Critical Release Notice

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The content of this customer NTP supports the SN06 (DMS) software release.

Bookmarks used in this NTP highlight the changes between the baseline NTP 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 baseline NTP remains unchanged and is valid for the current release.

Bookmark Color Legend

Black: Applies to new or modified content for the baseline NTP 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.

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

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Digital Switching Systems

UCS DMS-250

Reorigination Application Guide

UCS12 Standard 03.02 November 1999

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UCS DMS-250

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November 1998

Initial Standard release, 01.02, of this document for UCS09 (CSP09 and CSP10) software release.

October 1998

Initial Preliminary release, 01.01, of this document for UCS09 (CSP09 and CSP10) software release.

Contents

Figures

Tables

About this document

This document describes the Reorigination feature for the UCS DMS-250 switch. This document also provides information on how to implement, administer, and test the feature.

Intended audiences

This document is intended for use by operating company personnel who are responsible for setting up the Reorigination feature for the UCS DMS-250 switch. This document is also intended for use by personnel who have received training and have a technical knowledge of the UCS DMS-250 switch operation. It is assumed that the operating company personnel know how to use the table editor for the UCS DMS-250 switch.

How this document is organized

The chapters in this document provide the following:

Chapter 1, Reorigination overview

Chapter 1 provides an overview of reorigination for different call types.

Chapter 2, Reorigination implementation

Chapter 2 provides data schema information and datafill requirements for Reorigination on the UCS DMS-250 switch.

Chapter 3, Reorigination operations, administration, and maintenance

Chapter 3 provides operations, administration, and maintenance information for Reorigination.

Appendix A, KP REORIG key sequence

Appendix A describes how the KP REORIG key sequence works for reorigination on operator services calls.

How to check the version and issue of this document

The version and issue of the document are indicated by numbers, for example, 01.01.

The first two digits indicate the version. The version number increases each time the document is updated to support a new software release. For example, the first release of a document is 01.01. In the *next* software release cycle, the first release of the same document is 02.01.

The second two digits indicate the issue. The issue number increases each time the document is revised but rereleased in the *same* software release cycle. For example, the second release of a document in the same software release cycle is 01.02.

This document is written for all UCS DMS-250 Family offices. More than one version of this document may exist. To determine whether you have the latest version of this document and how documentation for your product is organized, check the release information in *UCS DMS-250 Master Index of Publications*.

References in this document

The following documents are referred to in this document:

- *DMS-100 Family Basic Translations Tools Guide*, 297-1001-360
- *UCS DMS-250 Alarm and Performance Monitoring Procedures Reference Manual*, 297-2621-543
- *UCS DMS-250 Billing Records Application Guide*, 297-2621-395
- *UCS DMS-250 Data Schema Reference Manual*, 297-2621-851
- *UCS DMS-250 Flexdial Framework Application Guide*, 297-2621-390
- *UCS DMS-250 Mechanized Calling Card Services (MCCS) Application Guide, 297-2621-305*
- *UCS DMS-250 Master Index of Publications*, 297-2621-001
- *UCS DMS-250 NetworkBuilder Application Guide*, 297-2621-370
- *UCS DMS-250 Office Parameters Reference Manual*, 297-2621-855
- *UCS DMS-250 Software Optionally Control (SOC) User's Manual*, 297-2621-301
- *UCS DMS-250 SS7 RLT Feature Application Guide*, 297-2621-345

What precautionary messages mean

The types of precautionary messages used in Nortel Networks documents include attention boxes and danger, warning, and caution messages.

An attention box identifies information that is necessary for the proper performance of a procedure or task or the correct interpretation of information or data. Danger, warning, and caution messages indicate possible risks.

Examples of the precautionary messages follow.

ATTENTION Information needed to perform a task

ATTENTION

If the unused DS-3 ports are not deprovisioned before a DS-1/VT Mapper is installed, the DS-1 traffic will not be carried through the DS-1/VT Mapper, even though the DS-1/VT Mapper is properly provisioned.

DANGER Possibility of personal injury

DANGER

Risk of electrocution

Do not open the front panel of the inverter unless fuses F1, F2, and F3 have been removed. The inverter contains high-voltage lines. Until the fuses are removed, the high-voltage lines are active, and you risk being electrocuted.

WARNING Possibility of equipment damage

WARNING

Damage to the backplane connector pins

Align the card before seating it, to avoid bending the backplane connector pins. Use light thumb pressure to align the card with the connectors. Next, use the levers on the card to seat the card into the connectors.

CAUTION Possibility of service interruption or degradation

CAUTION

Possible loss of service

Before continuing, confirm that you are removing the card from the inactive unit of the peripheral module. Subscriber service will be lost if you remove a card from the active unit.

How commands, parameters, and responses are represented

Commands, parameters, and responses in this document conform to the following conventions.

Input prompt (>)

An input prompt (>) indicates that the information that follows is a command:

>BSY

Commands and fixed parameters

Commands and fixed parameters that are entered at a MAP terminal are shown in uppercase letters:

>BSY CTRL

Variables

Variables are shown in lowercase letters:

>BSY CTRL ctrl_no

The letters or numbers that the variable represents must be entered. Each variable is explained in a list that follows the command string.

Responses

Responses correspond to the MAP display and are shown in a different type:

```
FP 3 Busy CTRL 0: Command request has been submitted.
FP 3 Busy CTRL 0: Command passed.
```

The following excerpt from a procedure shows the command syntax used in this document:

1 Manually busy the CTRL on the inactive plane by typing

>BSY CTRL ctrl_no
and pressing the Enter key.

where

ctrl_no is the number of the CTRL (0 or 1)

Example of a MAP response:

```
FP 3 Busy CTRL 0: Command request has been submitted.
FP 3 Busy CTRL 0: Command passed.
```

Reorigination overview

Reorigination allows a subscriber to place additional calls without disconnecting from the UCS DMS-250 network, after placing the first call over trunk agents that support the Reorigination feature. This chapter describes reorigination for the following types of calls:

- Normal
- Signaling System 7 (SS7) Release Link Trunk (RLT)

This chapter also provides the following information about the Reorigination feature:

- feature interactions
- hardware receivers that support the Reorigination feature
- restrictions, including treatment restrictions, and limitations

Normal reorigination

The Reorigination feature allows a subscriber to place additional calls over a supported trunk agency. The datafill in tables OFCVAR and TRKSGRP determines if and when a subscriber can reoriginate. The Reorigination feature allows a subscriber to select automatic or manual reorigination. The datafill in the Recall Dial Tone (RECALLDT) field of table TRKGRP for the supported trunk agency determines if a subscriber can reoriginate automatically after a called party disconnects (automatic reorigination), or if a subscriber must press the octathorpe (#) key (manual reorigination) to place additional calls.

When reorigination occurs, the UCS DMS-250 switch does not revalidate the Travel Card Number (TCN) unless the Reorigination Validation (REORGVAL) trunk group option is set in table TRKGRP. Account codes are always recollected regardless of the REORGVAL option.

Note: Refer to Chapter 2, “Reorigination implementation,” for hardware and datafill requirement information.

Reorigination digit

The Reorigination feature supports the Dual-tone Multifrequency (DTMF) octathorpe digit (#) to invoke reorigination. For NetworkBuilder calls, the Reorigination feature supports the octathorpe digit and the asterisk (*) digit to invoke reorigination.

Note: Refer to *UCS DMS-250 NetworkBuilder Application Guide* for more information on NetworkBuilder calls.

Supported call types and billing types

Normal reorigination supports the following call types and billing types:

- authorization code
- Automatic Number Identification (ANI)
- Mechanized Calling Card Service (MCCS) Travel Card Number (TCN)

Incompatible call types

The following call types are incompatible with normal reorigination and are not allowed to reoriginate:

- calls that invoke a Class of Service (COS) override
- data calls
- hot line calls
- INWATS calls (unless designated as calling party billed)
- MCCS Mechanized Voice Prompts (MVP) (applies to automatic reorigination only, manual reorigination MCCS MVP calls can reoriginate.)
- NetworkBuilder calls during the processing of Network_Busy and O_Called_Party_Busy messages.
- SACREMOT calls unless designated as calling party billed

Supported trunk types

The UCS DMS-250 switch supports the Reorigination feature on a trunk group basis. Subscribers can use the feature over the following trunk types:

- Dedicated Access Line (DAL)
- Equal Access Network Trunk (EANT) [Signaling System 7 (SS7) and Per-trunk Signaling (PTS)]
  - — The EANT is also known as a Feature Group D (FGD) trunk.
- SS7 Inter-Network Inter machine trunk (IMT) Universal Access (UA) trunk
- Global IMT UA trunk
- Offnet access line (ONAL)
  - — The ONAL is also known as a Feature Group A (FGA) trunk.
- Offnet access trunk (ONAT)
  - — The ONAT is also known as Feature Group B (FGB) and Feature Group C (FGC) trunks.

Unsupported trunk types

The following trunks do not support the Reorigination feature:

- Electronic dedicated access line (EDAL)
- Mexican R2
- Primary Rate Access 250 (PRA250)

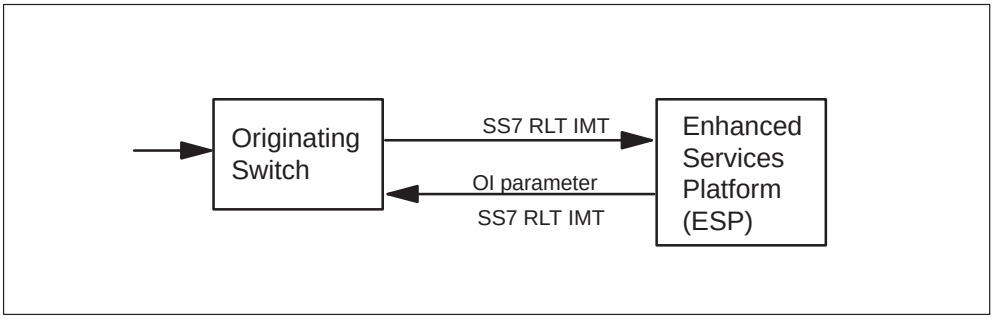
KP REORIG key

The Operator Reorigination Key and Screen Display feature allows the operator to override the trunk group datafill, change the reorigination type, and the method of enabling reorigination for a call. This feature requires placing SOC option URLT0001 in the ON state. Refer to Appendix A, “KP REORIG Key Sequence,” for an overview of how this sequence works.

SS7 RLT reorigination

The Operator Information (OI) parameter received in an SS7 IAM message enables reorigination for calls over SS7 IMT RLT trunks. For SS7 RLT calls, an applicable SS7 message must include the OI parameter to enable reorigination. SS7 RLT calls do not have to be operator services calls. SS7 RLT calls can route to an ESP as shown in Figure 1-1. Any OI parameters received override the current setting.

