of announcements to be changed while the announcements are in use. For example, the phrase, "Have a happy and safe holiday" could be recorded in RAM. The phrase could be included in a standard announcement, during a holiday season, simply by adding it to the phrase list in table DRAMTRK. The remainder of the announcement does not have to be re-recorded. The seasonal greeting is just as easily removed when no longer desired.

Multitrack announcements

When constructing multitrack announcements, try to make the tracks as close to the same length as possible. This is important so that the subscriber does not hear a lengthy silence between tracks. If it is difficult to equalize the different language segments, place different languages on the same track. A bilingual announcement, for example, could have all the prime language phrases and the initial second language phrase on the first track. Then, all the remaining second language phrases could be on the second track.

Multilingual announcements do not have to be on different tracks. The entire announcement may reside on a single track, if it is a short duration announcement or if it is infrequently used.

Multitrack organization can be used whenever the announcement is long. Consider a 30-second announcement with text and phrases arranged so that it can be divided into two 15-second groups of phrases. The first group can be place on track one and the second on track two. Since the first track is always heard first, the announcement phrases are always played in the correct sequence. The maximum waiting time for the announcement is 15 seconds. The traffic capacity of the announcement is the same as two separate announcement trunks each of one track.

If the announcements are implemented as two one-track members, the maximum subscriber waiting time is anywhere from 15 to 30 seconds. The two-track method must have both tracks functioning; however, the two-track method can function with only one member but at reduced capacity. Therefore, long announcements provide better service when implemented as multitracks.

Spreading announcements

The reliability of any announcement can be increased by placing members on different DRAM units. Use the DISPLAY command to ensure that the component phrases are stored on both DRAMS. Spreading announcements

over several DRAMS makes critical announcements less vulnerable to individual equipment failures. Announcements can be spread over both electromechanical and DRAM by placing trunks on both machines.

Using the REPEAT command

If using the REPEAT command from directory SYSDIR to diagnose the DRAM, use it with the SLEEP command. This allows the DRAM trunks to release before the next diagnostic starts. If sufficient time is not allowed for the trunks to release, the DRAM diagnostic will not complete, and a log report is issued.

Software upgrade procedures

The dump and restore, overnight process (ONP), and hybrid or retrofit to SuperNode procedures involve verifying DRAMS information and recorded announcements. These procedures are executed at the MAP terminal in the following four steps:

Procedure 7-5 Procedure for software upgrade

At the MAP terminal

1 Ensure the NT1X79AA DRAM card is datafilled in table DRAMS.

2 Enter the DRAMREC command. Use the DISPLAY command to show the card on which the customized announcements reside.

3 If customized announcements are shown, verify them by using the PLAYBACK command.

4 If announcements are not shown, do the following:

1. Enter the ASSIGN command using the data saved from the display list where the announcement was first recorded.
2. Connect a headset (HSET) and use the PLAYBACK command to play back the announcements.
3. If the announcements are still not present, re-record them.

For additional information regarding software upgrades, refer to the following documents:

- *Basic Administration Procedures*, 297-1001-300
- *One Night Process and Hybrid Software Delivery Procedures*, 297-8991-303

Announcement datafill sequence

The following table lists the tables that must be datafilled for announcements. These tables are listed in the order in which they should be datafilled.

Table 7-1 Datafill tables required for datafilling announcements

Table	Purpose of table
DRAMS	Digital Recorded Announcement Machines. This table contains the physical location of the announcement cards.
CLLI	Common Language Location Identifier. This table is used to uniquely identify the far end of each announcement, tone, trunk group, test trunk, national milliwatt test lines, and service circuit.
ANNS	Announcements. This table lists announcement types in the DRAM.
ANNMEMS	Announcement Members. This list lists the trunk assignments for announcement members.
One of the following tables:	
DRMUSERS	DRAM Users. This table associates the phrases for each announcement to an announcement member. Most of the customized type announcements used for Subscriber Services features (such as CFRA, SPP, SACB, SLEANN, and CLASS) require datafill in table DRMUSERS. ***Note:*** Phrases must be assigned using the DRAMREC utility before datafilling in table DRMUSERS.
DRAMTRK	DRAM Tracks. This table lists the names associated with the phrases that are assigned to each track of a standard announcement (that is, those announcements datafilled as STND in field ANTYPE in table ANNS). ***Note:*** Phrases must be assigned using the DRAMREC utility before datafilling in table DRMTRK.
Note: For further information on the preceding tables, refer to the *Translations Guide*.	
Note: Table RESOFC is an additional table datafilled with the announcement CLLI for certain Subscriber Services CLASS features. Refer to the individual feature descriptions in this document to determine which features require additional table datafill in table RESOFC.	

CAUTION
Examples are examples only and are not meant to be copied.
Any table datafill examples contained in this document are examples only. Do not enter them verbatim into your switch, because they may not be compatible with the translations in your office.

Datafill procedures and examples

The following datafill procedures and datafill examples were taken from the examples in the CFRA feature description in this document. To find datafill information for a specific Subscriber Services feature, refer to the *Translations Guide* for the location of features requiring announcement datafill.

Datafilling table DRAMS

Table DRAMS (Digital Recorded Announcement Machines) contains the product engineering codes (PEC) codes of the CFRA prerecorded message cards in the DRAM.

An explanation of the fields to be datafilled in table DRAMS and an example follow. Only those fields that directly apply to the CFRA feature are shown.

Table 7-2 Datafilling table DRAMS (Sheet 1 of 2)

Field	Subfield	Entry	Explanation and action
DRAMCARD		see subfields	Digital recorded announcement machine card. This field consists of the 1-line entry of subfields DRAM and CARD.
	DRAM	0 to 63	Digital recorded announcement machine. This subfield specifies the DRAM. Enter the DRAM number (a value from 0 to 63).
	CARD	1, 3, 5, or 7	Card. This subfield specifies the CFRA prerecorded message card. Enter the CFRA number (a value of 1, 3, 5, or 7). The CFRA number corresponds to a double density card in odd slots 1, 3, 5, or 7. The controller card is in slot 0.
TMTYPE		MTM or STM	Trunk module type. This field specifies the TM type on which the prerecorded message card is located. Enter MTM if the TM is a maintenance trunk module, or enter STM if the TM is a service trunk module.

Table 7-2 Datafilling table DRAMS (Sheet 2 of 2)

Field	Subfield	Entry	Explanation and action
TMNO			Trunk module number. This field specifies the TM number assigned to the MTM or STM. Enter a value from 0 to 2047.
TMCKT		2, 6, 10, or 14	Trunk module circuit. This field specifies the trunk module circuit number to which the trunk card is assigned. Enter the trunk module circuit number (2, 6, 10, or 14). Trunk module circuit numbers 2, 6, 10, and 14 are double density cards.
CARDCODE		NT1X76AM or NT1X76BM	Card code. This field specifies the PEC (NT1X76AM or NT1X76BM) for the CFRA prerecorded message card. Cards NT1X76AM and NT1X76BM are the English and French versions of the CFRA announcements, respectively. Enter the PEC.
CARDINFO			Card information. This field consists of the subfields CARDTYPE and BLKLIST.
	CARDTYPE	PROM	Card type. This subfield specifies the card type (PROM, RAM, or EEPROM). Enter PROM to indicate that the CFRA announcement card contains prerecorded messages.
	BLKLIST		Block list. This subfield consists of the refinement BLOCKNO.
	BLOCKNO		Block number. Enter the speech block numbers (0 and 1, 2 and 3, 4 and 5, or 6 and 7) that are assigned on the card. (List 2, a value from 0 to 7, or list up to 16, a value from 0 to 31.) Single-density cards have one speech block, and double-density cards have two speech blocks. Block numbers must not be repeated in the same DRAM, and a maximum of two speech blocks are allowed in the range of 0 to 7.

Datafill example for table DRAMS

The following example shows sample datafill for the CFRA feature in table DRAMS. In the example, CFRA announcement cards (1 and 2) are located in DRAM 0, which corresponds to TM type STM. Card 1 is a CFRA Announcement - English (NT1X76AM) PROM card containing prerecorded CFRA announcements in English. Card 2 consists of the French versions of the CFRA announcements found on card 1.

Datafill example for table DRAMS

The following example shows sample datafill for table DRAMS.

Figure 7-6 MAP display example for table DRAMS

```
DRAMCARD     TMTYPE   TMNO     TMCKT    CARDCODE     CARDINFO

0  1         STM      0        2        1X76AM       PROM 0 1
0  3         STM      0        4        1X76BM       PROM 2 3
```

Datafilling table CLLI

Table CLLI (Common Language Location Identifier) contains the CLLI codes that are used to identify the far end of each announcement used by CFRA. An explanation of the fields to be datafilled in table CLLI and an example follow. Only those fields that directly apply to the CFRA feature are shown.

Note: Memory is allocated by field SIZE in table DATASIZE for the entry with field DATSKEY equal to CLLI. The maximum number of CLLI codes is 8192.

Table 7-3 Datafilling table CLLI (Sheet 1 of 2)

Field	Subfield	Entry	Explanation and action
CLLI		see subfields	Common language location identifier. This field specifies the far end of each announcement, tone, trunk, group, test trunk, national milliwatt test line, and service circuit. Enter a 1- to 16-character unique identifier. This field consists of the subfields PLACE, PROV, BLDG, TRAFUNIT, and SUFX. These subfields are described below.
	PLACE	4-character code	Place. This subfield specifies the 4-character code used to identify the name of the city or town at the far end of the trunk group. Enter the 4-character code.
	PROV	2-character code	Province. This subfield specifies the 2-character code that identifies the province or state at the far end of the trunk group. Enter the 2-character code.

Table 7-3 Datafilling table CLLI (Sheet 2 of 2)

Field	Subfield	Entry	Explanation and action
	BLDG	2-character code	Building. This subfield specifies the 2-character code that identifies the building number at the far end of the trunk group. Enter the 2-character code.
	TRAFUNIT	3-character code	Traffic unit. This subfield specifies the 3-character code that identifies the destination of the traffic unit at the far end of the trunk group. Enter the 3-character code.
	SUFX	1-character code	Suffix. This subfield specifies the 1-character code that identifies trunk groups that terminate at the same CLLI location Enter the 1-character code.
ADNUM		numeric	Administrative trunk group number. This field specifies the unique administrative trunk group number. The number can range from a value of 0 to one less than the size of table CLLI, as shown in table DATASIZE. Enter the administrative trunk group number.
TRKGRSIZ		0 to 2047	Trunk group size. This field specifies the maximum number of trunk members to be assigned to the trunk group. Enter a value from 0 to 2047.
ADMININF		see subfields	Administration information. This field specifies any information that is of use to administrators but not to the system (up to 32 characters). The recommended subfields, TRAFCLS, OFFCLS, and TRKGRTYP, are described below.
	TRAFCLS	alphanumeric	Traffic class. This subfield specifies the trunk group traffic class. This information is optional and is used for administrative purposes only.
	OFFCLS	alphanumeric	Office class. This subfield specifies the office class. This information is optional and is used for administrative purposes only.
	TRKGRTYP	alphanumeric	Trunk group. This subfield specifies the trunk group type. This information is optional and is used for administrative purposes only.

Datafill example for table CLLI

The following example shows sample datafill for table CLLI. In the example, the first entry is for the standard direct inward system access (DISA) announcement (DISARAC). The DISARAC announcement prompts for the remote code. The second entry is for the CFRA announcements.

Figure 7-7 MAP display example for table CLLI

```
CLLI        ADNUM       TRKGRSIZ            ADMININF

DISARAC     353             5          RAC_ANNOUNCEMENT
CFRAANN     354             9        CFRA_ANNOUNCEMENTS
```

Datafilling table ANNS

Table ANNS (Announcements) contains analog and digital data for each announcement assigned in the switching unit.

An explanation of the fields to be datafilled in table ANNS and an example follow. Only those fields that directly apply to the CFRA feature are shown.

Table 7-4 Datafilling table ANNS (Sheet 1 of 2)

Field	Subfield	Entry	Explanation and action
CLLI		alphanumeric	Announcement CLLI key. This field specifies the announcement in table CLLI. Enter the announcement CLLI.
ANTYPE		CFRA	Announcement type. This field specifies the announcement type. Enter CFRA.
TRAFSNO		0 to 127	Traffic separator number. This field specifies whether or not the switching unit has the optional traffic separation software. If traffic separation is required, enter the outgoing traffic separation number assigned to the announcement. Enter a value from 0 to 127. If traffic separation is not required, enter 0. If the switching unit has software package NTX085AA, Traffic Separation Peg Count, the range of DTSN is dependent on the office parameter TFAN_OUT_MAX_NUMBER in table OFCENG.

Table 7-4 Datafilling table ANNS (Sheet 2 of 2)

Field	Subfield	Entry	Explanation and action
MAXCONN		1 to 255	Maximum connections. This field specifies the maximum number of simultaneous connections permitted for the announcement. Enter a value from 1 to 255.
CYTIME		0 to 18	Cycle time. This field specifies the time, in seconds, for one announcement cycle on one channel. Enter a value from 1 to 18, or enter 0 to indicate that this field is ignored.
MAXCYC		1	Maximum cycles. This field specifies the maximum number of times the complete announcement is heard before the call is advanced to the next route in the route list. Enter 1.

Datafill example for table ANNS

The following example shows sample datafill for the CFRA feature in table ANNS. In the first tuple, the announcement for the DISA remote access code (DISARAC) prompt is defined as a standard (STND) announcement. In the second tuple, the CFRA announcements are defined in the table as announcement type CFRA.

Figure 7-8 MAP display example for table ANNS

```
CLLI     ANTYPE   TRAFSNO MAXCONN CYTIME      MAXCYC
_____________________________________________________

DISARAC  STND     25      30      12          2
CFRAANN  CFRA     25      1        0          1
```

Datafilling table ANNMEMS

Table ANNMEMS (Announcement Members) contains the assignments for each member assigned to the announcement CLLI in table ANNS. Table ANNMEMS must be datafilled to define the number of channels to be used for CFRA announcements. The number of channels defined should equal the maximum number of concurrent CFRA users specified by office parameter MAX_PROGRAMMERS in table OFCENG. This number ensures that every CFRA call can be allocated a channel in the DRAM.

An explanation of the fields to be datafilled in table ANNMEMS and an example follow. Only those fields that directly apply to the CFRA feature are shown.

Table 7-5 Datafilling table ANNMEMS (Sheet 1 of 2)

Field	Subfield	Entry	Explanation and action
MAXCYC		1	Maximum cycles. This field specifies the maximum number of times the complete announcement is heard before the call is advanced to the next route in the route list. Enter 1.
ANNMEM		see subfields	Announcement member key. This field consists of the subfields ANN and MEMBER. These subfields are described below.
	ANN	alphanumeric	Announcement. This subfield specifies the code that represents the announcement group in table CLLI. If the trunk circuit is the first in the trunk list for the announcement member, enter the ANN code. If the trunk circuit is other than the first, leave this field blank.
	MEMBER	alphanumeric	Member. This subfield specifies the code that represents the announcement group in table CLLI. If the trunk circuit is the first in the trunk list for the announcement member, enter the MEMBER code. If the trunk circuit is other than the first, leave this field blank.
HDWTYPE		alphanumeric	Hardware type. This field specifies the hardware type. Enter DRAM to indicate that the recorded announcement is digital.
CARD		alphanumeric	Card code. This field specifies the card code. Enter DRA to indicate that the trunk member is digital.
MEMINFO		see subfields	Member information. This field consists of the subfields TRACK, TMTYPE, TMNO, and TMCKT. These subfields are described below.
	TRACK	0 to 31	Track number. This subfield specifies the track number assigned to the trunk card. Enter a value from 0 to 31.
	PMTYPE	TM8, MTM, DTM, or STM	Trunk module type. This subfield specifies the type of trunk module to which the trunk circuit is assigned. Enter TM8, MTM, DTM, or STM. If the announcement is digital, enter MTM or STM.

Table 7-5 Datafilling table ANNMEMS (Sheet 2 of 2)

Field	Subfield	Entry	Explanation and action
	TMNO	see explanation	Trunk module number. This subfield specifies the trunk module number assigned to the trunk module associated with the trunk circuit. If the TM type is MTM, the value is from 0 to 255. If the TM type is TM8, the value is from 0 to 2047. For offices with DRAMs, the trunk circuit consists of an assignment to one of the channels on the MTM in which the DRAM is located. A trunk circuit cannot be assigned to TM circuit number 0.
	TMCKT	1 to 29	Trunk module circuit number. This field specifies the trunk module circuit number assigned to the trunk circuit. Enter a value from 1 to 29. A trunk circuit cannot be assigned to trunk module circuit number 0.

Datafill example for table ANNMEMS

The following example shows sample datafill for the CFRA feature in table ANNMEMS. In the example, the DISARAC announcement is a standard announcement with two tracks (for example, English and French). The subfields within field TRCKLIST are repeated, in the case of the DISARAC announcement, to define the two tracks. The CFRA announcement (CFRAANN) is a unilingual announcement with one track; therefore, the subfields within field TRCKLIST appear once to define the single track.

Figure 7-9 MAP display example for table ANNMEMS

```
ANNMEM HDWTYPE CARD    MEMINFO
-------------------------------------------------------
DISARAC 1   DRAM    DRA ( 0 MTM 1 2 1 MTM  1 3)$
CFRAANN 1   DRAM    DRA         ( 0   MTM  1 4)$
```

Datafilling table DRMUSERS

Table DRMUSERS (Digital Recorded Announcement Machine Users) contains all the customized announcements required by the operating company. It also includes facilities for the operating company to specify the prime language for announcements for various features. This table must be datafilled to define the CFRA announcements that are required in the DRAM.

In addition, table DRMUSERS is used to specify the primary and secondary languages for the announcements.

Note: Defining and assigning primary and secondary language is accomplished through line option SL in SERVORD. For more information, refer to the *SERVORD Reference Manual*.

An explanation of the fields to be datafilled in table DRMUSERS and an example follow. Only those fields that directly apply to the CFRA feature are shown.

