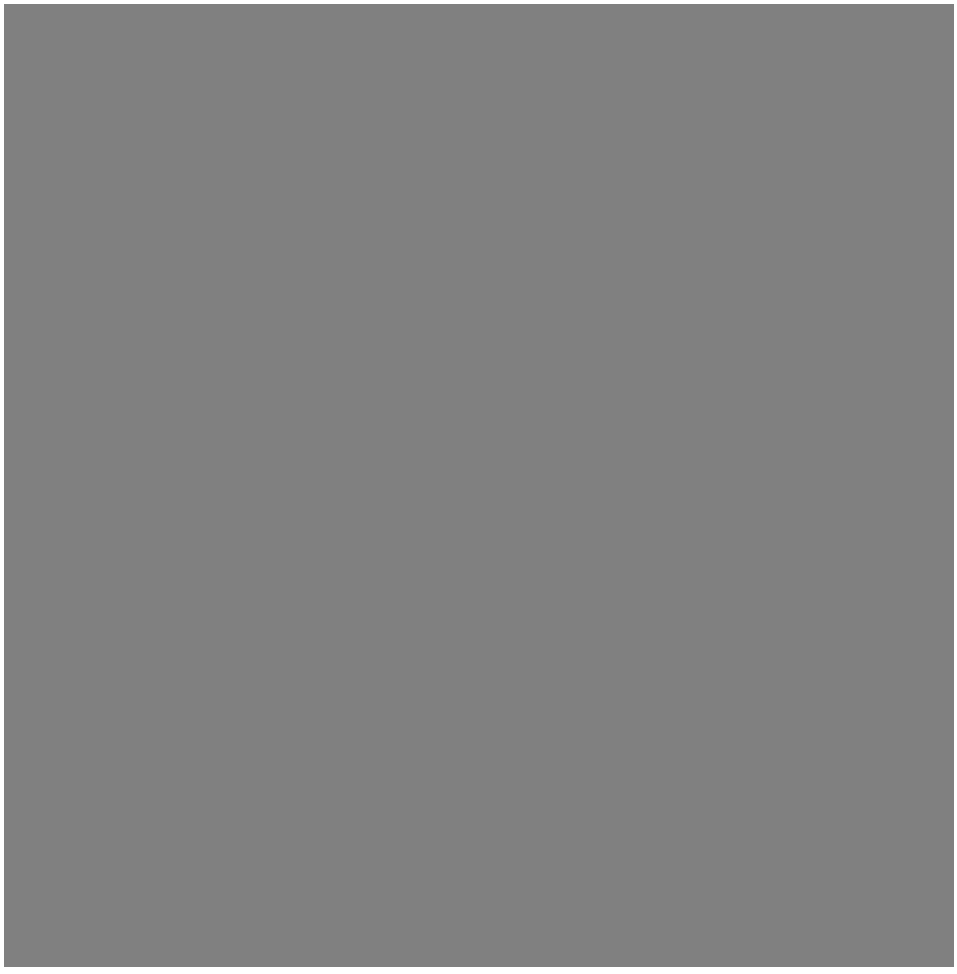
450-1021-313

Network Operations Systems

Station Detail Server

DNC-50 Operations NSR32 and up

DMSCCM04 Standard 32.01 August 1995



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Publication number: 450-1021-313
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Contents

Introduction

This Northern Telecom Practice (NTP) explains how to operate the Station Detail Server software application. This application, part of the Business Network Management (BNM) family of applications, is used by a DNC-50 Dynamic Network Control system to collect Station Message Detail Record (SMDR) data from a DMS digital switch.

Additional NTPs describe other aspects of the Station Detail Server. For a complete list of these NTPs, see NTP 450-1021-003, the Station Detail Server Index of Practices. Note especially that the DNC system Administrative Services (SAS) functions, which are used with other applications as well as the Station Detail Server, are described in NTP 450-1011-301.

Notational conventions

The following conventions are used in this document:

- The names of "hardkeys" (keys that are labeled on the keyboard and always perform the same function) are shown in uppercase. Some examples of hardkeys are ENTER and RETURN.
- The names of "softkeys" (keys that perform different functions depending on the screen display) are shown in mixed case and bracketed with carets. Some examples of softkeys are <Exit>, <Add>, <Delete>, and <Change>.
- The result of an action is indicated by an arrow: ==>

The system accepts both uppercase and lowercase input, but interprets all alphabetical input as uppercase, except where noted.

Changes

32.01

The following changes have been made to this document from SMDR Modification for International Direct Distance Dialing feature, specifically supporting the following requirements:

- upissued document from 28.32 to 32.01 to correspond to patch NSR32 activity (SMDR Modification for International Direct Distance Dialing)
- an increase in the number for international direct distance dialing (IDDD) rom 12 to 15 digits, in accordance with International Telecommunications Union (ITU) requirements

- an increase in the length of the long SMDR record (D3) and the long network evaluation, reporting and verification (NERVE) call detail recording (CDR) SMDR record (D4)
- multiple DMS nodes with pre-NA004 and NA004 software releases or subsequent software releases to customer and customer premise equipment (CPE)
- added field 15IDDD? to Customer Table
- data spooling support, based on the Centrex customer requirement of receiving the former SMDR format (that is, 12 IDDD and 78 characters in the D3 and D4 call records) or the expanded international SMDR format (that is, 15 IDDD and 84 characters in the D3 and D4 records), regardless of the DMS operating software release. (By default, the end user customer receives the former SMDR format. BNM Customer Table must be datafilled to activate the expanded international SMDR format.)

NSR28

Software version NSR28 of the Station Detail Server has the following new features and enhancements:

- the DNC Disk Monitoring table
- the DNC Processor Monitoring table
- SMDR spooling ports have been increased from 8 to 32
- Network Node SMDR data collection
- PBX SMDR data collection

Using the terminals

Two kinds of terminals can be used with a DNC-50 to communicate with the Station Detail Server application. The standard terminal for a DNC-50 system is a Northern Telecom M4000-series terminal (Figure 2-1). In addition, the DNC-50 can also be accessed by ASCII terminals that are compatible with Digital Equipment Corporation's VT100 terminal (ANSI X3.64 standard).

In comparison with M4000 terminals, VT100 terminals have a smaller screen size, fewer keyboard functions, and fewer graphic capabilities. Users of both types of terminals see the same displays for the Station Detail Server application, but on VT100 terminals the ASCII character set is used to approximate M4000 graphics, and two-key combinations are used to emulate M4000 softkeys. Specific operating instructions for both types of terminals are given on the following pages.

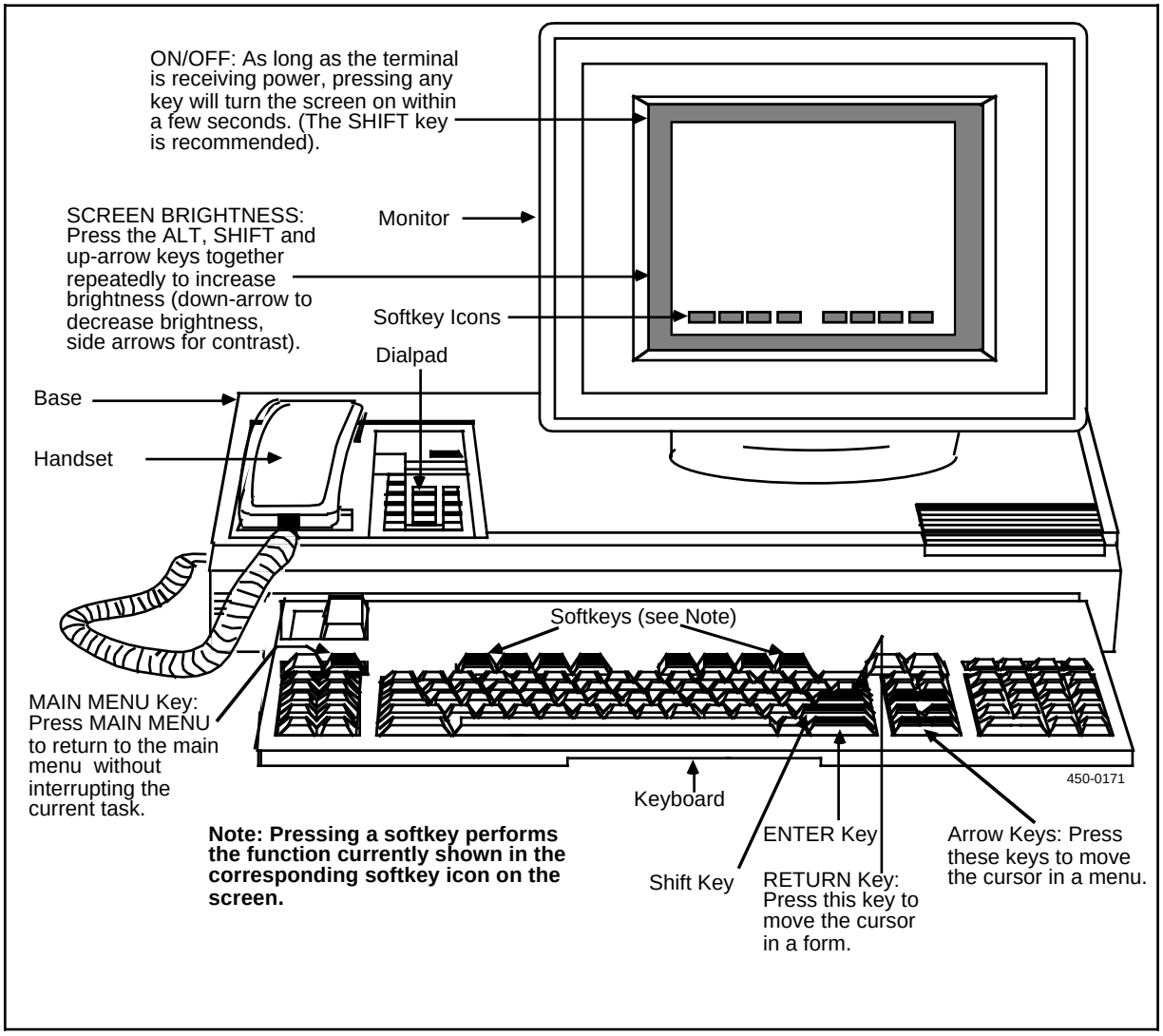
Connection to the DNC-50

Instructions for connecting terminals to a DNC are given in NTP 450-1011-201. Software configuration and initialization are described in NTP 450-1011-301. Following initialization, the terminal is ready for use.

User identification

Signing on to a DNC requires a user ID and a password, which are assigned by the system administrator. The system administrator's functions are described in practice 450-1011-301.

Figure 2-1
The M4000-series terminal



Using an M4000-series terminal

Turning the terminal on and off

An M4000-series terminal does not have an on/off switch. As long as the terminal is receiving power, pressing any key will cause the screen to come on after a few seconds. Note that even when the screen is dark, data may still be active on the terminal. Press a key that will not accidently cause data entry or modification (the SHIFT key is recommended). The screen also comes on if a message or data comes to the terminal.

The screen darkens automatically when the terminal has not been used for about 10 minutes. This feature extends the life of the screen.

Adjusting brightness and contrast

To adjust the brightness or contrast, hold down the ALT and SHIFT keys and push an arrow key repeatedly:

(1) to increase brightness, hold down the ALT and SHIFT keys and press the up-arrow key repeatedly

(2) to decrease brightness, hold down the ALT and SHIFT keys and press the down-arrow key repeatedly

(3) to increase contrast, hold down the ALT and SHIFT keys and press the left-arrow key repeatedly

(4) to decrease contrast, hold down the ALT and SHIFT keys and press the right-arrow key repeatedly

Using hardkeys and softkeys

There are two types of keys on the M4000 keyboard:

Hardkeys	A hardkey always has the same name and always performs the same function. Its name is usually marked on the keyboard. Examples of hardkeys are ENTER and RETURN. In this document, names of hardkeys are given in UPPER CASE.
Softkeys	Softkeys have different names and perform different functions depending on what is displayed on the screen. The eight softkeys on the M4000 keyboard are at the top of the keyboard, directly below the screen. Their current names are shown by a row of eight box icons at the bottom of the screen display. In this document, the names of softkeys are given in mixed case and bracketed by carets; for example, <Exit>.

Using a VT100-type terminal

The DNC-50 system supports any VT100-compatible terminal that follows the X3.64 standard. If you choose to use this type of terminal, consult the manufacturer's documentation for information about basic terminal operation.

When attached to a DNC-50 running the Station Detail Server application, VT100 terminals operate quite similarly to M4000s, but there are a few differences in screen layout and keyboard functions.

The differences in screen layout

The VT100 screen permits a display of only 24 lines and 80 columns, whereas the M4000 permits a display of 29 lines and 90 columns. For the Station Detail Server application, both terminals display the same types of information, but the displays are different in the following ways:

- An M4000-series terminal displays the date in the top right corner of the screen; a VT100-type terminal does not.
- The center of a VT100-type screen has less room for data, so less data can be shown on each "page" of a table or form.

The differences in keyboard functions

The VT100 keyboard does not have any softkeys, and many of its hardkeys are different from the hardkeys on an M4000 terminal. Before a VT100 terminal can be used with a DNC system, the system administrator must configure it according to the instructions in NTP 450-1011-301 and assign an "attention" (ATTN) key. The ATTN key is used in combination with other keys to change their function. The ESC and BREAK keys are often used as ATTN keys.

Table 2-A lists the ATTN key sequences you must use on a VT100 terminal to emulate the M4000 functions required for a Station Detail Server system. Take note of the following similarities and differences between VT100 hardkeys and M4000 hardkeys:

(1) The arrow keys on the VT100 are equivalent to the M4000 arrow keys.

(2) The ENTER key on the VT100 does not have the same function as the ENTER key on an M4000 terminal. As shown in Table 2-A, you must press ATTN RETURN or ATTN E on a VT100 when the Station Detail Server requires you to press ENTER.

(3) The M4000's INSERT, DELETE, and deleting BACKSPACE keys are not supported on the VT100.