Figure 1-1
SS7 RLT to ESP call routing diagram example



The host switch sends the OI parameter to the originating switch. The OI parameter can be included in one of the following SS7 messages:

- ANM (answer)
- Reorigination facility request (FAR)
- Bridging FAR
- Redirect FAR

Note: If the ANM includes the OI parameter, the full functionality of UCS RLT reorigination is not available. Full functionality is provided only with the FAR message types listed in the preceding paragraph.

The ALL_RLT_OPR_CALLS office parameter in table OFCVAR controls how the UCS DMS-250 switch handles non-operator calls when made over RLT trunks. When set to "Y," the UCS DMS-250 switch handles non-operator calls exactly like operator service calls. When set to "N," the UCS DMS-250 switch handles non-operator calls normally. The UCS DMS-250 switch handles 0+ and 0– calls as operator service calls regardless of the setting for the ALL_RLT_OPR_CALLS office parameter.

Boomerang reorigination

The Boomerang reorigination feature automatically reconnects the subscriber to the service provider upon reorigination. To accomplish this, the UCS DMS-250 switch uses the originally dialed address digits. The subscriber does not dial new address digits.

OI parameter format

Figure 1-2 shows the format of the OI parameter. The fields shown in bold provision reorigination over SS7 IMT RLT trunks. For information on the other fields, refer to the *UCS DMS-250 SS7 RLT Feature Application Guide*.

Figure 1-2
OI parameter format

	8	7	6	5	4	3	2	1
Octet 1	Operator Number							
Octet 2	**Reorigination Type**		Operator Number					
Octet 3	OPR	Entry Code						
Octet 4	TAC	Trouble Indicator						
Octet 5	ODD/ EVEN	**Bridge Reorig Control**	Action Response					
Octet 6	Term Route Code				Feat Code			
Octet 7	UTR Digit*+		**Reorigination Trigger Type+**				ANI BIlling Indicator+	
Octet 8	**Reorigination+ allowed**		STR Digit*	STR key Duration at Talking*				
Octet 9	Spare		Immed	STR key Duration at Non-Talking+*				
Octet 10	Spare			Disconnect Timer				
Octet 11	Spare							
Octet 12	Spare							

+ These fields are not included when the OI is received in an ANM. If they are included, then these fields are ignored.
* These fields are used only with AXXESS originators.

Reorigination Type field

The Reorigination Type field describes the type of reorigination behavior for the call. The range of values and the meaning of each value are as follows:

- 00
  - — If operator services reorigination is allowed and reorigination is invoked, the originator receives dial tone. A new dialed number is collected, translated, and routed.

— This value is supported from an ESP.

- 01
  - — If operator services reorigination is allowed and reorigination is invoked, the call is immediately translated and routed based on the original dialed number. Dial tone is not returned, and new digits are not collected.
  - — Uses the originally dialed number to route the reoriginated call (boomerang reorigination). This value is supported only from an ESP.
- 10
  - — Disallow reorigination. This value is supported from an ESP.
  - — No reorigination is allowed for the call.
- 11
  - — If the OI parameter is received in an ANM, then disallow reorigination. Otherwise, reorigination setup is defined by the Reorigination Trigger Type and Reorigination Allowed fields of the OI parameter. This value is supported from an ESP.

Bridge Reorig Control field

This field specifies whether the bridging switch should bridge the call when reorigination resources cannot be allocated. This field applies only when the OI parameter is received in a Bridge or Redirect FAR message. The values are as follows:

- 0
  - — The call bridges even if reorigination resources are not allocated.
- 1
  - — The call does not bridge if reorigination resources are not allocated.

Reorigination Trigger Type field

This field specifies how reorigination is invoked. This field is used only when the value for the Reorigination Type field is 11 and the OI parameter is received in one of the FAR messages. For all other values and messages, this field is ignored. The range of values and their meanings are as follows:

- 0000
  - — Reorigination is invoked as provisioned at the originating switch (uses the RECALLDT field in table TRKGRP for the originating switch.)
- 0001
  - — AUTO reorigination

- 0010
  - — MANUAL reorigination

Note: The other values are used only by AXXESS originators. For information about the other values, refer to the *UCS DMS-250 Flexdial Framework Application Guide*.

Reorigination Allowed field

This field specifies the type of reorigination to be used. This field is used only when the value for the Reorigination Type field is 11 and the OI parameter is received in one of the FAR messages. For all other values and messages, this field is ignored. The range of values and their meanings are as follows:

- 00
  - — No change from the previous reorigination allowed. Normal for the first origination.
- 01
  - — Normal reorigination allowed. New dialed digits are collected and used to route the call.
- 10
  - — Boomerang reorigination allowed. Dialed digits from the original call are reused to route the call.
- 11
  - — Spare/Unused.

Short digit duration reorigination

The Short Digit Duration Reorigination feature interfaces with the UCS DMS-250 Reorigination feature to provide short duration recognition of the reoriginating digit using the SPM or the STR card NT6X62EA.

The short digit duration reorigination triggers, restrictions and limitations apply to both the SPM and STR card NT6X62EA types of short digit duration reorigination.

Short digit duration reorigination on the SPM

The SPM Short Digit Duration Reorigination feature interworks with the UCS DMS-250 Reorigination feature to provide short duration recognition of the reoriginating digit using the SPM. With short duration recognition, SPM DTMF receivers are capable of detecting reorigination tones with a duration in the range of 40 milliseconds to 300 milliseconds. This feature supports reorigination capable legacy and AXXESS trunk originators.

Short digit duration reorigination with STR card NT6X62EA

The Enhanced Reorigination with STR card NT6X62EA feature provides the UCS DMS-250 switch with a minimum short duration of 40 milliseconds for reorigination on PTS and SS7 originating Legacy and AXXESS reorigination capable agents. This feature implements a reorigination time shorter than 500 milliseconds with the NT6X62EA card.

The STR NT6X62EA card detects DTMF digits as short as 40 milliseconds in duration followed by 40 milliseconds of silence. The STR NT6X62EA is an optional hardware card that scans all 480 trunks on a digital trunk controller (DTC) for the DTMF tone generated by either the asterisk (*) or the octothorpe (#) keys that are used to initiate reorigination. When the STR NT6X62EA card detects the specified tone, dial-tone is provides to the caller who can then originate a new call.

Short digit duration reorigination triggers

Short duration recognition of the reorigination digit is controlled by office parameter REORIG_SHORT_OR_LONG. This parameter is set to SHORT to enable the SPM DTMF receivers to recognize the reorigination digit with a tone duration in the range of 40 ms to 300 ms. If the value of parameter REORIG_SHORT_OR_LONG is set to LONG, reorigination tones with a duration less than 500 ms will not be recognized.

Legacy trunk agents

Legacy trunk agents with reorigination capabability enter datafill values in office parameter REORIG_DIGIT_DURATION to determine reorigination digit detection duration. When the value of office parameter REORIG_SHORT_OR_LONG is set to SHORT, the REORIG_DIGIT_DURATION values entered are based on 10 ms intervals (40 to 300 ms). If the value of office parameter REORIG_SHORT_OR_LONG is set to LONG, the REORIG_DIGIT_DURATION values entered are based on 100 ms intervals (500 to 3000 ms).

AXXESS trunk agents

With FlexDial, AXXESS trunk agents with reorigination capabilities use values datafilled in fields TKEYDUR and NTKEYDUR of the REORGTYP option in table FLEXFEAT to determine reorigination digit detection duration. When the value of office parameter REORIG_SHORT_OR_LONG is set to SHORT, the TKEYDUR and NTKEYDUR values entered are based on 10 ms intervals (40 to 300 ms). When the value of office parameter REORIG_SHORT_OR_LONG is set to LONG, the TKEYDUR and NTKEYDUR values entered are based on 100 ms intervals (500 to 3000 ms).

Short digit duration reorigination restrictions and limitations

The following restrictions and limitations apply to the Short Digit Duration Reorigination feature:

- The short duration recognition functionality affects the reorigination digit tone detection duration only. It does not alter the invocation of reorigination.
- This feature provides short duration reorigination on Legacy and AXXESS reorigination capable agents only.

Reorigination receivers

This section provides information about the hardware receivers that support the Reorigination feature.

DTMF

Dual-tone Multifrequency (DTMF) receivers, card number NT2X48AB, collect DTMF digits for a specific trunk. The UCS DMS-250 switch has a pool of DTMF receivers which all digital trunk controllers (DTCs) share. Table RECEIVER provisions DTMF receivers for the UCS DMS-250 switch. Refer to Chapter 2, “Reorigination implementation,” for more information on provisioning DTMF receivers.

STR

Specialized Tone Receivers (STRs), card number NT6X62AA, are optional hardware on a DTC. STRs can constantly scan 480 trunks for a specific dialed digit. Although the STRs can scan 480 trunks at once, the STRs can only report up to five simultaneous occurrences. Table LTCINV provisions STRs for the UCS DMS-250 switch. Refer to Chapter 2, “Reorigination overview,” for more information on provisioning STR receivers.

DTMF and STR differences

There are five major differences between using DTMF and STR receivers.

- DTMF receivers attach to a single trunk and can scan only one trunk at a time. STRs can scan all 480 trunks on a DTC simultaneously.
- DTMF receivers can detect reorigination before answer and shortly after clear back or disconnect. STRs can detect reorigination during the talking state as well as before answer and after clear back. DTMF receivers detach from the trunk during the talking state to better share the receivers among all 480 trunks on a DTC.
- STRs do not attach to a single trunk like DTMF receivers. As a result, there is less messaging between the switch and the DTC, and call reorigination is faster and more efficient.

- STRs allow a variable length of time that the subscriber must depress the reorigination digit to invoke reorigination. This time duration is adjustable between 500 and 3000 milliseconds. DTMF receivers do not have this variable capability.
- STRs can not be used with ISDN digital trunk controllers (DTCIs). DTMF receivers can be used for non-PRI trunks provisioned on DTCIs. The Reorigination feature is not supported on PRI trunks.

Reorigination timelines

Figure 1-3 shows when a normal call can reoriginate when DTMF receivers are used to detect the reorigination digit. Figure 1-4 shows when a normal call can reoriginate when STRs are used to detect the reorigination digit.

