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DMS-10 Family

600-Series Generics

Maintenance Diagnostic Input Manual

08.02

For Generic 602.20 Standard August 2006

NORTEL

DMS-10 Family

600-Series Generics

Maintenance Diagnostic Input Manual

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Section 1: Introduction

This publication describes the programs and commands that are used to diagnose and to recover from faults in the DMS-10 switch. This NTP may be used with the NTP entitled *Maintenance and Test Manual* (297-3601-511), which contains procedures that use the commands in this publication.

Each section of this publication briefly describes a specific program, and tables in the section list the input commands. The sections are arranged in alphabetical order by program mnemonic. The section title consists of the program mnemonic, followed by the program name in parentheses. Also, to help the reader locate specific programs, the appropriate mnemonic is located in the outer corner of each page header.

Notational conventions

Throughout this NTP, the system of notation shown in Table 1-A is used to illustrate system commands and responses. This notation is not part of the system language; rather, it is a means of indicating the order in which commands may or must appear, the required punctuation, and the allowable options. Any deviations from these conventions are noted and explained in the text.

| Table 1-A: Notational conventions | | |
|--|--|--|
| Notation | Symbol | Explanation |
| Carriage Return | <CR> | Depression of the carriage-return key. |
| Capital Letters or Special Characters | for example, TMAD, LOGI, #### | Commands or key words that will be accepted when the command is entered exactly as written. |
| Italic Letters | for example, <i>b s p u</i> , DD/MM/YY | A user- or system-supplied parameter; the limits for such parameters are usually defined in the explanation. |
| Lowercase, Italic <i>a</i> | <i>a</i> | An alphabetic variable from a through z. |
| Lowercase, Italic <i>n</i> | <i>n</i> | An integer from 0 through 9, unless otherwise defined. |
| Lowercase, Italic <i>x</i> | <i>x</i> | An alpha-numeric variable from a through z and 0 through 9, unless otherwise defined. |

| Table 1-A: (Continued) | | |
|-------------------------------|---------------|--|
| Notational conventions | | |
| Notation | Symbol | Explanation |
| Diagonal Slash | / | A choice of two or more commands, one of which must be entered. For example: <p style="text-align: center;">BUSY/RTS CNF CE <i>b s p</i></p> denotes a choice of either: <p style="text-align: center;">BUSY CNF CE <i>b s p</i> or RTS CNF CE <i>b s p</i></p> |
| Parentheses | () | An optional entry. Used for options such as site, IMED, and REP <i>n</i> . For example, if site is specified in the command, BUSY device (<i>site</i>) location (IMED), the device will be busied at the remote location. If IMED is specified, the system will unconditionally make the device man-made busy. |

Physical addressing conventions

Each circuit pack and line card in the DMS-10 switch has a unique physical address defined by its physical location. The physical address or location is designated using parameters represented by the following abbreviations:

- *bbay* or frame
- *c*Line Card Carrier (LCC) position on an RCU shelf
- *cbchannel* bank
- *chchannel* number
- *cuchannel* unit
- *l*oop or line number
- *l*klink
- *lsg*line subgroup
- *n*Network pack port number
- *ppack*
- *sshelf*
- *shshelf*
- *sitesystem* location
- *t*network interface pack or service pack diloop port number
- *ucircuit* unit

Maintenance states

After querying a device (that is, entering the STAT command), the system responds with a message that includes the device mnemonic, pack code, location, direct state, indirect state, activity state, disposition, hardware state, and/or call processing state. The direct state applies only to the device that was queried and does not reflect the dependency the device has with other devices in the hierarchy. If a higher-order device becomes unavailable, the direct state of the lower-order device does not change, but the lower-order device becomes indirectly unavailable. In other words, the availability of a device is dependent on its direct state as well as its indirect state. Regardless of the direct state, a device is treated as offline if it is indirectly unavailable. Table 1-B lists and describes the maintenance states.

| Table 1-B: Maintenance states | | |
|--|-----------------|--|
| Maintenance State | Mnemonic | Explanation |
| Direct | INS | In service. The device is available for its primary function. It is also available for maintenance activities if the maintenance activities do not disrupt the device's primary function. |
| | MMB | Man-made busy. The device is under craftsperson control and is available only for maintenance activities requested by operating company personnel. The device is not available for its primary function, so disruptive maintenance activities initiated by operating company personnel are allowed. |
| | MMOF | Man-made offline. The device, including all of its ports, is excluded from module- or system-level testing and is not available for its primary function. Because of extensive interconnections in the network, a single faulty device may cause other devices in the network to appear faulty. The MMOF state allows for more specific testing. The following example illustrates the difference between MMB and MMOF: An MMB DS-30A Interface pack connected to an LCM is accessed during LCM testing; however, an MMOF DS-30A Interface pack is not accessed during LCM testing. |
| | SMB | System-made busy. The system is controlling the device and is trying to return the device to the INS state. The device is unavailable for its primary function, so disruptive maintenance activities initiated by the system are allowed. Maintenance activities requested by operating company personnel are not allowed. |

| Table 1-B: (Continued) | | |
|-------------------------------|-----------------|---|
| Maintenance states | | |
| Maintenance State | Mnemonic | Explanation |
| | SMOF | System-made offline. The device is unavailable and cannot be accessed for any reason |
| Indirect | INDR | Device is unavailable because a higher-order device that is connected to this device is out of service. |
| Activity | ACTV | Active. |
| | DXFR | Data transfer. |
| | INAC | Inactive. |
| | NORM | Normal. |
| | SPRD | Spared. |
| | SPNG | Sparing. |
| | STBY | Standby. |
| Disposition | SHARED | Network port is shared with interface port. |
| Hardware | DSBL | Disabled. |
| | ENBL | Enabled. |
| Call Processing | CPBY | Call processing busy. |
| | IDLE | Idle. |

Maintenance time and date

The time and date are printed by the maintenance terminal every 15 min to help define the time of a fault detection. The format of this message is:

```
TIME DAY HH:MM:SS DD/MM/YY
```

where DAY is the day of the week, HH:MM:SS is the time in hours, minutes, and seconds, and DD/MM/YY is the date (day/month/year).

The system automatically corrects the date for leap years.

Overlay arbitration

The DMS-10 switch allows multiple overlays to run at the same time. The Multiple Overlay Access System (MOAS) allows multiple, compatible administration overlays and one maintenance overlay to run simultaneously. Overlays may be requested by a craftsperson or by the DMS-10 switch. Refer to the “System Description” section of the NTP entitled *Input/Output System (297-3601-300)* for information on the use of overlays and a list of the specific overlays that are included in the administrative and maintenance MOAS groups.

Section 2: Resident commands

Description

Resident commands are used to manipulate the DMS-10 switch or the I/O system without loading a specific overlay and, as such, are more general than commands used within specific overlays for specific tasks.

Resident command table

Table 2-A provides a list of all of the resident commands that apply to the DMS-10 switch. General system commands are listed first, followed by other categories of commands, which are arranged alphabetically by category title.

| Table 2-A: Resident commands | |
|---------------------------------|---|
| Command | Use |
| General Commands | |
| #### | <p>Interrupts any maintenance-terminal output, aborts execution of the current command, and places the maintenance terminal in input mode. Response is the prompt character >, ? , or #, if not currently in an overlay.</p> <p><i>Note:</i> Telnet-connected TTYs require a <CR> after the command is entered.</p> |
| **** | <p>Interrupts any maintenance-terminal output and aborts the overlay program. Response is the prompt character #.</p> <p><i>Note 1:</i> Overlays that usually do not allow preemption will not be aborted by this command.</p> <p><i>Note 2:</i> Telnet-connected TTYs require a <CR> after the command is entered.</p> |

2-2 Resident commands

| Table 2-A: (Continued) Resident commands | |
|---|--|
| Command | Use |
| %%%%% | Dumps output message buffers of the maintenance terminal that inputs the command. <i>CAUTION:</i> Because this command empties the output message buffer without displaying the contents at the maintenance terminal, important trouble messages may be lost. <i>Note:</i> <i>Telnet-connected TTYs require a <CR> after the command is entered.</i> |
| !!!! | Dumps output message buffers of all maintenance terminals <i>CAUTION:</i> Because this command empties all of the output message buffers without displaying their contents at the maintenance terminal, important trouble messages may be lost. <i>Note:</i> <i>Telnet-connected TTYs require a <CR> after the command is entered.</i> |
| [| Line delete |
| @ | Character delete |
| ? | Help command that causes the system to display valid inputs for commands in diagnostic overlays and valid responses for prompts in data modification overlays. <i>Note:</i> <i>All <u>possible</u> responses for a given prompt or inputs for a given command are listed; <u>applicable</u> responses or inputs, however, can be determined by referring to the appropriate overlay description located either in NTP 297-3601-311, 297-3601-456, or 297-3601-506.</i> |
| LOGI <CR> | Log in (used to start interactive session and to log into a TTY with a user account). The command has the following prompting sequence: "USER>" - Prompts for an existing User account at the login prompt (!) if the forced login indicator (FLGI) is set for the logical unit in the CNFG (LOGU) prompting sequence, or if SCOS is enabled in the CNFG (PSWD) prompting sequence and the logical unit is defined with TNET=NO, or if the command is entered at the resident prompt (#). "PSWD>" - Prompts for the User account password. "PSWD>" - If the user password has expired, prompts for a new password to be entered. "RPWD>" - Prompts for the user password to be re-entered. Must enter the same password as entered for the previous prompt. "PASS?" - Prompts for the TTY class password. |
| LOGO <CR> | Log out (used to terminate interactive session). |

| Table 2-A: (Continued) Resident commands | |
|---|--|
| Command | Use |
| OVLY OVLY mnemonic <CR> | <p>Query the system to determine which overlays are active (one maintenance overlay and multiple, compatible administrative overlays may be active simultaneously).</p> <p>Sample system responses:</p> <p>OVL000 (No overlay is active, or no overlay in the indicated overlay group is active.)</p> <p>or</p> <p>OVL000 TTY 0 MTC ALO (Overlay ALO, from overlay group MTC, is active on TTY0.)</p> <p>The overlay group can be one of:</p> <p>MTC - The overlay is in the maintenance group DMO - The overlay is in the administrative group</p> <p>Load the overlay, identified by a mnemonic, into the overlay area (accomplished if the overlay area is not occupied).</p> |
| OVLY mnemonic IMED <CR> | <p>Abort the currently loaded overlay and immediately load the overlay identified by the mnemonic.</p> <p>Note 1: The currently loaded overlay will not be aborted if it has a higher task priority than the overlay specified in this command. One maintenance overlay and multiple, compatible administrative (DMO) overlays may be in use simultaneously. The overlay classes (in descending order of priority) are:</p> <ol style="list-style-type: none"> 1. Debug 2. Maintenance 3. Traffic Change 4. DMO 5. Background <p>Note 2: The currently loaded overlay will not abort until it completes the test that it is performing. Overlays DED and NED may take 5 to 15 min to complete.</p> <p>Note 3: Overlays that usually do not allow preemption will not be aborted by this command.</p> |
| OVLY INIT CREQ <CR> | <p>Abort the currently loaded MTC overlay or scheduled overlay and clear all pending background overlay requests for maintenance.</p> <p>Note: <i>When this command is issued, operating company personnel are responsible for clearing/detecting problems that the scheduled background routine would otherwise have identified.</i></p> |