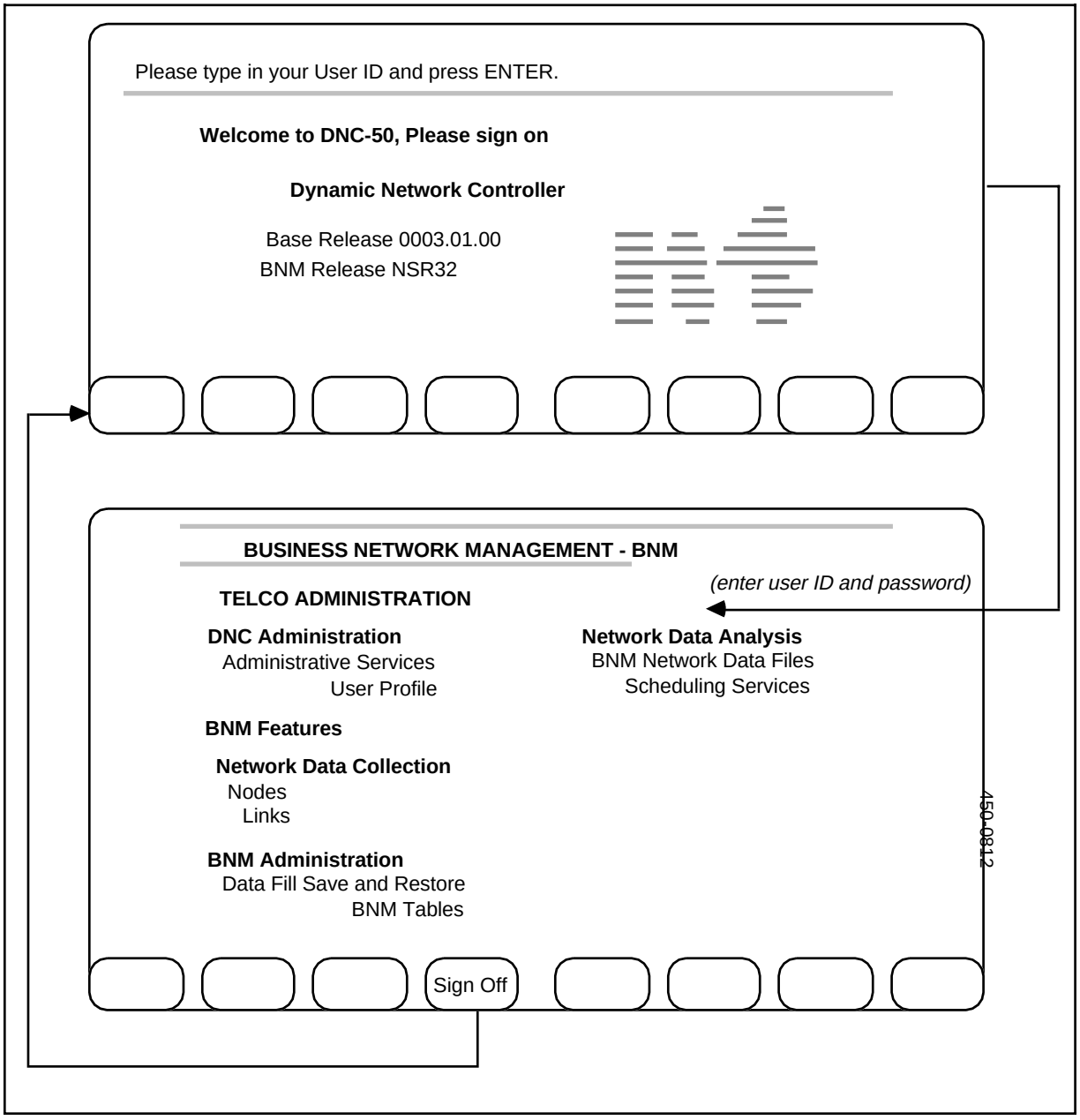
Table 2-A
VT100 keyboard functions

M4000 KEY	EQUIVALENT VT100 KEY SEQUENCE
Softkeys	
Softkey 1	ATTN 1 or PF1
Softkey 2	ATTN 2 or PF2
Softkey 3	ATTN 3 or PF3
Softkey 4	ATTN 4 or PF4
Softkey 5	ATTN 5
Softkey 6	ATTN 6
Softkey 7	ATTN 7
Softkey 8	ATTN 8
Hardkeys	
ACCEPT	ATTN A
ADJUST	ATTN D
CANCEL	ATTN X
CLOSE	ATTN L
COMMAND	ATTN C
HELP	ATTN H
MAIN MENU	ATTN M
MEETING	ATTN T
PHONE	ATTN P
SHARE	ATTN S
WINDOW	ATTN N
-continued-	

Table 2-A (continued)
VT100 keyboard functions

M4000 KEY	EQUIVALENT VT100 KEY SEQUENCE
Miscellaneous Functions	
ALT HELP (service description help)	ATTN V
ATTN key code (see note 1)	ATTN ATTN
SHIFT TAB (back to last tab)	ATTN B
ENTER	ATTN E or ATTN RETURN
INSERT	ATTN I
RESET	ATTN R
SHIFT HELP (help in data fields)	ATTN ?
SHIFT WINDOW (window menu)	ATTN W
XOFF	CRTL S (see note 2)
XON	CTRL Q (see note 2)
Note 1: The key that is to be used as the ATTN key is specified in the terminal configuration. (Terminal configuration is explained in NTP 450-1011-301.) Press the ATTN key twice to perform that key's own function. For example, if ESC is the ATTN key, press ESC twice to send the ESC code.	
Note 2: XON and XOFF are flow-control characters. Pressing CTRL S on a VT100 will cause the terminal to stop accepting input from the LAN interface unit that connects it to the DNC-500.	

Figure 2-2
Signing on and off



Sigining on to the DNC-50

Before you can sign on to the Station Detail Server application on a DNC-50, a DNC system administrator must register your user name and password in the System Administrative Services (SAS) User Table. SAS is described in NTP 450-1011-301.

Once a terminal has been connected to the DNC-50 and properly initialized, it should display the nt (Northern Telecom) logo, as shown on the top screen in Figure 2-2, or some other logo that has been customized for your company. To sign on to the Station Detail Server from this point, follow these steps:

(1) A message at the top of the screen prompts you to enter your user ID. Type your user ID and then press ENTER.
==> A new message at the top of the screen asks for your password.

(2) Type your password and then press ENTER. As a security measure, the password is not displayed as you type it.
==> If the user ID and password are valid, the BNM main menu appears. If the user ID and password are not valid, the system prompts for them again.

Signing off from the DNC-50

When you have finished using the DNC-50, you should sign off. This helps to prevent unauthorized use of the DNC-50. The procedure for signing off is:

(1) Display the BNM main menu. (Either press <Exit> on each screen in turn until you reach the main menu, or press the MAIN MENU key.)

(2) Press <Sign Off>.
==> A message prompts you to press ENTER to confirm that you want to sign off, and the <Sign Off> softkey changes to <Change User ID>. See the next procedure to find out how to change the user ID>

(3) Press ENTER.
==> The system signs you off, closes all windows, and displays the signon screen. (For information about windows, see Using Windows later in this chapter.)

Changing the user ID

If you want to stop working under one user ID and switch to another user ID, you do not have to sign off completely and then sign on again and reopen all your windows. Instead, follow these steps:

(1) Follow the first two steps of the procedure for signing off.

(2) Instead of pressing ENTER to complete the signoff procedure, press <Change User ID>.
==> The system displays the signon screen and prompts for a new user ID, but all windows remain open.

(3) Type the new user ID, then press ENTER.
==> The system prompts you for a password.

(4) Type the password for the new user ID and then press ENTER.
==> The BNM main menu appears. All your original windows remain open.

Using windows

A Business Network Management or Station Detail Server system can have up to six activities operating on a terminal at the same time. Each activity has its own "window". The window amounts to a virtual terminal devoted to that activity. If several windows are active on the terminal, you can switch between them, displaying them one at a time, to see how they are progressing or to work with them. Windows remain in existence until you close them, even after their activities are finished.

Creating a new window

To create a new window and begin a new activity without interrupting a current activity, press MAIN MENU. This action causes the terminal to display the main menu of a new window. Then make the appropriate selection from the main menu to begin the new activity.

The original activity continues to run in the original window. You can see it and work with it by switching between windows.

Each new window is assigned a number in the order in which it is created. All the window numbers appear at the top right corner of the screen, and the window number of the activity currently shown is highlighted.

Changing to another window

To change to another window, press WINDOW. The window that is next in numerical sequence is displayed. If several activities are active on the terminal, keep pressing WINDOW until you see the one you want.

Another option is to display a menu of all the open windows. To do this, press SHIFT and WINDOW together. From the resulting menu of windows, select the window to be displayed.

Closing a window

To close a window, press <Exit> while the window is displayed. This action closes the window and returns you to the main menu. If other windows are still open at this point, the softkey <Return to Window> is displayed. Press it to display the next active window.

On-line help

Press the SHIFT and HELP keys together while your cursor is in any input field to see an on-line help message that describes the type and format of input required.

Administering the BNM tables

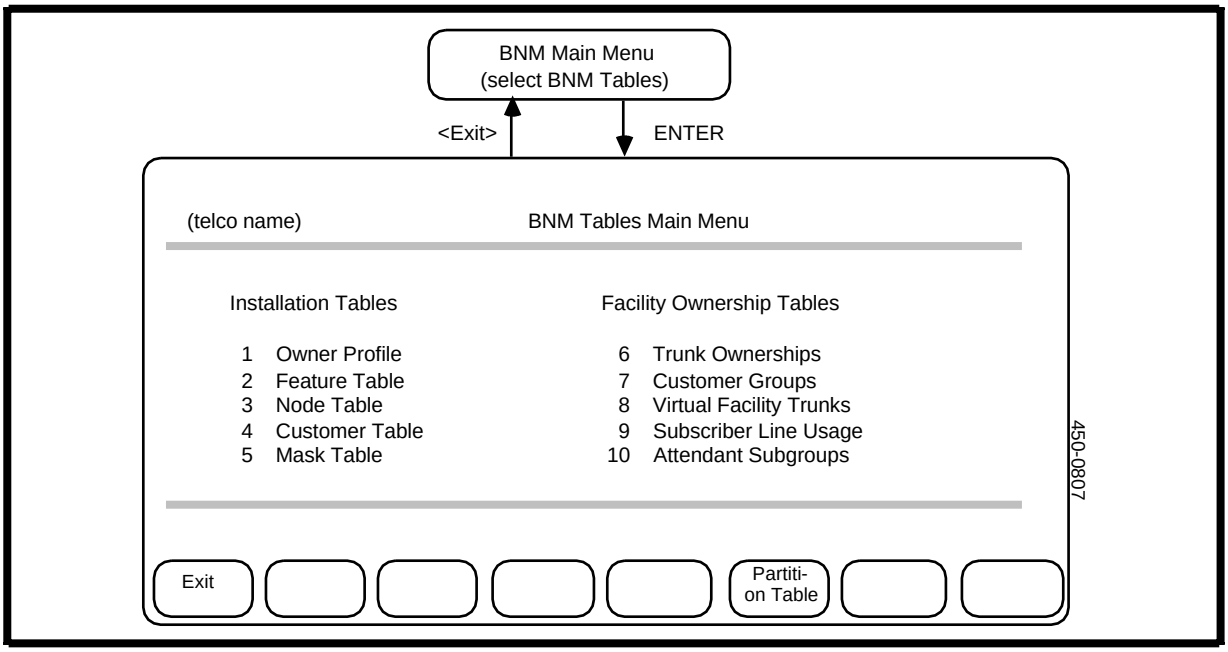
Overview

This part explains how to administer the BNM data tables. The information in these tables is used by the DNC to interpret and process the data it receives from the DMS node.

The tables are initialized with appropriate data when the DNC-50 is installed. After installation, entries can be displayed and changed when necessary. On a DNC-50 system (as opposed to some other type of BNM system), many of the tables should never need to be changed. This NTP explains only the tables that you might need to change.

You access the BNM data tables through the BNM Tables option on the BNM main menu. Figure 3-1 shows the BNM Tables Main Menu.

Figure 3-1
The BNM tables main menu



Installation tables

The Installation tables are the tables that the DNC relies on for information about the BNM network. There are five installation tables, but two of them should never need to be changed on a DNC-50 Station Detail Server system:

Owner Profile	This table registers information about the owner of the DNC-50. The owner has access to all functions of the BNM system and to all data collected by the DNC-50 for all customers.
Feature Table	This table does not need to be changed from its initial state on a Station Detail Server system.
Node Table	This table does not need to be changed from its initial state on a Station Detail Server system.
Customer Table	This table registers information about all the customers of the BNM system. For each customer in the table, softkeys lead to four other tables:

Customer Feature	does not need to be changed from its initial state on a Station Detail Server system
Customer Node	does not need to be changed from its initial state on a Station Detail Server system
Customer DNC	does not need to be changed from its initial state on a Station Detail Server system
SMDR Profile	shows how and in what format SMDR data is sent to the customer

Mask Table	This table is a list of telephone numbers that identify stations for which called numbers are to be masked on Station Message Detail Recording (SMDR) records.

Facility ownership tables

The Facility Ownership tables identify the network facilities that are reserved for the BNM customers and show which facilities belong to which customers. There is only one table for a DNC-50 Station Detail Server system, it is called the Customer Groups table.

Facility ownership - customer groups

In Meridian Digital Centrex networks, customers can be organized into groups that share a common owner. These arrangements must be listed in the Customer Group Table (Figure 3-2). This table contains the following information:

(a) ***Customer Group:*** This is the name of a customer group that is registered on the DMS switch for a customer.

(b) ***Customer Name.*** This is the name, as recognized by the DMS, of the customer to whom the group belongs. This name must appear in the Customer Table before it can be used in the Customer Groups table.

(c) ***User-defined Name.*** This is the customer's name for the group. This is the name that will appear on formatted reports.

(d) ***User Reference.*** This is a shorter version of the user-defined name that the system uses when formatting SMDR data for the customer.

The table can contain a maximum of 150 customer groups.

Displaying the table

To display the entries in the Customer Group table, follow these steps:

(1) From the BNM main menu, select BNM Tables and then press ENTER.
==> The BNM Tables Main Menu appears.

(2) Select Customer Groups and then press ENTER.
==> The Customer Group Table screen appears. If there are too many entries to be displayed on one screen, the <Show Next> and <Show Previous> softkeys can be used to move to different sections of the table.

Adding an entry

To add an entry to the Customer Group table, first display the table, then follow these steps:

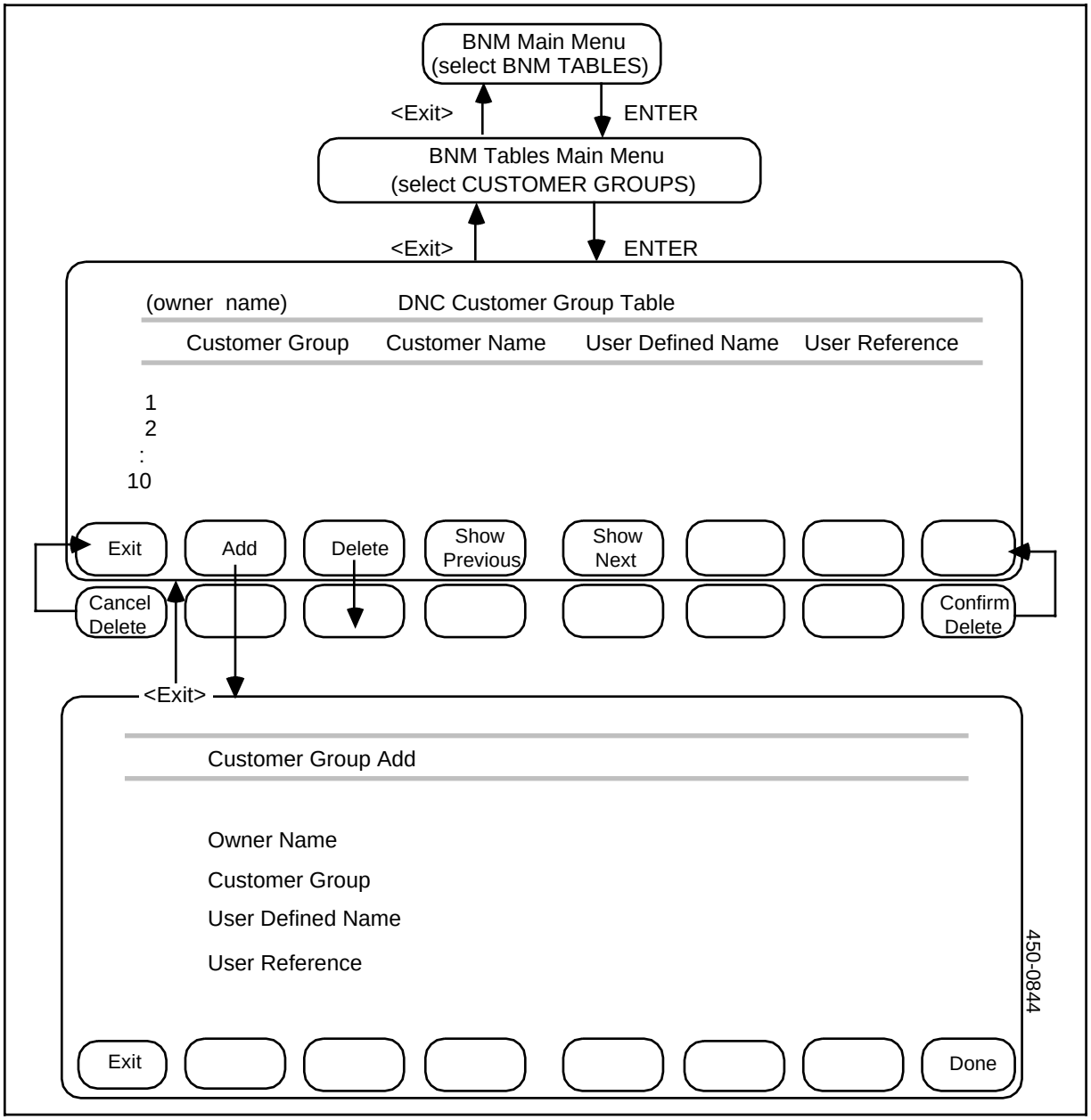
(1) Press <Add>.
==> The Customer Group Add screen appears.