Table 7-6 Datafilling table DRMUSERS

Field	Subfield	Entry	Explanation and action
USERANN		see subfields	This field consists of the subfields CLLI and ANNUM. These subfields are described below.
	CLLI		Common language location identifier. This subfield specifies name associated with the CFRA announcements specified in table CLLI.
	ANNNUM	1 to 255	Announcement number. This subfield specifies the number assigned to the CFRA announcement. There are five CFRA announcements made up of phrases that are recorded on the CFRA PROM cards. Enter a value from 1 to 255.
PHSLIST		see subfield	Phrase list. This field consists of the subfield PHRASES. This subfield is described below.
	PHRASES	alphanumeric	Phrases. This subfield specifies a list of up to 32 phrase names to be associated with the announcement. The phrase names specified here correspond to the CFRA phrases that have been recorded on the CFRA PROM cards. Enter the phrase names.

Datafill example for table DRMUSERS

The following example shows sample datafill for the CFRA feature in table DRMUSERS. The phrase names used in this example are the phrase names of the bilingual announcements that are provided on DRAM PROM cards for the CFRA feature. In this example LANGUAGE1 is English, and LANGUAGE2 is French. English phrase names have the prefix CFRAE, and French phrases have the prefix CFRAF.

Figure 7-10 MAP display example for table DRMUSERS

```
      USERANN   PHSLIST
      ------------------------------------------------------------------

CFRAANN 1 (LANGUAGE1)    (CFRAEDNPIN1)  (CFRAEDIGITS)  (CFRAEDNPIN2)
          (LANGUAGE2)    (CFRAFDNPIN1)  (CFRAFDIGITS)  (CFRAFDPIN2)$

CFRAANN 2 (LANGUAGE1)    (CRFAEFAC)     (LANGUAGE2)    (CFRAFFAC)$

CFRAANN 3 (LANGUAGE1)    (CFRAEFWDN)    (LANGUAGE2)    (CFRAFFWDN)$

CFRAANN 4 (LANGUAGE1)    (CFRAEFDW1)    (ENGVARDNF)    (CFRAEFWD2)
          (LANGUAGE2)    (CFRAFFDW1)    (FREVARDNF)    (CFRAFFWD2)$

CFRAANN 5 (LANGUAGE1)    (CFRAEERR1)    (ENGVARDNF)    (CFRAERRD2)
          (LANGUAGE2)    (CFRAFERR1)    (FREVARDNF)    (CFRAFERR2)$
```

Datafilling table DRAMTRK

Table DRAMTRK (DRAM Tracks) lists the names associated with the phrases that are assigned to each track of a standard announcement.

An explanation of the fields to be datafilled in table DRAMTRK and an example follow. Only those fields that directly apply to the CFRA feature are shown.

Table 7-7 Datafilling table DRAMTRK

Field	Subfield	Entry	Explanation and action
ANNTRACK		see subfields	Announcement track. This field consists of the 1-line entry of the subfields ANN and TRACK. These subfields are described below.
	ANN	alphanumeric	Announcement. This subfield specifies the name that represents the announcement group of the remote DISA access code in table CLLI (alphanumeric or blank). Enter the name.
	TRACK		Track. This subfield specifies the track number assigned to the announcement that matches the track number in table ANNMEMS. Enter a value from 0 to 31 (or leave blank).
PHSLIST		see subfield	Phrase list. This field consists of the subfield PHRASES. This subfield is described below.
	PHRASE	alphanumeric	Phrase. This subfield specifies the list of phrase name. Each phrase name must be separated from the others by a blank character. Enter the phrase names.

Datafill example for table DRAMTRK

The following example shows sample datafill for the CFRA feature in table DRAMTRK. In this example it is assumed that the phrases specified in the phrase list have been recorded on DRA cards. The DISAENG phrase is the DISA request announcement in English, and the DISAFRE phrase is the same announcement in French.

Figure 7-11 MAP display example for table DRAMTRK

```
ANNTRACK                    PHSLIST
-------------------------------------

DISARAC 0                 ( DISAENG )$
DISARAC 1                 ( DISAFRE )$
```

8 Appendix B: Recommended announcement datafill for screening list editing

Datafilling tables DRAMS, CLLI, ANNS, ANNMEMS, and DRMUSERS

To datafill screening list editing (SLE) announcements, tuples must be added to five tables. The following example of datafill is for a one-language office when field SLE_MAX_PROGRAMMERS in table OFCENG is set to 2, and the first four of eight SLE programmable read-only memories (PROM) are on digital recorded announcement machine (DRAM) 0, and the second four of eight SLE PROMS are on DRAM 1.

Note 1: Before datafilling announcements for SLE, read “Datafilling announcements" in this document for Subscriber Services general announcement information.

Note 2: The value in the parameter SLE_MAX_PROGRAMMERS must equal the trunk module circuit number in table ANNMEMS.

Table DRAMS

Table DRAMS stores the type of announcement memory cards for each DRAM. Note that SLE requires two full DRAMs for each language to accommodate the eight double-density PROM cards associated with each language.

Figure 8-1 MAP display example for table DRAMS

```
DRAMCARD TMTYPE TMNO TMCKT CARDCODE   CARDINFO
-------------------------------------------------
0 1      STM     0     2   1X75BA    CTRL DRAM0
0 3      STM     0     6   1X76AP    PROM 0 1
0 5      STM     0    10   1X76AQ    PROM 2 3
0 7      STM     0    14   1X76AR    PROM 4 5
0 1      STM     0     2   1X76AS    PROM 6 7
1 3      MTM     3     6   1X75BA    CTRL DRAM1
1 5      MTM     3    10   1X76AT    PROM 0 1
1 7      MTM     3    14   1X76AU    PROM 2 3
1 1      MTM     3     2   1X76AV    PROM 4 5
1 3      MTM     3     6   1X76AW    PROM 6 7
2 5      MTM     8    10   1X75BA    CTRL DRAM2
2 7      MTM     8    14   1X76GA    PROM 0 1
2 1      MTM     8     2   1X76GB    PROM 2 3
2 3      MTM     8     6   1X76GC    PROM 4 5
2 5      MTM     8    10   1X76GE    PROM 6 7
```

Table CLLI

Table CLLI requires two new common language location identifiers (CLLI) to be added for each language.

Figure 8-2 MAP display example for table CLLI

```
CLLI    ADNUM   TRKGRSIZ          ADMININF
-------------------------------------------
SLEENG1 997       2             SLE_ENGLISH_ANNCS
SLEENG2 998       2             SLE_ENGLISH_ANNCS
SLEENG3 999       2             SLE_ENGLISH_ANNCS
```

Table ANNS

Table ANNS associates the new CLLIs with the appropriate announcement type.

Figure 8-3 MAP display example for table ANNS

```
CLLI     ANNTYPE TRAFSNO MAXCONN CYTIME MAXCYC
-------------------------------------------------
SLEENG1  SLEENG     25       1      1       1
SLEENG2  SLEENG     25       1      1       1
SLEENG3  SLEENG     25       1      1       1
```

Table ANNMEMS

Table ANNMEMS associates a physical announcement circuit with each announcement member.

Figure 8-4 MAP display example for table ANNMEMS

```
ANNMEM       HDWTYPE     CARD      MEMINFO
-------------------------------------------
SLEENG1 0    DRAM        DRA      0 STM 0 1 $
SLEENG1 1    DRAM        DRA      0 STM 0 2 $
SLEENG2 2    DRAM        DRA      0 MTM 3 1 $
SLEENG2 3    DRAM        DRA      0 MTM 3 2 $
SLEENG3 4    DRAM        DRA      0 MTM 8 1 $
SLEENG3 5    DRAM        DRA      0 MTM 8 2 $
```

Table DRMUSERS

Table DRMUSERS associates the phrases for each announcement to an announcement member. It is imperative that the SLEENG1 announcements correspond to the DRAM with PROM cards 1X76AP, 1X76AQ, 1X76AR, and 1X76AS. SLEENG2 announcements must correspond to the DRAM with PROM cards 1X76AT, 1X76AU, 1X76AV, and 1X76AW. SLEENG3 announcements must correspond to the DRAM with PROM cards 1X76GA, 1X76GB, 1X76GC, and 1X76GE.

There are four different pause times to choose from: PAUSE1, PAUSE2, PAUSE3, and PAUSE4, which correspond to 1, 2, 3, and 4 s of silence, respectively. The datafill below can have any of the pause times datafilled.

The playback of announcements may be modified by replacing the 1X76AW PROM card (virtual card 01 only) with other predefined phrases on PROM cards 1X76GE, 1X76GF, 1X76GG, 1X76GH, 1X76GJ, 1X76GK, or 1X76GL. A list of these available physical phrases can be found at the end of the following datafill example.

Figure 8-5 MAP display example for table DRMUSERS

```
USERANN     PHSLIST
-------------------------------------------------------------------

SLEENG2 1   (STATINFO)
SLEENG2 2   (STATINFO) (PAUSE4) (CONTEXIT) (PROMPT)
SLEENG2 3   (LISTINFO)
SLEENG2 4   (FIRSTDN) (DNEND)
SLEENG2 5   (NEXTDN) (DNEND)
SLEENG2 6   (PREVDN) (DNEND)
SLEENG2 7   (CURRDN) (DNEND)
SLEENG2 8   (PUBDNWARN) (DNEND)
SLEENG1 9   (PRIVDNWARN)
SLEENG1 10  (ALLWARN)
SLEENG1 11  (PRIVWARN)
SLEENG2 12  (REMDN)
SLEENG2 13  (STATINFO) (LISTINFO) (INITSLE) (PAUSE3)
SLEENG1 14  (INITSERV) (PAUSE2)
SLEENG1 15  (LISTEDIT) (PROMPT)
SLEENG1 16  (LISTADD) (PROMPT)
SLEENG1 17  (LISTDEL) (PROMPT)
SLEENG2 18  (LISTREV) (PAUSE1)
SLEENG1 19  (PROGRDN) (PROMPT)
SLEENG1 20  (FORCEADD) (PAUSE1) (ADDENTRY) (PROMPT)
SLEENG1 21  (FORCEADD) (PAUSE1) (ADDENTRY) (PROMPT)
SLEENG2 22  (CONFIRM) (PROMPT)
SLEENG1 23  (CANCELLED) (PAUSE2) (RESTART) (PROMPT)
SLEENG1 24  (ERASED) (PAUSE4) (RESTART) (PROMPT)
SLEENG2 25  (ADDED) (DNEND) (PAUSE4) (CONTEXIT) (PROMPT)
SLEENG1 26  (ADDPRIV) (PAUSE4) (CONTEXIT) (PROMPT)
SLEENG2 27  (DELETED) (DNEND) (PAUSE4) (CONTEXIT) (PROMPT)
SLEENG1 28  (DELPRIV) (PAUSE4) (CONTEXIT) (PROMPT)
SLEENG1 29  (ALLDEL) (PAUSE4) (CONTEXIT) (PROMPT)
SLEENG1 30  (PRIVDEL) (PAUSE4) (CONTEXIT) (PROMPT)
SLEENG2 31  (ENDOFLIST) (PAUSE1)

                        –continued–
```

Figure 8-6 MAP display example for table DRMUSERS (continued)

```
USERANN      PHSLIST
SLEENG2 31  (ENDOFLIST) (PAUSE1)
SLEENG1 32  (PAUSE0)
SLEENG1 33  (INVCMD) (PAUSE2)
SLEENG1 34  (NOLASTDN) (PAUSE4) (RESTART) (PROMPT)
SLEENG1 35  (INVDIGS) (PAUSE4) (RESTART) (PROMPT)
SLEENG1 36  (ENTERDN) (PAUSE4) (RESTART) (PROMPT)
SLEENG2 37  (PRESENT) (DNEND) (PAUSE4) (CONTEXIT) (PROMPT)
SLEENG1 38  (PRIVPRES) (PAUSE4) (CONTEXIT) (PROMPT)
SLEENG1 39  (ABSENT) (PAUSE4) (RESTARTX) (PROMPT)
SLEENG1 40  (ILLEGAL) (PAUSE4) (RESTART) (PROMPT)
SLEENG1 41  (FULL) (PAUSE4) (CONTINUE) (PROMPT)
SLEENG1 42  (EMPTY) (PAUSE4) (OTHEROPT) (PROMPT)
SLEENG1 43  (NOPRIV) (PAUSE2) (CONTEXIT) (PROMPT)
SLEENG2 44  (LISTINFO) (PAUSE4) (OTHEROPT) (PROMPT)
SLEENG2 45  (NOPREVDN) (PAUSE2)
SLEENG2 46  (DIALED) (DNMID) (NOTPERM) (PAUSE2)
SLEENG2 47  (MANUALS)
SLEENG1 48  (SERVINTR)
SLEENG1 49  (VALFAIL) (PAUSE4) (CONTINUE) (PROMPT)
SLEENG1 50  (LISTEDIT) (PROMPT)
SLEENG1 51  (LISTADD) (PROMPT)
SLEENG1 52  (LISTDEL) (PROMPT)
SLEENG2 53  (LISTREV) (PROMPT)
SLEENG1 54  (PROGRDN) (PROMPT)
SLEENG1 55  (FORCEADD) (PAUSE2) (ADDENTRY) (PROMPT)
SLEENG1 56  (LISTEDIT) (PROMPT)
SLEENG1 57  (LISTADD) (PROMPT)
SLEENG1 58  (LISTDEL) (PROMPT)
SLEENG2 59  (LISTREV)
SLEENG1 60  (PROGRDN) (PROMPT)
SLEENG1 61  (FORCEADD) (PAUSE2) (ADDENTRY) (PROMPT)
SLEENG1 62  (LISTINFO)
SLEENG3 63  (STATINFO) (LISTINFO) (INTSLE) (PAUSE3)
SLEENG3 64  (LISTINFO) (PAUSE4) (OTHEROPT) (PROMPT)
```

Note: All SLE phrases are virtual phrases.

SLE announcement phrases in table DRMUSERS

The following table lists the announcement phrases that correspond to each SLE announcement number. The table includes announcements for both Digitone (DTMF) subscribers and rotary phone (DP) subscribers.

Table 8-1 DRMUSERS announcements (Sheet 1 of 12)

SLE announcement number	Announcement
1	Your <SCRJ, DRCW, SCA> service is now <on, off>. We're sorry. Please hang up now, consult your written instructions, and try again later. Your SCF service is now on. Your calls will be forwarded to <DN>. We're sorry. Please hang up now, consult your written instructions, and try again later. Your SCF service is now off. We're sorry. Please hang up now, consult your written instructions, and try again later.
2	Your <SCF, SCRJ, DRCW, SCA> service is now off. (4-second pause) Please continue, dial 0 for instructions, or hang up. (prompt tone) Your <SCF, SCRJ, DRCW, SCA> service is now on. (4-second pause) Please continue, dial 0 for instructions, or hang up. (prompt tone)
3	There are two entries on your list, including one private entry. After hearing an entry, you may dial 0, 7 to delete it and continue reviewing your list. (pause) There is one entry on your list. After hearing an entry, you may dial 0, 7 to delete it and continue reviewing your list. (pause)
4	If a 7- or 10-digit DN, the first entry on your list is <DN>. If an intercom-dialing code, the first entry on your list is extension <EXT>.
5	If a 7- or 10-digit DN, next, <DN>. If an intercom-dialing code, next, extension <EXT>.
6	If a 7- or 10 digit DN, repeating, <DN>. If an intercom-dialing code, repeating, extension <DN>.
7	If a 7- or 10-digit DN, repeating, <DN>. If an intercom-dialing code, repeating, extension <DN>.
8	The number you have removed is <DN>. If this number is correct, dial 1. If this number is not correct, dial 0.
9	The number you have removed is a private entry. If this number is correct, dial 1. If this number is not correct, dial 0.
10	There are no more entries on your list. If this number is correct, dial 1. If this number is not correct, dial 0.