Figure 1-3
DTMF receiver reorigination timeframe for normal calls

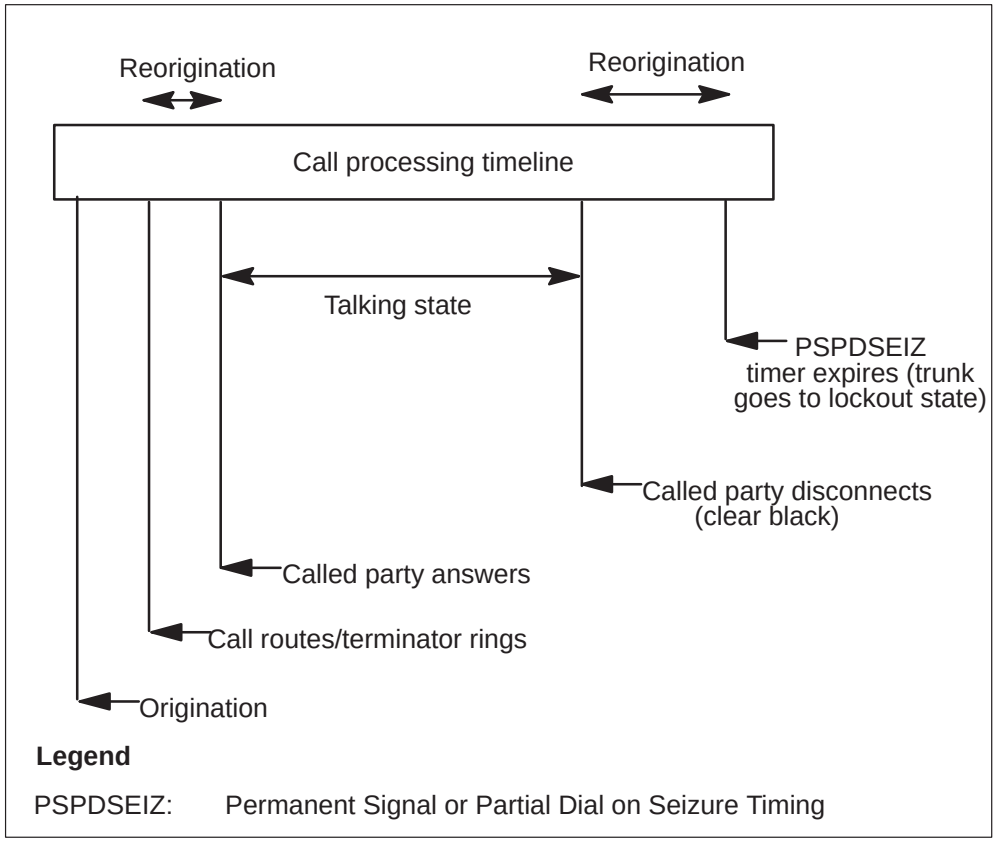
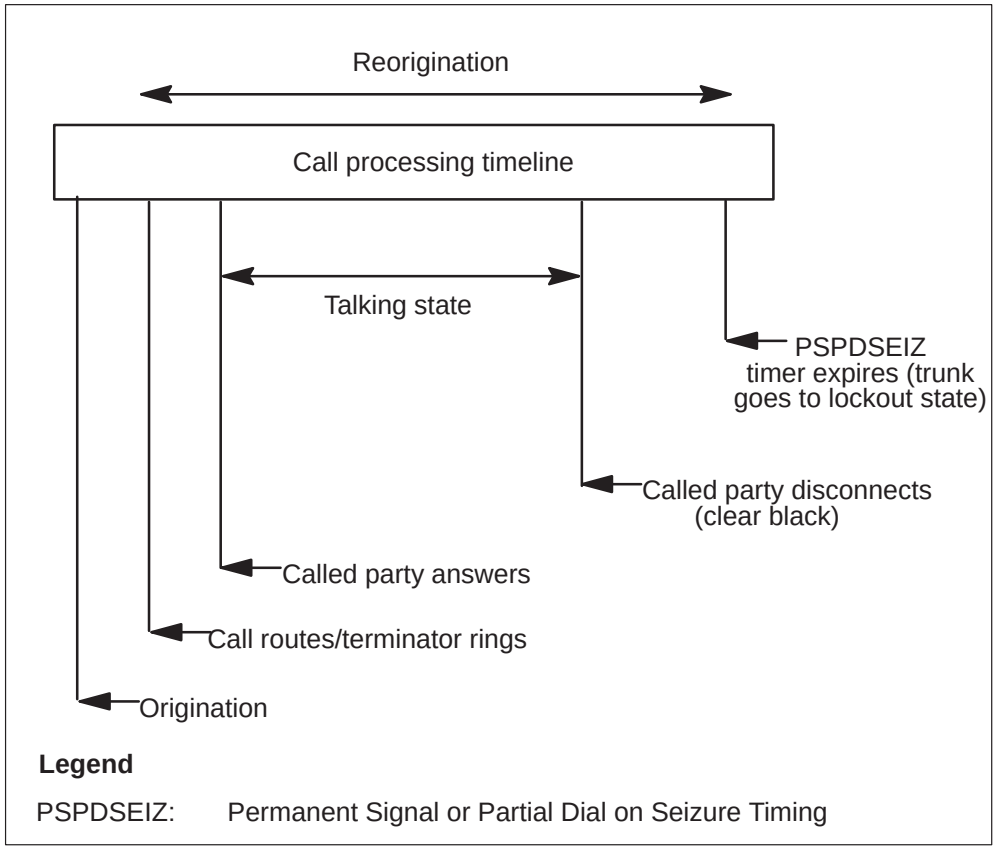


Figure 1-4
STR reorigination timeframe for normal calls



Figures 1-5 and 1-6 show when an operator-assisted call can reoriginate when DTMF receivers are used to detect the reorigination digit. Figures 1-5 shows the timeframe before the called party answers. Figures 1-6 shows the timeframe after the called party answers.

Figures 1-7 and 1-8 show when an operator-assisted call can reoriginate when STRs are used to detect the reorigination digit. Figures 1-7 shows the timeframe before the called party answers. Figures 1-8 shows the timeframe after the called party answers.

The figures that show the operator bridge before answer (Figure 1-5 and Figure 1-7) apply to SS7 RLT calls also.

Figure 1-5
DTMF reorigination timeframe, operator bridge before answer

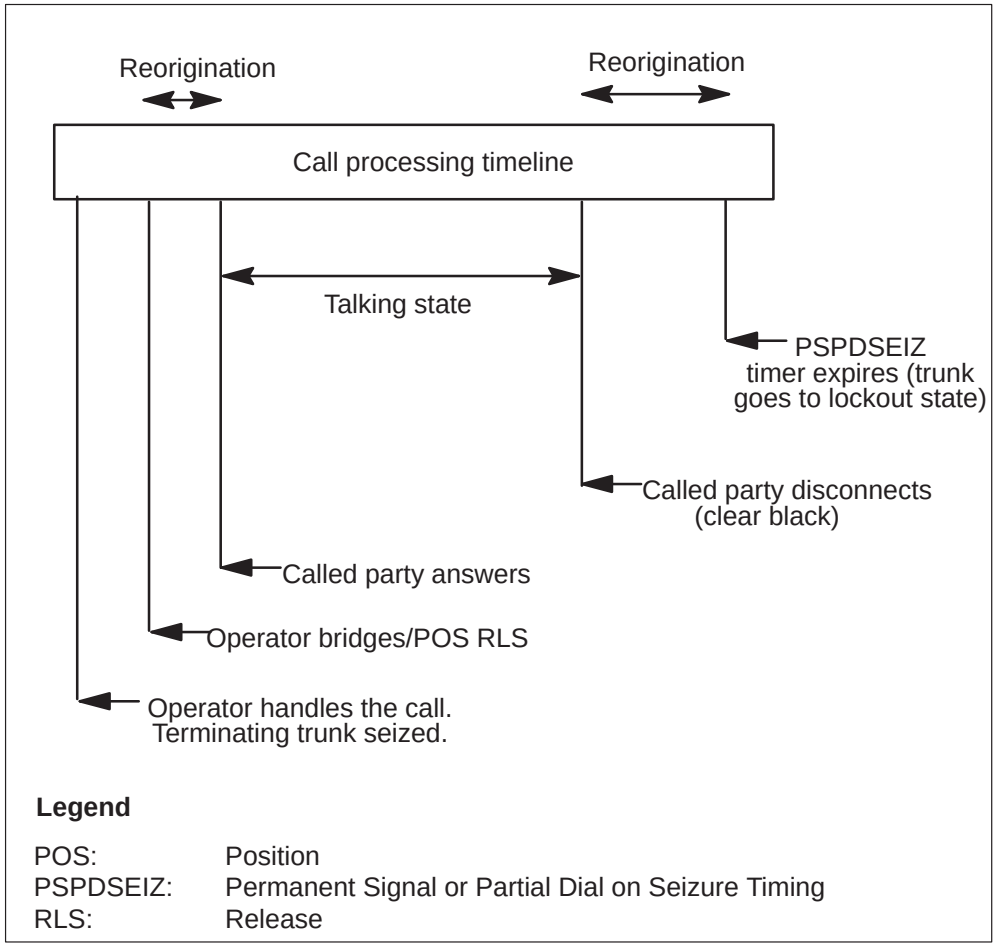
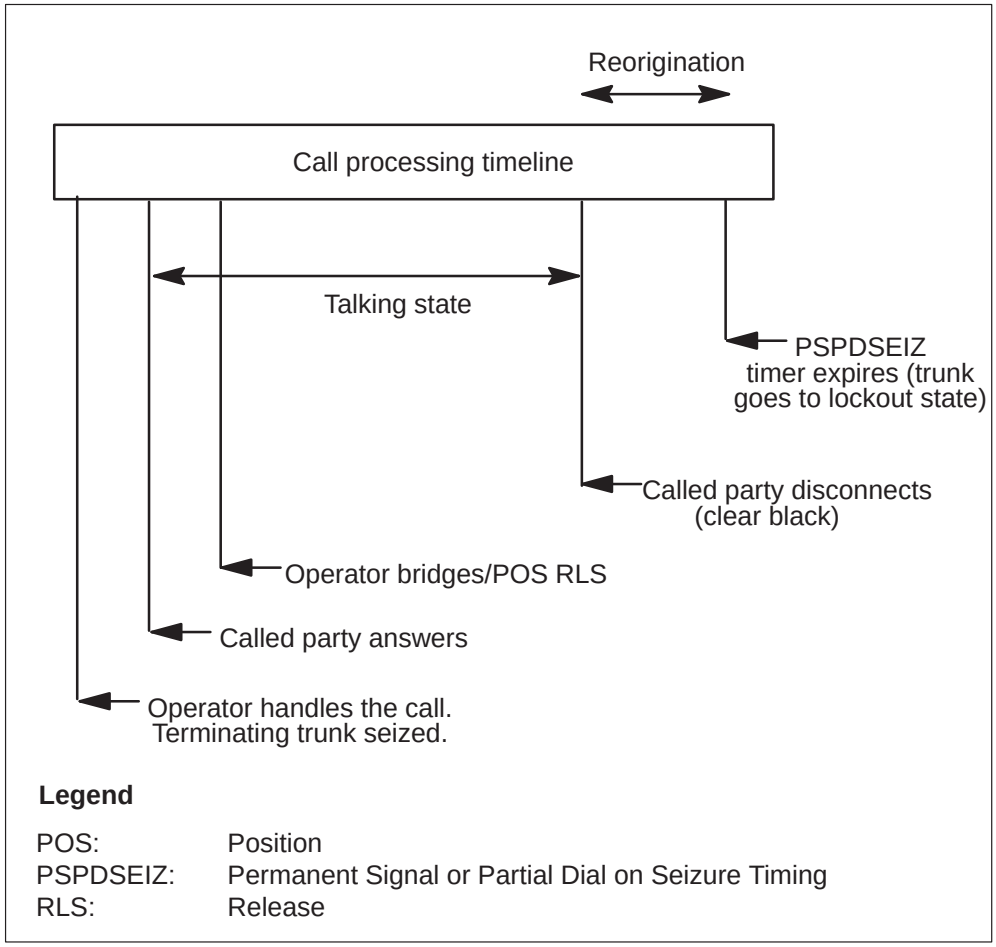