(2) Fill in the fields on this screen, using the RETURN key to move between fields. To save the new entry, press <Done>.
==> A message indicates that the entry has been added.

Note: To leave this screen without creating a new entry, press <Exit>.

(3) Add other entries as above, typing new characters over the old, or exit.

Figure 3-2
Facility ownership - customer group table



Deleting an entry

To delete an entry from the Customer Group table, use the arrow keys to select the entry to be deleted, then

(1) Press <Delete>.
==> A message requests confirmation, and new softkeys appear.

(2) Press <Confirm Delete>.
==> The table reappears with the entry deleted.

Exiting

To leave the Customer Group screens and return to previous screens, press <Exit> on each screen in turn.

Installation - customer table

The Customer table (Figure 3-3) registers all customers who are served by this DNC-50. The Customer table must also include an entry for the telco owner of the DNC-50 itself that has a group-id of 0.

The DNC-50's data collector checks the information in the Customer Table when it starts to collect data from the DMS node. This means that if the DNC is in the process of collecting data when a new customer is added to the Customer Table, no data for the new customer will be collected until the data collector is stopped and then restarted. Similarly, if information about a customer is changed, or if a customer is deleted, the data collector does not recognize the change until it is stopped and then restarted. To start or stop data collection, use the Nodes menu (see part 4 of this practice).

NSR28 supports up to 64 customers.

The Customer table contains the following information:

(a) ***Customer Name:*** (up to 16 characters) This is the name of the customer as it is to be formatted on reports.

(b) ***DNC Reference:*** (up to 16 characters) This is the name of the customer as recognized by this and other DNC systems. It should be the same as the DNC Reference for the customer at other DNC systems in the network.

(c) ***Network Address:*** not applicable for a DNC-50 system.

(d) ***DNC Logon Password:*** (displayed only on the Add and Change screens) not applicable for a DNC-50 system.

(e) ***Group-ID:*** (number from 0 to 99) This identifies the group with which the customer is associated in System Administrative Services. The system reserves group zero for the operating company owner of the DNC-50. Each group other than zero represents a separate customer. (See NTP 450-1011-301.)

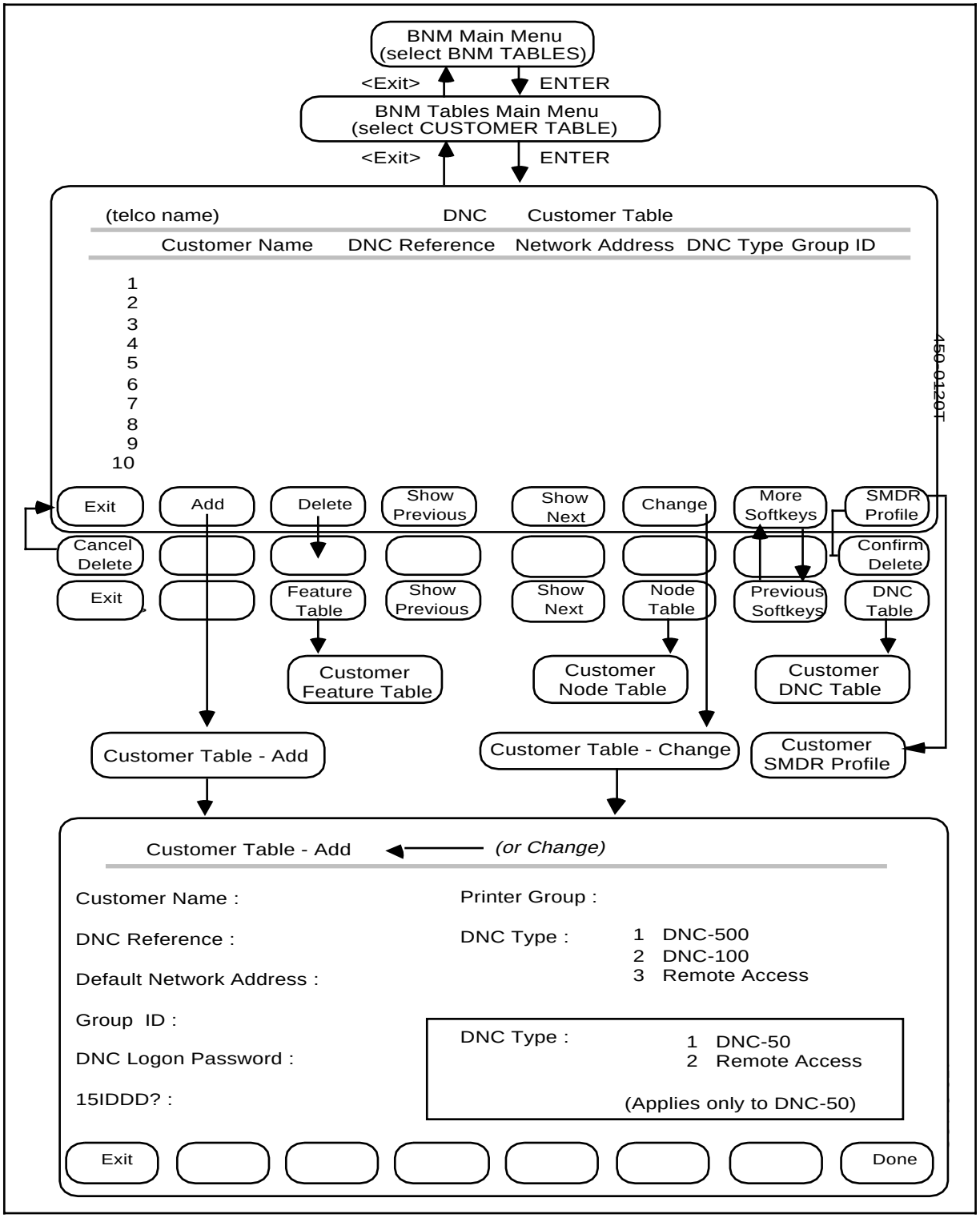
(e) ***15IDDD?:*** (Add and Change screens only) This field specifies the format of SMDR spooling. If the box next to this field is empty (the default value), then BNM spools the former SMDR format; pressing the space bar, which enters a check mark in the box, indicates that BNM is to spool the expanded SMDR format.

(f) ***Printer Group:*** (up to 16 characters - displayed on the Add and Change screens only) This is the name of the printer queue to which print jobs are assigned

(g) ***DNC Type:*** (displayed on the Add and Change screens only) Select

- ***DNC-500*** for the operating company owners and users
- ***Remote Access*** for customers

Figure 3-3
Installation - customer table



Displaying the table

To display the entries in the Customer table, follow these steps:

(1) From the BNM main menu, select BNM Tables and then press ENTER.
==> The BNM Tables Main Menu appears.

(2) Select Customer Table and then press ENTER.
==> The Customer Table screen appears. If there are too many entries to be displayed on one screen, you can use the <Show Next> and <Show Previous> softkeys to move to different sections of the table.

Adding an entry

To add an entry to the Customer table, first display the table, then follow these steps:

(1) Press <Add>.
==> The Customer Table Add screen appears.

(2) Fill in the fields on this screen, using the RETURN key to move between fields. In the DNC Type field, use the arrow keys to select a type. To save the new entry, press <Done>.
==> A message indicates that the entry has been added.

Note: to exit from this screen without creating a new entry, press <Exit>.

(3) Add other entries as above, typing new characters over the old, or exit.

Deleting an entry

To delete an entry from the Customer table, use the arrow keys to select the entry to be deleted, then

(1) Press <Delete>.
==> A message requests confirmation and new softkeys appear.

(2) Press <Confirm Delete>.
==> The table reappears with the entry deleted.

Changing an entry

To change an entry in the Customer table, first select the entry you want to change on the Customer Table screen, then:

(1) Press <Change>.
==> The Customer Table Change screen appears.

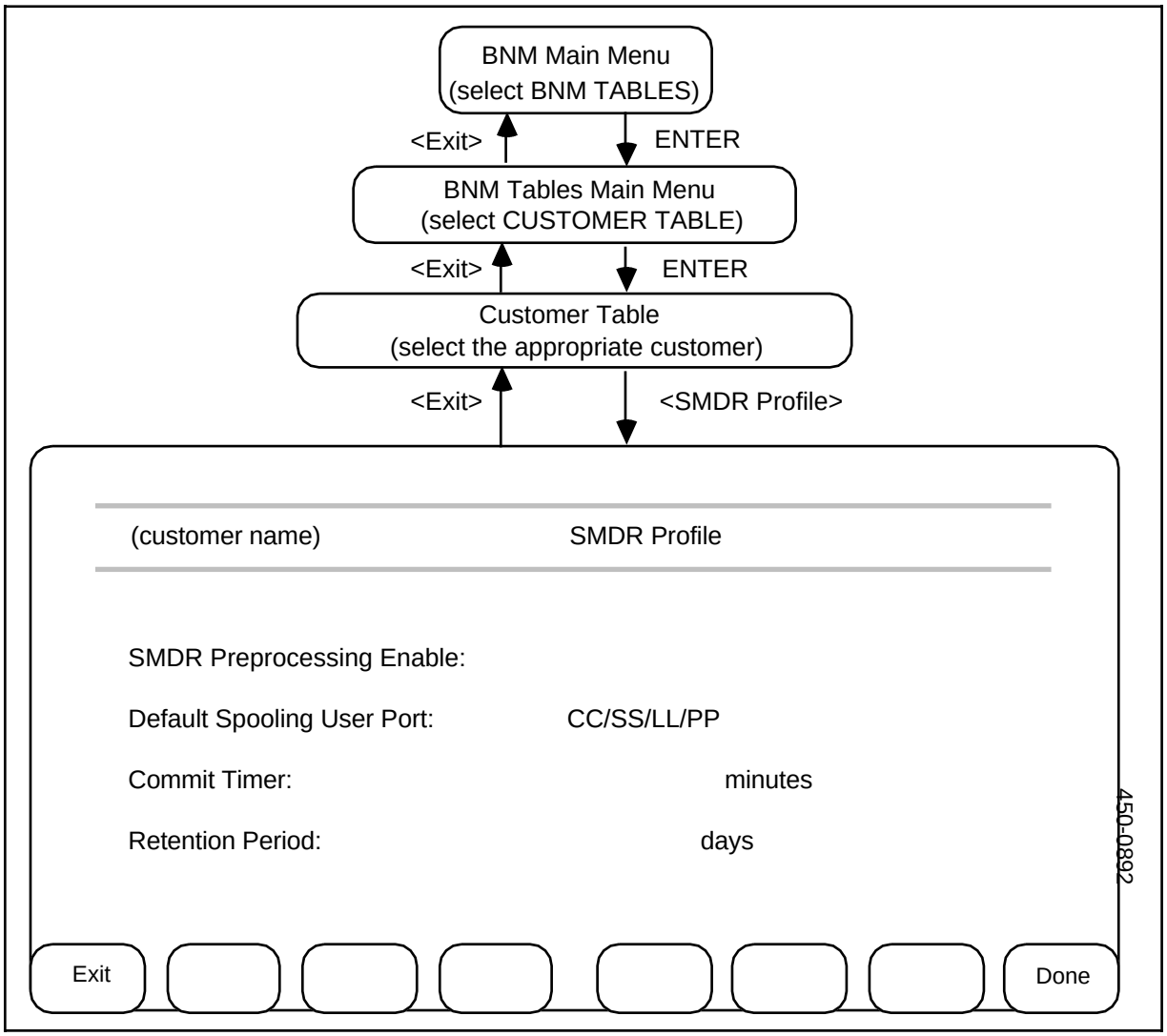
(2) Type new data in each field. Use the RETURN or TAB key to move from field to field. Press <Exit> at any time to return to the previous screen without changing the entry. To save the changes, press <Done> when all the fields are correct.
==> A message indicates that the entry has been changed.

(3) Press <Exit> to return to the previous screen.

Exiting

To leave the Customer Table screens and return to previous screens, press <Exit> on each screen in turn.

Figure 3-4
Installation - customer SMDR profile



Installation - customer SMDR profile

For each entry in the Customer Table (Figure 3-3), softkeys lead to a Customer SMDR Profile table (Figure 3-4) that lists the parameters for spooling SMDR data to that customer. The SMDR Profile contains the following information:

(a) ***SMDR Preprocessing Enable.*** If there is a check mark in this field, SMDR data that is being collected from a DMS switch is processed before it is stored on the DNC-50's disk. Processing consists of inserting a user reference name into the data.

(b) ***Default Spooling User Port.*** This identifies the LIU port on the DNC-50 through which data is spooled to the customer when no port is specified in the Customer Node table.

(c) ***Commit Timer.*** This shows how often SMDR data files that are being collected from a DMS switch are committed to the DNC's disk. The measurement is in minutes.

(d) ***Retention Period.*** This shows how long SMDR data files are kept on the DNC-50's disk before being erased to make room for new files. The measurement is in days.

Displaying the table

To display the entries in an SMDR Profile table, follow these steps (Figure 3-4):

(1) From the BNM main menu, select BNM Tables and then press ENTER.
==> The BNM Tables Main Menu appears.

(2) Select Customer Table and then press ENTER.
==> The Customer Table screen appears.

(3) Select the entry for the appropriate customer, then press <SMDR Profile>.
==> The SMDR Profile screen appears.

Changing an Entry

To change an entry in a customer's SMDR Profile, first display the SMDR Profile screen, then follow these steps:

(1) Type the new entries in the fields. In the Preprocessing Enable field, use the SPACE BAR to insert or delete a check mark. Use the RETURN or TAB key to move between the fields.

(2) To save the changes, press <Done>.
==> A message confirms that the changes have been made.

(3) Press <Exit> to return to the previous screen.

Installation - DNC owner profile

The DNC Owner Profile (Figure 3-5) registers the operating company owner of the DNC-50, who has access to all customer data and to all functions of the DNC system. This table contains the following information:

(a) ***Telco Name:*** (up to 16 characters) This is the name of the operating company as it is to appear on tapes and reports.

(b) ***Telco DNC Reference:*** (up to 16 characters) This is the name of the operating company as it is recognized by the DNC-50. The telco's DNC reference must be the same as the telco name.

(c) ***Network Address:*** (16 characters, upper case, no blanks) This is the address of this DNC-50 in the X.25 packet network. It must match this DNC's DTE Address on the X.25 Details Screen under System Administrative Services (see the section on setting up ports for X.25 and NOP in NTP 450-1011-301).

(d) ***Password:*** This is the password the DNC-50 uses when it logs on to DMS switches to collect data.

Displaying the table

To display the DNC Owner Profile, follow these steps:

(1) From the BNM main menu, select BNM Tables and then press ENTER.
==> The BNM Tables Main Menu appears.

(2) Select Owner Profile and then press ENTER.
==> The DNC Owner Profile screen appears.

Changing the profile

Change any fields that need to be changed by typing new information over old. Use RETURN to move the cursor from one field to the next. When the data is correct, press <Change Profile>.

Changing the password

To change the password, begin at the DNC Owner Profile screen, then follow these steps:

(1) Press <Change Password>.
==> The DNC Owner Password screen appears with a prompt to enter a new password.

(2) Type a new password.
==> The cursor moves, but the password is not displayed.