Table 8-1 DRMUSERS announcements (Sheet 2 of 12)

SLE announcement number	Announcement
11	There are no more private entries on your list. If this number is correct, dial 1. If this number is not correct, dial 0.
12	Your calls will be forwarded to <remote DN>. If this number is correct, dial 1. If this number is not correct, dial 0. Please dial now. (prompt tone) Your SCF service is now on. Your calls will be forwarded to <DN>. We're sorry. Please hang up now, consult your written instructions, and try again later. Your SCF service is now off. We're sorry. Please hang up now, consult your written instructions, and try again later.
13	Your <SCRJ, SCF, DRCW> service is now <on, off>. • There are two entries on your list, including one private entry. • There is one entry on your list. • There is one private entry on your list. • There are no entries on your list.
14	(DTMF subscribers) To reject the last calling party, press the number sign key, dial 0, 1, and then press the number sign key again. (2 s pause) (DP subscribers) To reject the last calling party, dial 1, 2 and then dial 0, 1. (2 s pause)
15	(DTMF subscribers) • To turn this service <on, off>, dial 3. (0.33-s pause) • To add an entry, press the number sign key. (0.33-s pause) • To remove on or more entries, press the star key. (0.33-s pause) • To hear the entries on your list, dial 1. (0.33-s pause) • To hear these instructions repeated, dial 0. (0.33-s pause) • Please dial now. (prompt tone) (DP subscribers) • To turn this service <on, off>, dial 3. (0.33-s pause) • To add an entry, dial 1, 2. (0.33-s pause) • To remove one or more entries, dial 1, 1. (0.33-s pause) • To hear the entries on your list, dial 1. (0.33-s pause) • To hear these instructions repeated, dial 0. (0.33-s pause) • Please dial now. (prompt tone)

Table 8-1 DRMUSERS announcements (Sheet 3 of 12)

SLE announcement number	Announcement
16	(DTMF subscribers) • Dial the number to be added, then press the number sign key again. (0.33-s pause) • To add the last calling party, dial 0, 1. (0.33-s pause) • Please dial now. (prompt tone) (DP subscribers) • Dial the number to be added. (0.33-s pause) • To add the last calling party, dial 0, 1. (0.33-s pause) • Please dial now. (prompt tone)
17	(DTMF subscribers) • Dial the number to be removed, then press the star key again. (0.33-s pause) • To remove all entries, dial 0, 8, then press the star key again. (0.33-s pause) • To remove just the private entries, dial 0, 9, then press the star key again. (0.33-s pause) • To hear these instructions repeated, dial 0. (0.33-s pause) • Please dial now. (prompt tone) (DP subscribers) • Dial the number to be removed. (0.33-s pause) • To remove all entries, dial 0, 8. (0.33-s pause) • To remove just the private entries, dial 0, 9. (0.33-s pause) • To hear these instructions repeated, dial 0. (0.33-s pause) • Please dial now. (prompt tone) There are two entries on your list, including one private entry. After hearing an entry, you may dial 0, 7 to delete it and continue reviewing your list. (pause) There is one entry on your list. After hearing an entry, you may dial 0, 7 to delete it and continue reviewing your list. (pause)
18	There are two entries on your list, including one private entry. After hearing an entry, you may dial 0, 7 to delete it and continue reviewing your list. (pause) There is one entry on your list. After hearing an entry, you may dial 0, 7 to delete it and continue reviewing your list. (pause)

Table 8-1 DRMUSERS announcements (Sheet 4 of 12)

SLE announcement number	Announcement
19	(DTMF subscribers) • Please dial the number to which you want your calls forwarded, then press the number sign key. • Please dial now. (prompt tone) (DP subscribers) • Please dial the number to which you want your calls forwarded. • Please dial now. (prompt tone)
20	Your calls will be forwarded to <remote DN>. If this number is correct, dial 1. If this number is not correct, dial 0. Please dial now (prompt tone) (DTMF subscribers) To turn on this service, you must add an entry to your list. (1-s pause) To add an entry, please press the number sign key. (prompt tone) (DP subscribers) To turn on this service, you must add an entry to your list. (1-s pause) To add an entry, dial 1, 2. (prompt tone)
21	Your calls will be forwarded to <remote DN>. If this number is correct, dial 1. If this number is not correct, dial 0. Please dial now. (prompt tone) (DTMF subscribers) To turn on this service, you must add an entry to your list. (1-s pause) To add an entry, please press the number sign key. (prompt tone) (DP subscribers) To turn on this service, you must add an entry to your list. (1-s pause) To add an entry, dial 1, 2. (prompt tone)
22	Your calls will be forwarded to <remote DN>. If this number is correct, dial 1. If this number is not correct, dial 0. Please dial now. (prompt tone)
23	(prompt tone)
24	You have cleared the digits dialed. (4-s pause) Please start again, or dial 0 for instructions. (prompt tone) You have cleared the digits dialed. (pause)

Table 8-1 DRMUSERS announcements (Sheet 5 of 12)

SLE announcement number	Announcement
25	(7- or 10-digit DN has been added) The number you have added is <DN>. (4-s pause) Please dial 0 for instructions or hang up. (prompt tone) (Intercom-dialing code has been added) The number you have added is extension <EXT>. (4-s pause) Please continue, dial 0 for instructions or hang up. (prompt tone) (7- or 10-digit DN has been added.) The number you have added is <DN>. (pause) (Intercom-dialing code has been added) The number you have added is extension <EXT>. (4-s pause)
26	The number you have added is a private entry. (4-s pause) Please continue, dial 0 for instructions, or hang up. (prompt tone) The number you have added is a private entry. (pause)
27	(7- or 10-digit DN has been deleted) The number you have removed is <DN>. (4-s pause) Please continue, dial 0 for instructions, or hang up. (prompt tone) (Intercom-dialing code has been deleted) The number you have removed is extension <EXT>. (4-s pause) Please continue, dial 0 for instructions, or hang up. (prompt tone) (7- or 10-digit DN has been deleted.) The number you have removed is <DN>. (pause) (Intercom-dialing code has been deleted) The number you have removed is extension <EXT>. (pause)
28	The number you have removed is a private entry. (4-s pause) Please continue, dial 0 for instructions, or hang up. (prompt tone)
29	There are no more entries on your list. (4-s pause) Please continue, dial 0 for instructions, or hang up. (prompt tone)
30	There are no more private entries on your list. (4-s pause) Please continue, dial 0 for instructions, or hang up. (prompt tone)
31	This is the end of your list. (1-s pause) This is the end of your list. Your list is now empty. (1-s pause)
32	0.25-s pause

Table 8-1 DRMUSERS announcements (Sheet 6 of 12)

SLE announcement number	Announcement
33	We're sorry. The digits dialed are not a valid command. (2-s pause)
34	We're sorry. The number of the the last calling party is not available. (4-s pause) Please start again, or dial 0 for instructions. (prompt tone) We're sorry. The number of the the last calling party is not available. (pause)
35	(For incorrect DN) • We're sorry. The number you have dialed is incorrect. (4-s pause) Please start again, or dial 0 for instructions. (prompt tone) • We're sorry. The number you have dialed is incorrect. (pause) (For too few digits) • We're sorry. You have dialed too few digits. (4-s pause) Please start again, or dial 0 for instructions. (prompt tone) • We're sorry. You have dialed too few digits. (pause) (For too many digits) • We're sorry. You have dialed too many digits. (4-s pause) Please start again, or dial 0 for instructions. (prompt tone) • We're sorry. You have dialed too many digits. (pause)
36	(DTMF subscribers) We're sorry. You must dial a telephone number after dialing the number sign key or the star key. (4-s pause) Please start again, or dial 0 for instructions. (prompt tone) (DP subscribers) We're sorry. You must dial a telephone number after dialing 1, 2 or 1, 1. (4-s pause) Please start again, or dial 0 for instructions. (prompt tone)
37	(7- or 10-digit DN) This number is already on your list. <DN> (4-s pause) Please continue, dial 0 for instructions or hang up. (prompt tone) (Intercom-dialing code) This number is already on your list. Extension <EXT>. (4-s pause) Please continue, dial 0 for instructions, or hang up. (prompt tone)
38	There is one private entry on your list. (4-s pause) Please try other options, or dial 0 for instructions. (prompt tone)
39	The number to be removed is not on your list. (4-s pause) Please start again, dial 0 for instructions, or hang up. (prompt tone)

Table 8-1 DRMUSERS announcements (Sheet 7 of 12)

SLE announcement number	Announcement
40	We're sorry. The number you have dialed is not available with this service. (4-s pause) Please start again, or dial 0 for instructions. (prompt tone)We're sorry. The number you have dialed is not available with this service. (pause)
41	We're sorry. Your list is full. You must remove an entry before adding another. (4-s pause) Please continue, or dial 0 for instructions. (prompt tone)
42	We're sorry. There are no entries on your list. (4-s pause) Please try other options, or dial 0 for instructions. (prompt tone)
43	There are no more private entries on your list. (4-s pause) Please continue, dial 0 for instructions, or hang up. (prompt tone)
44	There is one private entry on your list. (4-s pause) Please try other options, or dial 0 for instructions. (prompt tone)
45	2-s pause
46	The number you have dialed, <DN>, is not permitted. (pause)
47	Your <SCRJ, DRCW, SCA> service is now <on, off>. We're sorry. Please hang up now, consult your written instructions, and try again later. Your SCF service is now on. Your calls will be forwarded to <DN>. We're sorry. Please hang up now, consult your written instructions, and try again later. Your SCF service is now off. We're sorry. Please hang up now, consult your written instructions, and try again later.
48	We're sorry. The number you have dialed is not available with this service.
49	We're sorry. Please try adding the number again in a few minutes. (4-s pause) Please continue, or dial 0 for instructions. (prompt tone)

Table 8-1 DRMUSERS announcements (Sheet 8 of 12)

SLE announcement number	Announcement
50	(DTMF subscribers) • To turn this service <on, off>, dial 3. (0.33-s pause) • To add an entry, press the number sign key. (0.33-s pause) • To remove on or more entries, press the star key. (0.33-s pause) • To hear the entries on your list, dial 1. (0.33-s pause) • To hear these instructions repeated, dial 0. (0.33-s pause) • Please dial now. (prompt tone) (DP subscribers) • To turn this service <on, off>, dial 3. (0.33-s pause) • To add an entry, dial 1, 2. (0.33-s pause) • To remove one or more entries, dial 1, 1. (0.33-s pause) • To hear the entries on your list, dial 1. (0.33-s pause) • To hear these instructions repeated, dial 0. (0.33-s pause) • Please dial now.
51	(DTMF subscribers) • Dial the number to be added, then press the number sign key again. (0.33-s pause) • To add the last calling party, dial 0, 1. (0.33-s pause) • Please dial now. (prompt tone) (DP subscribers) • Dial the number to be added. (0.33-s pause) • To add the last calling party, dial 0, 1. (0.33-s pause) • Please dial now. (prompt tone)

Table 8-1 DRMUSERS announcements (Sheet 9 of 12)

SLE announcement number	Announcement
52	(DTMF subscribers) • Dial the number to be removed, then press the star key again. (0.33-s pause) • To remove all entries, dial 0, 8, then press the star key again. (0.33-s pause) • To remove just the private entries, dial 0, 9, then press the star key again. (0.33-s pause) • To hear these instructions repeated, dial 0. (0.33-s pause)Please dial now. (prompt tone) (DP subscribers) • Dial the number to be removed. (0.33-s pause) • To remove all entries, dial 0, 8. (0.33-s pause) • To remove just the private entries, dial 0, 9. (0.33-s pause) • To hear these instructions repeated, dial 0. (0.33-s pause) • Please dial now. (prompt tone) There are two entries on your list, including one private entry. After hearing an entry, you may dial 0, 7 to delete it and continue reviewing your list. (pause) There is one entry on your list. After hearing an entry, you may dial 0, 7 to delete it and continue reviewing your list. (pause)
53	There are two entries on your list, including one private entry. After hearing an entry, you may dial 0, 7 to delete it and continue reviewing your list. (pause) There is one entry on your list. After hearing an entry, you may dial 0, 7 to delete it and continue reviewing your list. (pause)
54	(DTMF subscribers) Please dial the number to which you want your calls forwarded, then press the number sign key. Please dial now. (prompt tone) (DP subscribers) Please dial the number to which you want your calls forwarded. Please dial now. (prompt tone)
55	Your calls will be forwarded to <remote DN>. If this number is correct, dial 1. If this number is not correct, dial 0. Please dial now. (prompt tone) (DTMF subscribers) To turn on this service, you must add an entry to your list. (1-s pause) To add an entry, please press the number sign key. (prompt tone) (DP subscribers) To turn on this service, you must add an entry to your list. (1-s pause) To add an entry, dial 1, 2. (prompt tone)

Table 8-1 DRMUSERS announcements (Sheet 10 of 12)

SLE announcement number	Announcement
56	(DTMF subscribers) • To turn this service <on, off>, dial 3. (0.33-s pause) • To add an entry, press the number sign key. (0.33-s pause) • To remove one or more entries, press the star key. (0.33-s pause) • To hear the entries on your list, dial 1. (0.33-s pause) • To hear these instructions repeated, dial 0. (0.33-s pause) • Please dial now. (prompt tone) (DP subscribers) • To turn this service <on, off>, dial 3. (0.33-s pause) • To add an entry, dial 1, 2. (0.33-s pause) • To remove one or more entries, dial 1, 1. (0.33-s pause) • To hear the entries on your list, dial 1. (0.33-s pause) • To hear these instructions repeated, dial 0. (0.33-s pause) • Please dial now.
57	(DTMF subscribers) • Dial the number to be added, then press the number sign key. (0.33-s pause) • To add the last calling party, dial 0, 1. (0.33-s pause) • Please dial now. (prompt tone) (DP subscribers) • Dial the number to be added. (0.33-s pause) • To add the last calling party, dial 0, 1. (0.33-s pause) • Please dial now. (prompt tone)

Table 8-1 DRMUSERS announcements (Sheet 11 of 12)

SLE announcement number	Announcement
58	(DTMF subscribers) • Dial the number to be removed, then press the star key. (0.33-s pause) • To remove all entries, dial 0, 8, then press the star key. (0.33-s pause) • To remove just the private entries, dial 0, 9, then press the star key. (0.33-s pause) • To hear these instructions repeated, dial 0. (0.33-s pause)Please dial now. (prompt tone) (DP subscribers) • Dial the number to be removed. (0.33-s pause) • To remove all entries, dial 0, 8. (0.33-s pause) • To remove just the private entries, dial 0, 9. (0.33-s pause) • To hear these instructions repeated, dial 0. (0.33-s pause) • Please dial now. (prompt tone) There are two entries on your list, including one private entry. After hearing an entry, you may dial 0, 7 to delete it and continue reviewing your list. (pause) There is one entry on your list. After hearing an entry, you may dial 0, 7 to delete it and continue reviewing your list. (pause)
59	There are two entries on your list, including one private entry. After hearing an entry, you may dial 0, 7 to delete it and continue reviewing your list. (pause) There is one entry on your list. After hearing an entry, you may dial 0, 7 to delete it and continue reviewing your list. (pause)
60	(DTMF subscribers) Please dial the number to which you want your calls forwarded, then press the number sign key. Please dial now. (prompt tone) (DP subscribers) Please dial the number to which you want your calls forwarded. Please dial now. (prompt tone)
61	Your calls will be forwarded to <remote DN>. If this number is correct, dial 1. If this number is not correct, dial 0. Please dial now. (prompt tone) (DTMF subscribers) To turn on this service, you must add an entry to your list. (1-s pause) To add an entry, please press the number sign key. (prompt tone) (DP subscribers) To turn on this service, you must add an entry to your list. (1-s pause) To add an entry, dial 1, 2. (prompt tone)

Table 8-1 DRMUSERS announcements (Sheet 12 of 12)

SLE announcement number	Announcement
62	There are two entries on your list, including one private entry. After hearing an entry, you may dial 0, 7 to delete it and continue reviewing your list. (pause) There one entry on your list. After hearing an entry, you may dial 0, 7 to delete it and continue reviewing your list. (pause)
63	Your <SCRJ, SCF, DRCW> service is now <on, off>. • There are two entries on your list, including one private entry. • There is one entry on your list. • There is one private entry on your list. • There are no entries on your list.
64	There is one private entry on your list. (4-s pause) Please try other options, or dial 0 for instructions. (prompt tone)

DRAMREC utility

To assign all the phrases on each DRAM for SLE, the ASSIGN command can be used in the DRAMREC utility. These phrases make up the actual contents of each virtual phrase listed in table DRMUSERS.

The following are MAP display examples of assigning phrases for table DRAMREC.

Figure 8-7 MAP display example 1 for table DRAMREC - assigning phrases

```
DRAMREC:

<command> <dram> <phrasename> <length> <block> <phraseno>
{PEC 1X76AP}
ASSIGN 0 SLEENG109  5  0  4
ASSIGN 0 SLEENG114  7  0  5
ASSIGN 0 SLEENG115  9  0  6
ASSIGN 0 SLEENG141 21  1  4
ASSIGN 0 SLEENG142 21  1  5
ASSIGN 0 SLEENG143 22  1  6
ASSIGN 0 SLEENG144 22  1  7
ASSIGN 0 SLEENG004  1  1  8
```

Figure 8-8 MAP display example 2 for table DRAMREC - assigning phrases

```
DRAMREC:

<command> <dram> <phrasename> <length> <block> <phraseno>
{PEC 1X76AQ}
ASSIGN 0 SLEENG025  5  2   4
ASSIGN 0 SLEENG030  5  2   5
ASSIGN 0 SLEENG034  4  2   6
ASSIGN 0 SLEENG041  3  2   7
ASSIGN 0 SLEENG042  3  2   8
ASSIGN 0 SLEENG080  3  2   9
ASSIGN 0 SLEENG081  3  2  10
ASSIGN 0 SLEENG038  3  2  11
ASSIGN 0 SLEENG029  4  3   4
ASSIGN 0 SLEENG106  5  3   5
ASSIGN 0 SLEENG107  4  3   6
ASSIGN 0 SLEENG108  5  3   7
ASSIGN 0 SLEENG112  4  3   8
ASSIGN 0 SLEENG113  4  3   9
ASSIGN 0 SLEENG119  3  3  10
```

Figure 8-9 MAP display example 3 for table DRAMREC - assigning phrases

```
DRAMREC:

<command><dram> <phrasename> <length> <block> <phraseno>
{PEC 1X76AR}
ASSIGN 0 SLEENG094  3  4  4
ASSIGN 0 SLEENG096  4  4  5
ASSIGN 0 SLEENG140  8  4  6
ASSIGN 0 SLEENG139 11  4  7
ASSIGN 0 SLEENG091  4  4  8
ASSIGN 0 SLEENG111  8  4  9
ASSIGN 0 SLEENG024  4  5  4
ASSIGN 0 SLEENG031  5  5  5
ASSIGN 0 SLEENG105  5  5  6
ASSIGN 0 SLEENG110  4  5  7
ASSIGN 0 SLEENG116  7  5  8
```

Figure 8-10 MAP display example 4 for table DRAMREC - assigning phrases

```
DRAMREC:

<command> <dram> <phrasename> <length> <block> <phraseno>
{PEC 1X76AS}
ASSIGN 0 SLEENG002  1  6  0
ASSIGN 0 SLEENG003  1  6  3
ASSIGN 0 SLEENG170 23  6  4
ASSIGN 0 SLEENG171 17  6  5
ASSIGN 0 SLEENG168 14  7  4
ASSIGN 0 SLEENG169  9  7  5
ASSIGN 0 SLEENG146  8  7  6
ASSIGN 0 SLEENG147  6  7  7
```

Figure 8-11 MAP display example 5 for table DRAMREC - assigning phrases

```
DRAMREC:

<command> <dram> <phrasename> <length> <block> <phraseno>
{PEC 1X76AT}
ASSIGN 1 SLEENG021  2  0   4
ASSIGN 1 SLEENG022  3  0   5
ASSIGN 1 SLEENG032  2  0   6
ASSIGN 1 SLEENG033  3  0   7
ASSIGN 1 SLEENG035  2  0   8
ASSIGN 1 SLEENG020  2  0   9
ASSIGN 1 SLEENG036  2  0  10
ASSIGN 1 SLEENG037  3  0  11
ASSIGN 1 SLEENG039  2  0  12
ASSIGN 1 SLEENG040  3  0  13
ASSIGN 1 SLEENG082  3  0  14
ASSIGN 1 SLEENG083  3  0  15
ASSIGN 1 SLEENG086  3  0  16
ASSIGN 1 SLEENG087  4  0  17
ASSIGN 1 SLEENG120  3  0  18
ASSIGN 1 EHIRI0     1  1   4
ASSIGN 1 EHIRI1     1  1   5
ASSIGN 1 EHIRI2     1  1   6
ASSIGN 1 EHIRI3     1  1   7
ASSIGN 1 EHIRI4     1  1   8
ASSIGN 1 EHIRI5     1  1   9
ASSIGN 1 EHIRI6     1  1  10
ASSIGN 1 EHIRI7     1  1  11
ASSIGN 1 EHIRI8     1  1  12
ASSIGN 1 EHIRI9     1  1  13
ASSIGN 1 ELORI0     1  1  14
ASSIGN 1 ELORI1     1  1  15
ASSIGN 1 ELORI2     1  1  16
ASSIGN 1 ELORI3     1  1  17
ASSIGN 1 ELORI4     1  1  18
ASSIGN 1 ELORI5     1  1  19
ASSIGN 1 ELORI6     1  1  20
ASSIGN 1 ELORI7     1  1  21
ASSIGN 1 ELORI8     1  1  22
ASSIGN 1 ELORI9     1  1  23
ASSIGN 1 EWAVE0     1  1  24
ASSIGN 1 EWAVE1     1  1  25
ASSIGN 1 EWAVE2     1  1  26
```