2-4 Resident commands

| Table 2-A: (Continued) Resident commands | |
|---|--|
| Command | Use |
| AMADNS Commands | |
| STDS | Not operational. |
| SPDS | Not operational. |
| SNDF | Not operational. |
| LSTF | Not operational. |
| CLSC | Not operational. |
| Audit Commands | |
| AUDT IDT <i>site</i> IDE <i>b</i> <CR> | This command specifies an Integrated Digital Terminal (IDT) location as a starting point for the Integrated Digital Terminal Line (IDTL) Embedded Operations Channel (EOC) fault audit. |
| Bell Commands | |
| STAT BELL <CR> | Print status of local audible alarms; BELL ACT or BELL DACT. |
| ACT BELL <CR> | Enable local audible alarms; prints BELL ACT. |
| DACT BELL <CR> | Disable local audible alarms; prints BELL DACT. |
| Cluster Commands | |
| | The following commands are valid for a DMS-10 switch configured with the Host Switching Office (HSO)/ Satellite Switching Office (SSO) option or with the Large Cluster Controller (LCC)/SSO option. <i>Note 1:</i> The ACC SSO <i>n</i> , ACC HSO, ACT TALM SSO <i>n</i> , and DACT TALM SSO <i>n</i> commands are valid only at the host (HSO or LCC). <i>Note 2:</i> The HSO TRAF terminal cannot be used for any input commands. |
| ACC SSO <i>n</i> <CR> | Access SSO <i>n</i> , where <i>n</i> is the terminal port number of an SSO. Valid numbers are 0 through 15. The cluster implementation supports one host (HSO or LCC) and 16 SSOs. |
| ACC HSO <CR> | Return terminal access to the HSO or LCC. Used in conjunction with ACC SSO command. |
| ACT TALM SSO <i>n</i> <CR> | Echo all tandem alarms from all SSOs in a cluster to SSO <i>n</i> , where <i>n</i> is the identifying number or numbers of one or more SSOs, or to all SSOs in the cluster. Valid numbers are 0 through 15 or ALL. The cluster implementation supports one host (HSO or LCC) and 16 SSOs. |
| DACT TALM SSO <i>n</i> <CR> | Deactivate tandem alarm feature, where <i>n</i> is the identifying number or numbers of the one or more SSOs receiving the echoed alarms, or ALL. |
| QUE TALM | Identify the SSOs that are activated for tandem alarms. The system response is "TALM SSO <i>n</i> " where <i>n</i> is the identifying number of the SSO, or "TALM SSO NONE" |
| Emergency I/O (EIO) Commands | |

| Table 2-A: (Continued) Resident commands | |
|---|--|
| Command | Use |
| ACT EIO <CR> (((nn ACT EIO <CR> | Activate EIO. Activate EIO (when the TTY is in the output mode). Activate EIO at the indicated satellite office (SSO, 0-15; HSO, 16) while in the SSO access mode. |
| DACT EIO <CR>))))) nn DACT EIO <CR> | Deactivate EIO. Deactivate EIO (when the TTY is in the output mode). Deactivate EIO at the indicated satellite office (SSO, 0-15; HSO, 16) while in the SSO access mode. |
| STAT EIO <CR> | Provide EIO TTY status. |
| Line Load Control Commands | Line Load Control (LLC) is activated only in cases of extreme emergency. Refer to the NTP entitled <i>Features and Services Description</i> (297-3601-105) and to local administration procedures before activating LLC. |
| ACT LLC <CR> | Activate line load control. System response is LLC ACT. CAUTION: Use of the command ACT LLC will cause non-essential subscriber's lines to be removed from service. |
| DACT LLC <CR> | Deactivate line load control. System response is LLC DACT. |
| STAT LLC <CR> | Request status of line load control. System response is LLC ACT or LLC DACT. |
| Message Forwarding Command | Enter the MSG command and then depress the carriage return key to forward the message. |
| MSG <i>n</i> message <CR> | Send message to terminal <i>n</i> , where <i>n</i> is 0 through 31. <i>Note:</i> Storage restrictions imposed by the I/O system limit the length of the command and the message to 80 characters. Any input in excess of 80 characters is not forwarded to the other terminal. |
| Monitor Command | Used for remote monitoring. |
| MON <i>n</i> <CR> | Monitor terminal <i>n</i> (0 through 31), where <i>n</i> is the remote terminal number, and repeat at this terminal whatever is designated for terminal <i>n</i> . Note 1: This command is not valid on a TTY with the SCCS format. The SCCS TTY displays all messages from MTTYs that are assigned any of the same output message classes assigned to the SCCS. Similarly, this command cannot be used to monitor the TRAF terminal in an HSO. Note 2: To disable remote monitoring, enter %%%. |
| Operational Measurement Commands | |
| PRNT OPM ALL <CR> | Print all operational measurements blocks |

2-6 Resident commands

| Table 2-A: (Continued) Resident commands | |
|--|--|
| Command | Use |
| PRNT OPM <i>block mnemonic(s)</i> <CR> | Print operational measurement block(s), identified by <i>block mnemonic</i> . Refer to the NTP entitled <i>Operational Measurements</i> (297-3601-456) for block mnemonic definitions. |
| Output Message Class Select Commands CSEL <CR> CSEL XXXX <CR> | Identify message classes assigned to this terminal. Print only messages appropriate to the indicated class or classes (XXXX). XXXX can be ALL (all classes), BTTY (maintenance terminal for batch DMOs), CLI (calling line identification), DEBG (debug), DLNK (data link), DMO (data modification), EDAS (EADAS), LIT (line insulation test), MTC (maintenance), RSB (remote service bureau), TRAF (traffic), or NONE (suppress printout of all messages assigned to the terminal). The selected message class must have been declared using prompt USER in Overlay CNFG (LOGU) prompting sequence). |
| Query Commands QUE LOGI <CR> QUE CSEL <CR> QUE CLAS <CR> QUE RTU <CR> QUE SITE <CR> QUE USER <CR> | Query user's password classes. Print message classes selected by CSEL XXXX command. Query the message classes assigned to this terminal. Query the current percentage of CPU real-time use the total number of stations (STN) from which calls originated during the measurement period and the total number of incoming trunks (TRK) from which calls originated during the measurement period. This measurement is updated at 5-min intervals. Query the site name that is specified for the CLLI prompt in the CNFG (SYS) prompting sequence. Query active users on the DMS-10. |
| Time and Date Commands DATE <CR> DATE <i>day dd mm yyyy</i> <CR> TIME <CR> TIME <i>hh mm ss</i> <CR> | Used only by administrative personnel after a system startup. Request date. Set date. <i>day</i> = MON/TUES/WED/THUR/FRI/SAT/SUN <i>dd</i> = date (two digits) <i>mm</i> = month (two digits) <i>yyyy</i> = year (four digits). Request time. Set time, where <i>hh</i> is the hour (00-23), <i>mm</i> is the minute (00-59), and <i>ss</i> is the second (00-59). |

| Table 2-A: (Continued) Resident commands | |
|---|---|
| Command | Use |
| TMAD <i>hh mm ss</i> <CR> | On systems equipped with AMA, this command adjusts the system clock to a new time and updates any in-progress billing registers. <i>Note: For changes involving daylight saving time, use the TMAD command. For time changes of more than 24 hr, use the TIME command.</i> |
| | Adjust the time, where <i>hh</i> is the new hour (00-23), <i>mm</i> is the new minute (00-59), and <i>ss</i> is the new second (00-59). The system response is one of the following: (a) <i>hh mm ss</i> , indicating the amount of time that must be added to (+) or subtracted from (?) the time on the system clock. This response is followed by the prompt ">". The valid user response is YES <CR>, make time adjustment, or NO <CR>, do not make time adjustment. This response must be entered within 30 s or the time adjustment command will timeout. (b) NO TIME DIFFERENCE-The system clock and the TMAD command show the same time. (c) TMAD TIMEOUT-No response received within 30 s after the <CR> following a TMAD command. (d) TMAD FINISHED-Time adjustment completed and in-progress billing registers have been adjusted. (e) TMAD NOT ALLOWED-The system is not equipped with AMA, use TIME command to adjust time. |
| TTY Identification Command MSG <CR> | Request number of the user terminal. |
| Trouble/Fault Commands List TRB ALIT | Provide a list of known faults and man-made-busy (MMB) and out -of-service (OOS) devices existing in the system at the time the command is input. These faults or devices usually are shelf-level or higher; however, some pack faults may be included. Also provides the software generic, issue, and list of all required, optional, and conversion patches defined in the office. The command also provides the CPU/clock status. See prompts LPOF and STAT in overlay CNFG (TRB) in NTP 297-3601-311 (<i>Data Modification Manual</i>). Print the test results of line insulation testing (LIT) from the most recent 24-hour testing period. For an explanation of the printout, see the NTP entitled <i>Input/Output System (297-3601-300)</i> . Applies to a DMS-10 switch configured with the LIT feature only. |

2-8 Resident commands

| Table 2-A: (Continued) Resident commands | |
|---|--|
| Command | Use |
| Upgrade Commands | The following commands are valid from a terminal with a password class of ALL, MTC, or ADM. In addition, the UPGD prompt in the overlay CNFG(SYS) prompting sequence must be set to YES. These commands are used to upgrade from a DMS-10 Classic Network configuration to a DMS-10EN configuration. The commands simultaneously busy or return to service the specified network interface packs (MLI or D3A, or BOTH) or return to service the DSI packs. |
| UPGD BUSY (MLI/D3A/BOTH) | Simultaneously busy the selected network interface packs (MLI or D3A, or BOTH). |
| UPGD RTS (MLI/D3A/BOTH/DSI) | Simultaneously return to service the selected network interface packs (MLI or D3A, or BOTH) or the DSI packs. |
| \$QM \$QM messageNum \$QM (BUG) bugGlb bugNum \$QM cpuHexCode | <p>Special Note: This command, valid in Generics 504.10 and later, can be used at any system prompt, not just the resident level prompt.</p> <p>Query the system for the definition of a DMS-10 output message. For example, \$QM INI002 will cause the definition of the INI002 message to be printed. \$QM BUG 177 1 or \$QM 177 1 will cause the definition of bug message 00177 001 to be printed. \$QM BUG IOD 1 or \$QM IOD 1 will cause the definition of bug message IOD 001 to be printed. \$QM A01 will cause the definition of the CPU hexadecimal display code A01 to be printed.</p> <p>The message definitions printed by this command will generally match those appearing in the version of NTP 297-3601-903 (Output Message Manual) associated with the active Generic. However, it is possible for new definitions to be added, or existing definitions to be changed, by system patches. For this reason, use of the \$QM command is recommended when the Output Message Manual does not appear to contain an accurate message definition.</p> <p>\$QM is context sensitive. For example, if \$QM DMO996 is executed at the DSID prompt in overlay CNFG (prompting sequence CHG IBSR), only the definition appropriate for overlay CNFG will be printed. Contrariwise, if \$QM DMO996 is executed at the resident prompt, all definitions of DMO996 will be printed.</p> <p>In addition, \$QM performs pattern matching. For example, if \$QM IOI541 is entered, the definition of IOI54X (which covers IOI541, IOI542, et cetera) will be printed.</p> <p>Note that message definitions are stored on disk, not in system memory. Therefore, for \$QM to function properly, at least one of the system disk drives must be in service.</p> |