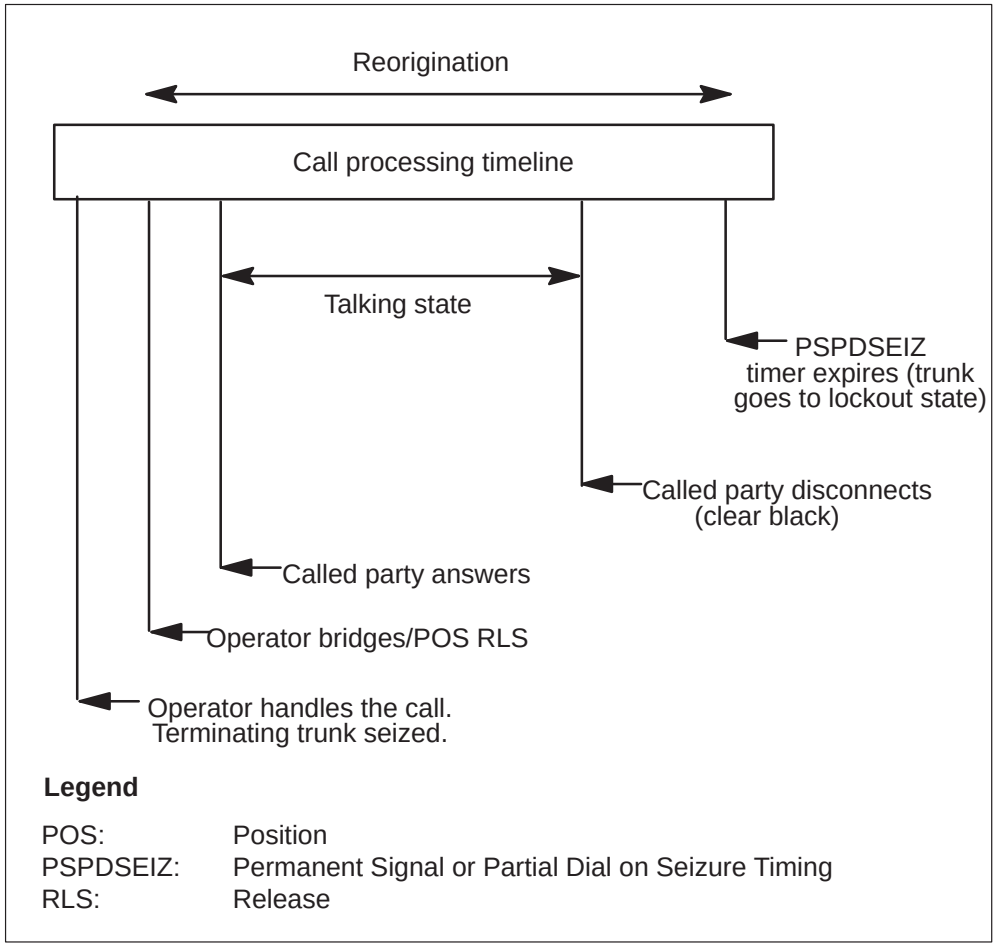
Figure 1-6
DTMF reorigination timeframe, operator bridge after answer



Legend

POS:	Position
PSPDSEIZ:	Permanent Signal or Partial Dial on Seizure Timing
RLS:	Release

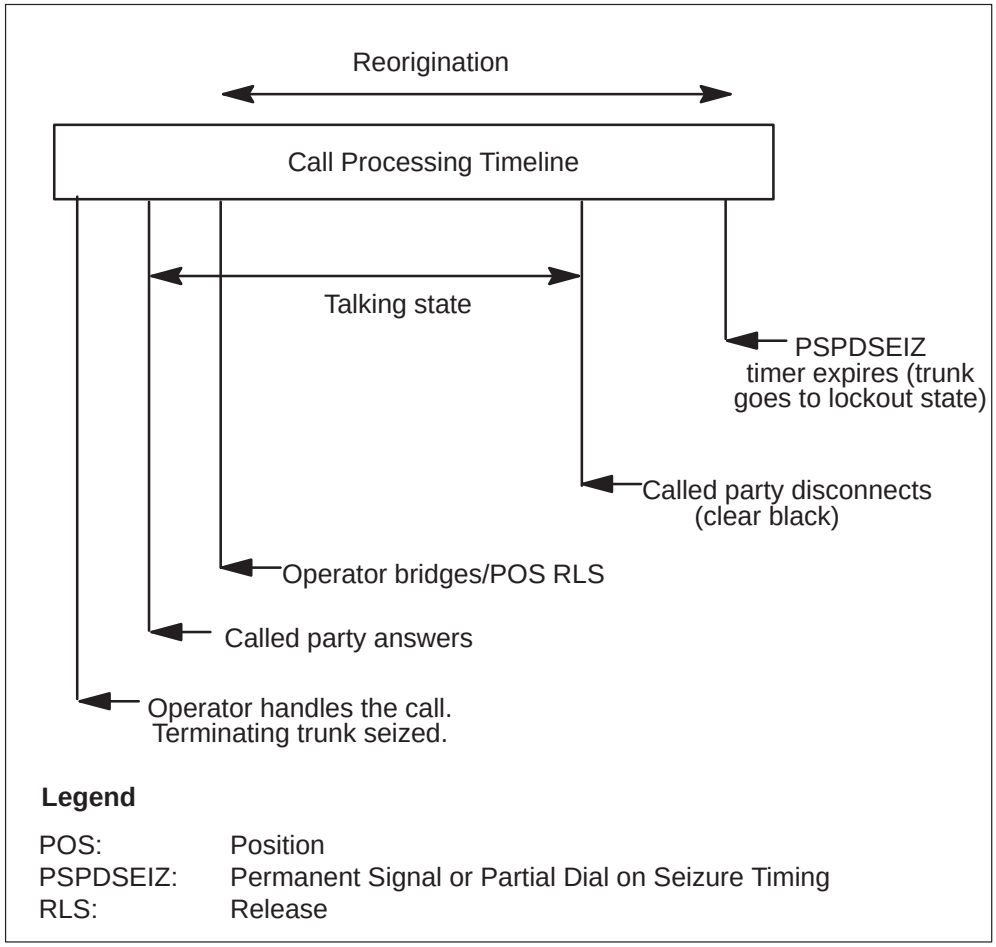
Figure 1-7
STR reorigination timeframe, operator bridge before answer



Legend

POS:	Position
PSPDSEIZ:	Permanent Signal or Partial Dial on Seizure Timing
RLS:	Release

Figure 1-8
STR reorigination timeframe, operator bridge after answer



Legend

POS:	Position
PSPDSEIZ:	Permanent Signal or Partial Dial on Seizure Timing
RLS:	Release

Reorigination interaction with SS7 Suspend/Resume message handling

Both manual and automatic reorigination impacts SS7 Suspend/Resume message handling on the UCS DMS-250 switch.

Manual reorigination

When the UCS DMS-250 switch receives a Suspend message and the RECALLDT field in table TRKGRP is set to MANUAL, the call processing software compares the datafilled reorigination timer to the suspend timer.

Note: The Permanent Signal or Partial Dial on Seizure Timing (PSPDSEIZ) field in table TRKSGRP sets the reorigination timer for PTS trunks. The Senderized Permanent Signal Timer (SNDRPSIG) field in table TRKGRP sets the reorigination timer for SS7 IMT and SS7 EANT (FGD) trunks. The trunk group suspend/resume timer (TSUSR) field in table TRKGRP sets the suspend timer.

The call processing software uses the larger of the two values for the new reorigination timer. After both the reorigination and the suspend timers start, one of the following events occur:

- The UCS DMS-250 switch receives a Resume message before the suspend timer expires and before one of the receivers in use detects the reorigination digit. The call continues as shown in Figure 1-9, or
- The receiver in use detects the reorigination digit before either timer expires. The terminating trunk (called party) disconnects, and reorigination occurs as shown in Figure 1-10, or
- The suspend timer expires. The terminating trunk (called party) disconnects, and reorigination is still possible if the reorigination timer is still active. When the reorigination timer expires, the UCS DMS-250 switch releases the call as shown in Figure 1-11.

Figure 1-9
Manual Reorigination – Suspend and Reorigination timers cancelled upon receipt of Resume message

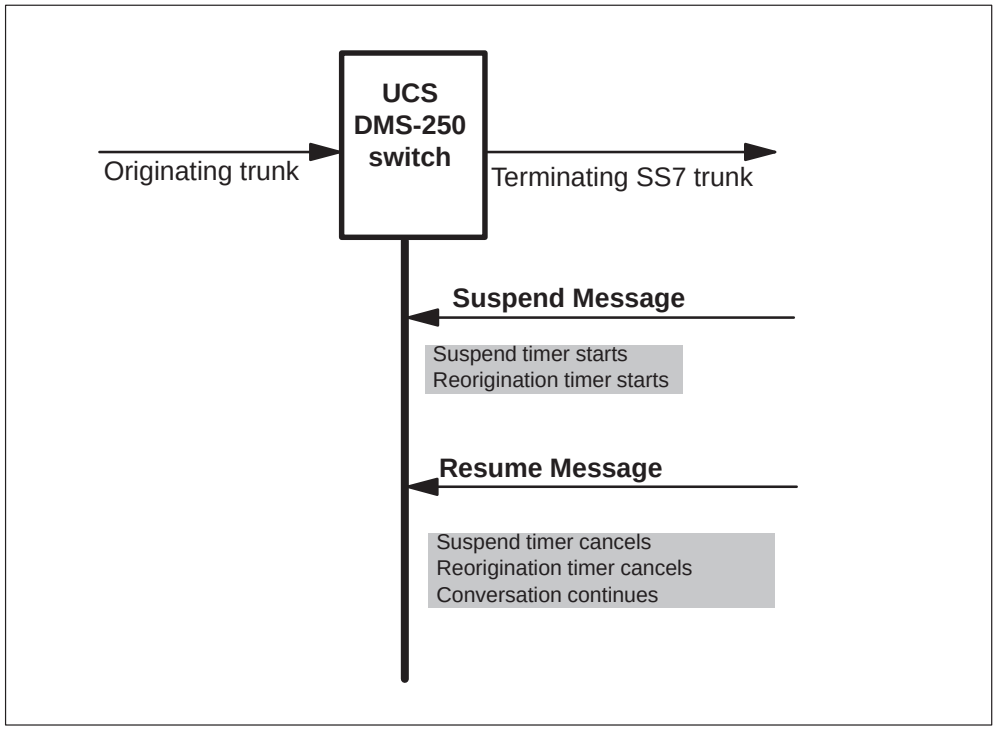


Figure 1-10
Manual Reorigination – Reorigination while Suspend and Reorigination timers are active