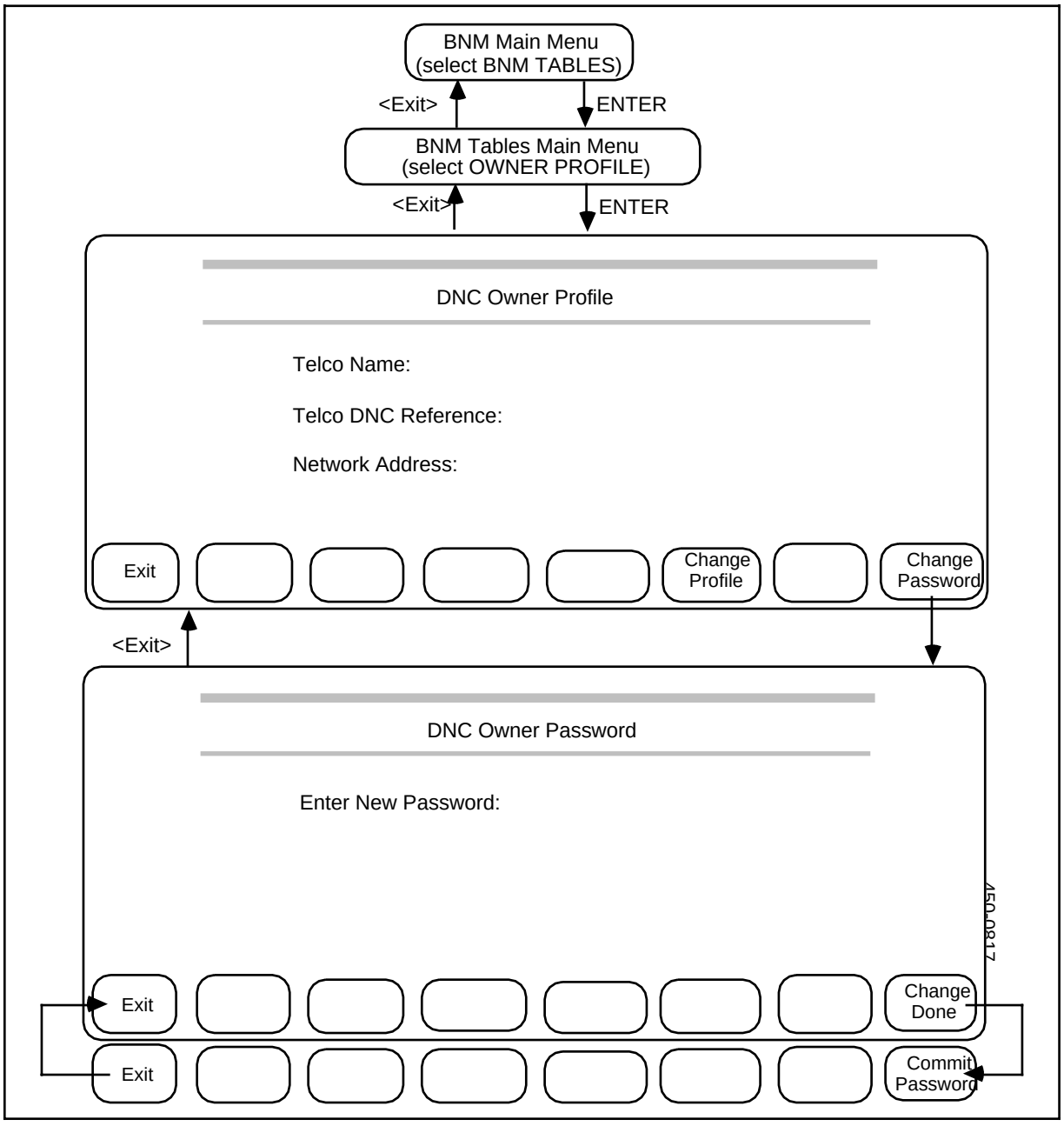
(3) Press <Change Done>.
==> A prompt requests confirmation.

(4) Retype the new password and press <Commit Password> to save the new password, or press <Exit> to leave this screen without changing the password.

Exiting

To leave the DNC Owner Profile screens and return to previous screens, press <Exit> on each screen in turn.

Figure 3-5
Installation - DNC owner profile



Mask table

The Mask Table (Figure 3-6) registers all telephone numbers that are to have their called numbers masked in SMDR data. The numbers are shown as 10-digit numbers that include an area code.

Displaying the mask table

To display the Mask table, follow these steps:

(1) From the BNM main menu, select BNM Tables and then press ENTER.
==> The BNM Tables Main Menu appears.

(2) Select Mask Table and then press ENTER.
==> The Mask Table screen appears with a prompt for a telephone number.

Querying an entry

To find out whether or not a particular directory number is in the Mask table, follow these steps:

(1) Type the directory number on the Mask Table screen. Use 10 digits, including an area code. The form can be either NPA-NXX-XXXX or NPANXXXXXX.

(2) Press <Query>.
==> A message indicates whether the number is in the Mask Table or not.

Listing all entries

To list all the entries, press <List> on the Mask Table screen.
==> The List screen appears with a list of the entries in the Mask table.

Adding an entry

To add an entry to the Mask table, follow these steps:

(1) Type the directory number on the Mask Table screen. Use 10 digits, including an area code. The form can be either NPA-NXX-XXXX or NPANXXXXXX.

(2) Press <Add>.
==> A message confirms that a number has been added.

Deleting an entry

To delete an entry from the Mask table, follow these steps:

(1) Press <Delete>.
==> A message requests confirmation, and new softkeys appear.

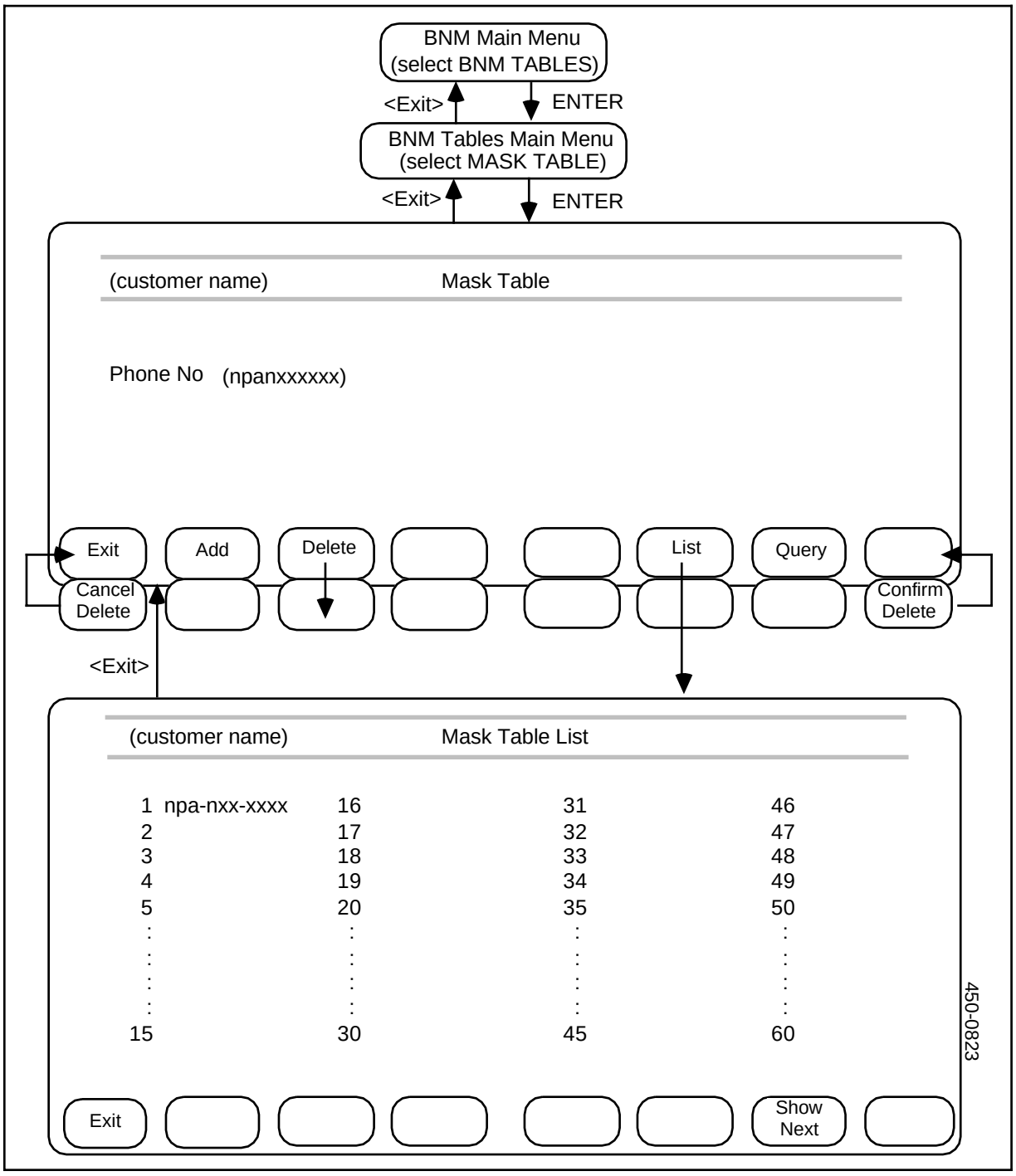
(2) Press <Confirm Delete>.
==> A message confirms the deletion.

Exiting

To exit from a Mask table screen and return to a previous screen, press <Exit>.

Figure 3-6

Installation - mask table



Operating the station detail server

Overview

This part explains how to use the features of the Station Detail Server. Figure 4-1 shows an overview of these features.

Figure 4-1
An overview of station detail server features

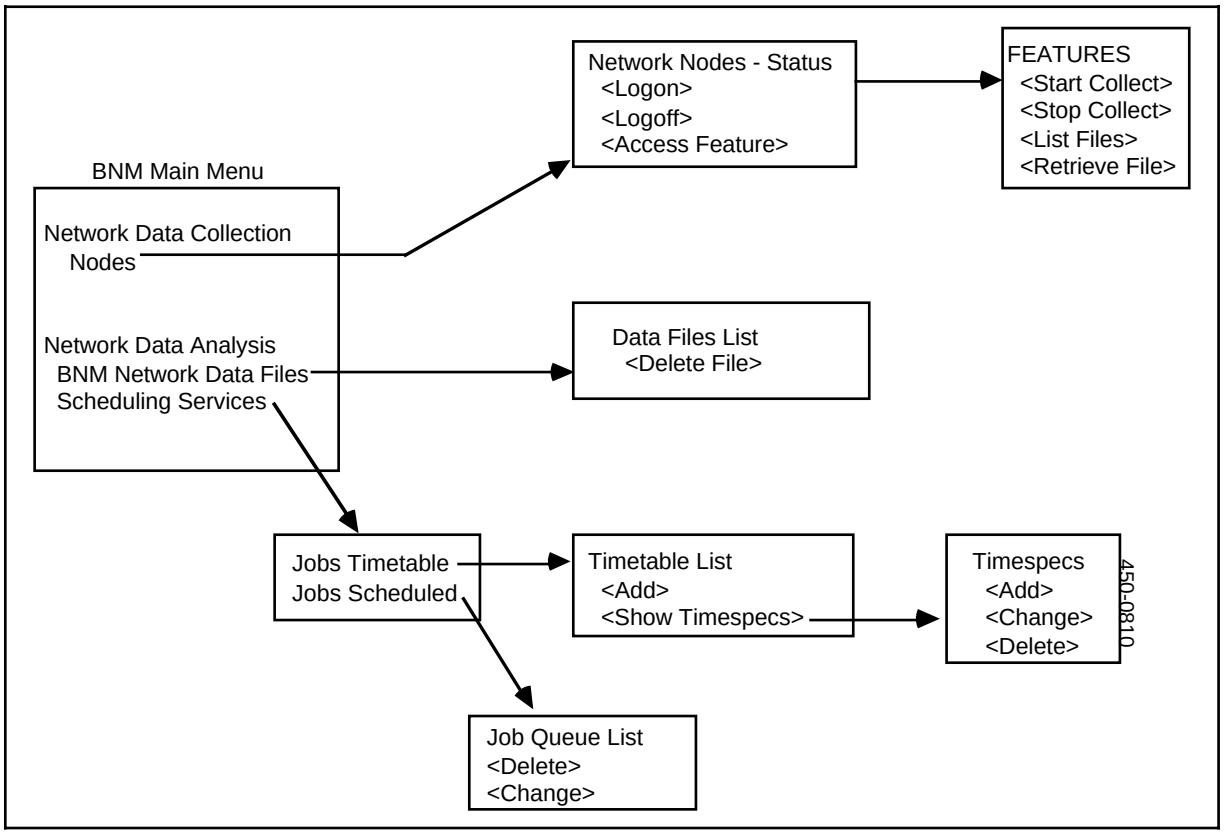
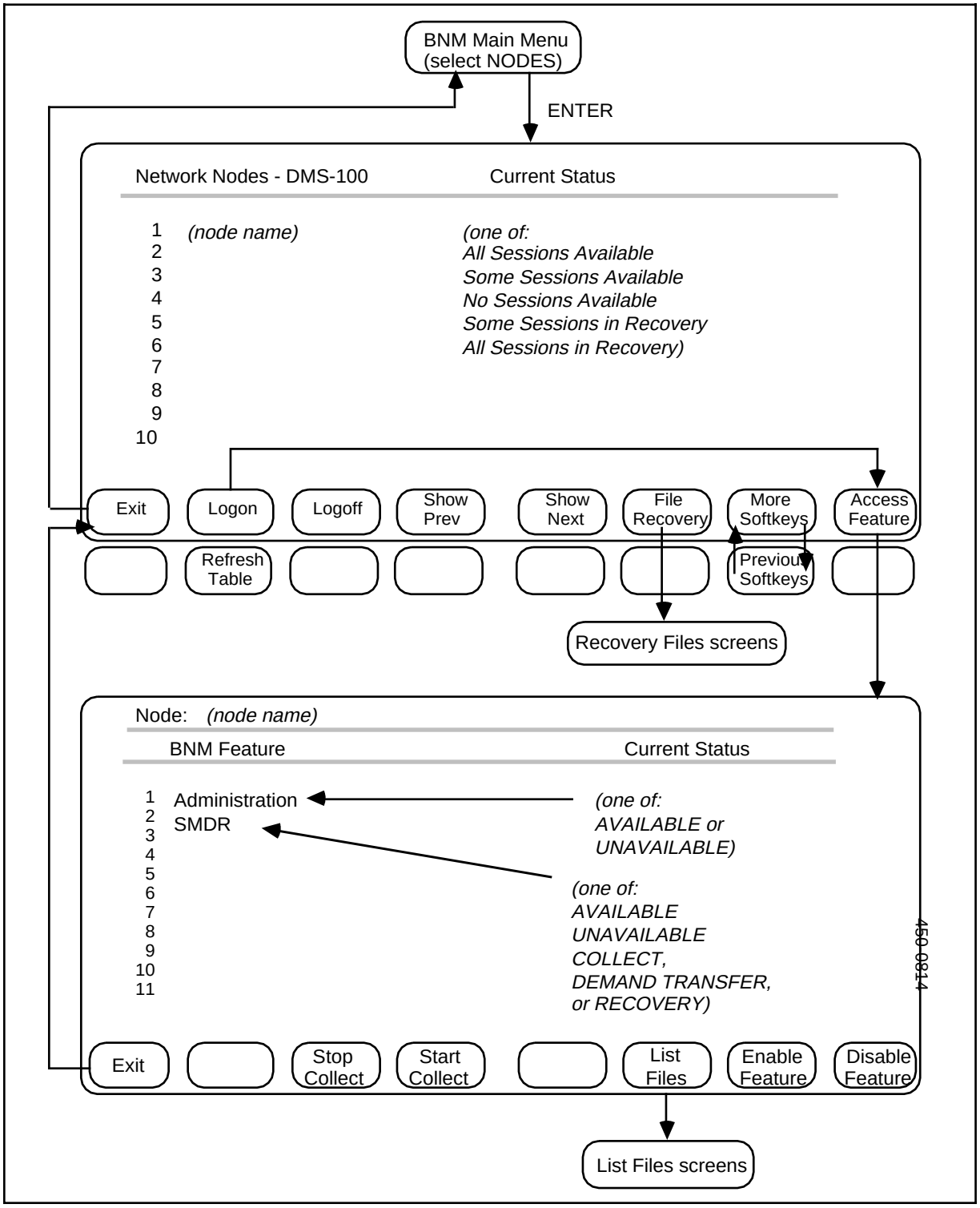


Figure 4-2
The network nodes screens



Using continuous data collection

A DNC-50 running the Station Detail Server application normally collects SMDR data from a DMS node continuously, as the data is generated. Before continuous collection can be started, the DNC must be logged on to the node. This section explains how to log on and off the node, and how to start and stop continuous collection of SMDR data from the node.