| Table 2-A: (Continued) Resident commands | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|-------------------------------------|-------|-------------|------|---------|-----------------------------|------|---------|-------------------------------|----|----------|---------------------------|-----------|--|--|----|----------|-----------------------------|-----------|--|--|-----|----------|-------------------------------|-----------|--|--|----|----------|-------------------------|-----------|--|--|----|------------|-------------------------------------|
| Command | Use | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SCRIP EXEC <i>[flags] type n(nnnnn)</i> <i>[arg1 arg2 ... argN]</i> | <p>Execute a script immediately.</p> <p><i>flags</i> specifies an optional list flags to apply to execution of the script.</p> <ul style="list-style-type: none"> -D Debug mode. After script execution terminates, errors generated by the interpreter are echoed to the controlling TTY prefixed with an exclamation point (!). -V Verbose mode. All I/O between the interpreter and the script TTY is echoed to the controlling TTY. Each line of output is prefixed with a semicolon (;). -S Single step mode. Prior to processing a DMS-10 command submitted by the script, script execution is halted, the command is echoed to the controlling TTY followed by the prompt "ABORT, STEP, or GO [A/S/G]>". Script execution remains halted until a valid response is received. <p>"A" stops script execution immediately.</p> <p>"S" submits the command to the DMS-10 and continues script execution in single step mode.</p> <p>"G" submits the command to the DMS-10 and executes the remainder of the script without further interruption.</p> <p><i>type</i> specifies the type of script and <i>n(nnnnn)</i> specifies the script number. The supported values for each is describe below:</p> <table border="1"> <thead> <tr> <th>Type</th> <th>Range</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>USER</td> <td>[1-250]</td> <td>User script - Miscellaneous</td> </tr> <tr> <td>VNDR</td> <td>[1-250]</td> <td>Vendor script - Miscellaneous</td> </tr> <tr> <td>EP</td> <td>[1-9999]</td> <td>Vendor script - Emergency</td> </tr> <tr> <td>Procedure</td> <td></td> <td></td> </tr> <tr> <td>MP</td> <td>[1-9999]</td> <td>Vendor script - Maintenance</td> </tr> <tr> <td>Procedure</td> <td></td> <td></td> </tr> <tr> <td>SOP</td> <td>[1-9999]</td> <td>Vendor script - Service Order</td> </tr> <tr> <td>Procedure</td> <td></td> <td></td> </tr> <tr> <td>TP</td> <td>[1-9999]</td> <td>Vendor script - Trouble</td> </tr> <tr> <td>Procedure</td> <td></td> <td></td> </tr> <tr> <td>IM</td> <td>[1-999999]</td> <td>Vendor script - Installation Method</td> </tr> </tbody> </table> <p><i>arg1arg2 ... argN</i>, specifies an optional parameter list to be use by the specified script.</p> | Type | Range | Description | USER | [1-250] | User script - Miscellaneous | VNDR | [1-250] | Vendor script - Miscellaneous | EP | [1-9999] | Vendor script - Emergency | Procedure | | | MP | [1-9999] | Vendor script - Maintenance | Procedure | | | SOP | [1-9999] | Vendor script - Service Order | Procedure | | | TP | [1-9999] | Vendor script - Trouble | Procedure | | | IM | [1-999999] | Vendor script - Installation Method |
| Type | Range | Description | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| USER | [1-250] | User script - Miscellaneous | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| VNDR | [1-250] | Vendor script - Miscellaneous | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EP | [1-9999] | Vendor script - Emergency | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Procedure | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MP | [1-9999] | Vendor script - Maintenance | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Procedure | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SOP | [1-9999] | Vendor script - Service Order | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Procedure | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TP | [1-9999] | Vendor script - Trouble | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Procedure | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IM | [1-999999] | Vendor script - Installation Method | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

2-10 Resident commands

| Table 2-A: (Continued) Resident commands | |
|---|---|
| Command | Use |
| | Examples: <i>SCRP EXEC user 1</i> <i>SCRP EXEC -ds vndr 0001</i> <i>SCRP EXEC -v im 012345 mvie 1 1 3</i> |
| SCRP STOP [TTY #, ALL] | Immediately stop script execution. An optional parameter specifying the TTY executing the script or All may be entered. |

Section 3: ALO (Alarm control overlay)

Description

Overlay ALO, when requested by maintenance personnel, is used to list alarm conditions that exist in the DMS-10 switch and to manipulate alarm functions within the system, Remote Line Concentrating Module (RLCM), Virtual Remote Line Concentrating Module (VLCM), Outside Plant Module (OPM), Outside Plant Access Cabinet (OPAC), or Remote Switching Center (RSC-S).

Input commands

This section lists and describes the commands that can be used once the ALO program is loaded (that is, the maintenance terminal has printed ALO000). Because of different hardware configurations, not all commands are valid for all sites or for all generics. The system provides error messages when incorrect commands are input.

Note: The response ALO001 indicates that the requested command was successfully completed.

ALO commands

| Input Command | Description |
|---------------|--|
| #### | Interrupts any maintenance-terminal output, places the maintenance terminal in input mode, and stops execution of the current command. Response is the prompt character >. |
| **** | Interrupts any maintenance-terminal output and aborts the overlay program. System response is the prompt character #. |
| ? | Queries the system for valid input. Can be used with any command. |
| ACT ALDP | Activates Alarm Dispatch, if prompt ALDP = YES in OVLY CNFG (ALRM). |
| ALSD | Activates Alarm Sending, if prompt ALSD = YES in OVLY CNFG (ALRM). |

3-2 ALO (Alarm control overlay)

ALO commands (Continued)

| Input Command | Description |
|--|--|
| ALPT (<i>site</i>) <i>n</i> SET | Set or clear alarm point <i>n</i> . For the DMS-10 base site, <i>n</i> = 1 through 64. |
| or | <i>Note:</i> If configured with the extended alarm device the base DMS-10 alarm scan points are increased to <i>n</i> = 1 through 127. |
| ALPT (<i>site</i>) <i>n</i> CLR | For an LCE-based remote location, <i>site</i> must be specified, and <i>n</i> = 1 through 56. |
| | Example: ALPT 12 SET |
| | Note 1: This command applies to fixed and customer-assignable points. |
| | Note 2: The hardware status of all alarm points is refreshed every 3 minutes. This refresh will override any ALPT or SDPT commands that contradict the hardware status. |
| | Note 3: Setting or clearing does not affect the hardware state of the alarm point. This command simulates the condition and the alarm handler behaves as if the conditions were real. |
| ALPT (<i>site</i>) <i>n</i> ACT or ALPT (<i>site</i>) ALL ACT | In Switching Control Center System (SCCS) applications, activates a specified building alarm scan point or all building alarm scan points, where <i>n</i> specifies the alarm point number. Activates the indicated alarm(s) in the DMS-10 office and causes the alarm(s) to be sent to the SCCS. |
| | Activates a specified alarm scan point or all alarm scan points, at the site. Activates the indicated alarm(s) in the DMS-10 office. |
| | Example: ALPT 1 ACT |
| ALPT (<i>site</i>) <i>n</i> INHB or ALPT (<i>site</i>) ALL INHB | In Switching Control Center System (SCCS) applications, inhibits a specified building alarm scan point or all building alarm scan points, where <i>n</i> specifies the alarm point number. Inhibits the indicated alarm(s) in the DMS-10 office and prevents the alarm(s) from being sent to the SCCS. |
| | Inhibits a specified alarm scan point, or all alarm scan points, at the site, if the scan point(s) have the option field "INHB" set to "YES." The "INHB" field is accessed by means of the Overlay ALRM. Inhibits the indicated alarm(s) in the DMS-10 office. |
| | Example: ALPT 1 INHB |
| BUSY ALPK CE <i>b s p</i> | Busies the Alarm Processor pack. |
| | Example: BUSY ALPK CE 3 5 2 |
| CLR <i>class</i> (<i>site</i>) <i>source</i> or CLR <i>class</i> ALL | Clears the given alarm. |
| | <i>class</i> can be one of: |
| | CAT catastrophic alarm |
| | MAJ major alarm |
| | MIN minor alarm. |
| | <i>site</i> is the four-character mnemonic of the remote location. If not specified, the base site is assumed. |

ALO commands (Continued)

| Input Command | Description |
|---------------|---|
| | <i>source</i> can be one of: |
| AMAB | AMA backup |
| BUG | BUG message overload |
| CCS7 | Common Channel Signaling System #7 device |
| CED | Overlay CED |
| CNFG | Memory configuration (<i>class</i> can only be MAJ or MIN) |
| CSUS | Central Automatic Message Accounting suspended |
| DCM | Digital Carrier Module (DCM) |
| DED | Overlay DED alarm for a peripheral shelf, REM, or DCM |
| DLC | Data Link Controller pack |
| DMON | Disk Monitor |
| DOOR | Not operational |
| DSI | Digital Signal Interface (DSI) disabled |
| DUMP | UPDT DUMP failure |
| EIO | Emergency I/O |
| ES | Ethernet Switch |
| ESB | Emergency Service Bureau |
| EXT | External alarm scan points |
| FAN | Not operational |
| FIBR | Not operational |
| FUSE | Not operational |
| IBSR | AMA IBSR feature |
| IFTP | IBSR FTP alarm |
| EXT | External alarm scan points |
| INI | System Initialization |
| IOD | Overlay IOD |
| KERN | Kernel detected |
| LAN | Local Area Network equipment |
| LIT | Line Insulation Test |
| LKT | Line lockout threshold exceeded |
| LLC | Line load control |
| LMU | Not operational |
| MISC | Unclassified |
| MTU | Magnetic Tape Unit |
| NED | Overlay NED |
| PAFA | Patch application failure alarm |

3-4 ALO (Alarm control overlay)

ALO commands (Continued)

| Input Command | Description |
|-----------------------------|---|
| | PED Overlay PED |
| | PGIC Packet Gateway Interface Controller |
| | PWR Not operational |
| | RBCD Overlay RBCD |
| | REM Remote Equipment Module (REM) |
| | RLYS Not operational |
| | RNGF Not operational |
| | SCM Subscriber Carrier Module (SCM) |
| | SED Overlay SED |
| | SNSR Not operational |
| | STUD Study feature alarm (TGMU) |
| | SYS System software reload (SYSLOAD) |
| | TEMP Not operational |
| | TLKB Not operational |
| | UPGD Upgrade configuration bit set in overlay CNFG(SYS) |
| DACT ALDP | Deactivates Alarm Dispatch, if prompt ALDP = YES in OVLY CNFG (ALRM). |
| ALSD | Deactivates Alarm Sending, if prompt ALSD = YES in OVLY CNFG (ALRM). |
| DSBL AT | Disables the alarm transfer switch. <i>Note: Alarm transfer is controlled by a switch on the Alarm and Ringing shelf. When the switch is disabled, alarms are prevented from being transferred to a remote location.</i> |
| ENBL AT | Enables the alarm transfer switch. <i>Note: Alarm transfer is controlled by a switch on the Alarm and Ringing shelf. When the switch is activated, alarms are unconditionally transferred to a remote location.</i> |
| LIST ACNT <i>site IDE n</i> | Provides a count of RDT alarms within the categories, facility (FCT), equipment (EQP), environmental (ENV), software (SFW), service (SRV), threshold alert (TRS), indeterminate (IND), and scheduled (SHD), and according to the severity levels, indeterminate (IND), warning (WRN), minor (MIN), major (MAJ), and critical (CRT). If the RDT does not support external alarms, an ALO010 message is output. |
| LIST ALM | Provides a list of all alarm conditions that exist within the system. The system response is: class site source data See the CLR command for lists of <i>class, site, source, and data mnemonics</i> . |
| LIST ALPK ALL | List status of all Alarm Processor packs. |
| LIST ALPK BUSY | List busied Alarm Processor packs. |
| LIST ALPK INS | List in-service Alarm Processor packs. |