Figure 8-12 MAP display example 6 for table DRAMREC - assigning phrases

```
DRAMREC

<command> <dram> <phrasename> <length> <block> <phraseno>
{PEC 1X76AT}
ASSIGN 1 EWAVE3 1 1 27
ASSIGN 1 EWAVE4 1 1 28
ASSIGN 1 EWAVE5 1 1 29
ASSIGN 1 EWAVE6 1 1 30
ASSIGN 1 EWAVE7 1 1 31
ASSIGN 1 EWAVE8 1 1 32
ASSIGN 1 EWAVE9 1 1 33
ASSIGN 1 EFALL0 1 1 34
ASSIGN 1 EFALL1 1 1 35
ASSIGN 1 EFALL2 1 1 36
ASSIGN 1 EFALL3 1 1 37
ASSIGN 1 EFALL4 1 1 38
ASSIGN 1 EFALL5 1 1 39
ASSIGN 1 EFALL6 1 1 40
ASSIGN 1 EFALL7 1 1 41
ASSIGN 1 EFALL8 1 1 42
ASSIGN 1 EFALL9 1 1 43
ASSIGN 1 EFLTA0 1 1 44
ASSIGN 1 EFLTA1 1 1 45
ASSIGN 1 EFLTA2 1 1 46
ASSIGN 1 EFLTA3 1 1 47
ASSIGN 1 EFLTA4 1 1 48
ASSIGN 1 EFLTA5 1 1 49
ASSIGN 1 EFLTA6 1 1 50
ASSIGN 1 EFLTA7 1 1 51
ASSIGN 1 EFLTA8 1 1 52
ASSIGN 1 EFLTA9 1 1 53
ASSIGN 1 EFLTB0 1 1 54
ASSIGN 1 EFLTB1 1 1 55
ASSIGN 1 EFLTB2 1 1 56
ASSIGN 1 EFLTB3 1 1 57
ASSIGN 1 EFLTB4 1 1 58
ASSIGN 1 EFLTB5 1 1 59
ASSIGN 1 EFLTB6 1 1 60
ASSIGN 1 EFLTB7 1 1 61
ASSIGN 1 EFLTB8 1 1 62
ASSIGN 1 EFLTB9 1 1 63
```

Figure 8-13 MAP display example 7 for table DRAMREC - assigning phrases

```
DRAMREC

<command> <dram> <phrasename> <length> <block> <phraseno>
{PEC 1X76AT}
ASSIGN 1 EWAVE3 1 1 27
ASSIGN 1 EWAVE4 1 1 28
ASSIGN 1 EWAVE5 1 1 29
ASSIGN 1 EWAVE6 1 1 30
ASSIGN 1 EWAVE7 1 1 31
ASSIGN 1 EWAVE8 1 1 32
ASSIGN 1 EWAVE9 1 1 33
ASSIGN 1 EFALL0 1 1 34
ASSIGN 1 EFALL1 1 1 35
ASSIGN 1 EFALL2 1 1 36
ASSIGN 1 EFALL3 1 1 37
ASSIGN 1 EFALL4 1 1 38
ASSIGN 1 EFALL5 1 1 39
ASSIGN 1 EFALL6 1 1 40
ASSIGN 1 EFALL7 1 1 41
ASSIGN 1 EFALL8 1 1 42
ASSIGN 1 EFALL9 1 1 43
ASSIGN 1 EFLTA0 1 1 44
ASSIGN 1 EFLTA1 1 1 45
ASSIGN 1 EFLTA2 1 1 46
ASSIGN 1 EFLTA3 1 1 47
ASSIGN 1 EFLTA4 1 1 48
ASSIGN 1 EFLTA5 1 1 49
ASSIGN 1 EFLTA6 1 1 50
ASSIGN 1 EFLTA7 1 1 51
ASSIGN 1 EFLTA8 1 1 52
ASSIGN 1 EFLTA9 1 1 53
ASSIGN 1 EFLTB0 1 1 54
ASSIGN 1 EFLTB1 1 1 55
ASSIGN 1 EFLTB2 1 1 56
ASSIGN 1 EFLTB3 1 1 57
ASSIGN 1 EFLTB4 1 1 58
ASSIGN 1 EFLTB5 1 1 59
ASSIGN 1 EFLTB6 1 1 60
ASSIGN 1 EFLTB7 1 1 61
ASSIGN 1 EFLTB8 1 1 62
ASSIGN 1 EFLTB9 1 1 63
```

Figure 8-14 MAP display example 8 for table DRAMREC - assigning phrases

```
DRAMREC:

<command> <dram> <phrasename> <length> <block> <phraseno>
{PEC 1X76AU}
ASSIGN 1 SLEENG067 3 2   4
ASSIGN 1 SLEENG068 3 2   5
ASSIGN 1 SLEENG069 3 2   6
ASSIGN 1 SLEENG070 3 2   7
ASSIGN 1 SLEENG071 3 2   8
ASSIGN 1 SLEENG072 3 2   9
ASSIGN 1 SLEENG073 3 2  10
ASSIGN 1 SLEENG074 3 2  11
ASSIGN 1 SLEENG075 3 2  12
ASSIGN 1 SLEENG076 3 2  13
ASSIGN 1 SLEENG077 3 2  14
ASSIGN 1 SLEENG078 3 2  15
ASSIGN 1 SLEENG008 2 3   4
ASSIGN 1 SLEENG009 3 3   5
ASSIGN 1 SLEENG010 2 3   6
ASSIGN 1 SLEENG011 3 3   7
ASSIGN 1 SLEENG012 3 3   8
ASSIGN 1 SLEENG013 3 3   9
ASSIGN 1 SLEENG014 3 3  10
ASSIGN 1 SLEENG015 3 3  11
ASSIGN 1 SLEENG016 3 3  12
ASSIGN 1 SLEENG017 3 3  13
ASSIGN 1 SLEENG018 3 3  14
ASSIGN 1 SLEENG019 3 3  15
ASSIGN 1 SLEENG084 3 3  16
ASSIGN 1 SLEENG085 5 3  17
```

Figure 8-15 MAP display example 9 for table DRAMREC - assigning phrases

```
DRAMREC:

<command> <dram> <phrasename> <length> <block> <phraseno>
{PEC 1X76AV}
ASSIGN 1 SLEENG025 5 4   4
ASSIGN 1 SLEENG043 2 4   6
ASSIGN 1 SLEENG045 2 4   7
ASSIGN 1 SLEENG046 2 4   8
ASSIGN 1 SLEENG047 2 4   9
ASSIGN 1 SLEENG048 2 4  10
ASSIGN 1 SLEENG049 2 4  11
ASSIGN 1 SLEENG050 2 4  12
ASSIGN 1 SLEENG051 2 4  13
ASSIGN 1 SLEENG052 2 4  14
ASSIGN 1 SLEENG053 2 4  15
ASSIGN 1 SLEENG054 2 4  16
ASSIGN 1 SLEENG055 2 4  17
ASSIGN 1 SLEENG031 5 5   4
ASSIGN 1 SLEENG044 3 5   5
ASSIGN 1 SLEENG056 3 5   6
ASSIGN 1 SLEENG057 3 5   7
ASSIGN 1 SLEENG058 3 5   8
ASSIGN 1 SLEENG059 3 5   9
ASSIGN 1 SLEENG060 3 5  10
ASSIGN 1 SLEENG061 3 5  11
ASSIGN 1 SLEENG062 3 5  12
ASSIGN 1 SLEENG063 3 5  13
ASSIGN 1 SLEENG064 3 5  14
ASSIGN 1 SLEENG065 3 5  15
ASSIGN 1 SLEENG066 3 5  16
ASSIGN 1 SLEENG079 3 5  17
```

Figure 8-16 MAP display example 10 for table DRAMREC - assigning phrases

```
DRAMREC:

<command> <dram> <phrasename> <length> <block> <phraseno>
{PEC 1X76GA}
ASSIGN 2 SLEENG018 3 0   4
ASSIGN 2 SLEENG019 3 0   5
ASSIGN 2 SLEENG210 3 0   6
ASSIGN 2 SLEENG211 3 0   7
ASSIGN 2 SLEENG212 3 0   8
ASSIGN 2 SLEENG213 3 0   9
ASSIGN 2 SLEENG214 4 0  10
ASSIGN 2 SLEENG008 2 0  11
ASSIGN 2 SLEENG009 2 0  12
ASSIGN 2 SLEENG010 2 0  13
ASSIGN 2 SLEENG011 2 0  14
ASSIGN 2 SLEENG012 2 0  15
ASSIGN 2 SLEENG013 2 0  16
ASSIGN 2 SLEENG014 3 0  17
ASSIGN 2 SLEENG015 3 0  18
ASSIGN 2 SLEENG016 3 0  19
ASSIGN 2 SLEENG017 3 1   4
ASSIGN 2 SLEENG215 3 1   5
ASSIGN 2 SLEENG216 3 1   6
ASSIGN 2 SLEENG217 3 1   7
ASSIGN 2 SLEENG218 3 1   8
ASSIGN 2 SLEENG219 3 1   9
ASSIGN 2 SLEENG220 3 1  10
ASSIGN 2 SLEENG221 3 1  11
ASSIGN 2 SLEENG222 3 1  12
ASSIGN 2 SLEENG223 3 1  13
ASSIGN 2 SLEENG224 3 1  14
ASSIGN 2 SLEENG225 3 1  15
ASSIGN 2 SLEENG226 3 1  16
ASSIGN 2 SLEENG227 3 1  17
ASSIGN 2 SLEENG228 3 1  18
```

Figure 8-17 MAP display example 11 for table DRAMREC - assigning phrases

```
DRAMREC:

<command> <dram> <phrasename> <length> <block> <phraseno>
{PEC 1X76GB}
ASSIGN 2 SLEENG191 3 2   4
ASSIGN 2 SLEENG192 3 2   5
ASSIGN 2 SLEENG193 3 2   6
ASSIGN 2 SLEENG194 3 2   7
ASSIGN 2 SLEENG195 3 2   8
ASSIGN 2 SLEENG196 3 2   9
ASSIGN 2 SLEENG197 3 2  10
ASSIGN 2 SLEENG198 3 2  11
ASSIGN 2 SLEENG199 3 2  12
ASSIGN 2 SLEENG200 3 2  13
ASSIGN 2 SLEENG201 3 2  14
ASSIGN 2 SLEENG202 3 3   4
ASSIGN 2 SLEENG203 3 3   5
ASSIGN 2 SLEENG204 3 3   6
ASSIGN 2 SLEENG205 3 3   7
ASSIGN 2 SLEENG206 3 3   8
ASSIGN 2 SLEENG207 3 3   9
ASSIGN 2 SLEENG208 3 3  10
ASSIGN 2 SLEENG209 3 3  11
ASSIGN 2 SLEENG031 3 3  12
```

Figure 8-18 MAP display example 12 for table DRAMREC - assigning phrases

```
DRAMREC:

<command> <dram> <phrasename> <length> <block> <phraseno>
{PEC 1X76GC}
ASSIGN 2 SLEENG172 3 4   4
ASSIGN 2 SLEENG173 3 4   5
ASSIGN 2 SLEENG174 3 4   6
ASSIGN 2 SLEENG175 3 4   7
ASSIGN 2 SLEENG176 3 4   8
ASSIGN 2 SLEENG177 3 4   9
ASSIGN 2 SLEENG178 3 4  10
ASSIGN 2 SLEENG179 3 4  11
ASSIGN 2 SLEENG180 3 4  12
ASSIGN 2 SLEENG181 3 4  13
ASSIGN 2 SLEENG182 3 4  14
ASSIGN 2 SLEENG183 3 4  15
ASSIGN 2 SLEENG184 3 4  16
ASSIGN 2 SLEENG185 3 5   4
ASSIGN 2 SLEENG186 3 5   5
ASSIGN 2 SLEENG187 3 5   6
ASSIGN 2 SLEENG188 3 5   7
ASSIGN 2 SLEENG189 3 5   8
ASSIGN 2 SLEENG190 3 5   9
```

Note: PEC 1X76AW virtual card 01 may contain other predefined phrases. A complete list of these physical phrases can be found at the end of this datafill example. Note that virtual card 02 on the PROM cannot be modified.

Figure 8-19 MAP display example 13 for table DRAMREC - assigning phrases

```
DRAMREC:

<command> <dram> <phrasename> <length> <block> <phraseno>
{PEC 1X76AW}
ASSIGN 1 SLEENG002 1 6   0
ASSIGN 1 SLEENG003 1 6   3
ASSIGN 1 SLEENG123 3 6   4
ASSIGN 1 SLEENG124 3 6   5      PEC 1X76AW
ASSIGN 1 SLEENG127 3 6   8          Virtual Card 01
ASSIGN 1 SLEENG128 3 6   9
ASSIGN 1 SLEENG129 4 6  10
ASSIGN 1 SLEENG130 4 6  11
ASSIGN 1 SLEENG229 3 6  12
ASSIGN 1 SLEENG230 3 6  13
ASSIGN 1 SLEENG004 1 6  14
ASSIGN 1 SLEENG007 8 7   4
ASSIGN 1 SLEENG026 2 7   5
ASSIGN 1 SLEENG117 7 7   6
ASSIGN 1 SLEENG118 6 7   8
ASSIGN 1 SLEENG001 8 7   9
```

SCRJ feature services

The SCRJ feature has two services to choose from: Call Screen service or Call Block service. By default, the data below is set up to play back the Call Block service announcement. To change this to play back the Call Screen service announcement, perform the following procedure.

Procedure 8-1 Procedure for changing SCRJ - Call Block service announcement

At your location

1 Remove the following assignment commands from 1X76AW:

```
ASSIGN  1 SLEENG123 3 6  4     (Call Block)
ASSIGN  1 SLEENG124 3 6  5
```

2 Replace with:

```
ASSIGN 1 SLEENG123 3 6  6     (Call Screen)
ASSIGN 1 SLEENG124 3 6  7
```

The following examples contains the available predefined playback phrases that can be used to customize announcements. These physical phrases are located on the specified PEC card, and can be used to replace PEC 1X76AW (virtual card 01 only)

Figure 8-20 MAP display example 1 for table SCRJ - service announcement

```
DRAMREC:

<command> <dram> <phrasename> <length> <block> <phraseno>
{PEC 1X76GE}
ASSIGN 1 SLEENG002 1 6   0
ASSIGN 1 SLEENG003 1 6   3
ASSIGN 1 SLEENG123 4 6   4
ASSIGN 1 SLEENG124 4 6   5
ASSIGN 1 SLEENG129 4 6   6
ASSIGN 1 SLEENG130 4 6   7
ASSIGN 1 SLEENG127 4 6   8
ASSIGN 1 SLEENG128 4 6   9
ASSIGN 1 SLEENG229 4 6  10
ASSIGN 1 SLEENG230 4 6  11
ASSIGN 1 SLEENG004 1 6  12
ASSIGN 1 SLEENG007 8 7   4
ASSIGN 1 SLEENG026 2 7   5
ASSIGN 1 SLEENG117 7 7   6
ASSIGN 1 SLEENG118 6 7   8
ASSIGN 1 SLEENG001 8 7   9
```

Figure 8-21 MAP display example 2 for table SCRJ - service announcement

```
DRAMREC:

<command> <dram> <phrasename> <length> <block> <phraseno>
{PEC 1X76GF}
ASSIGN 1 SLEENG002 1 6   0
ASSIGN 1 SLEENG003 1 6   3
ASSIGN 1 SLEENG123 4 6   4
ASSIGN 1 SLEENG124 4 6   5
ASSIGN 1 SLEENG129 4 6   6
ASSIGN 1 SLEENG130 4 6   7
ASSIGN 1 SLEENG127 4 6   8
ASSIGN 1 SLEENG128 4 6   9
ASSIGN 1 SLEENG229 4 6  10
ASSIGN 1 SLEENG230 4 6  11
ASSIGN 1 SLEENG004 1 6  12
ASSIGN 1 SLEENG007 8 7   4
ASSIGN 1 SLEENG026 2 7   5
ASSIGN 1 SLEENG117 7 7   6
ASSIGN 1 SLEENG118 6 7   8
ASSIGN 1 SLEENG001 8 7   9
```

Figure 8-22 MAP display example 3 for table SCRJ - service announcement

```
DRAMREC:

<command> <dram> <phrasename> <length> <block> <phraseno>
{PEC 1X76GG}
ASSIGN 1 SLEENG002 1 6   0
ASSIGN 1 SLEENG003 1 6   3
ASSIGN 1 SLEENG123 4 6   4
ASSIGN 1 SLEENG124 4 6   5
ASSIGN 1 SLEENG129 4 6   6
ASSIGN 1 SLEENG130 4 6   7
ASSIGN 1 SLEENG127 4 6   8
ASSIGN 1 SLEENG128 4 6   9
ASSIGN 1 SLEENG229 4 6  10
ASSIGN 1 SLEENG230 4 6  11
ASSIGN 1 SLEENG004 1 6  12
ASSIGN 1 SLEENG007 8 7   4
ASSIGN 1 SLEENG026 2 7   5
ASSIGN 1 SLEENG117 7 7   6
ASSIGN 1 SLEENG118 6 7   8
ASSIGN 1 SLEENG001 8 7   9
```