Logging on to the node

To log on to the node, follow these steps (Figure 4-2):

(1) On the BNM main menu, select Nodes and then press ENTER.
==> The Network Nodes screen appears. For a DNC-50 system, this screen lists the single node to which the DNC-50 is connected and shows the current status of the communications session with that node. The possible statuses are:

- all sessions available
- some sessions available
- no sessions available
- some sessions in recovery
- all sessions in recovery

(2) Press the <Logon> softkey.
==> Messages show whether the attempt to log on succeeds or fails.

Starting continuous data collection

Once you have logged on to the node, follow these steps to start continuous collection of SMDR data from that node:

(1) Press the <Access Feature> softkey.
==> The BNM Feature screen is displayed. This screen lists the communication channels between the node and the DNC-50. There is one channel for SMDR data collection and one channel for administration.

The Feature screen also gives the status of each channel. The administration channel can be either AVAILABLE or UNAVAILABLE. It must be AVAILABLE before SMDR data collection can begin. The status of the SMDR channel is one of:

Available	Data is not currently being collected, but can be collected if requested.
Unavailable	Data cannot be collected at this time.
Collect	Data is currently being collected by the continuous collection process.
Demand Transfer	Data is currently being collected in response to a demand transfer request.
Recovery	Data cannot be sent at this time, but the system is attempting to reconnect.

The status of the SMDR channel must be AVAILABLE before data collection can begin. If the status is UNAVAILABLE, use the procedure for reopening the data channel that is described later in this section.

(2) Use the arrow keys to select the SMDR channel, then press <Start Collect>.
==> After a short wait, the status of the channel changes to COLLECT. Continuous collection of SMDR data has now started and will continue until you stop it or log off the node. You can exit from these screens (by pressing <Exit>) and log off the DNC without affecting data collection.

Stopping continuous collection while keeping the channel Open

To stop continuous collection of SMDR data but keep the channel to the node open, follow these steps:

(1) Move to the Feature screen and select the SMDR channel.

(2) Press <Stop Collect>.
==> Data collection stops. After a short time, the status of the channel becomes AVAILABLE.

Stopping collection and clearing the channel

To stop collection and at the same time clear the channel through which the data is collected, follow these steps:

(1) Move to the Feature screen and select the SMDR channel.

(2) Press <Disable Feature>.
==> Data collection stops. After a short wait, the status of the channel becomes UNAVAILABLE.

Note: Pressing <Logoff> twice while continuous collection is in progress also causes the system to stop collection and log off from the channel.

Logging off the node

When you stop collecting SMDR data from the node, you should log off the node. Do this by displaying the Network Nodes screen and then pressing <Logoff>.

Reopening the SMDR channel

To reopen the SMDR channel after it has been cleared, follow these steps:

(1) Ensure that the DNC is logged on to the node (see the logon procedure earlier in this section).

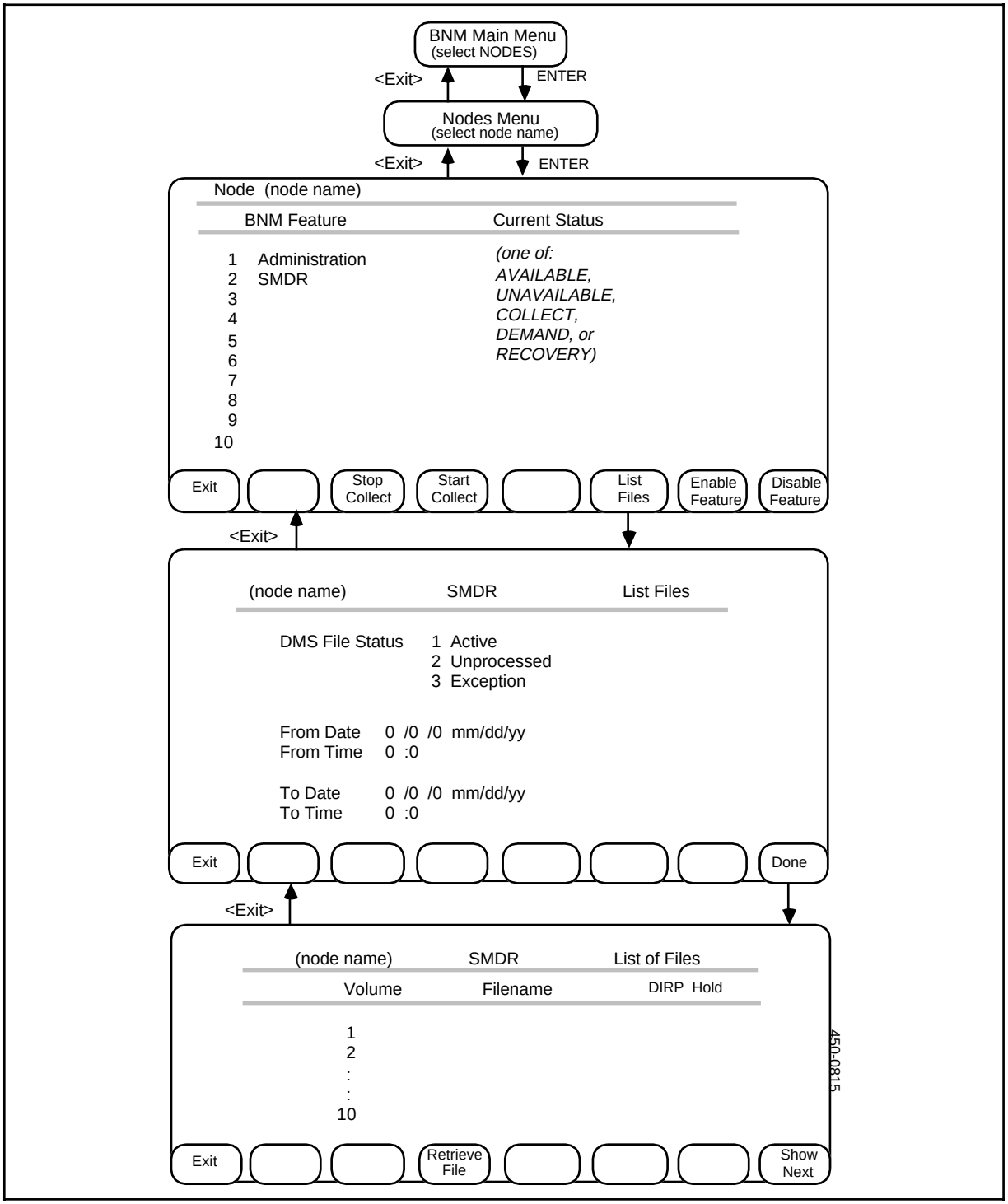
(2) Move to the Feature screen and select the SMDR channel.

(3) Press <Enable Feature>.
==> The system reopens the channel and its status becomes AVAILABLE. You can then restart data collection on that channel.

Exiting from the nodes screens

To return to the main menu, press <Exit> as many times as necessary (twice from the Feature screen, or once from the Network Nodes screen). If you have just started data collection, do not log off from the node before you exit from the screens, as this will cause data collection to stop. (However, you can log off from the DNC-50 without causing data collection to stop.)

Figure 4-3
The demand transfer screens



Using the demand transfer feature

If continuous collection of SMDR data by a Station Detail Server system from a DMS node is either deliberately or accidently interrupted, a DNC-50 operator may have to request the retransfer of missing data from the node. This section explains how to request the transfer of an unprocessed data file (or part of a file) from a DMS node to a DNC-50.

> ***Note:*** This process may require action by the local DMS operator before the data transfer takes place, if the file has to be restored from tape to the node's holding disk manually.

The demand transfer screens

The screens used for requesting a demand transfer are shown in Figure 4-3. These screens display or prompt for the following information:

Node	The name of the DMS node from which data is collected.
Feature Type	The type of data that is collected. For the Station Detail Server application, the only feature type available is SMDR (Station Message Detail Record data).
Volume	The name of the volume on the DMS disk that holds the data file that is to be transferred.
Filename	The name of the data file that is to be transferred.
FileID	The number of the data file in table DIRPHOLD on the DMS. This can be obtained from DMS file listings.

Making a request for a demand transfer

To request a demand transfer, follow these steps:

(1) On the BNM main menu, select Nodes and then press ENTER.
==> The Network Nodes screen appears. For a DNC-50 system, this screen lists the single node to which the DNC-50 is connected.

(2) Press <Logon>.
==> Messages indicates whether or not the logon is successful.

(3) Press <Access Feature>.
==> The BNM Feature table appears.

(4) Select the SMDR channel. The status of this channel must be AVAILABLE before you can collect data. If the status is UNAVAILABLE, press <Enable Feature>.

(5) Once the status of the SMDR channel is AVAILABLE, press <List Files>.
==> The SMDR List of Files screen appears. This screen allows you to specify a group of files that you want to list before deciding which ones you need to transfer.

(6) In the DMS File Status field, use the arrow keys to select the type of file you want to list (Active, Unprocessed, or Exception) and then press RETURN.
==> The cursor moves to the From Date field.

(7) To list only files that were created after a particular date and time, enter that date and time in the From Date and From Time fields. Press RETURN after each entry. You may leave these fields blank to list all files.

(8) To list only files that were created before a particular date and time, enter that date and time in the To Date and To Time fields. Press RETURN after each entry. You may leave these fields blank to list all files.

(9) Press <Done>.
==> The list of available files that match the criteria you entered is displayed on the List of Files screen. If the list is too long to fit on the screen, you can use the <Show Next> softkey to display other parts of it.

(10) Use the arrow keys to select the file you want to retrieve and then press <Retrieve File>.
==> Messages show you whether the transfer succeeds or fails.

Note: If the file transfer fails, and a message states that the file is in a "recovery" state, it means that the file should be recovered using the "Recovery File" method (see the next section of this chapter).

Exiting

To return to previous screens, press <Exit> on each screen in turn.

Recovering files

In most cases, a DNC-50 receives SMDR data files transferred from a DMS node on a continuous basis. However, if a transmission is lost or interrupted, the DNC identifies the portion of the transmission not received and the DMS node flags the files involved as Recovery (R) files. This section describes how to list and recover these Recovery files.

The recovery file screens

The screens used for listing and recovering Recovery files are shown in Figure 4-4. These screens display or prompt for the following information:

Node	The name of the DMS node that transfers data to the DNC-50.
Feature Type	The type of data that the Recovery files contain. For the Station Detail Server application, this must be SMDR (Station Message Detail Record) data.
Date and Time	The approximate times for which the Recovery files are to be listed. If this field is left blank, all Recovery files are listed.

Listing the recovery files

To list the available Recovery files, follow these steps (Figure 4-4):

(1) On the BNM main menu, use the arrow keys to select Nodes and then press ENTER.
==> The Network Nodes screen appears.

(2) Ensure that the DNC is logged on to the node. If it is not logged on, press <Logon>.

(3) Press <File Recovery>.
==> The Recovery File Query screen appears.

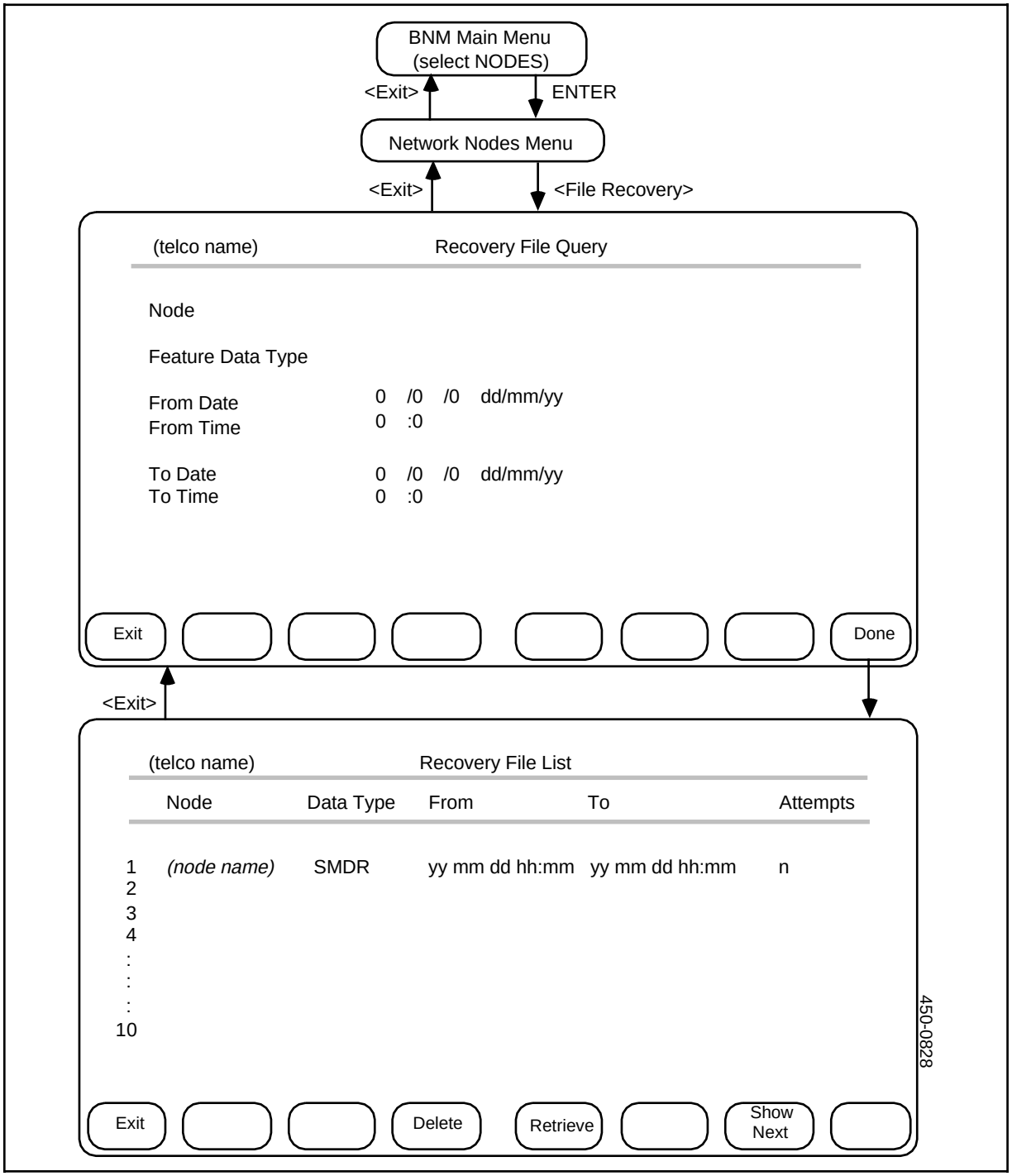
(4) Enter the name of the DMS node to which the DNC-50 is connected, then press RETURN.
==> The cursor moves to the Feature Data Type field.

(5) Enter SMDR and then press RETURN.
==> The cursor moves to the From Date field.

(6) Fill in dates and times to define the interval for which you want the Recovery files to be listed. Enter the day (1-31), month (1-12), year (last two digits), hours (0-23), and minutes (0-59). Use the RETURN key to move between fields. If you leave the dates and times blank, all Recovery files will be listed.

(7) Press <Done>.
==> The Recovery File List screen appears, listing all the Recovery files that meet the criteria you entered on the Query screen.

Figure 4-4
The recovery file screens



Deleting a file from the list

To delete a file that appears on the Recovery File List screen, follow these steps:

(1) Use the arrow keys to select the file you want to delete.

(2) Press <Delete File>.
==> A messages requests confirmation.

(3) Press <Delete File> again.
==> The file disappears from the list and a message confirms that the file has been deleted.

Retrieving a recovery file

To retrieve a file that is listed on the Recovery File List screen, follow these steps:

(1) Use the arrow keys to select the file you want to retrieve.

(2) Press <Retrieve>.
==> A message confirms that the file is being retrieved.