ALO commands (Continued)

| Input Command | Description |
|--------------------------------------|--|
| RSET RING | Reset PE Ringing Generator pack alarm. |
| RTS ALPK CE <i>b s p</i> | Return the Alarm Processor pack to service. Example: RTS ALPK CE 3 5 2 |
| SDPT (<i>site</i>) <i>n action</i> | Perform the specified action on signal distribution point <i>n</i> . For the DMS-10 base site, <i>n</i> = 1 through 63. For an LCE-based remote location, <i>site</i> must be specified, and <i>n</i> = 1 through 56. <i>action</i> can be one of: OPER operate and hold RLSE release PULS operate for 256 ms then release (PULS is not valid for RLCM, OPM, OPAC, or RSC-S sites). Example: SDPT 3 RLSE Note 1: This command applies to customer-assignable points only. |
| STAT ALPK CE <i>b s p</i> | Give the status of the Alarm Processor pack (in-service or busy). The system response is: ALPK CE <i>b s p</i> INS or ALPK CE <i>b s p</i> BUSY <i>reason</i> <i>reason</i> can be one of: MMB man-made-busy OVFL overflow SMB system-made-busy NORP no response STKI stuck interrupt. Examples: (input) STAT ALPK CE 3 5 2 (output) ALPK CE 3 5 2 BUSY SMB |
| STAT ALDP | Give the status of Alarm Dispatch (activated or deactivated). The system response is: ALDP ACT/DACT |
| STAT ALSD | Give the status of Alarm Sending (activated or deactivated). The system response is: ALSD ACT/DACT |
| STAT AT | Give the status of the alarm transfer switch (enabled or disabled). The system response is: |

3-6 ALO (Alarm control overlay)

ALO commands (Continued)

| Input Command | Description |
|---------------------------|--|
| | AT ENBL/DSBL <i>Note: Alarm transfer is controlled by a switch on the Alarm and Ringing shelf. When the switch is activated, alarms are unconditionally transferred to a remote location.</i> |
| STAT RING | Give the status of both PE Ringing Generator packs (active, inactive, or disabled). The system response is: RING CE <i>b s p</i> ACT/INAC/DSBL |
| SWCH RING CE <i>b s p</i> | Switch to indicated Ringing Generator pack. Example: SWCH RING CE 3 5 6 |

Section 4: ALT (Alarm test diagnostic)

Description

Overlay ALT is an interactive program used to test the DMS-10 switch alarm packs.

Input commands

This section describes input commands that can be used with this program. Because of different hardware configurations, not all commands are valid for all sites or for all generics. The system provides error messages when incorrect commands are input.

ALT commands

| Input Command | Description |
|-----------------|--|
| #### | Interrupts any maintenance-terminal output, places the maintenance terminal in input mode, and stops execution of the current command. Response is the prompt character >. |
| **** | Interrupts any maintenance-terminal output and aborts the overlay program. Response is the prompt character #. |
| ? | Queries the system for valid input. Can be used with any command. |
| ALDP ACTV | Activates Alarm Dispatch. |
| ALDP CANC | Cancels Alarm Dispatch. |
| ALSD ACTV | Activates alarm sending. |
| ALSD CANC | Cancels alarm sending. |
| BUSY 0 | Busies the Alarm Processor pack. |
| CLEA | Not for telco use. Clear the software alarm scan/distribution bits (CLEA <SCAN, DIST> PACK_#). |
| CNTR <i>alm</i> | Enables/disables the specified alarm function. This is a design tool and has no field application. This command is not recommended for use on an in-service DMS-10 switch. Use of this command may interfere with internal audits that are constantly monitoring alarm status and indications. <i>alm</i> can be one of: <ul style="list-style-type: none"> CTOF Catastrophic system alarm LED. If alarm is set and LED is on, turns LED off momentarily. CTON Catastrophic system alarm LED. If alarm is not set and LED is off, lights LED momentarily. |

4-2 ALT (Alarm test diagnostic)

ALT commands (Continued)

| Input Command | Description |
|-------------------------|--|
| MJOF | Major system alarm LED. If alarm is set and LED is on, turns LED off momentarily. |
| MJON | Major system alarm LED. If alarm is not set and LED is off, lights LED momentarily. |
| MNOF | Minor system alarm LED. If alarm is set and LED is on, turns LED off momentarily. |
| MNON | Minor system alarm LED. If alarm is not set and LED is off, lights LED momentarily. |
| PFOF | Power failure alarm LED (see Note 1). If alarm is set and LED is on, turns LED off momentarily. |
| PFON | Power failure alarm LED (see Note 1). If alarm is not set and LED is off, lights LED momentarily. |
| PWOFF | Power plant alarm LED. If alarm is set and LED is on, turns LED off momentarily. |
| PWON | Power plant alarm LED. If alarm is not set and LED is off, lights LED momentarily. |
| XFOF | Alarm transfer disabled (see Note 2). |
| XFON | Alarm transfer enabled (see Note 2). |
| <i>Note 1:</i> | This alarm applies to Vintage 1 alarms only. |
| <i>Note 2:</i> | Alarm transfer is controlled by a switch on the Alarm and Ringing shelf. When the switch is activated, alarms are unconditionally transferred to a remote location. |
| LIST | Not for telco use. |
| MAIN | Not for telco use. Clear or set the maintenance bit of the alarm pack (MAIN <SET, CLR> PACK_#). When set, input alarm messages are diverted to this overlay program. |
| OUTP | Puts the maintenance terminal in output mode so that incoming messages can be printed. |
| RCVD | Not for telco use. Simulate a message from an alarm pack in software (RCVD PACK_# STATUS CODE ERRORS). |
| RTS 0 | Returns the Alarm Processor pack to service. |
| RESE | Resets all signal distribution points. |
| SEND | Not for telco use. Sends the distribution point number xxxx using SEND_ALARM intrinsic (SEND xxxx). |
| STAT SCAN/DIST <i>n</i> | For the base site only, provides the status of either the alarm scan points (STAT SCAN) of pack <i>n</i> (NT3T53, Alarm Processor pack), where <i>n</i> is 0, or the distribution points (STAT DIST) of pack <i>n</i> (NT3T54, Alarm Signal Distribution pack), where <i>n</i> is either 0 or 1. |
| Examples: | STAT SCAN 0 STAT DIST 1 |

ALT commands (Continued)

| Input Command | Description |
|--|---|
| SYS <i>alm</i> SET or SYS <i>alm</i> CLR | Sets or clears the system alarm, where <i>alm</i> can be: MAJ Major alarm MIN Minor alarm CAT Catastrophic alarm. |
| TEST | For the base site only, operates each signal distribution point and checks alarm scan point for alarm messages. Repeats test on each CPU. Testing stops on a CPU when the error count exceeds 600 errors. If the test is run and a fault is found on both CPUs, the offending pack will be made SMB. This command masks informational messages not related to the status of the test. |
| TEST <i>n p</i> | For the base site only, operates the designated signal distribution point and checks alarm scan point for alarm message. <i>n</i> Number of the SD point to be tested (0 through 30) <i>p</i> Signal Distribution pack number (0 or 1) <i>Note:</i> <i>If any alarm conditions exist, this command should not be used. If the test is run and a fault is found from both CPUs, the offending pack will be made SMB.</i> |
| TEST CONT | For the base site only, operates each signal distribution point and checks alarm scan point for alarm message. Repeats test on each CPU. The test is run to completion, regardless of the error count, and lists all errors found. If the test is run and a fault is found from both CPUs, the offending pack will be made SMB. This command outputs ALT014 if an unexpected message is received. This is for informational purposes only and does not affect the status of the test. This command is intended to be used primarily by technical support personnel. |

4-4 ALT (Alarm test diagnostic)

Section 5: AUD (Software audit overlay)

Description

Overlay AUD repairs some simple faults in Call Store data structures. The overlay also ensures that the Network connection memory is sane. Although overlay AUD is not interactive, operating company personnel may load the overlay in an attempt to clear a fault. After the overlay is loaded, message AUD000 is printed on the maintenance terminal, and the tests and subsequent corrections occur. AUD001 is printed when the overlay has completed testing.

Input commands

When overlay AUD is invoked, the system displays the general prompt, ">", which indicates that the overlay is loaded in memory. To start the audit, "GO" must be entered.

Section 6: CCTB (Custom calling tape backup)

Description

Overlay CCTB is used to protect custom calling data during a planned system reload by dumping the data onto a data storage device prior to the reload.

Note: CCTB data is automatically dumped after an EDD by Overlay UPDT and is automatically loaded after a system reload.

In Generic 503 and later 500-Series, the database will be inaccessible during custom calling data backups to the DMS-10 file system by the CCTB overlay. Any pending database changes will be made after the custom calling data backup has completed.

Input commands

This section contains the commands that may be used when the overlay program is loaded.

CCTB commands

| Input Command | Description |
|-----------------------------------|---|
| #### | Interrupts any maintenance-terminal output, places the maintenance terminal in input mode, and stops execution of the current command. Response is the prompt character >. |
| *** | Interrupts any maintenance-terminal output and aborts the overlay program. Response is the prompt character #. |
| ? | Queries the system for valid input. Can be used with any command. |
| ACTV <i>file#</i> HD0/HD1/ MO0 | In Generic 601.10 and later. Makes the custom calling data file specified by <i>file#</i> the active file on the target IOI device. <i>file#</i> is obtained from the QUE command output for the target IOI device. |

CCTB commands (Continued)

| Input Command | Description |
|-----------------------------------|--|
| DUMP HD0 / HD1 / MO0 (TRAC) / ALL | <p>Dump custom calling data from memory to a specified IOI device or to all (ALL) devices. The specified device can be a hard disk (HD0 or HD1) or a magneto-optical device (MO0).</p> <p><i>Note: In 601.10 generics and beyond, when ALL is specified and an IP address of a collection point in the DMS-10 network has been configured via overlay CNFG(AODB) sequence, the latest version of the custom calling data on the primary IOI device will also be transferred to the IP location.</i></p> |
| | <p>A DUMP creates two data copies: the data copied to the specified device and a backup copy. The backup copy contains the office data as it appeared prior to the DUMP command execution.</p> <p><i>Note: In 601.10 generic and beyond, the backup data file created is the custom calling data file appended with a site name, date, time stamp, and generic that the backup file was created. Multiple backup files are created at the IP location by retaining the previously transferred files. For example, a custom calling data backup file created for site SYS1 would have the following name:</i> <i>"SYS1.2005.06.22.13.30.601.10.cctb.dat"</i></p> |
| | <p>TRAC may be selected to list all directory numbers that are dumped onto the IOI device(s). TRAC option is not provided for data transfers to the IP location.</p> |
| GETF <i>file#</i> HD0/HD1/MO0 | <p>In Generic 601.10 and later generics. Copies the custom calling data file specified by <i>file#</i> from the IP location into the DMS-10 officeData directory on the specified target IOI device. <i>file#</i> is obtained from the QUE command output for the IP location.</p> |
| LOAD HD0 / HD1 / MO0 (TN) (TRAC) | <p>Load custom calling data from a specified IOI device to memory by directory number. The device can be a hard disk (HD0 or HD1) or a magneto-optical device (MO0).</p> <p>TN may be selected to load custom calling data by physical terminal number appearance of the customer's line, in ascending order.</p> <p>TRAC may be selected to list all directory numbers or terminal numbers, if TN is also selected, that are loaded into memory.</p> |
| MON ON/OFF/<CR> | <p>In Generic 601.10 and later generics. Turns the FTP trace for the AODB feature on or off. When no parameter is specified the status of the monitor function is output.</p> |
| PUTF <CR> | <p>In Generic 601.10 and later generics. Copies the custom calling data file from the officeData directory on the primary IOI device to the IP location.</p> |
| PUTF <i>file#</i> HD0/HD1/MO0 | <p>In Generic 601.10 and later generics. Copies the custom calling data file from the officeData directory on the specified IOI device to the IP location. <i>file#</i> is obtained from the QUE command output for the target IOI device.</p> |
| QUE | <p>Displays the date, time, and generic load of available data bases generated via the DUMP command for all configured devices.</p> |

Section 7: CED (Control equipment diagnostic)

Description

Overlay CED is free-running when automatically loaded (once every 24 hr, if so scheduled in the OVLY prompting sequence in Overlay CNFG) and interactive when requested by maintenance personnel. In the interactive mode, this diagnostic allows the user to test:

- the components of the inactive NT3T98 System Processor pack, including
 - CPU
 - real-time clock circuitry
 - Ethernet LAN circuitry
 - flash memory
 - main RAM
 - hex display
- the CPU Bus Extender packs and cables
- equipment changeover mechanisms
- the inactive Synchronous Clock pack (NT3T47), if equipped
- the Ethernet Switches, if equipped

In the free-running mode, the program tests and automatically disables any standby control equipment found faulty. The program also switches the Cores, if possible, and indicates if inhibit switchover of the the Core is active.