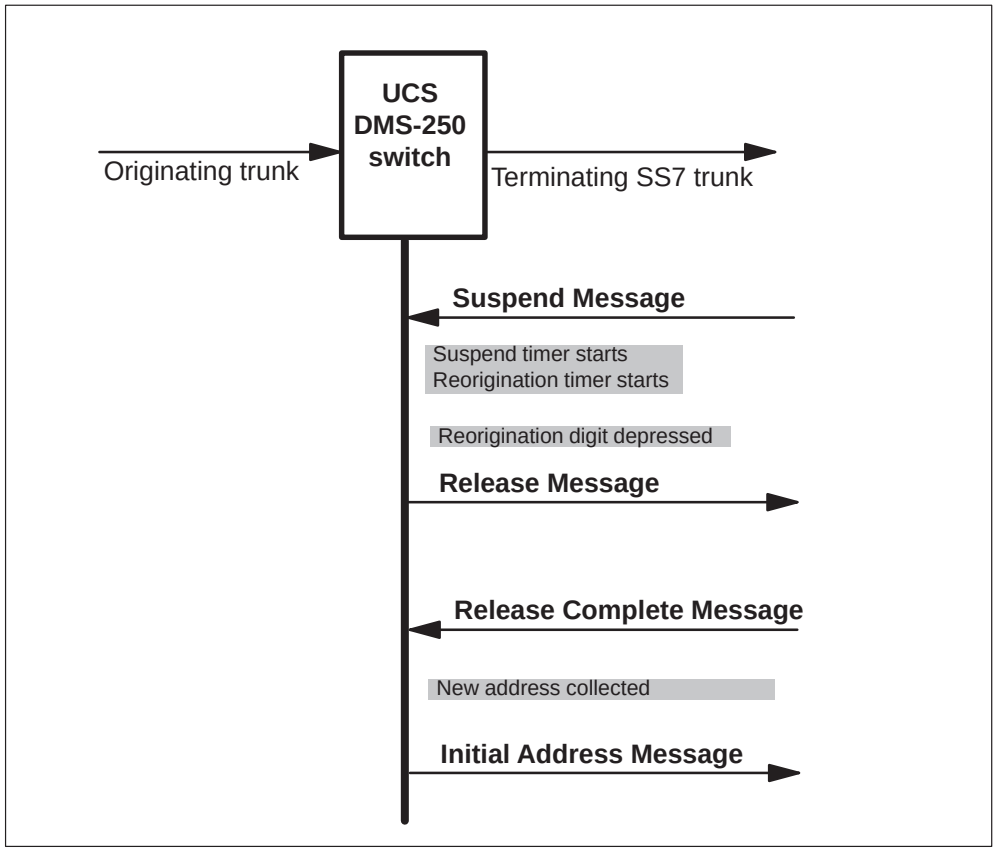
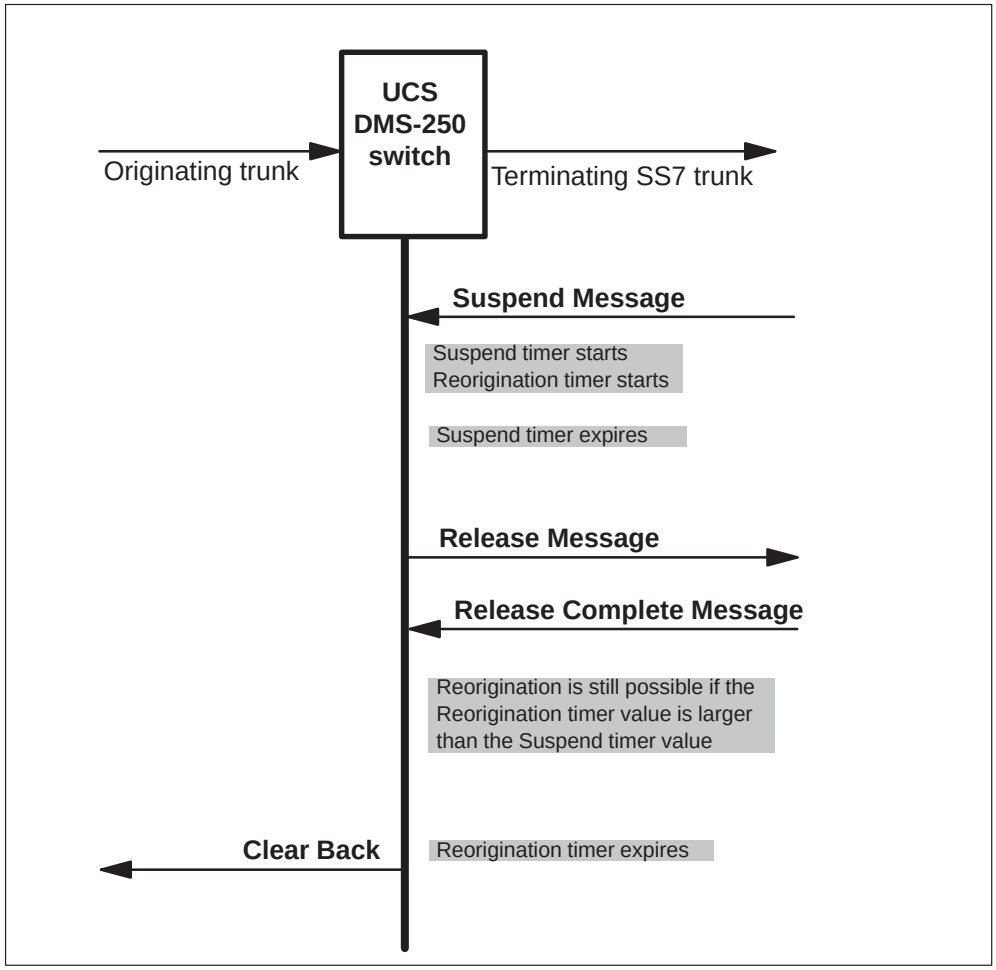


Figure 1-11
Manual Reorigination – Suspend and Reorigination timers expire



Automatic reorigination

For automatic reorigination, RECALLDT field in table TRKGRP set to AUTO, only the suspend timer starts, and reorigination occurs once the timer expires and the terminating trunk (called party) disconnects. Figure 1-12 shows when auto reorigination is possible after the Suspend timer expires. Figure 1-13 shows when auto reorigination is possible if the UCS DMS-250 switch receives a Resume message before the Suspend timer expires.

Figure 1-12
Auto Reorigination – after Suspend timer expires

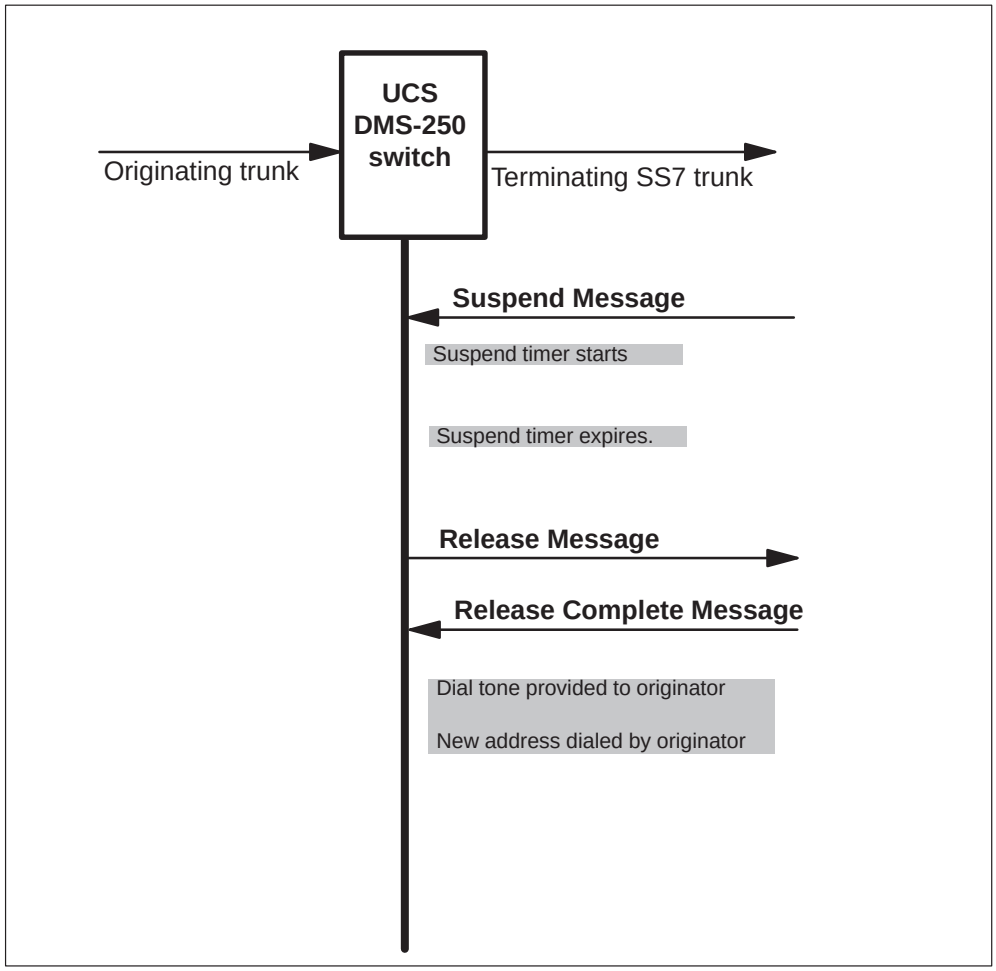
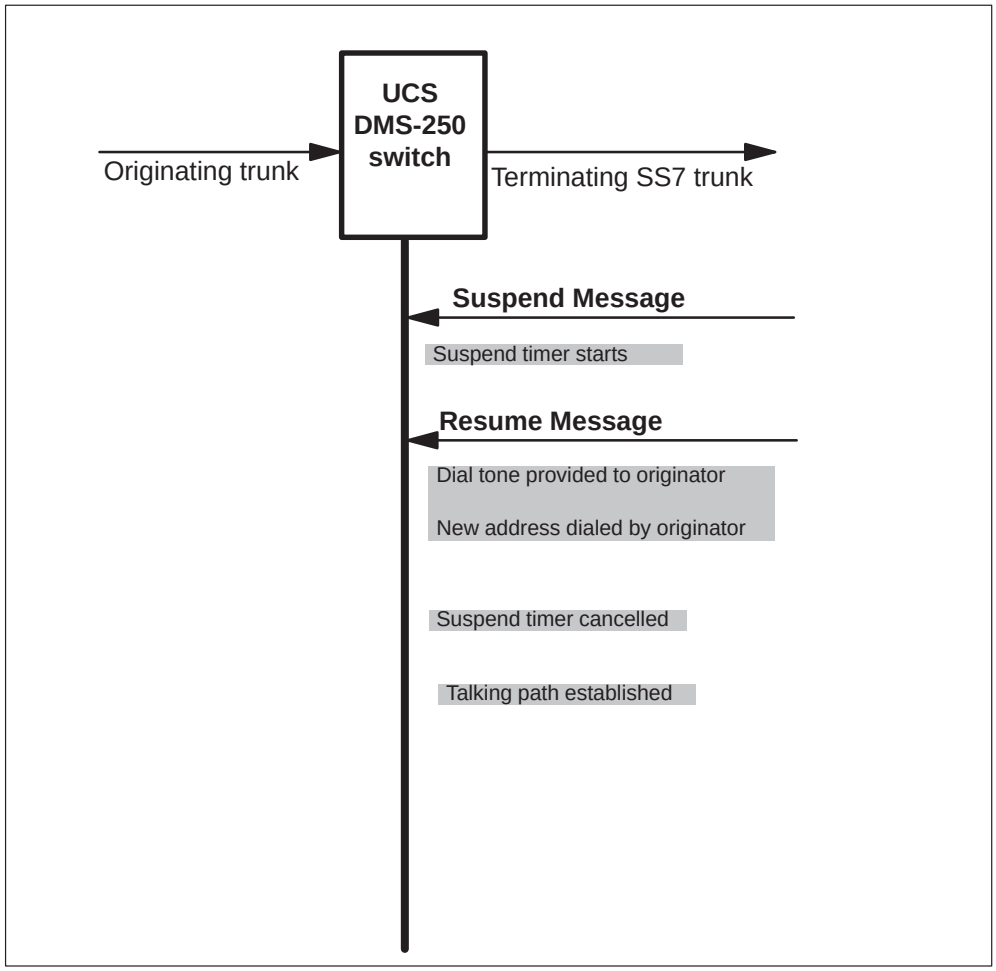