Figure 8-23 MAP display example 4 for table SCRJ - service announcement

```
DRAMREC:

<command> <dram> <phrasename> <length> <block> <phraseno>
{PEC 1X76GH}
ASSIGN 1 SLEENG002 1 6   0
ASSIGN 1 SLEENG003 1 6   3
ASSIGN 1 SLEENG123 4 6   4
ASSIGN 1 SLEENG124 4 6   5
ASSIGN 1 SLEENG129 4 6   6
ASSIGN 1 SLEENG130 4 6   7
ASSIGN 1 SLEENG127 4 6   8
ASSIGN 1 SLEENG128 4 6   9
ASSIGN 1 SLEENG229 4 6  10
ASSIGN 1 SLEENG230 4 6  11
ASSIGN 1 SLEENG004 1 6  12
ASSIGN 1 SLEENG007 8 7   4
ASSIGN 1 SLEENG026 2 7   5
ASSIGN 1 SLEENG117 7 7   6
ASSIGN 1 SLEENG118 6 7   8
ASSIGN 1 SLEENG001 8 7   9
```

Figure 8-24 MAP display example 5 for table SCRJ - service announcement

```
DRAMREC:

<command> <dram> <phrasename> <length> <block> <phraseno>
{PEC 1X76GJ}
ASSIGN 1 SLEENG002 1 6   0
ASSIGN 1 SLEENG003 1 6   3
ASSIGN 1 SLEENG123 4 6   4
ASSIGN 1 SLEENG124 4 6   5
ASSIGN 1 SLEENG129 4 6   6
ASSIGN 1 SLEENG130 4 6   7
ASSIGN 1 SLEENG127 4 6   8
ASSIGN 1 SLEENG128 4 6   9
ASSIGN 1 SLEENG229 4 6  10
ASSIGN 1 SLEENG230 4 6  11
ASSIGN 1 SLEENG004 1 6  12
ASSIGN 1 SLEENG007 8 7   4
ASSIGN 1 SLEENG026 2 7   5
ASSIGN 1 SLEENG117 7 7   6
ASSIGN 1 SLEENG118 6 7   8
ASSIGN 1 SLEENG001 8 7   9
```

Figure 8-25 MAP display example 6 for table SCRJ - service announcement

```
DRAMREC:

<command> <dram> <phrasename> <length> <block> <phraseno>
{PEC 1X76GK}
ASSIGN 1 SLEENG002 1 6   0
ASSIGN 1 SLEENG003 1 6   3
ASSIGN 1 SLEENG123 4 6   4
ASSIGN 1 SLEENG124 4 6   5
ASSIGN 1 SLEENG129 4 6   6
ASSIGN 1 SLEENG130 4 6   7
ASSIGN 1 SLEENG127 4 6   8
ASSIGN 1 SLEENG128 4 6   9
ASSIGN 1 SLEENG229 4 6  10
ASSIGN 1 SLEENG230 4 6  11
ASSIGN 1 SLEENG004 1 6  12
ASSIGN 1 SLEENG007 8 7   4
ASSIGN 1 SLEENG026 2 7   5
ASSIGN 1 SLEENG117 7 7   6
ASSIGN 1 SLEENG118 6 7   8
ASSIGN 1 SLEENG001 8 7   9
```

Figure 8-26 MAP display example 7 for table SCRJ - service announcement

```
DRAMREC:

<command> <dram> <phrasename> <length> <block> <phraseno>
{PEC 1X76GL}
ASSIGN 1 SLEENG002 1 6   0
ASSIGN 1 SLEENG003 1 6   3
ASSIGN 1 SLEENG123 4 6   4
ASSIGN 1 SLEENG124 4 6   5
ASSIGN 1 SLEENG129 4 6   6
ASSIGN 1 SLEENG130 4 6   7
ASSIGN 1 SLEENG127 4 6   8
ASSIGN 1 SLEENG128 4 6   9
ASSIGN 1 SLEENG229 4 6  10
ASSIGN 1 SLEENG230 4 6  11
ASSIGN 1 SLEENG004 1 6  12
ASSIGN 1 SLEENG007 8 7   4
ASSIGN 1 SLEENG026 2 7   5
ASSIGN 1 SLEENG117 7 7   6
ASSIGN 1 SLEENG118 6 7   8
ASSIGN 1 SLEENG001 8 7   9
```

Secondary datafill (French announcements)

This example can be used in addition to the previous example to allow an office to be datafilled for French announcements. The first four of eight SLE PROMs are on DRAM 0 and the second four of eight SLE PROMS are on DRAM 1.

Note: Before datafilling announcements for SLE, read “Datafilling announcements" in this document for Subscriber Services general announcement information.

Table DRAMS

Table DRAMS stores the type of announcement memory cards for each DRAM. Note that SLE requires two full DRAMS for each language to accommodate the eight double-density PROM cards associated with each language.

Figure 8-27 MAP display example for table DRAMS

```
DRAMCARD TMTYPE TMNO TMCKT CARDCODE  CARDINFO
0 0      STM      0   0    1X75BA    CTRL DRAM0
0 1      STM      1   2    1X76BP    PROM 0 1
0 3      STM      1   6    1X76BQ    PROM 2 3
0 5      STM      1  10    1X76BR    PROM 4 5
0 7      STM      1  14    1X76BS    PROM 6 7
1 0      MTM      2   0    1X75BA    CTRL DRAM1
1 1      MTM      2   2    1X76BT    PROM 0 1
1 3      MTM      2   6    1X76BU    PROM 2 3
1 5      MTM      2  10    1X76BV    PROM 4 5
1 7      MTM      2  14    1X76BW    PROM 6 7
```

Table CLLI

Table CLLI requires two new CLLIs to be added for each language.

Figure 8-28 MAP display example for table CLLI

```
CLLI    ADNUM TRKGRSIZ          ADMININF
SLEFRE1 898      2              SLE_FRENCH_ANNCS
SLEFRE2 899      2              SLE_FRENCH_ANNCS
```

Table ANNS

Table ANNS associates the new CLLIs with the appropriate announcement type.

Figure 8-29 MAP display example for table ANNS

```
CLLI    ANNTYPE TRAFSNO MAXCONN CYTIME MAXCYC
SLEFRE1 SLEFRE     25      1      1      1
SLEFRE2 SLEFRE     25      1      1      1
```

Table ANNMEMS

Table ANNMEMS associates a physical announcement circuit with each announcement member.

Figure 8-30 MAP display example for table ANNMEMS

```
ANNMEM       HDWTYPE     CARD      MEMINFO
SLEFRE1 0    DRAM        DRA       0 STM 1 1 $
SLEFRE1 1    DRAM        DRA       0 STM 1 2 $
SLEFRE2 2    DRAM        DRA       0 MTM 2 1 $
SLEFRE2 3    DRAM        DRA       0 MTM 2 2 $
```

Table DRMUSERS

Table DRMUSERS associates the phrases for each announcement to an announcement member. It is imperative that the SLEFRE1 announcements correspond to the DRAM with PROM cards 1X76BP, 1X76BQ, 1X76BR, and 1X76BS. SLEFRE2 announcements must correspond to the DRAM with PROM cards 1X76BT, 1X76BU, 1X76BV, and 1X76BW.

There are four different pause times to choose from: PAUSE1, PAUSE2, PAUSE3, and PAUSE4, which correspond to 1, 2, 3, and 4 seconds of silence, respectively. The datafill below can have any of the pause times datafilled.

The DRMUSERS table is based on, but not identical to, the English datafill.

Figure 8-31 MAP display example for table DRMUSERS

```
USERANN      PHSLIST
_____________________________________________________________

SLEFRE2 1   (STATINFO)
SLEFRE2 2   (STATINFO) (PAUSE4) (CONTEXIT) (PROMPT)
SLEFRE2 3   (LISTINFO)
SLEFRE2 4   (FIRSTDN) (DNEND)
SLEFRE2 5   (NEXTDN) (DNEND)
SLEFRE2 6   (PREVDN) (DNEND)
SLEFRE2 7   (CURRDN) (DNEND)
SLEFRE2 8   (PUBDNWARN) (DNEND)
SLEFRE2 9   (PRIVDNWARN)
SLEFRE2 10  (ALLWARN)
SLEFRE2 11  (PRIVWARN)
SLEFRE2 13  (STATINFO) (LISTINFO) (INITSLE) (PAUSE3)
SLEFRE1 14  (INITSERV) (PAUSE2)
SLEFRE1 15  (LISTEDIT) (PROMPT)
SLEFRE1 16  (LISTADD) (PROMPT)
SLEFRE1 17  (LISTDEL) (PROMPT)
SLEFRE2 18  (LISTREV)
SLEFRE1 20  (FORCEADD) (PAUSE1) (ADDENTRY) (PROMPT)
SLEFRE1 21  (FORCEADD) (PAUSE1) (ADDENTRY) (PROMPT)
SLEFRE1 23  (CANCELLED) (PAUSE2) (RESTART) (PROMPT)
SLEFRE1 24  (ERASED) (PAUSE4) (RESTART) (PROMPT)
SLEFRE2 25  (ADDED) (DNEND) (PAUSE4) (CONTEXIT) (PROMPT)
SLEFRE2 26  (ADDPRIV) (PAUSE4) (CONTEXIT) (PROMPT)
SLEFRE2 27  (DELETED) (DNEND) (PAUSE4) (CONTEXIT) (PROMPT)
SLEFRE2 28  (DELPRIV) (PAUSE4) (CONTEXIT) (PROMPT)
SLEFRE2 29  (ALLDEL) (PAUSE4) (CONTEXIT) (PROMPT)
SLEFRE2 30  (PRIVDEL) (PAUSE4) (CONTEXIT) (PROMPT)
SLEFRE2 31  (ENDOFLIST) (PAUSE1)
SLEFRE2 32  (PAUSE0)
SLEFRE1 33  (INVCMD) (PAUSE2)
SLEFRE1 34  (NOLASTDN) (PAUSE4) (RESTART) (PROMPT)
SLEFRE1 35  (INVDIGS) (PAUSE4) (RESTART) (PROMPT)
SLEFRE1 36  (ENTERDN) (PAUSE4) (RESTART) (PROMPT)
SLEFRE2 37  (DIALED) (DNMID) (PRESENT) (PAUSE4) (CONTEXIT)
            (PROMPT)
SLEFRE2 38  (PRIVPRES) (PAUSE4) (CONTEXIT) (PROMPT)
SLEFRE1 39  (ABSENT) (PAUSE4) (RESTARTX) (PROMPT)
SLEFRE1 40  (ILLEGAL) (PAUSE4) (RESTART) (PROMPT)

                    –continued–
```

Figure 8-32 MAP display example for table DRMUSERS (continued)

```
USERANN      PHSLIST
-------------------------------------------------------------

SLEFRE2 41  (FULL) (PAUSE4) (CONTINUE) (PROMPT)
SLEFRE2 42  (EMPTY) (PAUSE4) (OTHEROPT) (PROMPT)
SLEFRE2 43  (NOPRIV) (PAUSE2) (CONTEXIT) (PROMPT)
SLEFRE2 44  (LISTINFO) (PAUSE4) (OTHEROPT) (PROMPT)
SLEFRE2 45  (NOPREVDN) (PAUSE2)
SLEFRE2 47  (MANUALS)
SLEFRE2 48  (SERVINTR)
SLEFRE2 49  (VALFAIL) (PAUSE4) (CONTINUE) (PROMPT)
SLEFRE1 50  (LISTEDIT) (PROMPT)
SLEFRE1 51  (LISTADD) (PROMPT)
SLEFRE1 52  (LISTDEL) (PROMPT)
SLEFRE2 53  (LISTREV) (PROMPT)
SLEFRE1 54  (PROGRDN) (PROMPT)
SLEFRE1 55  (FORCEADD) (PAUSE2) (ADDENTRY) (PROMPT)
SLEFRE1 56  (LISTEDIT) (PROMPT)
SLEFRE1 57  (LISTADD) (PROMPT)
SLEFRE1 58  (LISTDEL) (PROMPT)
SLEFRE2 59  (LISTREV)
SLEFRE1 61  (FORCEADD) (PAUSE2) (ADDENTRY) (PROMPT)
```

Note: All SLE phrases are virtual phrases.

DRAMREC utility

To assign all the phrases on each DRAM for SLE, the following commands can be used in the DRAMREC utility. These phrases make up the actual contents of each virtual phrase listed in table DRMUSERS.

Figure 8-33 MAP display example

```
DRAMREC:

<command> <dram> <phrasename> <length> <block> <phraseno>
{PEC 1X76BP}
ASSIGN 0 SLEFRE170  27 0  4
ASSIGN 0 SLEFRE171  27 1  4
{PEC 1X76BQ}
ASSIGN 0 SLEFRE030   6 2  4
ASSIGN 0 SLEFRE107   4 2  5
ASSIGN 0 SLEFRE109   3 2  6
ASSIGN 0 SLEFRE042   4 2  7
ASSIGN 0 SLEFRE091   5 3  4
ASSIGN 0 SLEFRE139  10 3  5
ASSIGN 0 SLEFRE140   8 3  6
ASSIGN 0 SLEFRE096   3 3  7
ASSIGN 0 SLEFRE094   3 3  8
```

Figure 8-34 MAP display example

```
DRAMREC:

<command> <dram> <phrasename> <length> <block> <phraseno>
{PEC 1X76BR}
ASSIGN 0 SLEFRE168  15 4  4
ASSIGN 0 SLEFRE169  10 5  4
{PEC 1X76BS}
ASSIGN 0 SLEFRE002   1 6  0
ASSIGN 0 SLEFRE003   1 6  3
ASSIGN 0 SLEFRE029   5 6  4
ASSIGN 0 SLEFRE112   4 6  5
ASSIGN 0 SLEFRE113   4 6  6
ASSIGN 0 SLEFRE108   4 6  7
ASSIGN 0 SLEFRE106   5 6  8
ASSIGN 0 SLEFRE114   6 6  9
ASSIGN 0 SLEFRE115   6 6 10
ASSIGN 0 SLEFRE119   4 6 11
ASSIGN 0 SLEFRE004   1 6 12
ASSIGN 0 SLEFRE141  22 7  4
ASSIGN 0 SLEFRE142  23 7  5
ASSIGN 0 SLEFRE143  22 7  6
ASSIGN 0 SLEFRE144  23 7  7
```

Figure 8-35 MAP display example

```
DRAMREC:

<command> <dram> <phrasename> <length> <block> <phraseno>
{PEC 1X76BT}
ASSIGN 1 SLEFRE036   2 0  4
ASSIGN 1 SLEFRE105   4 0  5
ASSIGN 1 SLEFRE039   3 0  6
ASSIGN 1 SLEFRE080   3 0  7
ASSIGN 1 SLEFRE081   4 0  8
ASSIGN 1 SLEFRE084   3 0  9
ASSIGN 1 SLEFRE082   3 0 10
ASSIGN 1 SLEFRE021   3 0 11
ASSIGN 1 SLEFRE034   5 0 12
ASSIGN 1 SLEFRE035   2 0 13
ASSIGN 1 SLEFRE086   3 0 14
ASSIGN 1 SLEFRE032   3 0 15
ASSIGN 1 FHIRI0      1 1  4
ASSIGN 1 FHIRI1      1 1  5
ASSIGN 1 FHIRI2      1 1  6
ASSIGN 1 FHIRI3      1 1  7
ASSIGN 1 FHIRI4      1 1  8
ASSIGN 1 FHIRI5      1 1  9
ASSIGN 1 FHIRI6      1 1 10
ASSIGN 1 FHIRI7      1 1 11
ASSIGN 1 FHIRI8      1 1 12
ASSIGN 1 FHIRI9      1 1 13
ASSIGN 1 FLORI0      1 1 14
ASSIGN 1 FLORI1      1 1 15
ASSIGN 1 FLORI2      1 1 16
ASSIGN 1 FLORI3      1 1 17
ASSIGN 1 FLORI4      1 1 18
ASSIGN 1 FLORI5      1 1 19
ASSIGN 1 FLORI6      1 1 20
ASSIGN 1 FLORI7      1 1 21
ASSIGN 1 FLORI8      1 1 22
ASSIGN 1 FLORI9      1 1 23
ASSIGN 1 FWAVE0      1 1 24
ASSIGN 1 FWAVE1      1 1 25
ASSIGN 1 FWAVE2      1 1 26
ASSIGN 1 FWAVE3      1 1 27
ASSIGN 1 FWAVE4      1 1 28
ASSIGN 1 FWAVE5      1 1 29
ASSIGN 1 FWAVE6      1 1 30
```

Figure 8-36 MAP display example

```
DRAMREC:

<command> <dram> <phrasename> <length> <block> <phraseno>
{PEC 1X76BT} (continued)
ASSIGN 1 FWAVE7     1 1 31
ASSIGN 1 FWAVE8     1 1 32
ASSIGN 1 FWAVE9     1 1 33
ASSIGN 1 FFALL0     1 1 34
ASSIGN 1 FFALL1     1 1 35
ASSIGN 1 FFALL2     1 1 36
ASSIGN 1 FFALL3     1 1 37
ASSIGN 1 FFALL4     1 1 38
ASSIGN 1 FFALL5     1 1 39
ASSIGN 1 FFALL6     1 1 40
ASSIGN 1 FFALL7     1 1 41
ASSIGN 1 FFALL8     1 1 42
ASSIGN 1 FFALL9     1 1 43
ASSIGN 1 FFLTA0     1 1 44
ASSIGN 1 FFLTA1     1 1 45
ASSIGN 1 FFLTA2     1 1 46
ASSIGN 1 FFLTA3     1 1 47
ASSIGN 1 FFLTA4     1 1 48
ASSIGN 1 FFLTA5     1 1 49
ASSIGN 1 FFLTA6     1 1 50
ASSIGN 1 FFLTA7     1 1 51
ASSIGN 1 FFLTA8     1 1 52
ASSIGN 1 FFLTA9     1 1 53
ASSIGN 1 FFLTB0     1 1 54
ASSIGN 1 FFLTB1     1 1 55
ASSIGN 1 FFLTB2     1 1 56
ASSIGN 1 FFLTB3     1 1 57
ASSIGN 1 FFLTB4     1 1 58
ASSIGN 1 FFLTB5     1 1 59
ASSIGN 1 FFLTB6     1 1 60
ASSIGN 1 FFLTB7     1 1 61
ASSIGN 1 FFLTB8     1 1 62
ASSIGN 1 FFLTB9     1 1 63
```