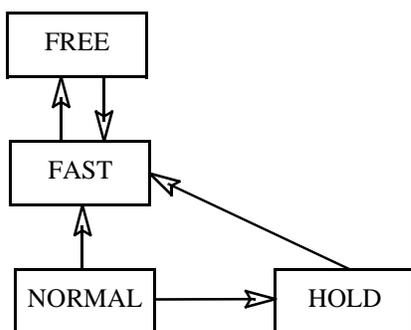
Input commands

This section lists the commands, with descriptions, that can be used once the requested (interactive) program is loaded (that is, the maintenance terminal has typed out CED000). Because of different hardware configurations, not all commands are valid for all sites or for all generics. The system provides error messages when incorrect commands are input.

CED commands

| Input Command | Description |
|-----------------------|---|
| #### | Interrupts any maintenance-terminal output, stops execution of the current command, and places the maintenance terminal in input mode. Response is the prompt character >. |
| **** | Interrupts any maintenance-terminal output, stops execution of the current command, aborts the overlay program, and places the maintenance terminal in input mode. Response is the prompt character #. |
| ? | Queries the system for valid input. Can be used with any command. |
| ALLW REFS | Allows automatic switchover to the backup synchronization reference source when the primary reference source experiences problems due to an excessive number of span line errors. The status of synchronization reference source switching can be obtained by entering the STAT SYNC command. |
| ALLW SWCH | Allows switchover of Core activity during automatic CED execution, or if manually loaded, during the execution of a TEST ALL, SWCH CORE, ENBL CORE, or TEST XTDR command. |
| AT MAN | Alarm transfer manual. The AT switch on the Alarm and Ringing shelf of the CE bay is enabled. |
| AT REM | Alarm transfer to a remote location. The AT switch on the Alarm and Ringing shelf of the CE bay is disabled. |
| CHG SYNC <i>state</i> | Changes the phase-locked loop state. <i>state</i> can be one of: <ul style="list-style-type: none"> FAST In this state, the DMS-10 switch is trying to acquire a good signal from the DCMs. After achieving synchronization, the system automatically changes to a slower-tracking normal mode. FREE In this state, the active SYNC pack is not tracking any synchronization reference source and has no stored history from previous operation with a synchronization reference source. HOLD Holdover state. In this state, the active SYNC pack (NT3T47) has lost its external synchronization reference sources and is using either data acquired during the tracking mode or internal data to retain its accuracy with respect to the last good frequency from the reference source. |

The *state* that can be selected depends on the current phase-locked loop state. The following diagram shows the allowable state changes. For example, from the NORMAL state, only FAST or HOLD states may be selected.



| | |
|----------|--|
| CHGO | <p>Performs a CPU change over from the active Core to the inactive Core. This command duplicates the action caused by simultaneously pressing the Enable and Changeover switches on the Alarm and Ringing Module.</p> <p>It is strongly recommended that CPU change overs be performed using the CHGO command. The CHGO command checks for errors that may inhibit proper recovery after the change over, and ensures that any data subject to loss is properly flushed to disk. These actions cannot be performed automatically when the Enable and Changeover switches are used.</p> |
| CHK MEM | Performs a comparison of the active and inactive (idle) memories. This function performs a complete read of all memory and corrects single, soft parity faults. |
| CLR DISP | Clears the active Core display to blank. |

CED commands

| Input Command | Description |
|-------------------------|---|
| CLR MAJ | Clears major CED and ES (Ethernet Switch) system-detected alarms. |
| CLR MIN | Clears minor CED and ES (Ethernet Switch) system-detected alarms. |
| DMOL | Data Modification Order Lock. This command blocks DMO execution preventing modification to office data. In Generic 501 and 502, after the lock command (DMOL) is issued, no DMO overlays other than UPDT and CCTB can be loaded. In Generic 503 and later 500-Series releases, after the lock command is issued, DMO overlays may be loaded but commands that modify the office data will be blocked; query-type commands will be permitted. Switch initialization automatically removes a lock, as does the manual unlock command (DMOU). This command may, optionally, be executed just prior to the UPDT command. UPDT is used to backup office data onto storage media at the beginning of the RGU process. |
| DMOU | Data Modification Order Unlock. This command reverses the effects of the DMOL command allowing office data modification to resume. |
| DNLD BSP <i>version</i> | Downloads the BSP (Board Support Package) FLASH memory on the inactive Core. Optional input parameter is the version (OLD, NEW, DFLT). If no parameter is provided the default value is used. |

CED commands (Continued)

| Input Command | Description |
|--|---|
| DNLD ES 0/1 SW FW | Downloads the Ethernet Switch firmware or software to the specified unit. The switch must be in the DSBL state for this command. |
| NEW DFLT OLD | Downloads the specified version (NEW DFLT OLD) of the load (SW FW). <i>Example:</i> DNLD ES 0 SW NEW |
| DSBL CLK 0/1 | Sets the software status of the associated clock pack (NT3T70) to inhibit the software switchover. However, the switchover to disable the clock during an active clock fault will still occur. |
| DSBL ES 0/1 (IMED) | Disables the specified Ethernet Switch by moving all traffic from the 3T98 ENET and PGIC ports to the other unit, and then disabling these ports. If the other unit is already DSBL'd, the IMED option is needed to force this unit to the DSBL state. |
| DSBL SYNC | Disables the inactive Synchronous Clock pack (NT3T47) and sets the man-made-busy (MMB) status. |
| ENBL CLK 0/1 | Sets the software status of the associated clock pack (NT3T70) to enable the software switchover. |
| ENBL CORE <i>mask</i> | <p>Performs the following tests on the inactive NT3T98 System Processor pack:</p> <ul style="list-style-type: none"> • RTC circuitry • Flash memory • main RAM • Ethernet LAN circuitry <p>If all tests pass, the ENBL CORE command briefly switches Core activity to the currently-inactive Core and back to the originally-active Core to verify that the system can successfully execute on the inactive NT3T98 System Processor pack.</p> <p>If the MBIT fault indicator is set when the ENBL CORE command is entered (refer to the STAT CORE command) and all tests pass, the MBIT fault indicator will be cleared. If tests or Core activity switch fail, the MBIT fault indicator will be set.</p> <p><i>mask</i> can be used to override some faults and conditions (ALRM, BUS, FLSH, INT, IOI, or PWR). If any maskable conditions exist, the ENBL CORE command will fail unless the optional <i>mask</i> parameters are included in the command. For information about the mask parameters, refer to the SWCH CORE command.</p> |
| <p>CAUTION: Use the mask options with extreme caution only after attempting to clear the previously found fault. If the fault has not been cleared, an Initialization or a SYSLOAD may occur.</p> | |
| ENBL ES 0/1 | Performs a software reset on the unit, sends the configuration file, enables all ports on this unit, and returns the ES unit to the ENBL state. |
| ENBL INT | Clears stuck interrupt fault indicators and hardware enables all interrupts on the active Core. |

CED commands (Continued)

| Input Command | Description |
|------------------|--|
| ENBL SYNC | <p>CAUTION: Use this command with extreme caution only after attempting to clear the previously found fault. If the fault has not been cleared, an Initialization or a SYSLOAD may occur.</p> <p>Enables the inactive Synchronous Clock (NT3T47) pack and clears the man-made-busy (MMB) status. All fault conditions must be cleared with the TEST SYNC command before the ENBL SYNC command can be executed. The ENBL SYNC command is not valid if the response to the SYNC prompt in the SYS prompting sequence (Overlay CNFG) is NO.</p> |
| ENTR 1BUS (IMED) | <p>Reconfigures the system into the one-bus mode.</p> <p>The ENTR 1BUS command is not allowed unless the NT3T71 maintenance TTY on the inactive Core shelf (TTY 0 or TTY 1) is disabled.</p> <p>The ENTR 1BUS command is not allowed unless the NT8T90 SCSI I/O and Disk Drive pack on the active Core shelf is disabled.</p> <p>In addition, the command is not allowed if one or more of the following conditions are true, unless the optional IMED parameter is included in the command:</p> <ul style="list-style-type: none"> • if the system clock (CLK) on the active Core shelf is not enabled and active. • if the synchronous clock (SYNC), if equipped on the active Core shelf, is not enabled and active. • if the system Media Access Controller (MAC) address is the MAC address of the inactive NT3T98 System Processor pack. Use of the IMED option to override this condition will only present a problem if the inactive NT3T98 pack is replaced with another NT3T98 pack while in one-bus mode. In this case, the system MAC address will be automatically reset when the user enters the EXIT 1BUS IMED command to exit the one-bus mode of operation. If the system MAC address is reset and there is any Ethernet (ENET) activity in progress on the active Core, then the Ethernet activity will be disrupted. |
| EXIT 1BUS (IMED) | <p>Tests and, if possible, reconfigures the system out of one-bus mode or split mode.</p> <p>The NT3T71 maintenance TTY (TTY 0 or TTY 1), the system clock (CLK), and synchronous clock (SYNC), if equipped on the inactive Core shelf remain disabled and must be manually enabled by the user.</p> <p>If the system Media Access Controller (MAC) address does not match the MAC address of either the active NT3T98 System Processor pack or the inactive NT3T98 pack, the EXIT 1BUS command will not be allowed unless the optional IMED parameter is included in the command.</p> <p>CAUTION: If the IMED option is used, the system MAC address will be automatically reset to match the MAC address of the active NT3T98 pack. This will disrupt any NT3T98 Ethernet activity in progress.</p> |

CED commands (Continued)

| Input Command | Description |
|---------------|--|
| INH REFS | <p>The EXIT 1BUS command tests the inactive Core real time clock (RTC) circuitry and the NT3T70 System Bus Controller inter-Core ports. If either of these tests fails, the MBIT fault indicator will be set and the system will not exit one-bus mode.</p> <p>If the MBIT fault indicator is not set, the inactive NT3T98 RAM will be tested and enabled. If the MBIT fault indicator is set, the inactive NT3T98 RAM will remain disabled. The ENBL CORE command must be used in this case to clear the MBIT fault and enable inactive NT3T98 RAM.</p> <p>Inhibits automatic switchover to the backup synchronization reference source when the primary reference source experiences problems due to an excessive number of span line errors. When the automatic switchover has been inhibited, the system enters the <i>holdover</i> state and operates without a synchronization reference source. The status of synchronization reference source switching can be obtained by entering the STAT SYNC command.</p> |
| INH SWCH | <p>Inhibits switchover of Core activity during automatic and manual CED execution.</p> |
| INIT | <p>Initialize. Performs a DMS-10 initialization or site restart. This command duplicates the action caused by physically pressing the MAN INT button on the NT3T98 System Processor pack.</p> <p><i>Note: It is strongly recommended that initializations be performed using the INIT command. The INIT command checks for errors that may inhibit proper recovery after the initialization, and ensures that any data subject to loss is properly flushed to disk. These actions cannot be performed automatically when the MAN INT button is used.</i></p> |
| QUE DNLD | <p>Queries the version of the OLD, NEW, and DFLT (default) Board Support Package (BSP) Flash memory download programs and Ethernet Switch software and firmware download programs that are present on the root IOI disk. The maintenance terminal output has the following format:</p> <pre> BSP OLD VER version BSP DFLT VER version BSP NEW VER version ES OLD VER version ES DFLT VER version ES NEW VER version </pre> <p>If a given download file is not present on the root disk (that is, an OLD or NEW program may or may not be present), a question mark (?) displays in place of the version.</p> |
| QUE HEX | <p>Prints the hex display data that was output in the last ICP001 TTY output message. ICP001 messages are printed as part of the Remote Generic Upgrade (RGU) feature and indicate the hex display codes that are displayed on the maintenance-active NT3T98 System Processor pack during a split-core reload. Refer to the ICP001 message in the output message manual (NTP 297-3601-903) for more information.</p> |