Exiting from the recovery file screens

To exit from the Recovery file screens, press <Exit> as many times as necessary. Pressing <Exit> three times from the Recovery File List screen returns you to the BNM main menu.

Displaying data files

Once SMDR data files have been collected from the DMS and stored on the DNC-50's hard disk, telco users can display them and perform various functions with them on a demand basis. This section explains how to

- list all the SMDR files that belong to one customer, or list certain files for that customer according to various criteria
- delete an SMDR file

The screens for displaying data files

The screens that are used for displaying data files are shown in Figure 4-5. Files can be listed and displayed according to the following criteria:

Customer Name	The name of the customer that owns the files.
Feature Type	The type of data in the files. For the Station Detail Server application, the only type available is SMDR.
Node	The name of the DMS node from which the files were collected.
Collection Interval	The interval over which the data in the files was collected by the DMS node. Nodes collect daily, weekly, and monthly data.
Timespec (From/To)	The approximate time interval during which the files were transferred to the DNC. The beginning and the end of the interval are marked by a year (last two digits), month (1-12), day (1-31), hour (1-23), and minute (1-59). If this field is left blank, all data files on the DNC's hard disk will be listed.

Selecting data files

To select an individual data file or a group of data files, follow these steps:

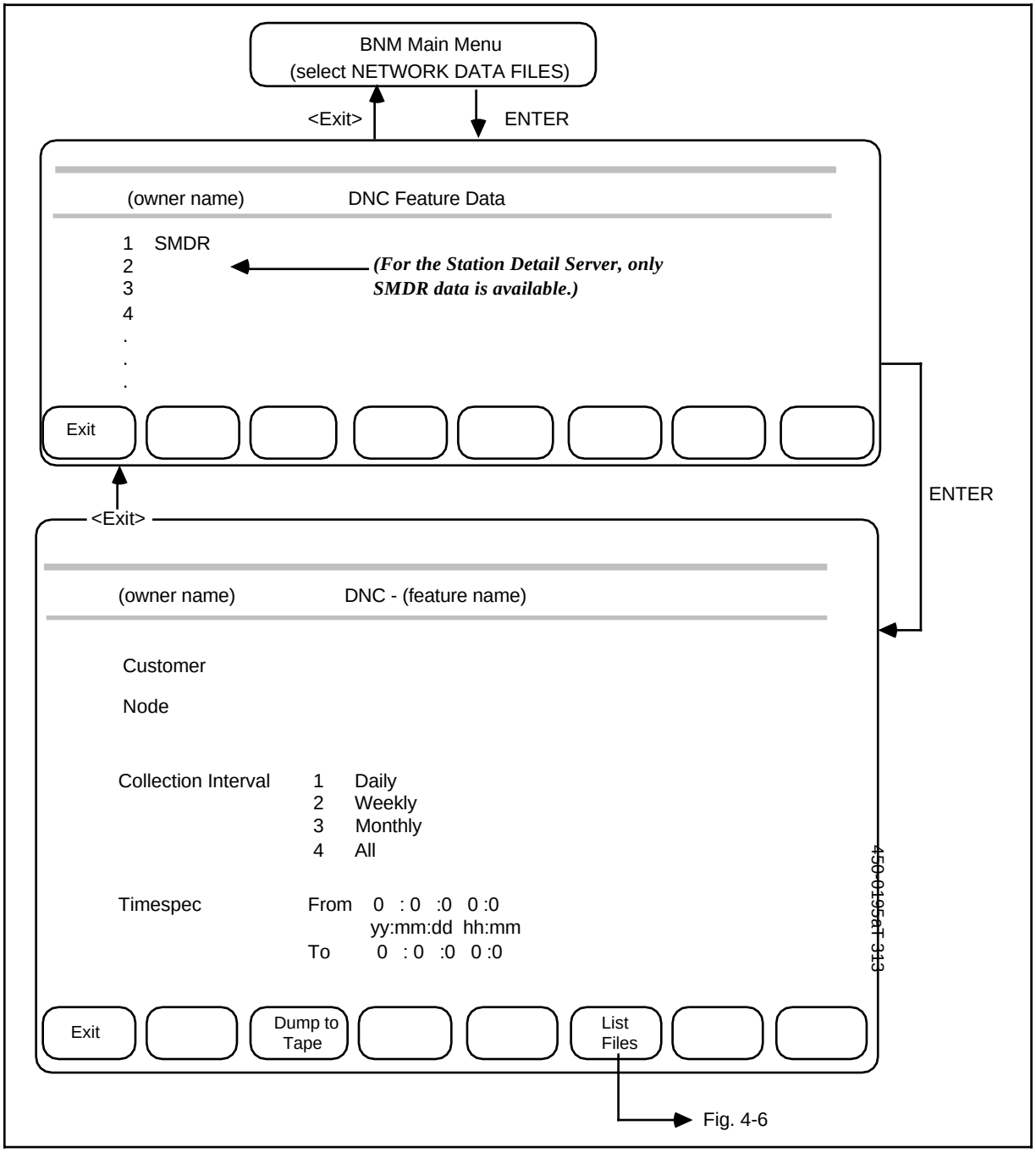
(1) On the BNM main menu, select Network Data Files and then press ENTER.
==> The Feature Data menu appears.

(2) Select SMDR on the Feature Data menu, then press ENTER.
==> A specification screen appears with the cursor in the Customer field. The fields on this screen are used to enter the remaining information that will be used to select files.

(3) Fill in the fields on the specification screen, using the RETURN key or the TAB key to move from field to field. In the Subgroup field (if present) and the Collection Interval field, use the arrow keys to select a value. In the Timespec fields, fill in a year (last two digits), month (1-12), day (1-31), hours (0-23), and minutes (0-59), or leave the fields blank to specify all files of the appropriate type, node, and collection interval.

(4) Continue with one of the following procedures.

Figure 4-5
The screens used for displaying data files



Creating a tape from a group of files

To create a tape from all the SMDR files specified on the specification screen, press the <Dump to Tape> softkey.
==> A message confirms that a TAPE job has been scheduled. This job is carried out as soon as possible.

Listing files

To list all the files specified on the specification screen, press the <List Files> softkey.
==> The DNC List of Files screen appears (Figure 4-6). The Status column shows one or more of the following values for each file:

Unformatted	The file has not been printed (ATT, KT, or OM) or dumped to tape (SMDR).
Formatted	The file has been printed (ATT, KT, or OM only). It can be printed again if necessary.
Tape Dumped	The file has been dumped to tape (SMDR only). It can be dumped again if necessary.
Unsent	The file has not been transmitted to another location (SMDR only).
Sent	The file has been transmitted to another location (SMDR only). It can be sent again if necessary.
Peak	The file contains peak value data (OM only). It may be formatted or unformatted.

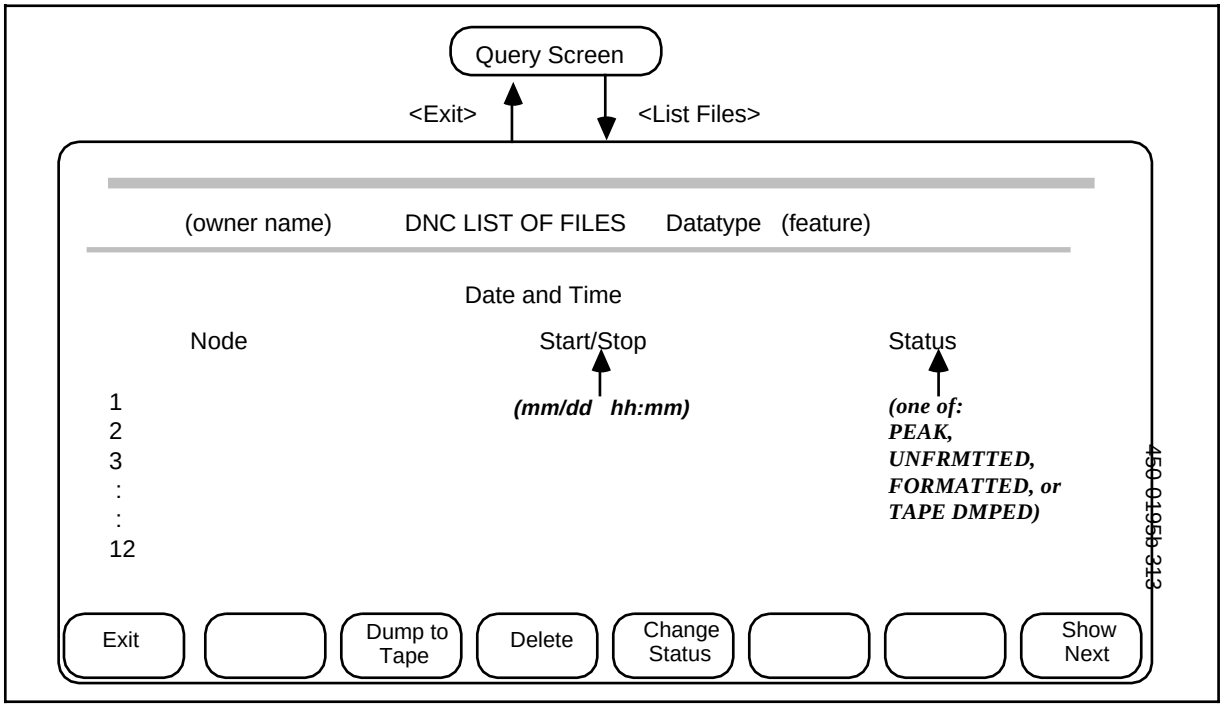
Changing the status of a SENT SMDR file

To change the status of an SMDR file from SENT to UNSENT, select the file on the List of Files screen, then press the <Change Status> softkey. The file can then be retransmitted.

Creating a tape from an individual file

To create a tape from one SMDR file, select the file on the List of Files screen, then press the <Dump to Tape> softkey.
==> A message confirms that a TAPE job has been scheduled. This job is carried out as soon as possible.

Figure 4-6
DNC list of files (from Figure 4-5)



Deleting individual files

To delete a file from the DNC's holding disk, follow these steps:

(1) Select the file on the List of Files screen, then press the <Delete> softkey.
==> A message requests confirmation.

(2) Press <Delete> again.
==> A message confirms that the file has been deleted.

Exiting

To return to previous screens, press <Exit> on each screen in turn.

Interactive data spooling

This section explains how a business customer can request and receive the transfer (spooling) of SMDR data in ASCII format from the telco's DNC-50 to a printer or computer file. The customer is responsible for the secure reception and disposal of the data.

> ***Note:*** The telco must use the Job Scheduler to schedule a SPOOL job if dedicated data spooling is to be used. (See Scheduling SPOOL and ADMIN Jobs in this practice.)

In order to receive spooled SMDR data, the customer must be registered for the SMDR feature in the Customer Feature Profile table. Also, a dedicated LIU connection must be specified. (See the Customer Table.)

This procedure assumes that a proper data link (as described in Part 2 of NTP 450-1021-153) has been established and connected to the DNC-50. It also assumes that the customer is equipped with and familiar with the appropriate ASCII devices (such as a printer/terminal or a computer) required to request and receive the data.

Required information

The following information is required in order to request data spooling:

- the telephone number of the line that the DNC-50 is connected to, if a dial-up data link is used
- a valid customer identification, as listed in the DNC-50's Customer Table
- the appropriate eight-character password, as registered in the DNC-50's Customer Table

Establishing a connection

To establish a connection with the DNC-50, follow these steps:

(1) Dial the appropriate number for the interactive spooling port.
==> The system answers and establishes a data-link connection.

(2) Send a "wake up" ASCII string containing a period and a carriage return (<CR>).
==> The system returns the following question:

Prompt or Noprompt command mode? (P, N (P default)) >

At this point you have the choice of having the system prompt you through the remainder of the session, or of completing the procedure without using prompts.

Requesting data by replying to prompts

If you want to be prompted through the remainder of the session, follow these steps:

(1) When the system asks "Prompt or Noprompt command mode?", send a P (for Prompt) and a carriage return.
==> The system returns the prompt "CUSTOMER>."

(2) Send your customer name.
==> The system returns the prompt "PASSWORD>."

(3) Send your password.
==> The system returns the prompt "NODE>."

(4) At this point, you have a choice of obtaining data for a single node or for all nodes that serve your network.

- to obtain data for all nodes, send a carriage return.
==>The DNC returns the prompt "CUST GRP>".
- to obtain data for only one node, send the name of the node, and carriage return.
==>The system return the prompt "CUST GRP>".

(5) Send either the name of the particular customer group for which you want data, or a carriage return (for all groups).
==> The system returns the prompt "DATATYPE>."

(6) Send the value SMDR.
==> The system compiles and sends an ASCII file of all the "UNSENT" SMDR records for the appropriate customer group.

Note: If you send an incorrect string during the Prompt procedure, the system returns the ASCII string "INVALID" and prompts you again.

Requesting data without using prompts

To sign on to the DNC-50 and request data spooling without having the system prompt you, follow these steps:

(1) When the system asks "Prompt or Noprompt command mode?", send an N (for Noprompt).
==> The system returns the "less than" character (<).

(2) Send your customer identification (custid), your password, the name of the DMS node (node), and, optionally, the name of the customer group for which you want data (custgrp), as follows:

//custid/password/DATATYPE SMDR N node C custgrp//

Follow the string with a carriage return and a line-feed character.

==> The system checks the ID and compiles and sends an ASCII file of all "UNSENT" SMDR records for the appropriate customer group, or returns a LOGON IS INVALID string if anything is wrong with the original string.

Controlling the transmission

To stop data transmission temporarily, send the XOFF ASCII character.
==> The system stops sending data and waits until you send another signal.

To restart data transmission, send the XON ASCII character.
==> The system resumes sending data.

Ending the session and disconnecting

To stop a session and disconnect, send the ESCAPE ASCII character.
==> The system stops sending this file and the modem connection drops.

Scheduling spool and admin jobs

This section explains how to list and schedule jobs that are performed on a regular, periodic basis by a Station Detail Server system. If you want to delete or change one particular scheduled occurrence of the job (a particular event), see Changing a Scheduled Event later in this document.

The scheduler timetable screens

The Scheduler Timetable screens are shown in Figure 4-7. These screens display or prompt for the following information:

Customer Name The name of the customer for whom the job is to be scheduled. (This is not relevant for ADMIN jobs.)