Figure 1-13
Auto Reorigination – Resume message received before Suspend timer expires



Restrictions and limitations

This section describes restrictions that apply to the Reorigination feature. These restrictions include:

- EANT (FGD) trunks that use the pure dialing plan (1+)
- SS7 IMT trunks
- Other restrictions
- Treatments

EANT (FGD) trunks

For EANT (FGD) originating trunks, the PFGD_1PLUS_REORIG_DISALLOW office parameter in table OFCVAR can restrict reorigination for FGD calls that use the pure FGD dial plan (1 + address). When this office parameter is set to Y, reorigination is disallowed. This affects both manual and automatic reoriginations. This office parameter applies to calls that originate on pure PTS FGD and pure SS7 FGD originating trunks only. It does not apply to cut-through, pass-through, transitional, MCCS, or UA calls.

Note: There is a call type called a pure FGD MCCS call. With respect to reorigination, this call is considered a pure FGD call and not a MCCS call and reorigination is not allowed. MCCS calls that originate over other trunk agents and dial plans are not affected by this office parameter. Refer to *UCS DMS-250 Mechanized Calling Card Services (MCCS) Application Guide* for more information on MCCS calls.

All calls that originate over pure PTS FGD or pure SS7 FGD trunks and terminate over SS7 IMT RLTs can override the PFGD_1PLUS_REORIG_DISALLOW office parameter with the OI parameter.

SS7 IMT restrictions

The Network Specific (NETWKSPC) field in table TRKGRP restricts reorigination on SS7 IMT trunks. The range of values for the NETWKSPC field and the restriction each value imposes are as follows:

- INTRA
  - — Reorigination is not permitted. The RECALLDT field in table TRKGRP can only be set to NONE. For operator services calls, this value cannot be overridden with a KP REORIG key sequence.
- INTER
  - — Reorigination is permitted for UA calls only. The RECALLDT field in table TRKGRP can be set to the full range of values, but is ignored on non-UA calls. This value supports reorigination for operator services calls.
- GLOBAL
  - — Reorigination is permitted for Universal Access (UA) calls only. The RECALLDT field in table TRKGRP can be set to the full range of values, but is ignored on non-UA calls. This value does not support operator services reorigination.

— Reorigination on IMTs can be invoked only when using DTMF receivers; STRs are not supported.

Fraud prevention restrictions

Reorigination is allowed if a valid billing number exists and if all other existing reorigination controls are met. Reorigination is not allowed if a valid billing number does not exist, with the following exceptions:

- calls with a dialing plan of FGC national (MF: KP + ADDR + ST), that complete without billing information
- calls with the ANIBYP (ANI bypass) option in table TRKGRP provisioned on the originating trunk group, that complete without verifying the ANI, and without additional billing information (for example, FGD Pure)
- calls with the ANIDIGS (ANI digits required) option in table TRKGRP not provisioned on the originating trunk group that complete without an ANI and without additional billing information (for example, ISUP FGD Pure)

Other restrictions

The following restrictions apply to other call types:

- Hot line calls cannot reoriginate.
- INWATS calls cannot reoriginate unless designated as calling party billed.
- SACREMOT calls cannot reoriginate unless designated as calling party billed.
- Calls that invoke a COS override cannot reoriginate.
- Data calls cannot reoriginate. A data call is when both the originating and terminating trunks have a Bearer Capability Name (BCNAME) field in table TRKGRP that is assigned a Restricted Digital (RESDIG) or Unrestricted Digital (UNRESDIG) transfer capability (XFERCAP field in table BCDEF).
- Automatic reorigination does not support MVP calls.
- For NetworkBuilder calls, the Reorigination feature does not support reorigination during the processing of Network_Busy and O_Called_Party_Busy messages.

  Note: Refer to *UCS DMS-250 NetworkBuilder Application Guide* for more information on NetworkBuilder calls.

- If a congested switch attempts reorigination, no REL message is generated unless the reorigination timer expires. If the reorigination timer expires, a REL message is generated, and if congestion has been declared an ACL parameter is added to the REL message.

  Note: If the Tsus,r timer (TSUSR in table TRKGRP) has been activated, the reorigination timer uses the larger of the two values between the reorigination timer (REORIG_DISCONNECT_TIMER), or the Tsus,r timer.

Reorigination treatment restrictions

An originating call cannot reoriginate if the call receives one of the treatments listed in Table 1-1.

Table 1-1
Reorigination treatment restrictions

Treatment	Description
AARD	ANI account recently disallowed
ADBF	ANI database failure
AIFL	Automatic identified outward dialing (AIOD) failure
ANBB	ANI FGB block
ANIA	ANI account status not allowed
CCNV	Calling card not valid
CCTO	Calling card timeout
COSX	Class of service (COS) exceeded
DDPB	direct distance dialing (DDD) prohibited
DDSN	DDD COS screen failed
DDST	DDD destination failure
DRET	DDD date and time restricted
DTFL	Datafill error
FDNZ	First digit not zero
IDPB	International direct distance dialing (IDDD) prohibited
IDST	IDDD destination failed
ILRS	Inter LATA restricted
INAC	Invalid account code

—continued—

Table 1-1
Reorigination treatment restrictions (continued)

Treatment	Description
INAU	Invalid authorization code
INCC	Invalid city code
INPD	Invalid Pin digits
IRET	IDDD date and time restricted
ISCN	IDDD COS screen failed
LCAB	Local call area barred
LCNV	Local exchange carrier (LEC) calling card not valid
NPAR	numbering plan area (NPA) restricted
MAUC	Multiple calls per authcode
ODST	Onnet destination failure
ONPB	Onnet prohibited
ORET	Onnet date and time restricted
OSCN	Onnet COS screening failed
PDIL	Partial dial
PSIG	Permanent signal
RODR	Reorder
RSDT	Restricted date and time
SCFL	Database communication error
SCUN	Service currently unavailable
SORD	Storage overflow reorder
TINV	Temporary invalid
VACS	Vacant speed number
ZMPB	ZMINUS (zero minus) prohibited
ZMRT	ZMINUS (zero minus) date and time restricted
ZPPB	ZPLUS (zero plus) prohibited
ZPRT	ZPLUS (zero plus) date and time restricted
—end—	

Vacant treatment (VACT)

Calls routed to VACT treatment normally allow reorigination except for one of the following reasons:

- 0+ calls or UA authcode calls that did not previously enter an authorization code
- Global IMT UA calls which set VACT treatment on the first origination

Reorigination implementation

SOC requirements

The UCS Tandem Base software includes software for the Reorigination feature with the following exceptions:

- the Operator Reorigination Key and Screen Display feature requires software optionality control (SOC) option URLT0001.
- the Boomerang Reorigination feature requires SOC option URLT0002.

Refer to the *UCS DMS-250 Software Optionality Control User's Manual* for information on activating URLT0001 and URLT0002.

Hardware requirements

The Reorigination feature requires either a Dual-tone Multifrequency (DTMF) receiver (card number NT2X48AB) or Specialized Tone Receiver (STR) (card number NT6X62AA). Refer to Chapter 1, "Reorigination overview," for a description of these cards.

Note: The Spectrum Peripheral Module (SPM) supports only DTMF receivers. The Extended Multi-processor System Based Peripheral Module (XPM) supports both DTMF receivers and STRs.

DTMF provisioning

All fields in table RECEIVER require valid datafill for DTMF provisioning. Refer to *UCS DMS-250 Data Schema Reference Manual* for valid datafill information about table RECEIVER.

STR provisioning

The Optional Card (OPTCARD) field in table Line Trunk Controller Inventory (LTCINV) requires a value of either STR16IC or STR17IC for STR provisioning. The OPTIONAL ATTRIBUTE (OPTATTR) field in table LTCINV requires a value of STRDTRE for STR provisioning.

Table OFCVAR

The REORIG_DIGIT_DURATION office parameter in table OFCVAR requires a number between 5 and 30 for STR provisioning. This number

specifies the length of time in 100 ms increments that the reorigination digit must me pressed to invoke reorigination.

Datafill requirements

This section describes the table datafill for provisioning the Reorigination feature. Refer to the *UCS DMS-250 Data Schema Reference Manual* for additional table datafill information. Refer to the *UCS DMS-250 Office Parameters Reference Manual* for additional information about the office parameters.

The Reorigination feature requires datafill in the following tables:

- Trunk Group (TRKGRP)
- Trunk Subgroup (TRKSGRP)
- Office Variable (OFCVAR)

Table TRKGRP

The RECALLDT field provisions reorigination for an applicable trunk group. The applicable trunks include, DAL, EANT (FGD), ONAL (FGA), ONAT (FGB/FGC), IMT UA (Inter and Global only) The RECALLDT field has the following values:

- NONE
  - — Reorigination is not permitted.
- AUTO
  - — The subscriber automatically receives dial tone after the initial called party disconnects or upon completion of a treatment.
- MANUAL
  - — The subscriber receives dial tone and can reoriginate after pressing the reorigination digit. If DTMF receivers are used, reorigination can occur before the called party answers the call or shortly after the called party goes on-hook. If STRs are used, reorigination can occur before the called party answer, shortly after the called party goes on on-hook, and during the talking state with the called party.
  - — For calls that originate over Per-trunk Signaling (PTS) trunks, the PSPDSEIZ field in table TRKSGRP specifies how long the UCS DMS-250 switch waits for the reorigination digit after the called party goes on-hook. For calls that originate over SS7 trunks, the SNDRPSIG field in table TRKGRP specifies how long the UCS DMS-250 switch waits for the reorigination digit after the called party goes on-hook. These timer fields apply to DTMF receivers and STRs.