CED commands (Continued)

| Input Command | Description |
|---------------|--|
| | <p>The system response is:</p> <p style="padding-left: 40px;">HEX <i>nnn</i> CORE <i>n</i> <i>sitename</i> <i>date</i> <i>time</i></p> <p>where</p> <p><i>nnn</i> is the hexadecimal value displayed: 000 to FFF, or “___” (three underscore marks) if the last display value was blank</p> <p><i>n</i> is the NT3T98 associated with the hexadecimal display</p> <p><i>sitename</i> is the base site name</p> <p><i>date</i> is the date the display was updated</p> <p><i>time</i> is the time the display was updated</p> <p><i>Note:</i> This command is intended for use during a split-core reload. If a system initialization has occurred since the last split-core reload, “HEX ???” will be output in response to this command.</p> <p>Example: HEX 2FF CORE 0 CAPF FRI 01/28/00 09:42:04</p> |
| RSET ES 0/1 | <p>The Reset command will power cycle of the specified Ethernet Switch and return the unit to an ENBL state.</p> |
| RSET MAC | <p>Resets the system Media Access Controller (MAC) address to the MAC address of the active NT3T98 System Processor pack. The RSET MAC command is not allowed if the system MAC address is already set to the MAC address of the active NT3T98 pack.</p> <p style="text-align: center;">CAUTION: The RESET MAC command will disrupt any NT3T98 Ethernet activity in progress.</p> |
| SPLD | <p>Allows operating company personnel to split Cores and load a generic (including office data) from HD1 to the idle Core. At command execution the idle Core goes into maintenance active mode and starts automatically sysloading from HD1.</p> <p><i>Note 1:</i> It is strongly recommended that the SPLD command be used to perform Split-Core Reloads, because it eliminates the risk inherent in any procedure that requires packs to be physically touched.</p> <p><i>Note 2:</i> If HD1 is physically disabled (ON/OFF switch in OFF position), the system will attempt to load from MO0 (NT4T32BA). Under no conditions will the system attempt to load from HD0.</p> |
| SPLT CORE | <p>Reconfigures the system so that the idle (non-call-processing) CPU is separated from the call processing system. SPLT CORE requires that idle CPU I/O devices are MMB, CLK, and SYNC (if equipped) are enabled, and the primary IOI is disabled.</p> |
| STAT CLK | <p>Reports the active Core, the status of the network/system clocks as seen by the active Core, and indicates whether the clocks passed the response test at the time of the last Initialization. This command also indicates the source of the network/system clocks that are selected by the NT3T70 DIP switch settings.</p> <p>The maintenance-terminal output has the following format:</p> |

CED commands (Continued)

| Input Command | Description |
|---------------|--|
| COREx | ACTV <i>stat1</i> |
| CLK0 | <i>stat2 stat3 stat4</i> SRC <i>stat5</i> |
| CLK1 | <i>stat2 stat3 stat4</i> SRC <i>stat5</i> |
| | where: |
| | COREx Indicates the active Core (<i>x</i> = 0 or 1) |
| | <i>stat1</i> may be: |
| | blank system is running in a normal redundant Core configuration |
| | 1BUS system is running in the one-bus configuration |
| | SPLT system is running in the split-Core configuration |
| | MBIT the NT3T70 Maintenance bit is reset, indicating that the inactive NT3T98 is faulty |
| | <i>stat2</i> may be: |
| | ACTV Active network/system clock |
| | IDLE Hot standby network/system clock |
| | <i>stat3</i> may be: |
| | ENBL Enabled |
| | DSBL Disabled |
| | <i>stat4</i> is: |
| | FALT the inactive clock is in a faulty state |
| | <i>stat5</i> maybe: |
| | 3T70 system is using 3T70 internal clock (Refer to 3T70 DIP Switch Settings) |
| | 3T47 system is using 3T47 generated clock (Refer to 3T70 DIP Switch Settings) |
| STAT CORE | Reports the status of both Core complexes. The report displays the status of the active Core complex followed by the status of both Core complexes and their respective ethernet LAN (ENET) ports. The maintenance terminal output has the following format: |
| | COREx ACTV <i>stat1</i> |
| | CORE0 <i>stat2</i> |
| | ENET0 <i>stat3 stat4</i> CARR = YES/NO or blank |
| | ENET1 <i>stat3 stat4</i> CARR = YES/NO or blank |
| | CORE1 <i>stat2</i> |
| | ENET0 <i>stat3 stat4</i> CARR = YES/NO or blank |
| | ENET1 <i>stat3 stat4</i> CARR = YES/NO or blank |
| | where: |
| | <i>stat1</i> may be: |
| | blank system is running in a normal redundant Core configuration |

CED commands (Continued)

| Input Command | Description |
|---|--|
| 1BUS | system is running in the one-bus configuration |
| SPLT | system is running in the split-Core configuration |
| MBIT | the NT3T70 System Bus Controller (SBC) maintenance bit is reset, indicating that the inactive NT3T98 is faulty |
| <i>stat2</i> indicates any faults associated with the given Core: | |
| PWR | power-related fault, may be one of: NT3T70 System Bus Controller pack is without power, is missing, or is faulty cable between the active and the inactive NT3T70 is missing or is faulty NT3T98 pack is without power, is missing , or is faulty cable between the active and the inactive NT3T98 pack is missing or faulty |
| CLK | NT3T70 network/system clock (CLK) fault - use the STAT CLK command in Overlay CED to obtain more information |
| IOI | NT8T90 Input/Output Interface fault |
| ALRM | NT3T71 Alarm Interface fault |
| BUS | NT3T72 I/O Bus Extender fault - use the STAT XTDR command in Overlay CED to obtain more information |
| INT | stuck interrupt fault - use the STAT INT command in Overlay CED to obtain more information |
| <i>stat3</i> indicates the activity state of the ENET port on the active Core only: | |
| ACTV | this ENET port is active |
| IDLE | this ENET port is idle |
| <i>Note: stat3 is blank if this is the inactive Core.</i> | |
| <i>stat4</i> indicates the result of the last test performed on the ENET port: | |
| GOOD | the last test on this ENET port passed |
| FLT | the last test on this ENET port failed |
| CARR indicates the carrier status of the ENET port on the active Core only: | |
| CARR = YEScarrier is present on the ENET port | |
| CARR = NOcarrier is not present on the ENET port | |
| <i>Note: This field is blank if this is the inactive Core.</i> | |
| A sample printout from the STAT CORE command is shown below: | |
| CORE1 ACTV | |

CED commands (Continued)

| Input Command | Description |
|----------------|--|
| | <p>CORE0 GOOD</p> <p> ENET0 GOOD</p> <p> ENET1 GOOD</p> <p>CORE1 GOOD</p> <p> ENET0 ACTV GOOD CARR = YES</p> <p> ENET1 IDLE GOOD CARR = NO</p> |
| STAT ES (FULL) | <p>Displays the status of both Ethernet Switches.</p> <p>Status can be ENBL or DSBL.</p> <p>DSBL reason: MMB, SMB.</p> <p>The FULL option will display status of all 24 ports.</p> |
| STAT INT | <p>Reports the location and types of stuck interrupts present in the system and the location where the interrupts are masked.</p> <p>If any stuck interrupts are isolated between the NT3T98 System Processor pack and the local NT3T72 I/O Bus Extender pack, and are masked at the NT3T98 pack, the output is as follows:</p> <p> COREx STK: <i>ints</i></p> <p>where:</p> <p> <i>x</i> is the shelf location (0 or 1) of the NT3T98 where the interrupt is masked</p> <p> <i>ints</i> is one or more of: MAN, RDY, PER, IOB, IOC, NW, WD, DB, OS, and MAC (see the definitions of these interrupts below)</p> <p>If any stuck interrupts are isolated between the local NT3T72 I/O Bus Extender pack and one of the remote NT3T72 I/O Bus Extender packs, and are masked at the local NT3T72 pack, the output is as follows:</p> <p> CE <i>b s p</i> STK: <i>ints</i></p> <p>where:</p> <p> CE <i>b s p</i> is the location of the NT3T72 pack where the interrupt is masked</p> <p> <i>ints</i> is one or more of: RDY, IOB, and NW (see the definitions of these interrupts below)</p> <p>If any stuck interrupts are isolated to a Network or GPIO shelf and are masked at a remote NT3T72 I/O Bus Extender pack, the output is as follows:</p> <p> CE <i>b s p</i> STK: <i>ints</i></p> <p>where:</p> <p> CE <i>b s p</i> is the location of the NT3T72 pack where the interrupt is masked</p> <p> <i>ints</i> is one or more of: RDY, IOB, and NW (see the definitions of these interrupts below)</p> <p>The possible interrupts (<i>ints</i>) include:</p> |

CED commands (Continued)

| Input Command | Description |
|---------------|---|
| | <p>MAN (manual interrupt), generated by pressing the MAN INT button on the faceplate of the active NT3T98 pack, initiates a DMS-10 system initialization.</p> <p>RDY (ready interrupt). This party line interrupt services the NT3T50 Data Link Controller ports and the NT3T70 Inter-CPU (ICPU) ports.</p> <p>PER (periodic interrupt), generated once every 128 ms by circuitry on the NT3T98 pack, initiates a low-level audit of the real-time clock and network interface packs.</p> <p>IOB (input/output backplane interrupt). This party line interrupt services NT3T80 Dual Serial Data Interface (SDI) ports, NT3T93 Dual Integrated Modem ports, NT3T09 Serial Data Interface pack ports, the NT3T71 Maintenance Interface pack terminal (TTY 0 or TTY 1) on the active Core shelf, the alarm interface on the active Core shelf, and the secondary NT8T90 input/output interfaces.</p> <p>IOC (input/output cable interrupt), which services the NT3T71 Maintenance Interface pack terminal (TTY0 or TTY1) on the inactive Core shelf.</p> <p>NW (network interrupt). This party line interrupt services the NT4T16 LAN/Core Interface pack, the NT4T01 Tone and Digit Sender pack, the NT4T04 DS-30A Interface pack, and the NT4T05 Multiplex Loop Interface pack, in a DMS-10 Classic network configuration, and services the NT8T04 Network Interface pack and NT8T06 Network pack, in a DMS-10EN network configuration.</p> <p>WD (watchdog interrupt), generated after one second if software does not reset the watchdog timer circuitry on the active NT3T98 pack, initiates a system initialization. Software should always reset the watchdog timer circuitry so that this interrupt is never generated.</p> <p>DB (Debug interrupt), generated by the Serial Debug Interface port on the NT3T98 pack and intended for use only by Nortel personnel.</p> <p>OS (operating system interrupt), generated once every ten ms by timing circuitry on the NT3T98 pack, drives operating system tasks such as task scheduling and timing queue updates.</p> <p>MAC (Media Access Controller (MAC) interrupt), generated by the MAC circuitry on the NT3T98 pack, which facilitates computer network connectivity (that is, ethernet LAN connectivity).</p> |
| STAT SYNC | <p>Reports the status of the Synchronous Clock (NT3T47) packs. This command is not valid if the response to the SYNC prompt in Overlay CNFG, SYS prompting sequence is NO. This command also indicates the NT3T70 DIP switch settings.</p> |