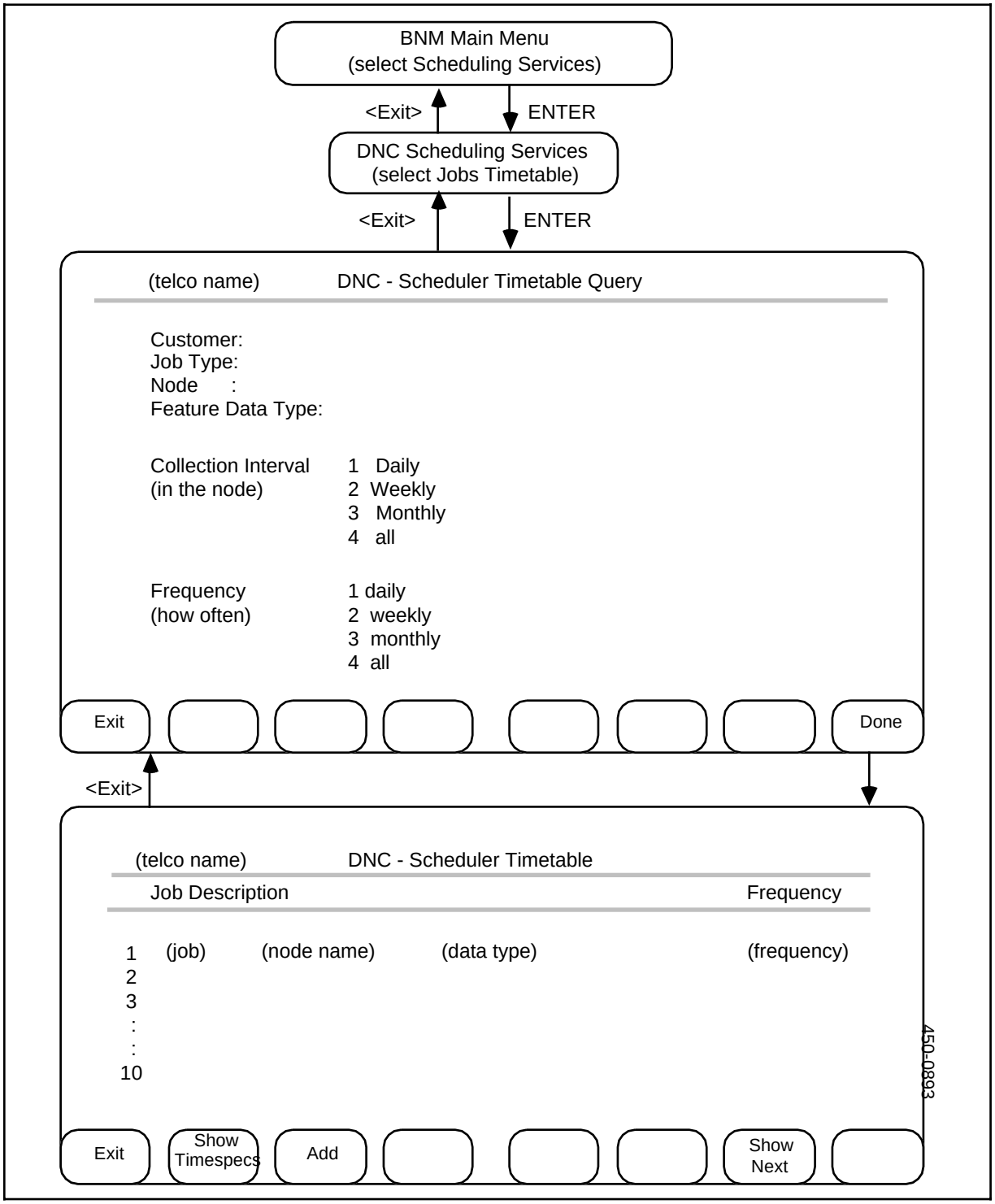
Job Type One of:

- **ADMIN** This job type schedules various administration tasks for the system. The job scheduled is internal to the DNC. It conducts internal software audits to ensure the integrity of the system and flags as deleted data records that are more than two days old. ADMIN should be scheduled for a quiet period, preferably between 02:00 and 03:00 each morning when the system automatically carries out its own internal administration tasks.
- **SPOOL** Spooling transfers SMDR data in ASCII format over a modem link from a DNC-50 to the printer or computer of a particular customer. The modem link must be connected to the host SRU RS232 port of the DNC-50.

Node The name of the DMS node from which the DNC-50 collects SMDR data. (This field is not relevant for ADMIN jobs.)

Feature Data Type The type of data that is to be assembled for the job. For the Station Detail Server application, the only type of data available is SMDR. (This field is not relevant for ADMIN jobs.)

Figure 4-7
The scheduler timetable screens



Collection interval The interval over which the data to be assembled was collected by the DMS node. The node collects daily, weekly, and monthly data. (This field is not relevant for ADMIN jobs.)

Frequency The frequency with which this job is to be carried out: daily, weekly, or monthly.

- **Daily** A daily job is carried out one or more times a day, and keeps to the same schedule each day, 7 days a week.
- **Weekly** A weekly job is carried out one or more times a week, and keeps to the same schedule each week, 52 weeks a year.
- **Monthly** A monthly job is carried out one or more times a month, and keeps to the same schedule each month, 12 months a year.

Listing jobs

To see a list of currently scheduled jobs, follow these steps:

(1) On the BNM main menu, use the arrow keys to select Scheduling Services, then press ENTER.
==> The DNC Scheduling Services Menu is displayed.

(2) Select Jobs Timetable and then press ENTER.
==> The DNC Scheduler Timetable Query screen is displayed.

(3) To list all the jobs in the timetable or to move quickly to the next screen so that you can add a new job, leave the fields on the Query screen blank and press <Done>. To list particular jobs from the timetable, fill out the fields on the Query screen to identify those jobs before pressing <Done>. (In the Collection Interval and Frequency fields, use the arrow keys to select a value.)
==> A list of the selected jobs appears on the Scheduler Timetable screen.

Adding a job

To add a new job to the timetable, begin at the Scheduler Timetable screen (see *Listing Jobs* above), then follow these steps:

(1) Press <Add>.
==> The Add Job Type screen appears (Figure 4-8).

(2) Fill in the appropriate fields on this screen to enter information about the new job. Use the RETURN key to move between fields. In the Collection Interval field, use the arrow keys to select a value. In the Frequency field, use the arrow keys to select Daily, Weekly, or Monthly.

(3) Press <Add Timespec>.
==> A blank Spec Add/Change form appears with appropriate fields for the frequency that you chose (Figure 4-8).

(4) Fill in the fields on the Spec Add/Change screen to enter the first time specification for the new job. Valid entries are:

Date (of month)	1 through 31
Day (of week)	SUN, MON, TUE, WED, THU, FRI, SAT
From Time	Hours: 00 through 23 Minutes: 00 through 59
To Time	Hours: 00 through 23 Minutes: 00 through 59
Every	1 through 9999 minutes

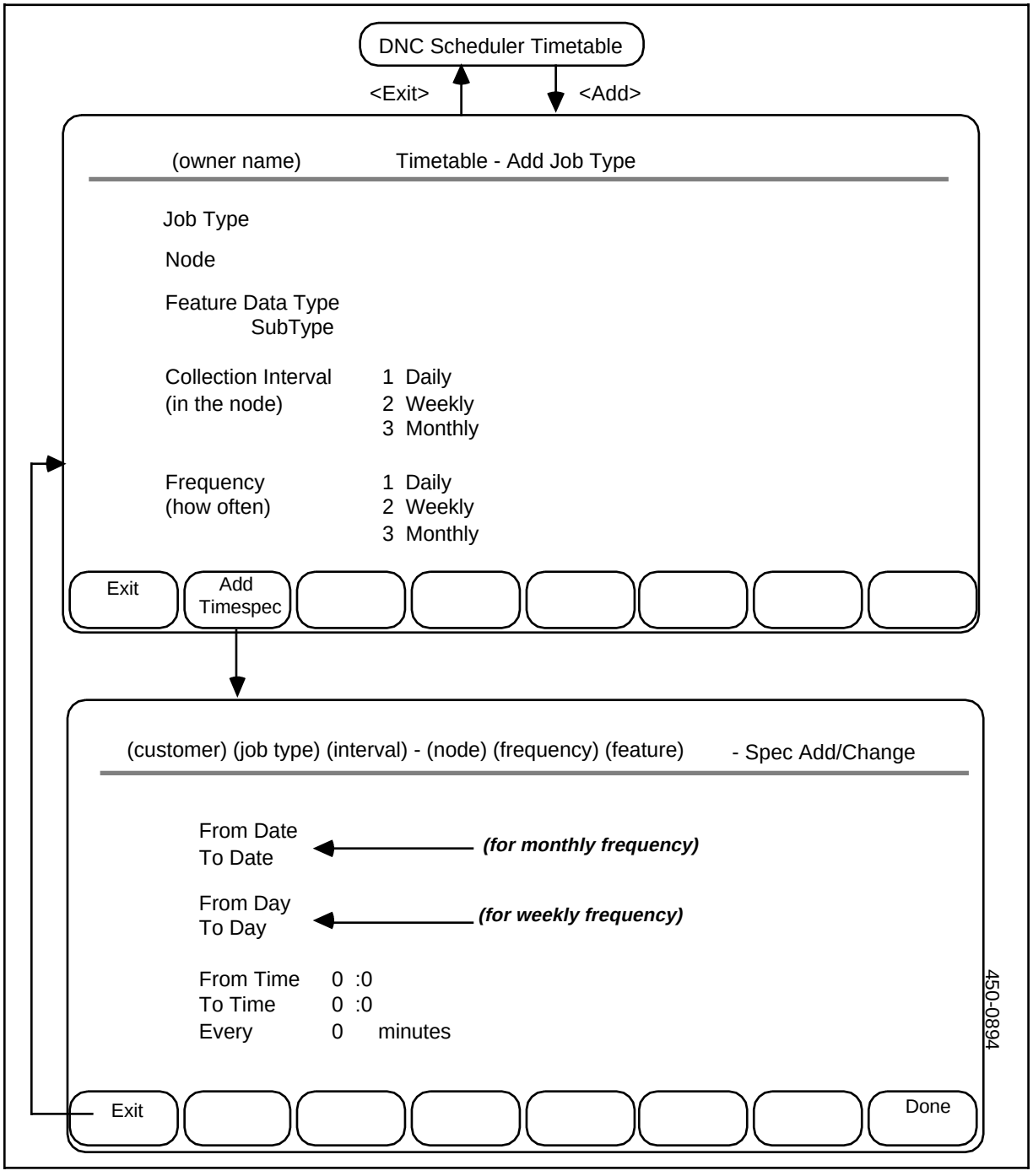
(5) Press <Done>.
==> A message confirms that the timespec has been added.

(6) If another timespec is required, repeat steps 4 and 5, typing over the first timespec. You can enter up to eight timespecs.

(7) Press <Exit>.
==> The Add Job Type screen appears.

(8) Press <Exit>.
==> The Scheduler Timetable screen appears.

Figure 4-8
The screens for adding a job



Deleting a job

To delete a job, delete all its associated timespecs (see *Deleting a Timespec* below). Once all timespecs have been deleted, the job disappears from the Scheduler Timetable.

To delete only the next scheduled occurrence of a job but retain the schedule for all occurrences after the next one, use the Jobs Scheduled option (see *Changing a Scheduled Event* later in this chapter).

Deleting a timespec

To delete one of a job's timespecs, begin at the Scheduler Timetable screen (see *Listing Jobs* above), then follow these steps:

(1) Select the job for which a timespec is to be deleted and then press <Show Timespecs>.
==> The Timespec screen appears with a list of the current timespecs (Figure 4-9).

(2) Select the timespec to be deleted and press <Delete>.
==> The timespec disappears from the list.

Adding a timespec

To add a timespec for a job, begin at the Scheduler Timetable screen (see *Listing Jobs* above), then follow these steps:

(1) Select the job for which a timespec is to be added and press <Show Timespecs>.
==> A list of the current timespecs appears (Figure 4-9).

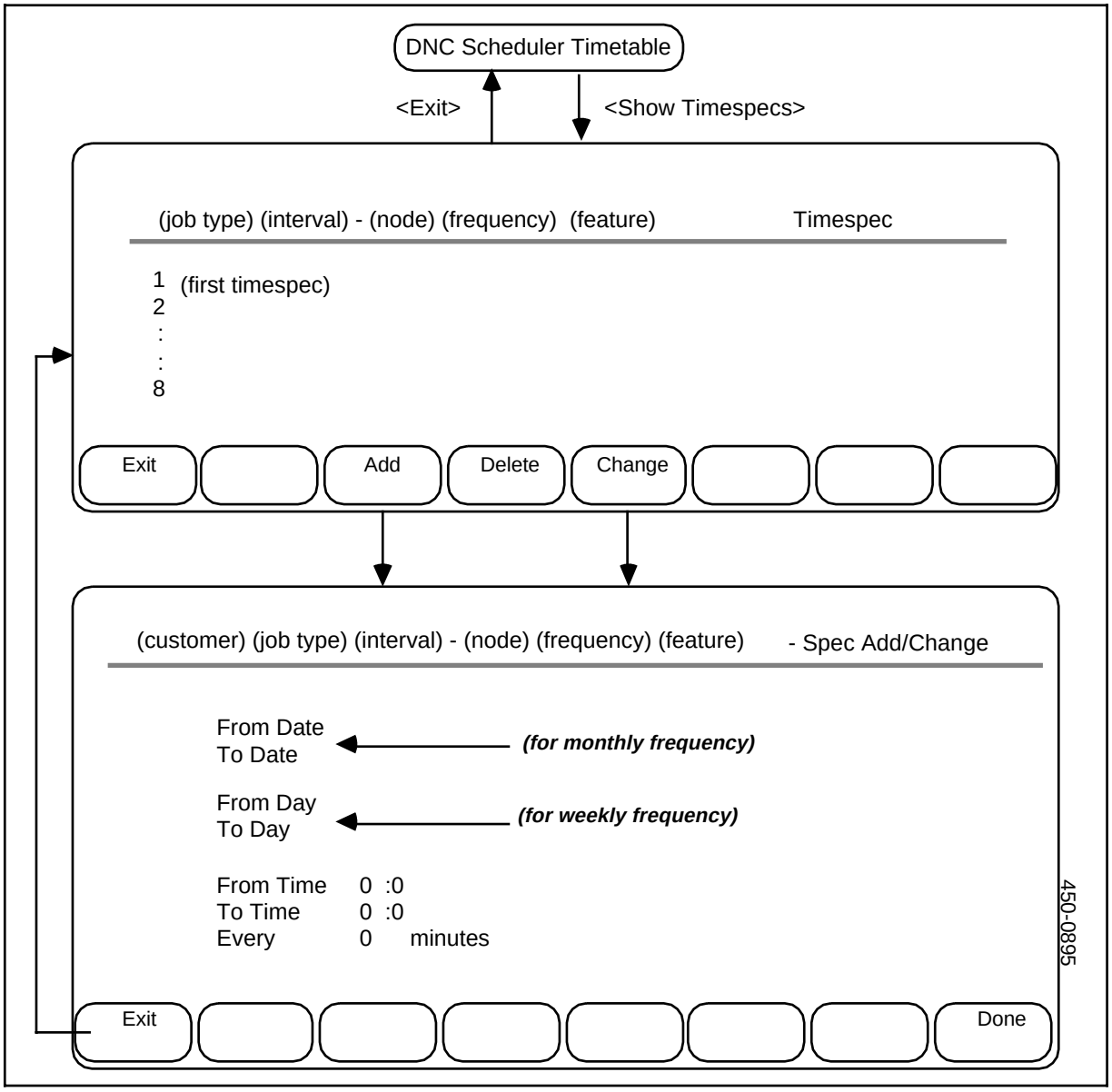
(2) Press <Add>.
==> The Spec Add/Change form appears (Figure 4-9).

(3) Enter the new timespec, then press <Done>.

(4) If another new timespec is required, repeat step 3, typing over the first timespec. You can enter up to eight timespecs per job.

(5) Press <Exit>.
==> An updated Timespec screen appears.

Figure 4-9
The timespecs screens



Changing a timespec

To change a timespec, begin at the Scheduler Timetable screen (see *Listing Jobs* above), then follow these steps:

(1) Select the job to be changed and press <Show Timespecs>.
==> The Timespec screen appears with a list of the current timespecs (Figure 4-9).

(2) Select the timespec to be changed and press <Change>.
==> The Spec Add/Change form appears.

(3) Enter new specifications over the old and press <Done>.
==> A message confirms the change.

(4) Press <Exit>.
==> The Timespec screen appears, with the updated entry.

Changing a job

To change non-timespec data for a job, delete the job and then replace it with a new job.

Changing one event in a job schedule

This section explains how to make changes to the job queue. The job queue shows the next scheduled occurrence (event) of each job that is defined in the timetable. You can delete any entry in the queue or set it to take place at a new time without affecting the remainder of the schedule. (To create or change the entire schedule for a job, see *Scheduling SPOOL and ADMIN Jobs* earlier in this chapter.)

> ***Example:*** if you delete or reschedule the 0900 occurrence of a job that is supposed to run every 60 minutes from 0900 to 1159, the 1000 and 1100 occurrences will still run as scheduled.

The job queue screens

The Job Queue screens, shown in Figure 4-10, list scheduled occurrences of jobs. These screens display or prompt for the following information:

Customer Name	The name of the customer for whom job is performed.
Node	The name of the DMS node from which the job collects data (for SMDR jobs). This field is not applicable to ADMIN jobs.
Job Type	The type of job for which events are to be listed (ADMIN or SPOOL). If this field is left blank, events for all types of jobs are listed.
Feature Data Type	The type of data that is manipulated by the jobs whose events are to be listed. The only type available for the Station Detail Server application is SMDR. This field can be left blank.
Dates and Times	The range of times from within which scheduled events are to be listed. The month must be in the range 1-21, the day in the range 1-31, the hours in the range 0-23, and the minutes in the range 0-59. The year is identified by its last two digits. To list the earliest scheduled events of jobs, leave the Start Date and Time fields blank. To list the latest scheduled events of jobs, leave the End Date and Time fields blank. If no dates or times are entered, all scheduled events of jobs are listed.