Figure 8-37 MAP display example

```
DRAMREC:

<command> <dram> <phrasename> <length> <block> <phraseno>
{PEC 1X76BU}
ASSIGN 1 SLEFRE071   4 2  4
ASSIGN 1 SLEFRE068   4 2  5
ASSIGN 1 SLEFRE074   4 2  6
ASSIGN 1 SLEFRE075   4 2  7
ASSIGN 1 SLEFRE070   4 2  8
ASSIGN 1 SLEFRE073   4 2  9
ASSIGN 1 SLEFRE072   4 2 10
ASSIGN 1 SLEFRE069   4 2 11
ASSIGN 1 SLEFRE067   4 2 12
ASSIGN 1 SLEFRE031   5 2 13
ASSIGN 1 SLEFRE012   3 3  4
ASSIGN 1 SLEFRE009   3 3  5
ASSIGN 1 SLEFRE017   3 3  6
ASSIGN 1 SLEFRE015   3 3  7
ASSIGN 1 SLEFRE016   3 3  8
ASSIGN 1 SLEFRE018   3 3  9
ASSIGN 1 SLEFRE011   3 3 10
ASSIGN 1 SLEFRE014   3 3 11
ASSIGN 1 SLEFRE013   3 3 12
ASSIGN 1 SLEFRE010   3 3 13
ASSIGN 1 SLEFRE008   3 3 14
ASSIGN 1 SLEFRE001   8 3 15
```

Figure 8-38 MAP display example

```
DRAMREC:

<command> <dram> <phrasename> <length> <block> <phraseno>
{PEC 1X76BV}
ASSIGN 1 SLEFRE048   3 4  4
ASSIGN 1 SLEFRE045   3 4  5
ASSIGN 1 SLEFRE053   3 4  6
ASSIGN 1 SLEFRE055   3 4  7
ASSIGN 1 SLEFRE051   3 4  8
ASSIGN 1 SLEFRE052   3 4  9
ASSIGN 1 SLEFRE054   3 4 10
ASSIGN 1 SLEFRE047   3 4 11
ASSIGN 1 SLEFRE050   3 4 12
ASSIGN 1 SLEFRE049   3 4 13
ASSIGN 1 SLEFRE046   3 4 14
ASSIGN 1 SLEFRE043   3 4 15
ASSIGN 1 SLEFRE025   6 4 16
ASSIGN 1 SLEFRE059   3 5  4
ASSIGN 1 SLEFRE056   3 5  5
ASSIGN 1 SLEFRE064   3 5  6
ASSIGN 1 SLEFRE066   3 5  7
ASSIGN 1 SLEFRE062   3 5  8
ASSIGN 1 SLEFRE063   3 5  9
ASSIGN 1 SLEFRE065   3 5 10
ASSIGN 1 SLEFRE058   3 5 11
ASSIGN 1 SLEFRE061   3 5 12
ASSIGN 1 SLEFRE060   3 5 13
ASSIGN 1 SLEFRE057   3 5 14
ASSIGN 1 SLEFRE044   3 5 15
```

Figure 8-39 MAP display example

```
DRAMREC:

<command> <dram> <phrasename> <length> <block> <phraseno>
{PEC 1X76BW}
ASSIGN 1 SLEFRE002   1 6  0
ASSIGN 1 SLEFRE003   1 6  3
ASSIGN 1 SLEFRE121   3 6  4
ASSIGN 1 SLEFRE122   3 6  5
ASSIGN 1 SLEFRE025   5 6  6
ASSIGN 1 SLEFRE118   6 6  7
ASSIGN 1 SLEFRE038   4 6  8
ASSIGN 1 SLEFRE116   5 6  9
ASSIGN 1 SLEFRE041   4 6 10
ASSIGN 1 SLEFRE117   6 6 11
ASSIGN 1 SLEFRE076   4 7  4
ASSIGN 1 SLEFRE019   3 7  5
ASSIGN 1 SLEFRE078   4 7  6
ASSIGN 1 SLEFRE077   4 7  7
ASSIGN 1 SLEFRE004   1 7  8
ASSIGN 1 SLEFRE111   4 7  9
ASSIGN 1 SLEFRE079   3 7 10
ASSIGN 1 SLEFRE110   4 7 11
ASSIGN 1 SLEFRE080   4 7 12
```

Announcement phrases

The following sections list the set of announcement phrases defined for SLE. Each component is assigned a name to be used in table DRMUSERS which identifies the phrases that compose an SLE announcement.

Announcement phrases supplying information

The following table defines the set of SLE announcement phrases that provide basic information about the status of the service, remote DN and screening list size and contents.

Table 8-2 General SLE information (Sheet 1 of 2)

Phrase description	Phrase name
Status of Service	STATINFO
List Summary	LISTINFO
List is Empty	EMPTY
List is Full	FULL

Table 8-2 General SLE information (Sheet 2 of 2)

Phrase description	Phrase name
First DN in List	FIRSTDN
Next DN in List	NEXTDN
Previous DN in List	PREVDN
Current DN in List	CURRDN
Number Dialed	DIALED
Remote DN	REMDN
DN Within Phrase List	DNMID
DN at End of Phrase List	DNEND
Delete Public Entry Warning	PUBDNWARN
Delete Private Entry Warning	PRIVDNWARN
Delete All Entries Warning	ALL WARN
Delete Private Entries Warning	PRIVWARN

Announcement phrases providing directions

These phrases comprise the basic building blocks for SLE instructional announcements. The following table defines the set of SLE announcement phrases that provide general SLE directions.

Table 8-3 General SLE directions (Sheet 1 of 2)

Phrase description	Phrase name
General SLE Instructions	INITSLE
Initial Screening Service Instructions	INITSERV
List Editing Instructions	LISTEDIT
List Addition Instructions	LISTADD
List Deletion Instructions	LISTDEL
List Review Instructions	LISTREV
Program Remote DN Instructions	PROGRDN
Force Addition Instructions	FORCEADD

Table 8-3 General SLE directions (Sheet 2 of 2)

Phrase description	Phrase name
Instructions to Add an Entry	ADDENTRY
Confirm Action Instructions	CONFIRM

Announcement phrases prompting for user input

The following table defines the set of SLE announcement phrases that signal the user that input is expected.

Table 8-4 Prompting for user input

Phrase description	Phrase name
Continue	CONTINUE
Continue or Hang Up	CONTEXIT
Start Again	RESTART
Start Again or Hang Up	RESTARTX
Try Other Options	OTHEROPT
Must Enter DN	ENTERDN
Prompt Tone	PROMPT
Pause 1/4 second	PAUSE0
Pause 1 second	PAUSE1
Pause 2 seconds	PAUSE2
Pause 3 seconds	PAUSE3
Pause 4 seconds	PAUSE4

Announcement phrases indicating success

The following table defines the set of SLE announcement phrases that indicate that a command has been executed successfully.

Table 8-5 Successful completion of a command (Sheet 1 of 2)

Phrase description	Phrase name
Public Entry Added	ADDED
Private Entry Added	ADDPRIV

Table 8-5 Successful completion of a command (Sheet 2 of 2)

Phrase description	Phrase name
Public DN Already on List	PRESENT
Private DN Already on List	PRIVPRES
Public Entry Deleted	DELETED
Private Entry Deleted	DELPRIV
DN Not on List	ABSENT
All Entries Deleted	ALLDEL
Private Entries Deleted	PRIVDEL
No Private Entries	NOPRIV
End of List	ENDOFLIST
Input Erased	ERASED
Command Cancelled	CANCELLED

Announcement phrases indicating failure

The following table defines the set of SLE announcement phrases that indicate that the execution of a command has failed.

Table 8-6 Command failure

Phrase description	Phrase name
Invalid command	INVCMD
Invalid DN	INVDIGS
Not Permitted	NOTPERM
No Last Calling DN	NOLASTDN
No Previous Entry	NOPREVDN
Short Term Denial	VALFAIL
Long Term Denial	ILLEGAL
Service Interrupted	SERVINTR
Consult Written Instructions	MANUALS

SLE DRAM physical phrase text

The following tables (one per 1x76 PROM) document the mapping from SLE phrases to the actual message text.

> ***Note:*** There can be more than one distinct phrase associated with any given SLEENGnnn. For example, SLEENG123 on PROM 1X76AW01 can be assigned to phrase number 4 or phrase number 6.

Likewise, an identical message can appear on two different PROMs. In this case, only one of the messages should be assigned with the SLE phrase number. For example, SLEENG002 is a <1-second pause> and should only be assigned to one PROM per DRAM, even though it is defined at phrase number 0 on every PROM.

Table 8-7 PROM 1X76AP virtual card 01

Phr SLEENG	LEN	Blk	Phr Number	Message text
002	1	0	0	<One second silence>
003	1	0	3	<1/4 second silence>
109	5	0	4	We are sorry. The digits dialed are not a valid command.
114	7	0	5	We are sorry. You must dial a telephone number after dialing the number sign key or the star key.
115	9	0	6	We are sorry. You must dial a telephone number after dialing 1, 2, or 1,1.

Table 8-8 PROM 1X76AP virtual card 02 (Sheet 1 of 2)

Phr SLEENG	LEN	Blk	Phr Number	Message text
002	1	1	0	<One second silence>
003	1	1	3	<1/4 second silence>
004	1	1	8	<CLASS prompt tone>
141	21	1	4	To turn this service on, dial 3; to add an entry, press the number sign key; to remove one or more entries, press the star key; to hear the entries on your list, dial 1; to hear these instructions repeated, dial 0; Please dial now.

Table 8-8 PROM 1X76AP virtual card 02 (Sheet 2 of 2)

Phr SLEENG	LEN	Blk	Phr Number	Message text
142	21	1	5	To turn this service off, dial 3; to add an entry, press the number sign key; to remove one or more entries, press the star key; to hear the entries on your list, dial 1; to hear these instructions repeated, dial 0; Please dial now.
143	22	1	6	To turn this service on, dial 3; to add an entry, dial 1, 2; to remove one or more entries, dial 1,1; to hear the entries on your list, dial 1; to hear these instructions repeated, dial 0; Please dial now.
144	22	1	7	To turn this service off, dial 3; to add an entry, dial 1, 2; to remove one or more entries, dial 1, 1; to hear the entries on your list, dial 1; to hear these instructions repeated, dial 0; Please dial now.

Table 8-9 PROM 1X76AQ virtual card 01

Phr SLEENG	LEN	Blk	Phr Number	Message text
002	1	2	0	<One second silence>
003	1	2	3	<1/4 second silence>
025	5	2	4	Please continue, dial 0 for instructions, or hang up.
030	5	2	5	Please start again, dial 0 for instructions, or hang up.
034	4	2	6	The number is already on your list as a private entry.
041	3	2	7	The number you have removed is a private entry.
042	3	2	8	The number to be removed is not on your list.
080	3	2	9	There are no more entries on your list.
081	3	2	10	There are no more private entries on your list.
038	3	2	11	The number you have added is a private entry.

Table 8-10 PROM 1X76AQ virtual card 02

Phr SLEENG	LEN	Blk	Phr Number	Message text
002	1	3	0	<One second silence>
003	1	3	3	<1/4 second silence>
029	4	3	4	Please start again, or dial 0 for instructions.
106	5	3	5	We are sorry. The number you have dialed is not available with this service.
107	4	3	6	We are sorry. The number you have dialed is incorrect.
108	5	3	7	We are sorry. The number of the last calling party is not available.
112	4	3	8	We are sorry. You have dialed too few digits.
113	4	3	9	We are sorry. You have dialed too many digits.
119	3	3	10	You have cleared the digits dialed.

Table 8-11 PROM 1X76AR virtual card 01 (Sheet 1 of 2)

Phr SLEENG	LEN	Blk	Phr Number	Message text
002	1	4	0	<One second silence>
003	1	4	3	<1/4 second silence>
094	3	4	4	To add an entry, dial 1, 2.
096	4	4	5	To add an entry, please press the number sign key.
140	8	4	6	To reject the last calling party, dial 1, 2 and then dial 0, 1.
139	11	4	7	To reject the last calling party, press the number sign key, dial 0, 1 and then press the number sign key again.

Table 8-11 PROM 1X76AR virtual card 01 (Sheet 2 of 2)

Phr SLEENG	LEN	Blk	Phr Number	Message text
091	4	4	8	To turn on this service, you must add an entry to your list.
111	8	4	9	We are sorry. This service is being interrupted. Please hang up and try again in a few minutes.

Table 8-12 PROM 1X76AR virtual card 02

Phr SLEENG	LEN	Blk	Phr Number	Message text
002	1	5	0	<One second silence>
003	1	5	3	<1/4 second silence>
024	4	5	4	Please continue, or dial 0 for instructions.
031	5	5	5	Please try other options, or dial 0 for instructions.
105	5	5	6	We are sorry. Please try adding the number again in a few minutes.
110	4	5	7	We are sorry. There are no entries on your list.
116	7	5	8	We are sorry. Your list is full. You must remove an entry before adding another.

Table 8-13 PROM 1X76AS virtual card 01 (Sheet 1 of 2)

Phr SLEENG	LEN	Blk	Phr Number	Message text
002	1	6	0	<One second silence>
003	1	6	3	<1/4 second silence>

Table 8-13 PROM 1X76AS virtual card 01 (Sheet 2 of 2)

Phr SLEENG	LEN	Blk	Phr Number	Message text
170	23	6	4	Dial the number to be removed, then press the star key again. To remove all entries, dial 0, 8 then press the star key again; to remove just the private entries, dial 0, 9 then press the star key again; to hear these instructions repeated, dial 0; Please dial now.
171	17	6	5	Dial the number to be removed. To remove all entries, dial 0, 8; to remove just the private entries, dial 0, 9; to hear these instructions repeated, dial 0. Please dial now.

Table 8-14 PROM 1X76AS virtual card 02

Phr SLEENG	LEN	Blk	Phr Number	Message text
002	1	7	0	<One second silence>
003	1	7	3	<1/4 second silence>
168	14	7	4	Dial the number to be added, then press the number sign key again. To add the last calling party, dial 0, 1 then press the number sign key again. Please dial now.
169	9	7	5	Dial the number to be added. To add the last calling party, dial 0, 1. Please dial now.
146	8	7	6	Please dial the number to which you want your calls forwarded, then press the number sign key. Please dial now.
147	6	7	7	Please dial the number to which you want your calls forwarded. Please dial now.

Table 8-15 PROM 1X76AT virtual card 01

Phr SLEENG	LEN	Blk	Phr Number	Message text
002	1	0	0	<One second silence>
003	1	0	3	<1/4 second silence>
021	2	0	4	Next,
022	3	0	5	Next, extension
032	2	0	6	Repeating,
033	3	0	7	Repeating, extension
035	2	0	8	The number you have dialed,
020	2	0	9	is not permitted.
036	2	0	10	The number you have added is
037	3	0	11	The number you have added is extension
039	2	0	12	The number you have removed is
040	3	0	14	The first entry on your list is extension
082	2	0	14	The first entry on your list is
083	3	0	15	The first entry on your list is extension
086	3	0	16	This number is already on your list
087	4	0	17	This number is already on your list. Extension
120	3	0	18	Your calls will be forwarded to

Note: PROM 1X76AT virtual card 02 contains the digits ranging from 0 to 9 in various intonations. The correct selection of these digits and intonations provides a natural-sounding human voice. These digits and their corresponding intonations are not documented in this appendix.

Table 8-16 PROM 1X76AU virtual card 01 (Sheet 1 of 2)

Phr SLEENG	LEN	Blk	Phr Number	Message text
002	1	2	0	<One second silence>
003	1	2	3	<1/4 second silence>
067	3	2	4	There is one private entry on your list.

Table 8-16 PROM 1X76AU virtual card 01 (Sheet 2 of 2)

Phr SLEENG	LEN	Blk	Phr Number	Message text
068	3	2	5	There are two private entries on your list.
069	3	2	6	There are three private entries on your list.
070	3	2	7	There are four private entries on your list.
071	3	2	8	There are five private entries on your list.
072	3	2	9	There are six private entries on your list.
073	3	2	10	There are seven private entries on your list.
074	3	2	11	There are eight private entries on your list.
075	3	2	12	There are nine private entries on your list.
076	3	2	13	There are ten private entries on your list.
077	3	2	14	There are eleven private entries on your list.
078	3	2	15	There are twelve private entries on your list.

Table 8-17 PROM 1X76AU virtual card 02 (Sheet 1 of 2)

Phr SLEENG	LEN	Blk	Phr Number	Message text
002	1	3	0	<One second silence>
003	1	3	3	<1/4 second silence>
008	2	3	4	including one private entry.
009	3	3	5	including two private entries.
010	2	3	6	including three private entries.
011	3	3	7	including four private entries.
012	3	3	8	including five private entries.
013	3	3	9	including six private entries.
014	3	3	10	including seven private entries.
015	3	3	11	including eight private entries.
016	3	3	12	including nine private entries.

Table 8-17 PROM 1X76AU virtual card 02 (Sheet 2 of 2)

Phr SLEENG	LEN	Blk	Phr Number	Message text
017	3	3	13	including ten private entries.
018	3	3	14	including eleven private entries.
019	3	3	15	including twelve private entries.
084	3	3	16	This is the end of your list.
085	3	3	17	This is the end of your list. Your list is now empty.

Table 8-18 PROM 1X76AV virtual card 01

Phr SLEENG	LEN	Blk	Phr Number	Message text
002	1	4	0	<One second silence>
003	1	4	3	<1/4 second silence>
025	5	4	4	Please continue, dial 0 for instructions, or hang up.
024	5	4	5	Please continue, dial 0 for instructions.
043	2	4	6	There is one entry on your list.
045	2	4	7	There are two entries on your list.
046	2	4	8	There are three entries on your list.
047	2	4	9	There are four entries on your list.
048	2	4	10	There are five entries on your list.
049	2	4	11	There are six entries on your list.
050	2	4	12	There are seven entries on your list.
051	2	4	13	There are eight entries on your list.
052	2	4	14	There are nine entries on your list.
053	2	4	15	There are ten entries on your list.
054	2	4	16	There are eleven entries on your list.
055	2	4	17	There are twelve entries on your list.