CED commands (Continued)

| Input Command | Description |
|---------------|---|
| | The maintenance-terminal output has the following format: CLK 0 / 1 ACTV / IDLE ENBL / DSBL/SRC 3T70 / 3T47 SYNC <i>n</i> CE <i>b s p</i> <i>stat run mode</i> or <i>fault cause</i> (if <i>stat</i> = DSBL) <i>ref source ref locn</i> FCR = <i>nnnnn</i> |
| REF PRIM | <i>location</i> ACTV/AVAL/INHB/FALT |
| REF ALT | <i>location</i> ACTV/AVAL/INHB/FALT |
| | Last reference change <i>mm/dd/yy</i> at <i>hh:mm:ss</i> Total # of reference changes today is (<i>number</i>) where: <i>n</i> is 0 or 1. <i>stat</i> is one of: ACTV Active DSBL Disabled STBY Standby <i>run mode</i> can be one of: FAST Acquire state (In this state, the DMS-10 switch is trying to acquire a good signal from the DCMs; it has found that they are good and is now trying to find the frequency of the signal.) FREE Free run (In this state, the active SYNC pack is not tracking on any SYNC source. The inactive SYNC pack is trying to keep in step. Usually when this state is encountered, either the DCM source is in trouble or the system is coming up initially.) NORM Tracking state (In this state, the DMS-10 switch has verified the signals from the DCMs and SYNC packs and both are stable and good. The DMS-10 switch will continue to monitor both signal sources for faults.) HOLD Holdover state (In this state, the active SYNC pack (NT3T47) has lost its external synchronization reference sources and is using either data acquired during the tracking mode or internal data to retain its accuracy with respect to the last good frequency from the reference source.) If <i>stat</i> = DSBL, fault cause will be printed as one or more of: FALT Software-detected fault INDR External fault (not in the Synchronous Clock (NT3T47) pack) |

CED commands (Continued)

| Input Command | Description |
|---------------|--|
| | MMB Man-made-busy as a result of the DSBL SYNC command |
| | NORP No response from Synchronous Clock (NT3T47) pack |
| | <i>ref source</i> can be one of: |
| | ALT Operating off of the alternate DCM |
| | PRIM Operating off of the primary DCM |
| | EXT SRCE Operating off of the building integrated timing supply (BITS) clock source |
| | SNC <i>n</i> Sync pack <i>n</i> |
| | FCR = <i>nnnnnn</i> , where <i>nnnnnn</i> is the value of the frequency-control register. |
| | <i>Note:</i> Stable signals usually range from 00064 to 04048 with a midpoint of 02048. |
| STAT XTDR | Reports the status of all Core and I/O bus extenders configured in the system. The maintenance terminal output provides one line of information for each extender, in the following format: CE <i>b s p</i> ACTV / IDLE /DSBL GOOD / BAD / ? (INT) |
| | where: |
| | ACTV Active |
| | IDLE Idle |
| | DSBL Disabled |
| | GOOD Enabled |
| | BAD Extender failed most recent test. |
| | ? Not tested during or since initialization |
| | INT Stuck interrupt between local I/O and remote I/O bus extenders or on a network shelf. |
| | <i>Note:</i> If bus extenders have not been equipped in the system, output response is <i>NONE</i> . |
| SWCH CLK | Switches network/system clock activity if the clock sync feature is disabled or if the Synchronous Clock (NT3T47) pack feeding the idle System Bus Controller (NT3T70) pack is enabled. |
| SWCH CLK MAN | Switches network/system clock activity even if the Synchronous Clock (NT3T47) pack feeding the idle System Bus Controller (NT3T70) is faulty, provided that the active Synchronous Clock pack is also faulty. This command will not force a switch to a disabled network/system clock. |

CED commands (Continued)

| Input Command | Description | | | | | | | | | | | | | | |
|-----------------------|--|------|--|------|---|-----|--|-----|---|-----|--|-----|---|------|---|
| SWCH CORE <i>mask</i> | <p>Switches Core activity. After Core activity is switched, software execution resumes at the first instruction following the last instruction that was executed on the previously-active Core. Calls are not affected by a Core switch. The Core switch will not be allowed unless all of the following conditions are met:</p> <ul style="list-style-type: none"> • a Core switch has not been manually inhibited, that is, the INH SWCH command is not currently invoked • the system is not in one-bus mode - refer to the 1BUS status in the STAT CORE command output • the inactive NT3T98 pack is not marked faulty, that is, the NT3T70 maintenance bit is not reset - refer to the MBIT status in the STAT CORE command output • the version of the flash memory on the inactive NT3T98 pack matches that on the active NT3T98 pack - refer to the TEST FLSH command output and the FLSH mask below • an NT3T72 Alarm Interface fault is not marked against the inactive Core - refer to the ALRM status in the STAT CORE command output and the ALRM mask below • an NT8T90 Input/Output Interface (IOI) fault is not marked against the inactive Core - refer to the IOI status in the STAT CORE command and the IOI mask below • an NT3T72 I/O Bus Extender fault is not marked against the inactive Core - refer to the BUS status in the STAT CORE and STAT XTDR command output, and to the BUS mask below • a stuck interrupt fault is not marked against the inactive Core - refer to the INT status in the STAT CORE and STAT INT command output, and to the INT mask below • a power fault is not marked against the inactive Core - refer to the PWR status in the STAT CORE command output and the PWR mask below <p><i>mask</i> can be used to override some faults and conditions and can be one of:</p> <table border="0" style="margin-left: 20px;"> <tr> <td style="padding-right: 20px;">FLSH</td> <td>the flash memory versions on the inactive NT3T98 pack do not match the flash memory versions on the active NT3T98 pack</td> </tr> <tr> <td>ALRM</td> <td>an NT3T72 Alarm Interface fault is marked against the inactive Core</td> </tr> <tr> <td>BUS</td> <td>an NT3T72 I/O Bus Extender fault is marked against the inactive Core</td> </tr> <tr> <td>INT</td> <td>a stuck interrupt fault is marked against the inactive Core</td> </tr> <tr> <td>IOI</td> <td>an NT8T90 Input/Output Interface (IOI) fault is marked against the inactive Core</td> </tr> <tr> <td>PWR</td> <td>a power fault is marked against the inactive Core</td> </tr> <tr> <td>IMED</td> <td>all of the maskable faults/conditions above</td> </tr> </table> | FLSH | the flash memory versions on the inactive NT3T98 pack do not match the flash memory versions on the active NT3T98 pack | ALRM | an NT3T72 Alarm Interface fault is marked against the inactive Core | BUS | an NT3T72 I/O Bus Extender fault is marked against the inactive Core | INT | a stuck interrupt fault is marked against the inactive Core | IOI | an NT8T90 Input/Output Interface (IOI) fault is marked against the inactive Core | PWR | a power fault is marked against the inactive Core | IMED | all of the maskable faults/conditions above |
| FLSH | the flash memory versions on the inactive NT3T98 pack do not match the flash memory versions on the active NT3T98 pack | | | | | | | | | | | | | | |
| ALRM | an NT3T72 Alarm Interface fault is marked against the inactive Core | | | | | | | | | | | | | | |
| BUS | an NT3T72 I/O Bus Extender fault is marked against the inactive Core | | | | | | | | | | | | | | |
| INT | a stuck interrupt fault is marked against the inactive Core | | | | | | | | | | | | | | |
| IOI | an NT8T90 Input/Output Interface (IOI) fault is marked against the inactive Core | | | | | | | | | | | | | | |
| PWR | a power fault is marked against the inactive Core | | | | | | | | | | | | | | |
| IMED | all of the maskable faults/conditions above | | | | | | | | | | | | | | |

CED commands (Continued)

| Input Command | Description |
|------------------|---|
| SWCH ENET (IMED) | <p><i>CAUTION:</i> Use the mask options with extreme caution only after attempting to clear the previously found fault. If the fault has not been cleared, an Initialization or a SYSLOAD may occur.</p> <p>Switches the Ethernet network ports on the active Core unit.</p> <p>If a fault is set against the inactive Ethernet port on the active Core unit (refer to the STAT CORE command), the SWCH ENET is not allowed unless the optional IMED parameter is entered with the command. The SWCH ENET command will fail if the carrier is not present on the inactive Ethernet port on the active Core unit.</p> |
| SWCH REF | <p>Causes switchover to the backup synchronization reference source when the primary reference source experiences problems due to an excessive number of span line errors. A switchover is allowed only if the synchronization reference source being switched to is valid and is not experiencing problems. A switch back to the primary reference source will occur automatically when the primary reference source is fault free. The status of synchronization reference source switching can be obtained by entering the STAT SYNC command.</p> <p>When the SWCH REF command is entered, output message SNC408 displays in the format:</p> <pre>REF PRIM/ALT location errors</pre> <p>where:</p> <p>errors may be one of: Excessive number of OOFs (out-of-frame) High slip rate</p> |
| SWCH REF (IMED) | <p>Automatically inhibits the automated reference switching. This prevents the system from switching back to the primary reference.</p> <p><i>Note:</i> To switch references again after executing SWCH REF IMED, either ALLW REFS should be executed, or the IMED option should be used again (the IMED option automatically performs ALLW REFS).</p> |
| SYSL | <p>The SYSL command performs a DMS-10 switch hard restart which includes a complete verification, load, and initialization of the Core.</p> |

CED commands (Continued)

| Input Command | Description |
|---------------|---|
| | <p>The SYSL command is similar to the action caused by simultaneously pressing the Enable and Reload switches on the Alarm and Ringing Module. When the Enable and Reload switches are pressed, the DMS-10 switch restarts from Core 0 in two-bus mode. When the SYSL command is entered, the DMS-10 switch restarts in two-bus mode on the currently-active Core, that is, the Core that was active when the SYSL command was entered. This could be either Core 0 or Core 1.</p> <p><i>Note: It is strongly recommended that SYSLOADs be performed using the SYSL command. The SYSL command checks for errors that may inhibit proper recovery after the SYSLOAD, and ensures that any data subject to loss is properly flushed to disk. These actions cannot be performed automatically when the Enable and Reload switches are used.</i></p> |
| TEST ALL | <p>Performs one complete cycle of Control Equipment Diagnostic. The TEST ALL command is not allowed if the system is in one-bus mode.</p> <p>The following activities are performed:</p> <ul style="list-style-type: none"> • tests all Core and I/O Bus Extenders. This may involve brief switches in Core activity to the currently-inactive Core and back to the originally-active Core, provided that INH SWCH is not active and there are no faults pegged against the currently-inactive Core. • performs the following tests on the currently-inactive CPU: <ul style="list-style-type: none"> -RTC circuitry -Flash memory -main RAM -Ethernet LAN circuitry • tests the inter-CPU (ICPU) ports on the NT3T70 System Bus Controller packs • tests communications with Ethernet Switches if provisioned • switches Core activity, provided that INH SWCH is not active, the MBIT fault indicator is not set, the system is not in one-bus mode, and there are no faults pegged against the currently-inactive Core • if Core activity is successfully switched, performs the following tests on the newly-inactive Core: <ul style="list-style-type: none"> -RTC circuitry -Flash memory -main RAM -Ethernet LAN circuitry <p>At the end of the TEST ALL command processing, the current Core activity should match Core activity that was present at the beginning of the TEST ALL command processing. This may or may not require an additional switch in Core activity.</p> |