With the RECALLDT field set to either AUTO or MANUAL, reorigination is possible an unlimited number of times. The only exception is with NetworkBuilder calls; the ReorigAllowed parameter in a Service Control Point (SCP) response message can limit the number of reoriginations from 0 to 99, with 0 disallowing reorigination completely.

SS7 trunks

The SNDRPSIG field sets the Senderized Permanent Signal timer for SS7 trunks. This value indicates the reorigination timeout value. The range of values, in seconds, is 2 to 30. For SS7 trunks, datafill in the NETWKSPC field of table TRKGRP interacts with fields that apply to reorigination. Refer to "SS7 IMT restrictions" in Chapter 1, "Reorigination overview," of this document for additional information about the NETWKSPC field.

Table TRKSGRP

The PSPDSEIZ field sets the Permanent Signal or Partial Dial On Seizure timer for PTS trunks. This value indicates the reorigination timeout value. The range of values, in seconds is 2 to 30.

Table OFCVAR

The following office parameters apply to the Reorigination feature:

- ALL_RLT_OPR_CALLS
  - — This office parameter determines how non-operator services calls made over SS7 IMT RLTs are handled. When set to Y, non-operator calls made over SS7 IMT RLTs are handled exactly like operator services calls. When set to N, non-operator services calls are handled in their usual manner.

    Note 1: 0+ and 0– calls are still treated as operator service calls regardless of the setting of the ALL_RLT_OPR_CALLS office parameter.

    Note 2: When the ALL_RLT_OPR_CALLS office parameter is set to Y, all SS7 IMT RLT calls are subject to the REORIG_FOR_OPERATOR_SERVICES office parameter. When the ALL_RLT_OPR_CALLS is set to N, non-operator SS7 IMT RLT calls are not subject to the REORIG_FOR_OPERATOR_SERVICES office parameter and allows reorigination regardless of the setting for this office parameter.
- CDR_UNAVAIL_BLOCK
  - — This office parameter specifies whether a call can reoriginate when a call detail record (CDR) is not available for the reoriginated call. When set to Y, reorigination fails if a CDR is unavailable. When set to N, reoriginations continues even if a CDR is unavailable.

- PFGD-1PLUS_REORIG_DISALLOW

  — This office parameter determines if reorigination is allowed for pure FGD 1+ calls. When set to Y, reorigination is disallowed. When set N, reorigination is allowed. This affects both manual and automatic reoriginations.

- REORIG_DIGIT_DURATION

  — This office parameter specifies the length of time in 100 ms increments that the subscriber must press the reorigination digit to invoke reorigination. This parameter is set to any whole number between 5 and 30. Only STRs require this office parameter. If a DTMF receiver is in use for a given trunk, this office parameter has no effect.

- REORIG_FOR_OPERATOR_SERVICES

  — This office parameter allows or disallows reorigination for SS7 RLT operator services calls. Setting this parameter to Y activates the feature. Setting this parameter to N, deactivates the feature.

- REORIG_RECEIVERS

  — This office parameter specifies what type of receiver the UCS DMS-250 switch uses to scan for the reorigination digit. The values for this parameter include: DTMF_ONLY, STR_ONLY, and STR_AND_DTMF.

    – DTMF_ONLY means to use only DTMF receivers to detect reorigination.

    – STR_ONLY means to use only an STR to detect reorigination, and if an STR is not available, reorigination is not possible.

    – STR_AND_DTMF means to use an STR, but if an STR is not available, then use a DTMF receiver.

- REORIG_SHORT_OR_LONG

  — This office parameter controls the short duration recognition of the reorigination digit. It is set to SHORT to enable the SPM DTMF receivers to recognize the reorigination digit with a tone duration as low as 40 ms. If the value of this parameter is set to LONG, reorigination tones with a duration less than 500 ms are not recognized.

Reorigination operations, administration, and maintenance

This chapter provides operation, administration, and maintenance, information (OA&M) for the Reorigination feature.

Billing information

The UCS DMS-250 switch generates a call detail record (CDR) for every call it processes. When the switch processes a reoriginated call, the switche create a new CDR or OSR, and the billing information automatically copies into the new CDR and OSR before the previous CDR or OSR releases to the billing stream.

Note: SS7 RLT calls also generate a CDR/OSR pair.

The following station-to-station or person-to-person, non-collect billing types apply to the Reorigination feature:

- authorization code
- automatic number identification (ANI)
- calling card [travel card number (TCN)]
- credit card (ESP calls only)

For CDRs, the following fields are copied from the first call CDR to the CDR for the reoriginated call:

- TRAP
- PINDIGS (PIN digits)
- UNIVACC (universal access)
- ORIGIPORT (originating port)

For OSRs, the following fields are copied from the first call OSR to the OSR for the reoriginated call:

- ANISP (ANI Spill)
- INFODIG (information digits)
- BILLNUMB (billing number)

Refer to the *UCS DMS-250 Billing Records Application Guide* for additional information about CDRs and OSRs.

Reorigination verification

This section provides high-level testing and troubleshooting procedures for the Reorigination feature. Information in these procedures assume these procedures are performed for an in-service UCS DMS-250 switch and that the Reorigination feature is being added to applicable trunk types. Also, information in these procedures assume operating company personnel know how to use the table editor for the UCS DMS-250 switch. Refer to *DMS-100 Family Basic Translations Tools Guide* for information on how to the table editor.

Testing

Use the following procedure to verify the Reorigination feature is provisioned according to office requirements, and use the following procedure to test the feature. Chapter 1, “Reorigination overview,” contains information about supported call types, billing types, and trunk types. Chapter 2, “Reorigination implementation,” contains information about hardware and datafill requirements.

Note: Before performing this procedure, determine if the configuration for the UCS DMS-250 switch contains either DTMFs or STRs, or both. The REORIG_RECEIVERS office parameter in table OFCVAR determines which receiver the UCS DMS-250 switch uses to detect the reorigination digit.

1 Use the table editor to make sure tables TRKGRP and TRKSGRP are datafilled according to office requirements for each applicable trunk type.

2 Use the table editor to make sure table OFCVAR is datafilled according to office requirements.

3 Use the table editor to make sure table RECEIVER is datafilled according to office requirements for DTMF receivers.

4 Use the table editor to make sure the REORIG_DIGIT_DURATION parameter in table OFCVAR and the OPTCARD and OPTATTR fields in table LTCINV are datafilled according to office requirements for STRs. STRs are optional hardware. If the DMS-250 switch is not equipped with STRs, omit this step.

5 Place a sequence of reorigination test calls over applicable trunks according to testing requirements for the office.

6 Place a sequence of reorigination test calls that require operator assistance.

7 Place a sequence of reorigination test calls to the ESP.

8 If the reorigination test calls pass, you have completed this procedure. If the reorigination test calls fail, refer to the “Troubleshooting” section in this chapter or refer to your operating company next level of support.

Troubleshooting

Use the following procedure to troubleshoot test failures for the Reorigination feature.

1 Check the alarm panel for any alarm conditions that may affect the reorigination test calls. Refer to the *UCS DMS-250 Alarm and Performance Monitoring Procedures Reference Manual*, to clear any alarms. After clearing any alarms that affect the reorigination test calls, return to this procedure.

2 Check cable connections and seating of the DTMF (NT2X48AB) card in the trunk module (TM) shelf. If the STR (NT6X62AA) card is part of the DMS-250 switch configuration, check cable connections and seating of the card in the extended multi-processor based peripheral module (XPM) shelf.

3 Recheck table datafill for the Reorigination feature in tables TRKGRP, TRKSGRP, OFCVAR, RECEIVER, and LTCINV.

4 Verify the far-end switch does not have any service-affecting problems that prevent placing the reorigination test calls.

5 Place the sequence of reorigination test calls again.

6 If the reorigination test calls pass, you have completed this procedure. If the reorigination tests calls fail, contact your operating company next level of support, or contact Nortel's UCS emergency technical assistance service (ETAS).

Appendix A
KP REORIG key sequence

The operator can optionally change reorigination resources specified by table datafill with the KP REORIG key sequence. This functionality is supported for ESP calls. To use this feature, SOC option URLT0001 must be in the ON state. The sequences are as follows:

KP REORIG + X1 + X2 + START, where

- KP REORIG is the KP REORIG key.
- X1 is a digit that specifies the reorigination type.
  - — 0 – No change from the previous reorigination type. Normal if this is the first origination.
  - — 1 – Normal (non-boomerang) reorigination.
  - — 2 – Boomerang reorigination (Boomerang reorigination uses the originally dialed number and is only supported for SS7 RLT to ESP.)
  - — 3 – No reorigination allowed.
  - — 4 thru 9 – Undefined.
- X2 is a digit that specifies the reorigination method.
  - — 0 – As provisioned by the originating switch (Use the RECALLDT field for the originating trunk.)
  - — 1 – AUTO
  - — 2 – MANUAL
  - — 3 thru 7 – Used by the Flexdial feature only.
  - — 8 thru 9 – Undefined
- START is the START key.

If both the X1 and X2 digits are omitted, the default value, 0, is used for both digits.

If only one digit is received, that digit is used for the X1 digit and the X2 digit and uses the default value of 0.

If more than two digits are entered, then only the first two digits are used and the remaining digits are ignored.

If the X1 digit is equal to 3, then the X2 digit is ignored.

After the operator enters the sequence, if the display is blinking, then an error occurred when processing the KP REORIG key sequence and reorigination is not possible even if the operator bridges the call. If the display is steady, not blinking, then reorigination may be possible, subject to all the restrictions in Chapter 1, “Reorigination overview.”

Once the operator bridges the call, the reorigination type and trigger method is permanent unless changed again by the operator. For example, if the RECALLDT field in table TRKGRP is set to NONE for an originating trunk, and the operator enters a KP REORIG key sequence of X1 = NORMAL, X2 = MANUAL, the originator is able to manually reoriginate any number of times until the originator goes on-hook. This example holds for all possible combinations of the RECALLDT and the KP REORIG key sequences.

Note 1: If software optionality control (SOC) option URLT0001 is not in the ON state, the KP REORIG key sequence can still be entered by the operator, but the host switch ignores the sequence.

Note 2: To provision Boomerang Reorigination, SOC option URLT0002 must be in the ON state.

List of terms

ANI

See Automatic Number Identification.

ANISP

ANI Spill

ANM

See Answer Message.

Answer Message

A common channel signaling 7 (CCS7) protocol message sent in a backward direction to indicate that a call has been answered and the terminating switch has connected the voice path.

Automatic Number Identification

(1) A service where a calling number is identified automatically and transmitted to the AMA office equipment for billing.

(2) A three-, six-, or ten-digit number datafilled in table ANISCUSP that identifies subscribers.