Table 8-19 PROM 1X76AV virtual card 02

Phr SLEENG	LEN	Blk	Phr Number	Message text
002	1	5	0	<One second silence>
003	1	5	3	<1/4 second silence>
031	5	5	4	Please try other options, or dial 0 for instructions.
044	3	5	5	There is one entry on your list.
056	2	5	6	There are two entries on your list.
057	2	5	7	There are three entries on your list.
058	2	5	8	There are four entries on your list.
059	2	5	9	There are five entries on your list.
060	2	5	10	There are six entries on your list.
061	2	5	11	There are seven entries on your list.
062	2	5	12	There are eight entries on your list.
063	2	5	13	There are nine entries on your list.
064	2	5	14	There are ten entries on your list.
065	2	5	15	There are eleven entries on your list.
066	2	5	16	There are twelve entries on your list.
079	3	5	17	There are no entries on your list.

Table 8-20 PROM 1X76AW virtual card 01 (Sheet 1 of 2)

Phr SLEENG	LEN	Blk	Phr Number	Message text
002	1	6	0	<One second silence>
003	1	6	3	<1/4 second silence>
123	3	6	4	Your Call Block service is now on.
124	3	6	5	Your Call Block service is now off.
Note: SLEENG123 and SLEENG124 are repeated on this PROM to allow the office to identify SCRJ as either Call Blocking or Call Screen. Select one of the above SLEENG assignments.				

Table 8-20 PROM 1X76AW virtual card 01 (Sheet 2 of 2)

Phr SLEENG	LEN	Blk	Phr Number	Message text
123	3	6	6	Your Call Screen service is now on.
124	3	6	7	Your Call Screen service is now off.
127	3	6	8	Your Selective Call Forwarding service is now on.
128	3	6	9	Your Selective Call Forwarding service is now off.
129	4	6	10	Your Distinctive Ringing Call Waiting service is now on.
130	4	6	11	Your Distinctive Ringing Call Waiting service is now off.
229	3	6	12	Your Avoid-a-Call service is now on.
230	3	6	13	Your Avoid-a-Call service is now on.
004	1	6	14	<CLASS prompt tone>

Note: SLEENG123 and SLEENG124 are repeated on this PROM to allow the office to identify SCRJ as either Call Blocking or Call Screen. Select one of the above SLEENG assignments.

Table 8-21 PROM 1X76AW virtual card 02

Phr SLEENG	LEN	Blk	Phr Number	Message text
002	1	7	0	<One second silence>
003	1	7	3	<1/4 second silence>
007	8	7	4	If this number is correct, dial 1. If this number is incorrect, dial 0.
026	2	7	5	Please dial now.
117	7	7	6	We are sorry, please hang up now, consult your written instructions, and try again later.
118	6	7	8	You may dial during the announcements for faster service. When you are finished, hang up.
001	8	7	9	After hearing an entry, you may dial 0, 7 to delete it and continue reviewing your list.

Table 8-22 PROM 1X76GA virtual card 01

Phr SLEENG	LEN	Blk	Phr Number	Message text
002	1	0	0	<One second silence>
003	1	0	3	<1/4 second silence>
008	2	0	11	including one private entry.
009	3	0	12	including two private entries.
010	2	0	13	including three private entries.
011	3	0	14	including four private entries.
012	3	0	15	including five private entries.
013	3	0	16	including six private entries.
014	3	0	17	including seven private entries.
015	3	0	18	including eight private entries.
016	3	0	19	including nine private entries.
018	3	0	4	including eleven private entries.
019	3	0	5	including twelve private entries.
210	3	0	6	including thirteen private entries.
211	3	0	7	including fourteen private entries.
212	3	0	8	including fifteen private entries.
213	3	0	9	including sixteen private entries.
214	3	0	10	including seventeen private entries.

Table 8-23 PROM 1X76GA virtual card 02 (Sheet 1 of 2)

Phr SLEENG	LEN	Blk	Phr Number	Message text
002	1	1	0	<One second silence>
003	1	1	3	<1/4 second silence>
017	3	1	4	including ten private entries.
215	3	1	5	including eighteen private entries.

Table 8-23 PROM 1X76GA virtual card 02 (Sheet 2 of 2)

Phr SLEENG	LEN	Blk	Phr Number	Message text
216	3	1	6	including nineteen private entries.
217	3	1	7	including twenty private entries.
218	3	1	8	including twenty-one private entries.
219	3	1	9	including twenty-two private entries.
220	3	1	10	including twenty-three private entries.
221	3	1	11	including twenty-four private entries.
222	3	1	12	including twenty-five private entries.
223	3	1	13	including twenty-six private entries.
224	3	1	14	including twenty-seven private entries.
225	3	1	15	including twenty-eight private entries.
226	3	1	16	including twenty-nine private entries.
227	3	1	17	including thirty private entries.
228	3	1	18	including thirty-one private entries.

Table 8-24 PROM 1X76GB virtual card 01 (Sheet 1 of 2)

Phr SLEENG	LEN	Blk	Phr Number	Message text
002	1	2	0	<One second silence>
003	1	2	3	<1/4 second silence>
191	3	2	4	There are thirteen private entries on your list.
192	3	2	5	There are fourteen private entries on your list.
193	3	2	6	There are fifteen private entries on your list.
194	3	2	7	There are sixteen private entries on your list.
195	3	2	8	There are seventeen private entries on your list.
196	3	2	9	There are eighteen private entries on your list.
197	3	2	10	There are nineteen private entries on your list.

Table 8-24 PROM 1X76GB virtual card 01 (Sheet 2 of 2)

Phr SLEENG	LEN	Blk	Phr Number	Message text
198	3	2	11	There are twenty private entries on your list.
199	3	2	12	There are twenty-one private entries on your list.
200	3	2	13	There are twenty-two private entries on your list.
201	3	2	14	There are twenty-three private entries on your list.

Table 8-25 PROM 1X76GB virtual card 02

Phr SLEENG	LEN	Blk	Phr Number	Message text
002	1	3	0	<One second silence>
003	1	3	3	<1/4 second silence>
202	3	3	4	There are twenty-four private entries on your list.
203	3	3	5	There are twenty-five private entries on your list.
204	3	3	6	There are twenty-six private entries on your list.
205	3	3	7	There are twenty-seven private entries on your list.
206	3	3	8	There are twenty-eight private entries on your list.
207	3	3	9	There are twenty-nine private entries on your list.
208	3	3	10	There are thirty private entries on your list.
209	3	3	11	There are thirty-one private entries on your list.
031	3	3	12	Please try other options, or dial 0 for instructions.

Table 8-26 PROM 1X76GC virtual card 01

Phr SLEENG	LEN	Blk	Phr Number	Message text
002	1	4	0	<One second silence>
003	1	4	3	<1/4 second silence>
172	3	4	4	There are thirteen entries on your list,
173	3	4	5	There are fourteen entries on your list,
174	3	4	6	There are fifteen entries on your list,
175	3	4	7	There are sixteen entries on your list,
176	3	4	8	There are seventeen entries on your list,
177	3	4	9	There are eighteen entries on your list,
178	3	4	10	There are nineteen entries on your list,
179	3	4	11	There are twenty entries on your list,
180	3	4	12	There are twenty-one entries on your list,
181	3	4	13	There are twenty-two entries on your list,
182	3	4	14	There are twenty-three entries on your list,
183	3	4	15	There are twenty-four entries on your list,
184	3	4	16	There are twenty-five entries on your list,

Table 8-27 PROM 1X76GC virtual card 02 (Sheet 1 of 2)

Phr SLEENG	LEN	Blk	Phr Number	Message text
002	1	5	0	<One second silence>
003	1	5	3	<1/4 second silence>
185	3	5	4	There are twenty-six entries on your list,
186	3	5	5	There are twenty-seven entries on your list,
187	3	5	6	There are twenty-eight entries on your list,
188	3	5	7	There are twenty-nine entries on your list,

Table 8-27 PROM 1X76GC virtual card 02 (Sheet 2 of 2)

Phr SLEENG	LEN	Blk	Phr Number	Message text
189	3	5	8	There are thirty entries on your list,
190	3	5	9	There are thirty-one entries on your list,

9 Appendix C: Quick Reference for logical phrase ENGDATIME

Defining the logical phrase ENGDATIME

The addition of the CLASS AR Date and Time feature causes updates to the phrase lists in table DRMUSERS. To achieve the update, the changes are made through the DRAM recording (DRAMREC) utility. The logical phrase ENGDATIME is built from a combination of physical phrases. These physical phrases include the month, day, hour, minute, and A.M. or P.M. indicator. The logical phrase is announced as “August 21 at 4:11 P.M."

Note: Before datafilling announcements for ENGDATIME, read “Datafilling announcements" in this document for Subscriber Services general announcement information.

Required physical phrases

When ENGDATIME is datafilled for the CLASS AR Date and Time feature, a number of physical phrases must be assigned. These phrases provide the announcements for the month, day, and time of day, including the A.M. or P.M. indicator.

Recommended datafill for table DRAMS

The following example shows recommended datafill for table DRAMS.

Figure 9-1 MAP display example for table DRAMS

```
DRAMCARD TMTYPE TMNO TMCKT CARDCODE   CARDINFO
2 3      MTM     4    6    1X76JA      PROM 2 3
```

Recommended datafill for table CLLI

The following example shows recommended datafill for table CLLI.

Figure 9-2 MAP display example for table CLLI

```
CLLI     ADNUM TRKGRSIZ          ADMININF
-------------------------------------------
CLASSANN 898      2              ENGDATIME
```

Recommended datafill for table ANNS

The following example shows recommended datafill for table ANNS.

Figure 9-3 MAP display example for table ANNS

```
CLLI     ANNTYPE TRAFSNO MAXCONN CYTIME MAXCYC
-----------------------------------------------
CLASSANN CLASS     30       1      0      1
```

Recommended datafill for table ANNMEMS

The following example shows recommended datafill for table ANNMEMS.

Figure 9-4 MAP display example for table ANNMEMS

```
ANNMEM       HDWTYPE     CARD      MEMINFO
-----------------------------------------------
CLASSANN 1     DRAM       DRA      0 MTM 4 5 $
CLASSANN 2     DRAM       DRA      0 MTM 4 6 $
CLASSANN 3     DRAM       DRA      0 MTM 4 7 $
CLASSANN 4     DRAM       DRA      0 MTM 4 8 $
```

Assigning the physical phrases through DRAMREC utility

The following are the assignments for the phrases defined in the CLASS AR Date and Time feature.

Figure 9-5 MAP display example for table DRAMREC - assigning phrases

```
DRAMREC:

<command> <dram> <phrasename> <length> <block> <phraseno>
ASSIGN 2 CLASSENG7   6   5   7
ASSIGN 2 CLASSENG12  6   5   6
ASSIGN 2 CLASSENG16  3   5   4
ASSIGN 2 CLASSENG17  5   5   8
ASSIGN 2 CLASSENG22  3   5   5
ASSIGN 2 CLASSENG23  2   5   9
```

The following are the assignments, on the 1X76JB card, for the English month phrases.

Figure 9-6 MAP display example for table DRAMREC - assigning English month phrases

```
DRAMREC:

<command> <dram> <phrasename> <length> <block> <phraseno>
  ASSIGN 2 ENGJANUARY   1   6   4
  ASSIGN 2 ENGFEBRUAR   1   6   5
  ASSIGN 2 ENGMARCH     1   6   6
  ASSIGN 2 ENGAPRIL     1   6   7
  ASSIGN 2 ENGMAY       1   6   8
  ASSIGN 2 ENGJUNE      1   6   9
  ASSIGN 2 ENGJULY      1   6   A
  ASSIGN 2 ENGAUGUST    1   6   B
  ASSIGN 2 ENGSEPTEMB   1   6   C
  ASSIGN 2 ENGOCTOBER   1   6   D
  ASSIGN 2 ENGNOVEMBE   1   6   E
  ASSIGN 2 ENGDECEMBE   1   6   F
```

The following are the assignments, on the 1X76JB card, for the English numbers 01 to 09 for minutes and 1 to 59 for the days, hours, and remainder of the minute phrases.

Figure 9-7 MAP display example for table DRAMREC - assigning English date and time

```
DRAMREC:

 <command> <dram> <phrasename> <length> <block> <phraseno>


   ASSIGN 2 ENGNUM01    1   6    #13
   ASSIGN 2 ENGNUM02    1   6    #14
   ASSIGN 2 ENGNUM03    1   6    #15
   ASSIGN 2 ENGNUM04    1   6    #16
   ASSIGN 2 ENGNUM05    1   6    #17
   ASSIGN 2 ENGNUM06    1   6    #18
   ASSIGN 2 ENGNUM07    1   6    #19
   ASSIGN 2 ENGNUM08    1   6    #1A
   ASSIGN 2 ENGNUM09    1   6    #1B
   ASSIGN 2 ENGNUM1     1   6    #1C
   ASSIGN 2 ENGNUM2     1   6    #1D
   ASSIGN 2 ENGNUM3     1   6    #1E
   ASSIGN 2 ENGNUM4     1   6    #1F
   ASSIGN 2 ENGNUM5     1   6    #20
   ASSIGN 2 ENGNUM6     1   6    #21
   ASSIGN 2 ENGNUM7     1   6    #22
   ASSIGN 2 ENGNUM8     1   6    #23
   ASSIGN 2 ENGNUM9     1   6    #24
   ASSIGN 2 ENGNUM10    1   6    #25
   ASSIGN 2 ENGNUM11    1   6    #26
   ASSIGN 2 ENGNUM12    1   6    #27
   ASSIGN 2 ENGNUM13    1   6    #28
   ASSIGN 2 ENGNUM14    1   6    #29
   ASSIGN 2 ENGNUM15    1   6    #2A
   ASSIGN 2 ENGNUM16    1   6    #2B
   ASSIGN 2 ENGNUM17    1   6    #2C
   ASSIGN 2 ENGNUM18    1   6    #2D
   ASSIGN 2 ENGNUM19    1   6    #2E
   ASSIGN 2 ENGNUM20    1   6    #2F
   ASSIGN 2 ENGNUM21    1   6    #30
   ASSIGN 2 ENGNUM22    1   6    #31
   ASSIGN 2 ENGNUM23    1   6    #32
```

Figure 9-8 MAP display example for table DRAMREC - assigning English date and time (continued)

```
DRAMREC:(continued)

 <command> <dram> <phrasename> <length> <block> <phraseno>
   ASSIGN 2 ENGNUM24    1   7   4
   ASSIGN 2 ENGNUM25    1   7   5
   ASSIGN 2 ENGNUM26    1   7   6
   ASSIGN 2 ENGNUM27    1   7   7
   ASSIGN 2 ENGNUM28    1   7   8
   ASSIGN 2 ENGNUM29    1   7   9
   ASSIGN 2 ENGNUM30    1   7   A
   ASSIGN 2 ENGNUM31    1   7   B
   ASSIGN 2 ENGNUM32    1   7   C
   ASSIGN 2 ENGNUM33    1   7   D
   ASSIGN 2 ENGNUM34    1   7   E
   ASSIGN 2 ENGNUM35    1   7   F
   ASSIGN 2 ENGNUM36    1   7  10
   ASSIGN 2 ENGNUM37    1   7  11
   ASSIGN 2 ENGNUM38    1   7  12
   ASSIGN 2 ENGNUM39    1   7  13
   ASSIGN 2 ENGNUM40    1   7  14
   ASSIGN 2 ENGNUM41    1   7  15
   ASSIGN 2 ENGNUM42    1   7  16
   ASSIGN 2 ENGNUM43    1   7  17
   ASSIGN 2 ENGNUM44    1   7  18
   ASSIGN 2 ENGNUM45    1   7  19
   ASSIGN 2 ENGNUM46    1   7  1A
   ASSIGN 2 ENGNUM47    1   7  1B
   ASSIGN 2 ENGNUM48    1   7  1C
   ASSIGN 2 ENGNUM49    1   7  1D
   ASSIGN 2 ENGNUM50    1   7  1E
   ASSIGN 2 ENGNUM51    1   7  1F
    ASSIGN 2 ENGNUM52    1   7  20
    ASSIGN 2 ENGNUM53    1   7  21
    ASSIGN 2 ENGNUM54    1   7  22
    ASSIGN 2 ENGNUM55    1   7  23
    ASSIGN 2 ENGNUM56    1   7  24
    ASSIGN 2 ENGNUM57    1   7  25
    ASSIGN 2 ENGNUM58    1   7  26
    ASSIGN 2 ENGNUM59    1   7  27
```

The following are the assignments for the miscellaneous English phrases required for the voiceback message.

Figure 9-9 MAP display example for table DRAMREC - assigning English phrases

```
DRAMREC:

<command> <dram> <phrasename> <length> <block> <phraseno>
   ASSIGN 2 ENGAM  1   6   10
   ASSIGN 2 ENGPM  1   6   11
   ASSIGN 2 ENGAT  1   6   12
```

10 Appendix D: Quick reference for switch timers, announcements, and treatments for ACB/AR

ACB/AR switch timers

There are various timers running on both the originating and terminating switches. The values of some timers are datafillable; the values of other timers are derived from other datafilled values. For correct and optimal operation of Automatic Call Back (ACB) and Automatic Recall (AR) in the network, timers should be datafilled in the same way on every switch in the network.

Originating switch timers

The following table lists the originating switch timers that interact with ACB/AR.

Table 10-1 Originating switch timers (Sheet 1 of 2)

Information	Field number
TRING	Monitors the length of time the calling party can receive special recall ringing. TRING is calculated as RINGCYCL * 6.
TSCAN	Specifies the time between line status queries from the originating switch. The timer is started after a busy/idle query receives a reply of busy. TSCAN applies only to queries done during originating scanning. TSCAN is not triggered by a reply to a final busy/idle query.
T2	Specifies the waiting period between unanswered special ringing and reinitiation of the service.

Table 10-1 Originating switch timers (Sheet 2 of 2)

Information	Field number
T5	Specifies the time allowed by the originating switch to receive a response from the terminating switch. The timer starts when a message is sent and stops when the expected response is received. If T5 expires, depending on the message sent, the following actions are taken: • initial query message: deny the feature, give short-term denial treatment (STDENIAL) • request terminating scanning message: assume term scanning cannot be performed, do original scanning • busy/idle query messages: assume the called party is busy
T6	Determines how long delayed processing remains active. This timer starts as soon as the request is validated and delayed processing is invoked. When T6 expires, a cancellation message is sent to the terminating switch for internode ACB/AR. For intranode ACB/AR, the service is deactivated directly. The recommended value of T6 is 30 min.
T10	Ensures that the calling party does not attempt to stay in the terminating queue too long. Starts when the request is validated and an initial query message is sent to the terminating switch. It stops when service is completed. The recommended length of T10 is 180 min.