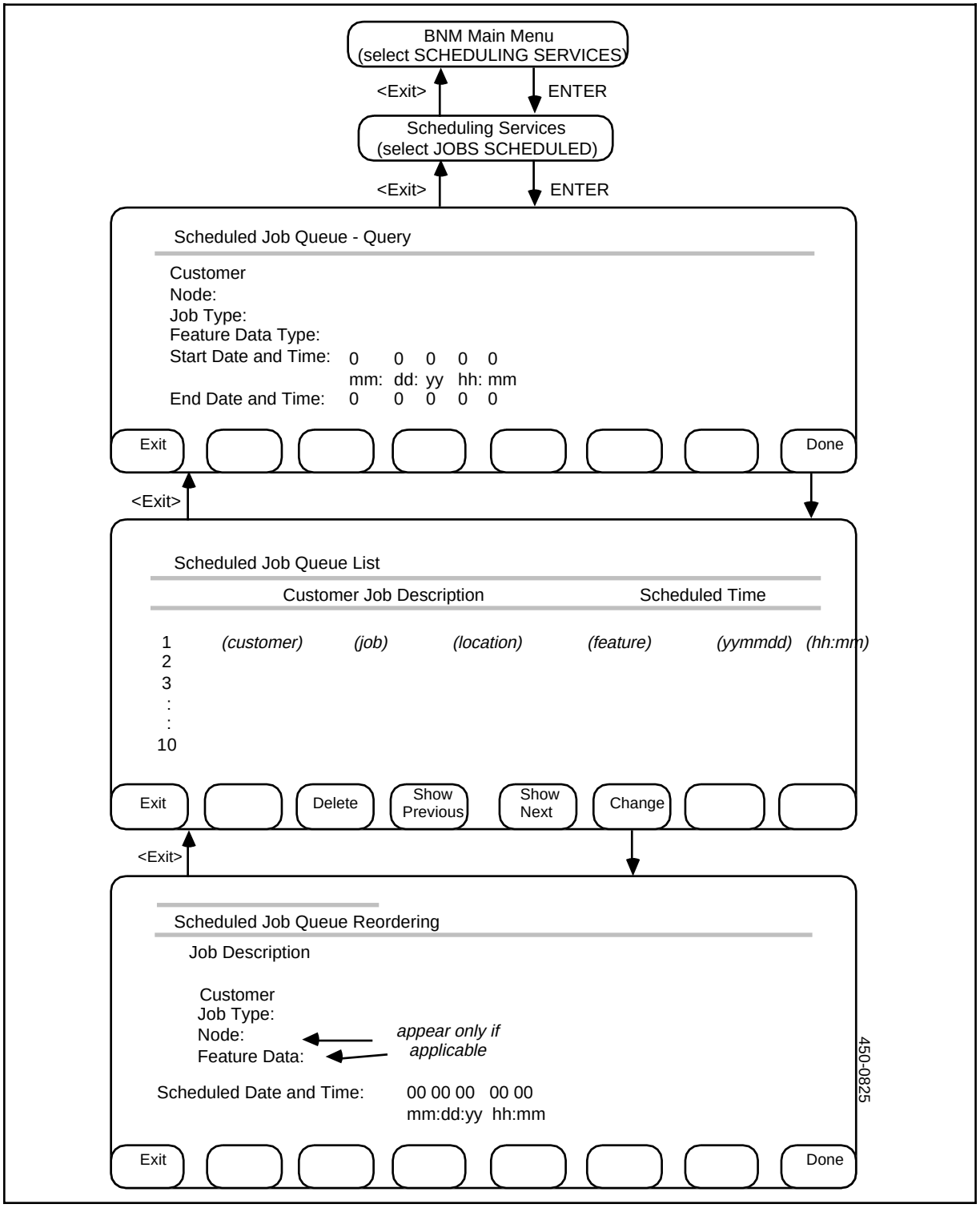
Listing jobs in the job queue

The first step in using the job queue is always to reach the Scheduled Job Queue List screen (Figure 4-10). This screen lists selected jobs in the queue. To reach the Job Queue List screen, follow these steps:

(1) From the BNM main menu, use the arrow keys to select Scheduling Services, then press ENTER.
==> The DNC Scheduling Services Menu appears.

(2) Select Jobs Scheduled and then press ENTER.
==> The Scheduled Job Queue Query screen appears.

Figure 4-10
The job queue screens



(3) To list all the jobs in the queue, leave the fields on the Query screen blank and press <Done>. To list particular jobs, fill out the fields on the Query screen to identify those jobs and then press <Done>.
==> The Scheduled Job Queue List screen appears, listing all scheduled events for jobs that meet the criteria you entered.

Deleting an entry

To delete an entry from the job queue, select it on the Job Queue List screen and then press <Delete>.
==> A message confirms that the entry has been deleted. If you exit from this screen and then re-enter it, the list will show a new entry for the next scheduled occurrence of the job after the one that was deleted.

Rescheduling an entry

To reschedule an entry on the Job Queue List screen, follow these steps:

(1) Use the arrow keys to select the entry and then press <Change>.
==> The Scheduled Job Queue Reordering screen appears.

Note: The Job Type, Node, and Feature Data fields cannot be changed.

(2) Enter a new date, a new time, or both, then press <Done>.
==> A message confirms the new schedule.

(3) Press <Exit>.
==> The Job Queue List screen appears with the updated entry.

Exiting from the job queue screens

To exit from any Job Queue screen and return to the previous screen, press <Exit>.

The DNC processor monitoring table

The DNC Processor Monitoring table shows how busy selected processors' central processing units (CPUs) are and how much memory they have available. To display this table, select DNC Processor Monitoring on the BNM main menu and then press ENTER.
==> The DNC Processor Monitoring table appears (Figure 4-11). Each line on this table displays the following information about a processor:

Num	a number that the DNC uses to keep track of the processor
CC/SS/LL/PP	numbers that identify the location of the processor by cabinet (CC), slot (SS), line (LL), and port (PP)
Interval	the length of time, in seconds, that the processor is monitored before this screen is updated
Average-busy	the percentage of time that the processor's CPU was busy during the last monitoring interval
Memory Available	the number of kilobytes of memory that the processor currently has available
Peak-busy	the percentage of time that the CPU was at peak business during the last monitoring interval
Peak-time	the month (MTH), day (DD), hour (HH), and minute (MM) that peak CPU usage occurred

Selecting processors

By default, the Processor Monitoring table displays information about each processor that is listed in a Service Data Manager (SDM) table called MXMCP-UD. You can add or delete processors from this list. See Using SDM Tables in 450-1011-301 for instructions on editing SDM tables.

You can also add or delete processors while the Processor Monitoring table is being displayed:

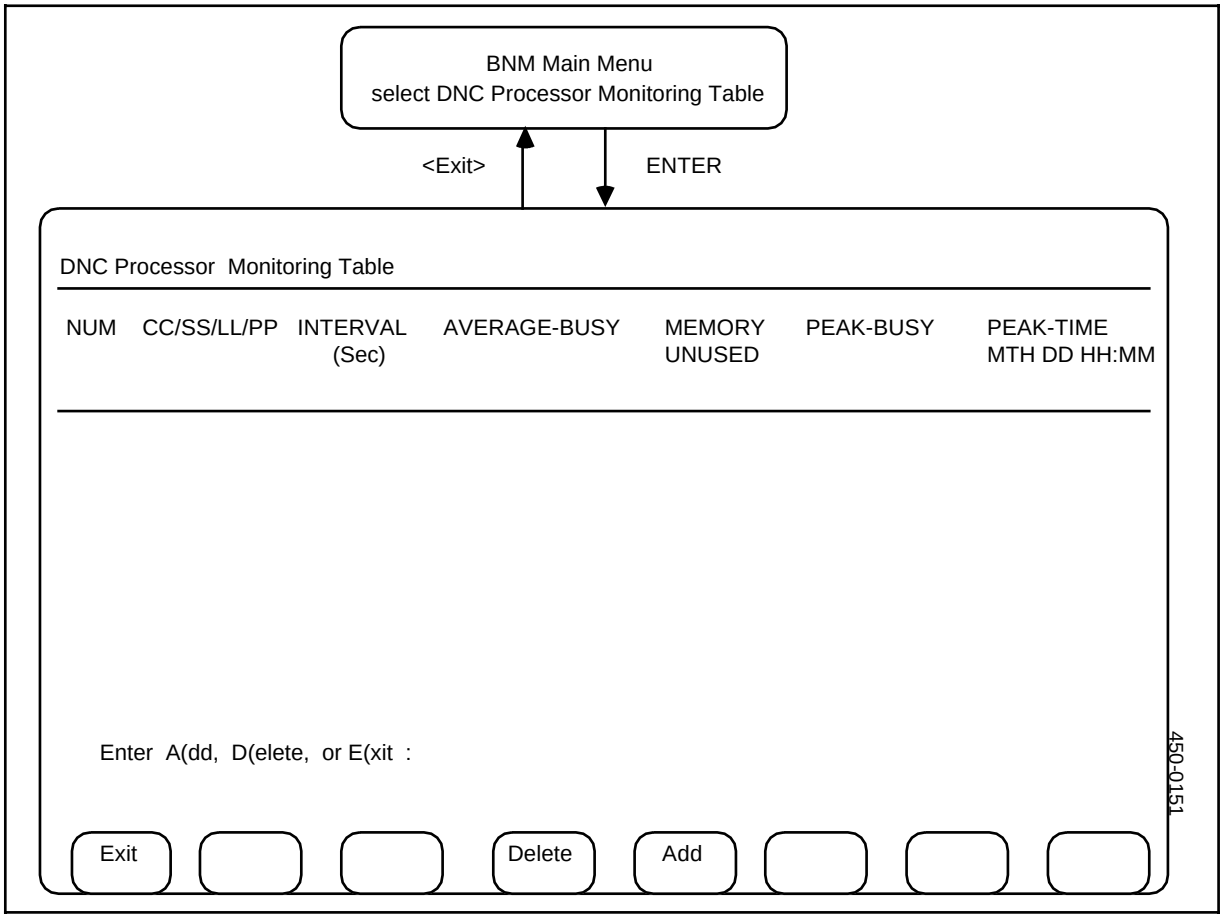
(1) Press <Add> or <Delete>, or type Add, Delete, A, or D.
==> The system prompts you for the name of the processor you want to add or delete.

(2) Type the name of a processor, then press ENTER.
==> The system updates the screen to add or remove information about that processor.

Exiting from the table

To exit from the Processor Monitoring screen and return to the BNM main menu, press <Exit>, or type Exit or E.

Figure 4-11
The DNC processor monitoring table



The DNC disk monitoring table

The DNC Disk Monitoring table shows how many files are being stored on selected disks and what percentage of space on each disk is full. To display this table, select DNC Disk Monitoring on the BNM main menu and then press ENTER.
==> The DNC Disk Monitoring table appears (Figure 4-12). Each line on this table displays the following information about a disk:

Server Name	name of the disk
Total Blocks	total no. of blocks on disk (1 block = 1 Kbyte)
Blocks Used	number and percentage of blocks that are currently being used
After Audit	number and percentage of blocks that were being used at the end of the last audit
Last Audit	day, hour, and minute the last audit took place
Peak Usage	highest percentage of disk space in use between audits (i.e., highest ever) and the time that this happened
Intvl	length of time, in seconds, that the disk is monitored before this screen is updated
Total Files	total number of files on the disk at the end of the last audit. If an audit is running, it is the number of files found so far during the audit.

Selecting disks

By default, the Disk Monitoring table displays information about each processor that is listed in a Service Data Manager (SDM) table called MXDISK-UD. You can add or delete disks from this list, and you can also change the monitoring intervals. See Using SDM Tables in 450-1011-301 for instructions on editing SDM tables.

You can also add or delete disks while the Disk Monitoring table is being displayed:

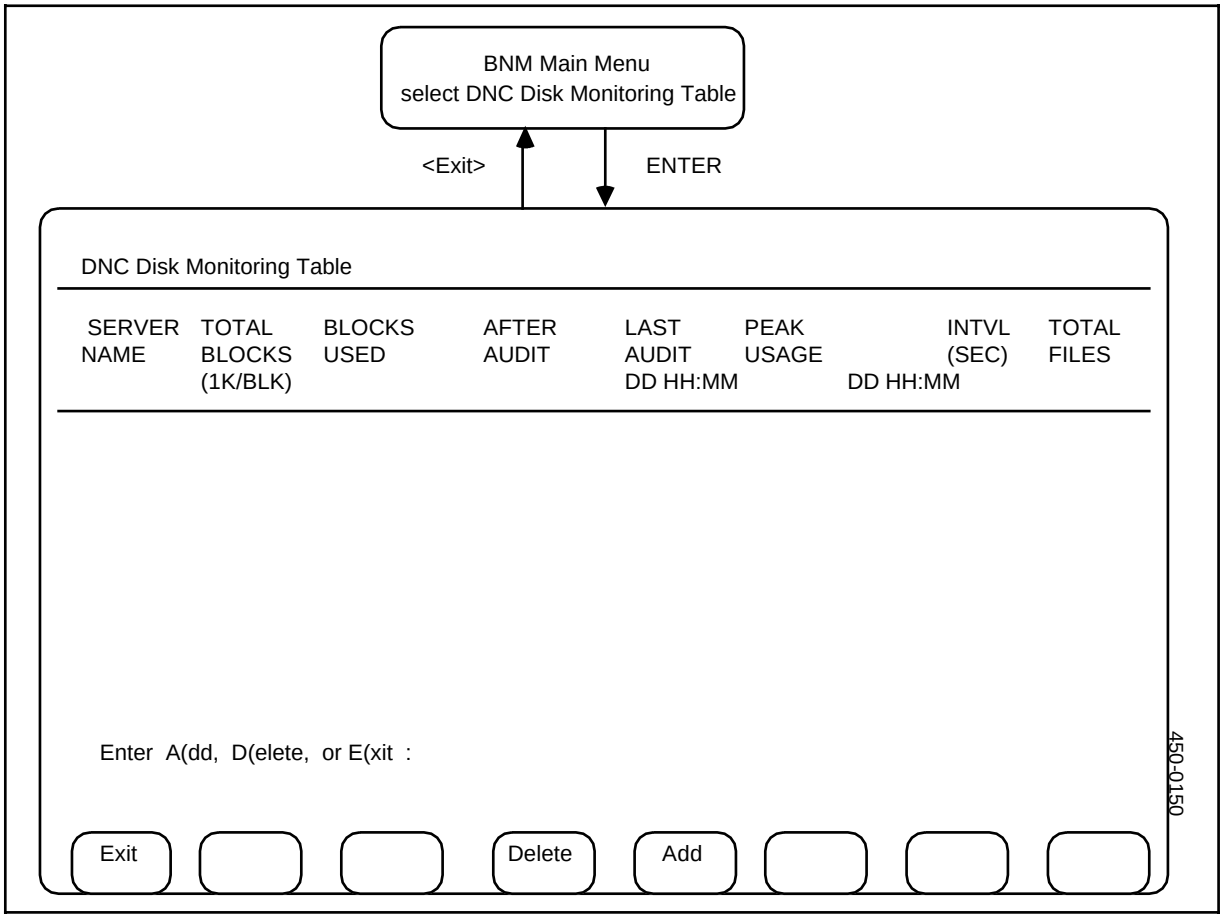
(1) Press <Add> or <Delete>, or type Add, Delete, A, or D.
==> The system prompts you for the name of the disk you want to add or delete.

(2) Type the name of a disk, then press ENTER.
==> The system updates the screen to add or remove information about that disk.

Exiting from the table

To exit from the Disk Monitoring screen and return to the BNM main menu, press <Exit>, or type Exit or E.

Figure 4-12
The DNC disk monitoring table



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