(3) ANI can also be part of an incoming message or an incoming digit stream to the UCS DMS-250 switch that the call processing software uses to identify calling parties.

BCNAME

Bearer Capability Name

BILLNUMB

Billing Number

Call Detail Record

A file that stores billing information.

CDR

See Call Detail Record.

Class of Service

The categorization of telephone subscribers according to the specific type of services extended. Telephone service distinctions include such items as rate differences between individual and party lines, flat rate and message rate, and restricted and extended area service.

COS

See Class of Service.

DAL

See Dedicated/Direct Access Line.

Dedicated/Direct Access Line

A trunk interface that connects a private branch exchange (PBX), a key system, or a single telephone to a DMS-250 switch.

Digital Trunk Controller

A peripheral module that connects DS30 links from the network with digital trunk circuits.

DTC

See Digital Trunk Controller.

DTCI

See ISDN Digital Trunk Controller.

DTMF

See Dual-tone Multifrequency.

Dual-tone Multifrequency

A signaling method that uses set combinations of two specific voice-band frequencies. One of these voice-band frequencies is selected from a group of four low frequencies, and the other is selected from a group of three or four relatively high frequencies.

EANT

See Equal Access Network Trunk.

EDAL

See Electronic Dedicated Access Line.

Electronic Dedicated Access Line

A trunk interface that connects a PBX to the UCS DMS-250 switch. The configuration simulates electronic tandem network switching. See also electronic switched network.

Electronic Switched Network

A business communications network consisting of a number of nodes that are connected through dedicated links. These nodes have access to the public network.

Enhanced Services Platform

A third-party vendor who supplies value-added services to the subscriber.

Equal Access Network Trunk

A trunk interface that connects the DMS-250 switch to the trunk side of an equal access end office or a Class 4/5 access tandem office. Also known as Feature Group D (FGD) trunks.

ESP

See Enhanced Service Platform.

Extended Multi-processor System Based Peripheral Module

The generic name for peripheral modules that use the Motorola 68000 microprocessor. An XPM has two processors in a hot-standby configuration: a master processor and a signaling processor.

FAR

Facility Request message

Feature Group A

Normally, a two-wire, line-side connection between the access customers and the end office. These lines can be accessed by subscribers to originate and terminate interLATA calls. Also called off-network access lines.

Feature Group B

1) A trunk-side connection to an end office or access tandem switch. FGB has a universal seven-digit access code associated with the participating interconnecting entity for the purpose of originating or terminating calls to or from subscribers served by an end office or by the end offices subtending an access tandem.

2) Multifrequency-based signaling protocol defined between an equal access end office or an non-equal access end office and an interexchange carrier office to provide subscribers access to the interexchange carrier. To use this plan, the subscriber must dial 950-WXXX.

Feature Group C

1) A trunk-side connection provided through all local exchange carrier end offices. In most cases, it offers an access area that includes all station lines terminated directly at the end office where the trunk terminations are made.

2) A plan for equal access that implements the equal access plan (EAP) with the following exceptions: it uses FGC signaling (predivestiture signaling), and it uses additional trunk group types.

3) Multifrequency-based signaling protocol defined between an equal access end office and an interexchange carrier office to provide INWATS services. The access number dialed by the subscriber will either be a 950-WXXX number or an 800-NXX-XXXX format number.

Feature Group D

1) A trunk-side connection that allows any telephone served by an appropriately equipped end office to place an interLATA call through an access company by dialing an uniform five-digit access code (10XXX), followed by prefix digits 0 or 1 when necessary, and then the standard seven- or ten-digit directory number. Access code dialing is not required for interLATA calls to an access customer over FGD service, if the customer is accessing their presubscribed interexchange carrier from a line presubscribed to that same interexchange carrier.

2) Multifrequency- or CCS7-based signaling protocol defined between an equal access end office and an interexchange carrier office to provide subscribers access to interexchange carriers. Subscribers use standard 1+ dialing to access the interexchange carrier network, and subscriber identification is achieved by passing the subscriber's ANI from the equal access end office to the interexchange carrier over the FGD interface.

3) Also referred to as equal access network trunk.

FGA

See Feature Group A.

FGB

See Feature Group B.

FGC

See Feature Group C.

FGD

See Feature Group D.

IAM

See Initial Address Message.

IMT

See Intermachine Trunk.

INFODIGS

Information Digits

Initial Address Message

The first message in an SS7 call (connection-oriented or connectionless). It contains information required to route the call to its destination.

Intermachine Trunk

A trunk interface that connects a UCS DMS-250 switch to other UCS DMS-250 switches in a network.

Inward Wide Area Telecommunications Service

A telephony service that allows a subscriber to receive long distance telephone calls originating within specified service areas without a charge to the originating party. A toll free number is assigned to a certain PBX to allow for free calls.

INWATS

See Inward Wide Area Telecommunications Service.

ISDN Digital Trunk Controller

A peripheral module that connects DS30 links from the network with ISDN digital trunk circuits.

KP REORIG

Key Pulse Reorigination

LTCINV

Line Trunk Controller Inventory table

MCCS

See Mechanized Calling Card Service.

Mechanized Calling Card Service

A service that allows a subscriber to make chargeable long distance calls without operator assistance. A subscriber makes these calls by using a credit card or operating company calling card and entering special billing information.

Mechanized Voice Prompts

A voice prompt service available with the MCCS feature that provides recorded voice announcements to callers with instructions that guide them through call placement.

MVP

See Mechanized Voice Prompts.

NETWKSPC

Network Specific

OA&M

operations, administration, and maintenance

OFCVAR

Office Variable table

Off-net Access Line

A trunk interface that connects a DMS-250 switch to the line side of a Class 5 central office. ONALs are also known as FGA trunks.

Off-net Access Trunk

A trunk interface that connects a DMS-250 switch to the trunk side of a Class 5 local end office and all telephones that connect directly to the office. ONATs also support connections between the DMS-250 switch and a class 4/5 tandem office. ONATs are also known as FGB or FGC trunks.

OI

See Operator Information Parameter.

ONAL

See Off-net Access Line.

ONAT

See Off-net Access Trunk.

Operator Information Parameter

An SS7 parameter that provisions the reorigination feature for operator service calls that originate over SS7 IMT RLT trunks. The parameter can be included in the ANM, Reorigination FAR, Bridging FAR, and Redirect FAR messages.

Operator Services Record

A call detail record generated for operator-assisted calls.

OPTATTR

Option Attribute

OPTCARD

Optional Card

ORIGIPORT

Originating Port

OSR

See Operator Services Record.

PER PD

Person Paid

PER SPL CLG

Person Special Calling

Per-trunk Signaling

A conventional telephony method of signaling that multiplexes the control signal of a call with voice or data over the same trunk.

PINDIGS

Personal Identification Number Digits

PRI

See Primary Rate Interface.

Primary Rate Interface

An interface that carries nB+D channels over a digital DS-1 facility (23B+D in North America and 30B+D in Europe). PRI is used to link private network facilities, such as PBXs, local area networks (LAN), and host computers with a standardized architecture acting as the bridge between private switching equipment and the public network.

PSPDSEIZ

Permanent Signal or Partial Dial on Seizure Timing

PTS

See Per-trunk Signaling.

RECALLDT

Recall Dial Tone

Release Link Trunk

A software feature for a trunk connected to the UCS DMS-250 switch that allows the switch to release or disconnect the trunk from an originating call after the call is bridged or connected by another switch or services platform such as an EOPS.

REORGVAL

Reorigination Validation

RESDIG

Restricted Digital

RLT

See Release Link Trunk.

SACREMOT

See Service Access Code Remote Translations.

SCP

See Service Control Point.

Service Access Code

Three-digit nongeographic codes that have the same format as an area code. These nongeographic codes are reserved for and allocated to provide caller access to interexchange or local exchange carriers and their customers. Currently three service access codes are provided by N00 service: 700, 800, and 900. These three service access codes are used in place of numbering plan areas to designate a particular type of service.

Service Access Code Remote Translations

A N00 service feature that receives translations data from a remote database such as a service control point instead of the UCS DMS-250 switch. Datafill in Subtable STDPRTCT.STDPRT determines when the UCS DMS-250 switch call types an incoming call as a SACREMOT call. See also Service Access Code.

Service Control Point

A node in a common channel signaling 7 (CCS 7) signaling network that supports application databases. The function of an SCP is to accept a query for information, retrieve the requested information from one of its application databases, and send a response message to the originator of the request.

signaling system 7

A version of CCS 7 that was developed for North American use.

SNDRPSIG

Senderized Permanent Signal timer

SOC

See Software Optionality Control.

Software Optionality Control

A software utility available with the UCS DMS-250 switch and controlled by Nortel (Northern Telecom) distributed passwords that allows operating companies to control which software features are active or nonactive for a product computing module.

Specialized Tone Receiver

An optional hardware card on a DTC that is used to detect and collect dialed digits. An STR can constantly scan all 480 trunks in a DTC for a specific dialed digit.

Spectrum Peripheral Module

A modular high-capacity XPM that supports a variety of call processing functions and provides direct access to SONET optical carrier networks.

SPM

See Spectrum peripheral module.

SS7

See signaling system 7.

STA PD

Station Paid

STA SPL CLG

Station Special Calling

STR

See Specialized Tone Receiver.

TCN

See Travel Card Number.

TM

See Trunk Module.

Travel Card Number

A 14-digit calling card number that subscribers use for placing MCCS calls.

TRKGRP

Trunk Group table

TRKSGRP

Trunk Subgroup table

Trunk Module

A peripheral module in a trunk module equipment frame that provides speech and signaling interfaces between a DS30 network port and analog trunks.

TSUSR

Trunk Group Suspend/Resume timer

UA

See Universal Access.

UCS

Universal Carrier Service

UNIVACC

Universal Access

Universal Access

A dialing plan type or a call type applicable to EANT (FGD) and ONAT (FGC) trunks. Universal access allows subscribers to dial an 800 number or a number in the 950-YXXX format to reach a long-distance carrier.

UNRESDIG

Unrestricted Digital

XFERCAP

Transfer Capability

XPM

See Extended Multi-processor System Based Peripheral Module.

Ordering information

Use the following table for ordering Nortel NTPs (Northern Telecom Publications) and Product Computing-Module Loads (PCLs):

Type of product	Source	Phone	Cost
Technical documents (paper or CD-ROM)	Nortel Product Documentation	1-877-662-5669, Option 4 + 1	Yes
Individual NTPs (paper)	Merchandising Order Service	1-800-347-4850	Yes
Marketing documents	Sales and Marketing Information Center (SMIC)	1-800-4NORTEL (1-800-466-7835) * ESN 444-5930	No
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Please have the CD number and software version available, for example, **HLM-2621-001 02.02**.

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When ordering software

Please have the eight-digit ordering code, for example, **UCSE00012**, as well as the ordering codes for the features you wish to purchase. Contact your Nortel representative for assistance.

Digital Switching Systems

UCS DMS-250

Reorigination Application Guide

Product Documentation–Dept 3423
Nortel Networks
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RTP, NC 27709–3010
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