Terminating switch timers

The following table lists the terminating switch timers that interact with ACB/AR.

Table 10-2 Terminating switch timers (Sheet 1 of 2)

Information	Field number
T7	Controls the time allowed by the terminating switch to receive a response from the originating switch. Expiration of the timer results in a timer expired message being sent to the originating switch and the queue position being placed inactive. For internode ACB/AR, T7 starts with the acceptance of the terminating scanning request and stops when scanning stops for some reason. For intranode ACB/AR, T7 starts when the service is activated.
T8	Starts in the terminating switch when a calling party is notified that the called party is idle (either an idle message is sent or an idle response to a query is sent for internode ACB/AR, or recall is started for the calling party for intranode ACB/AR). If there are other active members in the queue, T8 delays both the placing of the current member inactive and the sending of either an idle message or idle response or a recall message to the next active member.

Table 10-2 Terminating switch timers (Sheet 2 of 2)

Information	Field number
T10	Starts when the terminating switch queues the incoming request. It is stopped by the incoming dequeue request or an internal time-out. If the timer expires, the queue position is freed.
T11	Specifies the amount of time an entry in the queue can remain active after a busy/idle status query is received from the originating switch. T11 starts after each query is tested and found busy. If T11 expires, that request is marked inactive. Other queries can report idle, or a called party free message can be sent to an originator, if the terminator goes on-hook.

ACB/AR announcements

The following table lists the ACB/AR announcements.

Table 10-3 ACB/AR announcements (Sheet 1 of 6)

Disposition	CLASS announcement no.	Context
BUSYANN	6	BUSY treatment. ACB/AR call line has gone busy after the final query.
CONFANN (ACB)	14	CONFirmation ANNouncement ACB. ACB request accepted and terminating line busy.
CONFANN (AR-1)	3	CONFirmation ANNouncement AR one-level activation. One-level activation request accepted and terminating line busy.
CONFANN (AR-2)	11	CONFirmation ANNouncement AR two-level activation. Two-level activation request accepted and terminating line busy.
DEACTANN (ACB)	17	DEACTivation ANNouncement ACB. Successful deactivation of all ACB requests.
DEACTANN (AR)	7	DEACTivation ANNouncement AR. Successful deactivation of all AR requests.
DNANN	10	Directory Number ANNouncement. AR two-level activation after dialing the access code and a valid directory number is in the IMS.
INVANN	9	INValid directory number ANNoucement on AR two-level activation. AR two-level activation when the IMS is empty or the DN is invalid (for example, the last call was from a PTS trunk).
LTDENIAL (ACB)	6	Long-term DENIAL ACB. ACB call attempt when unacceptable service type or DN match indicators are found.

Table 10-3 ACB/AR announcements (Sheet 2 of 6)

Disposition	CLASS announcement no.	Context
	16	Long-term DENIAL ACB. ACB call attempt on an interoffice call where there is no end-to-end CCS7 connectivity.
	16	Long-term DENIAL ACB. ACB call attempt where the class of service is other than unrestricted termination or selective call rejection.
	16	Long-term DENIAL ACB. ACB call attempt where network choking is in effect for called DN.
	16	Long-term DENIAL ACB. ACB call attempt on an international or inter-LATA call.
	16	Long-term DENIAL ACB. ACB call attempt on an 800 or 900 number call.
	16	Long-term DENIAL ACB. ACB call attempt when there is an invalid DN in the OMS.
	16	Long-term DENIAL ACB. ACB call attempt when the called line has MSB or DND activated.
	16	Long-term DENIAL ACB. ACB call attempt when a return error component with an error code of not queued is sent back from the terminating office.
	16	Long-term DENIAL ACB. ACB call attempt on an attendant console or an attendant console subgroup that is out of service.
	16	Long-term DENIAL ACB. ACB call attempt to a 4FR, 8FR, or 10FR line.
	16	Long-term DENIAL ACB. ACB call attempt to a coin line if option COINLINE is set to DENY.
	16	Long-term DENIAL ACB. ACB call attempt to a line that is maintenance busy.
	16	Long-term DENIAL ACB. ACB call attempt to a line that is system busy.
	16	Long-term DENIAL ACB. ACB call attempt to a line that is deloaded.
	16	Long-term DENIAL ACB. ACB call attempt to a line that is locked-out.

Table 10-3 ACB/AR announcements (Sheet 3 of 6)

Disposition	CLASS announcement no.	Context
	16	Long-term DENIAL ACB. ACB call attempt to a line that has option SUS.
	16	Long-term DENIAL ACB. ACB call attempt to a line that has option PLP.
	16	Long-term DENIAL ACB. ACB call attempt to a line that has option RSUS.
LTDENIAL (AR-1)	5	Long-term DENIAL AR one-level activation. AR one-level activation call attempt when unacceptable service type or DN match indicators are found.
	5	Long-term DENIAL AR one-level activation. AR one-level activation call attempt on an interoffice call where there is no end-to-end CCS7 connectivity.
	5	Long-term DENIAL AR one-level activation. AR one-level activation attempt where called line status cannot be determined.
	5	Long-term DENIAL AR one-level activation. AR one-level activation attempt where the class of service is other than unrestricted termination or selective call rejection.
	5	Long-term DENIAL AR one-level activation. AR one-level activation attempt where network choking is in effect for called DN.
	5	Long-term DENIAL AR one-level activation. AR one-level activation attempt on an international or inter-LATA call.
	5	Long-term DENIAL AR one-level activation. AR one-level activation attempt on an 800 or 900 number call.
	5	Long-term DENIAL AR one-level activation. AR one-level activation attempt when there is an invalid DN in the IMS.
	5	Long-term DENIAL AR one-level activation. AR one-level activation attempt when the called line has MSB or DND activated.
	5	Long-term DENIAL AR one-level activation. AR one-level activation attempt when a return error component with an error code of not queued is sent back from the terminating office.
	5	Long-term DENIAL AR one-level activation. AR one-level activation call attempt on an attendant console or an attendant console subgroup that is out of service.

Table 10-3 ACB/AR announcements (Sheet 4 of 6)

Disposition	CLASS announcement no.	Context
	5	Long-term DENIAL AR one-level activation. AR one-level activation call attempt to a 4FR, 8FR, or 10FR line.
	5	Long-term DENIAL AR one-level activation. AR one-level activation call attempt to a coin line if option COINLINE is set to DENY.
	5	Long-term DENIAL AR one-level activation. AR one-level activation call attempt to a line that is maintenance busy.
	5	Long-term DENIAL AR one-level activation. AR one-level activation call attempt to a line that is system busy.
	5	Long-term DENIAL AR one-level activation. AR one-level activation call attempt to a line that is deloaded.
	5	Long-term DENIAL AR one-level activation. AR one-level activation call attempt to a line that is locked-out.
	5	Long-term DENIAL AR one-level activation. AR one-level activation call attempt to a line that has option SUS.
	5	Long-term DENIAL AR one-level activation. AR one-level activation call attempt to a line that has option PLP.
	5	Long-term DENIAL AR one-level activation. AR one-level activation call attempt to a line that has option RSUS.
LTDENIAL (AR-2)	13	Long-term DENIAL AR two-level activation. AR two-level activation call attempt when unacceptable service type or DN match indicators are found.
	13	Long-term DENIAL AR two-level activation. AR two-level activation attempt on an interoffice call where there is no end-to-end CCS7 connectivity.
	13	Long-term DENIAL AR two-level activation. AR two-level activation attempt where called line status cannot be determined.
	13	Long-term DENIAL AR two-level activation. AR two-level activation attempt where the class of service is other than unrestricted termination or selective call rejection.
	13	Long-term DENIAL AR two-level activation. AR two-level activation attempt where network choking is in effect for called DN.
	13	Long-term DENIAL AR two-level activation. AR two-level activation attempt on an international or inter-LATA call.

Table 10-3 ACB/AR announcements (Sheet 5 of 6)

Disposition	CLASS announcement no.	Context
	13	Long-term DENIAL AR two-level activation. AR two-level activation attempt on an 800 or 900 number call.
	13	Long-term DENIAL AR two-level activation. AR two-level activation attempt when the called line has MSB or DND activated.
	13	Long-term DENIAL AR two-level activation. AR two-level activation attempt when a return error component with an error code of not queued is sent back from the terminating office.
	13	Long-term DENIAL AR two-level activation. AR two-level activation call attempt on an attendant console or an attendant console subgroup that is out of service.
	13	Long-term DENIAL AR two-level activation. AR two-level activation call attempt to a 4FR, 8FR, or 10FR line.
	13	Long-term DENIAL AR two-level activation. AR two-level activation call attempt to a coin line if option COINLINE is set to DENY.
	13	Long-term DENIAL AR two-level activation. AR two-level activation call attempt to a line that is maintenance busy.
	13	Long-term DENIAL AR two-level activation. AR two-level activation call attempt to a line that is system busy.
	13	Long-term DENIAL AR two-level activation. AR two-level activation call attempt to a line that is deloaded.
	13	Long-term DENIAL AR two-level activation. AR two-level activation call attempt to a line that is locked-out.
	13	Long-term DENIAL AR two-level activation. AR two-level activation call attempt to a line that has option SUS.
	13	Long-term DENIAL AR two-level activation. AR two-level activation call attempt to a line that has option PLP.
	13	Long-term DENIAL AR two-level activation. AR two-level activation call attempt to a line that has option RSUS.
PRIVANN	8	PRIVate number ANNouncement. AR two-level activation after dialing the access code and a private DN is in the IMS.
STDENIAL (ACB)	15	Short-term DENIAL ACB. ACB call attempt when universal call forwarding is active on the terminator.

Table 10-3 ACB/AR announcements (Sheet 6 of 6)

Disposition	CLASS announcement no.	Context
	15	Short-term DENIAL ACB. ACB call attempt when selective call forwarding is applicable to the calling line.
STDENIAL (AR-1)	4	Short-term DENIAL AR one-level activation. AR one-level activation call attempt when universal call forwarding is active on the terminator.
	4	Short-term DENIAL AR one-level activation. AR one-level activation call attempt when selective call forwarding is applicable to the calling line.
STDENIAL (AR-2)	12	Short-term DENIAL AR two-level activation. AR two-level activation call attempt when universal call forwarding is active on the terminator.
	12	Short-term DENIAL AR two-level activation. AR two-level activation call attempt when selective call forwarding is applicable to the calling line.

ACB/AR treatments

The following table lists the ACB/AR treatments.

Table 10-4 ACB/AR treatments (Sheet 1 of 2)

Disposition	Context
BUSY	BUSY treatment. ACB/AR line has gone busy after the final query.
FNAL	Feature Not ALlowed. ACB/AR not available on line and one of the activation or deactivation codes is dialed.
FNAL	Feature Not ALlowed. ACB/AR not enabled in Table RESOFC upon activation or deactivation.
NACK	Negative ACKnowledgement. Exceeded 30 concurrent ACB/AR requests.
NACK	Negative ACKnowledgement. T5 expiration.
NACK	Negative ACKnowledgement. AR two-level timeout on digit collection after DN Voiceback.
NACK	Negative ACKnowledgement. AR two-level invalid digit dialed after DN Voiceback.
NACK	Negative ACKnowledgement. Call is interoffice and called party's office does not support ACB/AR.

Table 10-4 ACB/AR treatments (Sheet 2 of 2)

Disposition	Context
NACK	Negative ACKnowledgement. Upon activating ACB/AR after a flash when the calling line is already in a call.
NACK	Negative ACKnowledgement. Upon receiving an SCCP error of Network Failure.
NACK	Negative ACKnowledgement. Upon receiving an SCCP error of Network Congestion.
NACK	Negative ACKnowledgement. Upon receiving an SCCP error of Subsystem Failure.
NACK	Negative ACKnowledgement. Upon receiving an SCCP error of Subsystem Congestion.
NBLH	Network BLocking Heavy traffic. Attempt to activate ACB/AR under heavy traffic.
NBLH	Network BLocking Heavy traffic. Network blockage or lack of connections during the startup of digit collection for AR two-level activation.
NOSC	NO Service Circuit. Failure to start some ACB/AR announcements.
NOSR	NO Software Resource. Lack of local resources (for example, no feature blocks).
NOSR	NO Software ResouRce. Lack of FTRQs or FDBs on ACB/AR activation.
NOSR	NO Software ResouRce. Failure to send initial TCAP query.
NOSR	NO Software ResouRce. Failure to send final TCAP busy/idle query.
NOSR	NO Software ResouRce. Lack of FDBs to start digit collection during AR two-level activation.
SYFL	SYstem FaiLure. Race condition where TCAP requests ACB/AR to clean up while beginning CONFANN or BUSYANN.
SYFL	SYstem FaiLure. Race condition where an internal switch message is lost.
SYFL	SYstem FaiLure. T6 or T10 expires at the same time the user answers special ringing (race condition).

11 Appendix E: TCAP CLASS subsystem datafill

In order to make the custom local area signaling service (CLASS) subsystem known to the DMS switch, an entry must be added to each of the following Common Channel Signaling 7 (CCS7) tables listed in the following table.

Note: This section assumes that the reader has previous knowledge of CCS7. For more information, refer to *Common Channel Signaling 7 Maintenance Reference Manual*, 297-1001-531.

Table 11-1 TCAP CLASS datafill (Sheet 1 of 2)

Table	Description	Attributes
C7LOCSSN	This table contains the datafill for the local subsystem resident at this node.	This table provides the following attributes: • subsystem name • subsystem number (SSN) • number of instances of the subsystem • indication of replication at another PC • TFMI indicator • list of concerned PCs, which require notification on subsystem status changes ***Note:*** The subsystem must be busied and returned to service from the SCCPLOC level of the MAP terminal.
C7NETSSN	This table contains the datafill for the remote PCs and remote subsystems that are of concern to SCCP at this node.	This table provides the following attributes: • PC name (routeset CLLI) • list of subsystems at the PC, where each subsystem consists of the subsystem name and SSN. ***Note:*** Each CLASS remote point code in Table C7NETSSN has to be busied and returned to service from the SCCPRPC level of the MAP. Also, CLASS must be busied and returned to service for that given remote point code from the SCCPRSS sublevel of the SCCPRPC level for CLASS features to work properly between nodes.
In order to allow the CLASS subsystem to communicate with other subsystems at other nodes, an entry must be added to each of the following CCS7 tables:		

Table 11-1 TCAP CLASS datafill (Sheet 2 of 2)

Table	Description	Attributes
C7NETC7G	This table provides the mapping of an internally defined translation and a network-defined translation-type value.	This table provides the following attributes: • network translation type • network translation number • internal translation type
C7GTT	This table provides the mapping of translation type to a CCS7 address that SCCP can use to route messages to their destination.	This table provides the following attributes: • network translation type • “from" and “to" digits for translation purposes • SCCP routing result

Subsystem datafill example

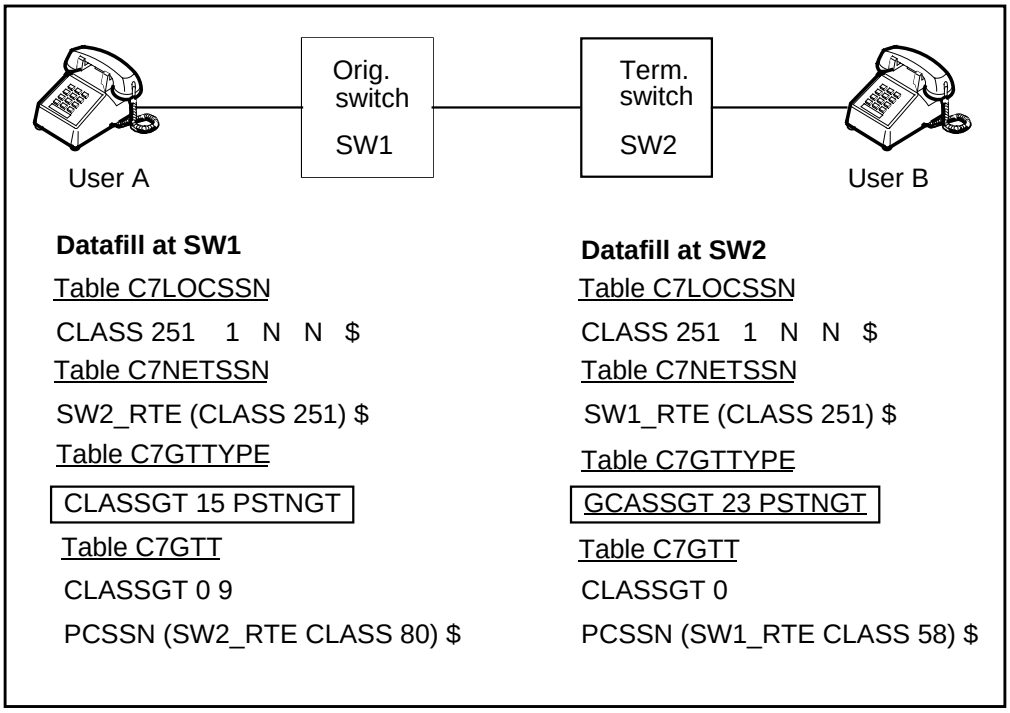
Assume a transaction capability application part (TCAP) link exists between two switches in a CCS7 network. User A on SW1 (originating switch) attempts to use Automatic Call Back (ACB)/Automatic Recall (AR) on user B on SW2 (terminating switch). The following figure shows the datafill required by the SCCP in order to route messages to the CLASS subsystem at either node.

Note 1: To function properly, all CCS7 linksets and routesets must first be busied and then returned to service.

Note 2: The Bellcore-recommended value for CLASS subsystems is 251.

Note 3: Datafilling tables C7LOCSSN, C7NETSSN, C7GTTYPE, and C7GTT as shown permits ACB/AR TCAP messages to be correctly routed.

Figure 11-1 Subsystem datafill for CLASS



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