CED commands (Continued)

| Input Command | Description |
|-----------------------|---|
| TEST DISP | Causes the active Core display to sequence through all 16 hexadecimal digits, from 000 to FFF. The display is left blank. |
| TEST ENET | Tests the Ethernet circuitry on the inactive NT3T98 System Processor pack. |
| TEST ES 0/1 | Tests communication between the DMS10 and the Ethernet Switch. |
| TEST FLSH | <p>Performs a checksum test of Flash memory on the active and inactive NT3T98 circuit packs and reports the Flash version information. If the checksum test of the inactive Flash memory fails, the MBIT fault indicator will be set, indicating that the inactive NT3T98 pack is faulty.</p> <p>The Flash memory on the NT3T98 pack is divided into three segments:</p> <ul style="list-style-type: none"> • BSPL (Board Support Package Loader) • BSP (Board Support Package) • BUSC (Bus Control) <p>The maintenance terminal output has the following format:</p> <pre> CORE0 ACTV/IDLE BSPL VER <i>version</i> BSP VER <i>version</i> BUSC VER <i>version</i> CORE1 ACTV/IDLE BSPL VER <i>version</i> BSP VER <i>version</i> BUSC VER <i>version</i> </pre> <p>If the checksum test fails for given segment, a question mark (?) displays in place of the version for that segment.</p> |
| TEST ICP | Tests the Inter-Core Port (ICP) on the NT3T70 pack for family codes BD and later. |
| TEST MEM | Destructively tests and restores the inactive Core's DRAM memory. |
| TEST RTC | Tests the inactive Core real time clock functions. |
| TEST SYNC | Tests the inactive Synchronous Clock (NT3T47) pack and, if the test is successful, clears any faults marked against the tested pack. |
| TEST XTDR <i>mask</i> | <p>Tests and enables, if possible, all Core and I/O Bus Extenders that have previously been marked faulty and disabled regardless of Core activity. The execution of this command may involve brief switches in Core activity to the currently idle Core and back to the originally active Core. If the INH SWCH command is currently invoked, enter the ALLW SWCH command to allow a Core activity switch only after determining why the switch was inhibited.</p> <p><i>mask</i> can be used to override some faults and conditions (ALRM, BUS, FLSH, INT, IOI, or PWR). The mask parameters for Core faults will be accepted to allow Core switching if necessary. For information about the mask parameters, refer to the SWCH CORE command.</p> |

CED commands (Continued)

| Input Command | Description |
|---------------|--|
| VERS ES | Returns the current and expected SW and FW versions of both Ethernet Switches. |

CAUTION: Use the mask options with extreme caution only after attempting to clear the previously found fault. If the fault has not been cleared, an Initialization or a SYSLOAD may occur.

Section 8: CKT (Circuit status)

Description

Overlay CKT is interactive only and provides the capability to obtain additional data and status information that cannot be obtained from other overlays.

Input commands

This section lists the commands (with descriptions) that can be used once the CKT overlay is loaded (that is, the maintenance terminal has printed out CKT000). Because of different hardware configurations, not all commands are valid for all sites or for all generics. The system provides error messages when incorrect commands are input.

CKT commands

| Input Command | Description |
|--|---|
| #### | Interrupts any maintenance-terminal output, stops execution of the current command, and places the maintenance terminal in input mode. Response is the prompt character >. |
| **** | Interrupts any maintenance-terminal output, stops execution of the current command, and aborts the overlay program, and places the maintenance terminal in input mode. Response is the prompt character #. |
| ? | Queries the system for valid input. Can be used with any command. |
| BUSY ITG <i>n(nn)</i> or BUSY OTG <i>n(nn)</i> | For all trunk groups other than type SIP packet, make man-made-busy all members of the specified incoming or outgoing trunk group, where <i>n(nn)</i> is the trunk group number (1-2047). For SIP packet trunk groups, change the status of the specified trunk group to MMB (man-made-busy). |
| BUSY ILTG <i>n(nn)</i> or BUSY OLTG <i>n(nn)</i> | Make man-made-busy all members of the specified incoming or outgoing line trunk group, where <i>n(nn)</i> is the line trunk group number (1-2047). |
| CALC RCUL (<i>site</i>) <i>lsg l</i> | Calculate a Remote Carrier Urban (RCU) shelf, card, and unit location, where <i>site</i> is the RCU site mnemonic, <i>lsg</i> is the RCU line subgroup, and <i>l</i> is the RCU line. The output format is: RCUL (<i>site</i>) <i>s c u</i> where <i>s</i> is the RCU shelf, <i>c</i> is the Line Card Carrier (LCC) position, and <i>u</i> is the unit on that LCC. |

CKT commands (Continued)

| Input Command | Description |
|---|---|
| CALC ULIN (<i>site</i>) <i>s c u</i> | Calculate a Remote Carrier Urban (RCU) line subgroup and line location, where <i>site</i> is the RCU site mnemonic, <i>s</i> is the RCU shelf, <i>c</i> is the Line Card Carrier (LCC) position, and <i>u</i> is the unit on that LCC. The output format is: ULIN (<i>site</i>) <i>lsg l</i> where <i>lsg</i> is the RCU line subgroup and <i>l</i> is the RCU line. |
| DSBL ANIM TG <i>n(nn)</i> | Disable ANI-fail message for incoming trunk group <i>n(nn)</i> . |
| DSBL ANIM LTG <i>n(nn)</i> | Disable ANI-fail message for incoming line trunk group <i>n(nn)</i> . |
| DSBL FLM | Prevent the DMS-10 switch from outputting the singing margin line failure message (LIN022). |
| DUMP PE GWE <i>gw l l</i> or DUMP PE <i>site</i> HUBE <i>b s lsg l</i> or DUMP PE <i>site</i> IDE <i>n l</i> or DUMP PE (<i>site</i>) LCE <i>b s lsg l</i> or DUMP PE (<i>site</i>) PE <i>b s p u</i> or DUMP PE <i>site</i> RSC <i>b s lsg l</i> or DUMP PE <i>site</i> RSC <i>b s p l ch</i> or DUMP PE <i>site</i> RSE <i>b s lsg l</i> or DUMP PE <i>site</i> SLE <i>b cb cu</i> or DUMP PE <i>site</i> UCE <i>b lsg l</i> or DUMP PE <i>site</i> VLIN <i>n</i> or | Dump call-register and device-register information for a given device if it is involved in a call. If device is a line, and the line is idle, the output message is IDLE. <i>Note: Always use the unit or line number.</i> |

CKT commands (Continued)

| Input Command | Description | | | | | | | | | | | | | | | | | | |
|--|--|------------|----------------------|-------------------------|-----------------|-------------------------|----------------------------------|--------|-------------------------------|-----|--------------|--------------|--|-------------------|---|---|---|--------------|------------|
| DUMP PE (<i>site</i>) LCE/RSE/RSC <i>b s lsg l</i> TEI # or DUMP PE (<i>site</i>) LCE/RSE/RSC <i>b s lsg l</i> ALL | Dump call-register and device-register information for active devices on an ISDN line. Call- and device-register information can be displayed for an active device defined by a unique terminal endpoint identifier (TEI), or for all active devices on the line. | | | | | | | | | | | | | | | | | | |
| DUMP xxxxxxxx | Dump call register xxxxxxxx information. | | | | | | | | | | | | | | | | | | |
| ENBL ANIM TG <i>n(nn)</i> | Enable ANI-fail message for incoming trunk group <i>n(nn)</i> . | | | | | | | | | | | | | | | | | | |
| ENBL ANIM LTG <i>n(nn)</i> | Enable ANI-fail message for incoming line trunk group <i>n(nn)</i> . | | | | | | | | | | | | | | | | | | |
| ISDN AUD LCE/RSE/RSC/IDE <i>b s lsg l</i> | Causes a TEI audit to be sent to the selected ISDN line. | | | | | | | | | | | | | | | | | | |
| ISDN DROP TEI # LCE/RSE/RSC/IDE <i>b s lsg l</i> | Causes the selected TEI to be deleted and a new TEI to be established. The TEI selected must be a dynamic TEI. | | | | | | | | | | | | | | | | | | |
| ISDN QUE LCE/RSE/RSC/IDE <i>b s lsg l</i> | Causes data for each terminal on the selected ISDN line to be displayed. The following information is displayed: TEI, type of TEI (dynamic or static), TSP index, data link established, number of calls on the terminal, SPID, and time/date of last CPE download. Output from SL1_TEST_TOOL: <table border="1"> <thead> <tr> <th><u>TEI</u></th> <th><u>TSP</u></th> <th><u>DL</u></th> <th><u>CALLS</u></th> <th><u>SPID (TSPID+TID)</u></th> <th><u>CPE DNLD</u></th> </tr> </thead> <tbody> <tr> <td>120D 1</td> <td></td> <td>Y</td> <td>0</td> <td>912921346501</td> <td>12:00 10/4</td> </tr> <tr> <td>120D 2</td> <td></td> <td>Y</td> <td>0</td> <td>912921346502</td> <td>11:00 10/4</td> </tr> </tbody> </table> | <u>TEI</u> | <u>TSP</u> | <u>DL</u> | <u>CALLS</u> | <u>SPID (TSPID+TID)</u> | <u>CPE DNLD</u> | 120D 1 | | Y | 0 | 912921346501 | 12:00 10/4 | 120D 2 | | Y | 0 | 912921346502 | 11:00 10/4 |
| <u>TEI</u> | <u>TSP</u> | <u>DL</u> | <u>CALLS</u> | <u>SPID (TSPID+TID)</u> | <u>CPE DNLD</u> | | | | | | | | | | | | | | |
| 120D 1 | | Y | 0 | 912921346501 | 12:00 10/4 | | | | | | | | | | | | | | |
| 120D 2 | | Y | 0 | 912921346502 | 11:00 10/4 | | | | | | | | | | | | | | |
| ISDN REST TEI # LCE/RSE/RSC/IDE <i>b s lsg l</i> | Causes the selected TEI to re-establish its link with the IDC/RDT. The TEI must be a static TEI. | | | | | | | | | | | | | | | | | | |
| ENBL FLM | Allow the DMS-10 switch to output the singing margin line failure message (LIN022). | | | | | | | | | | | | | | | | | | |
| LIST <i>equip (\) state</i> | Print physical location, hardware type, and status of parameters specified, where: <i>equip</i> can be one of: <table border="1"> <tbody> <tr> <td>ALL</td> <td>All lines and trunks</td> </tr> <tr> <td>ACT</td> <td>ac Tester</td> </tr> <tr> <td>AUXT</td> <td>Auxiliary Ringing and Tone packs</td> </tr> <tr> <td>CPSC</td> <td>CAMA Position Signaling packs</td> </tr> <tr> <td>GWL</td> <td>Gateway Line</td> </tr> <tr> <td>IBRT</td> <td>Integrated Bit Error Rate Tester packs</td> </tr> <tr> <td>ILTG <i>n(nn)</i></td> <td>Incoming line trunk group number <i>n(nn)</i></td> </tr> </tbody> </table> | ALL | All lines and trunks | ACT | ac Tester | AUXT | Auxiliary Ringing and Tone packs | CPSC | CAMA Position Signaling packs | GWL | Gateway Line | IBRT | Integrated Bit Error Rate Tester packs | ILTG <i>n(nn)</i> | Incoming line trunk group number <i>n(nn)</i> | | | | |
| ALL | All lines and trunks | | | | | | | | | | | | | | | | | | |
| ACT | ac Tester | | | | | | | | | | | | | | | | | | |
| AUXT | Auxiliary Ringing and Tone packs | | | | | | | | | | | | | | | | | | |
| CPSC | CAMA Position Signaling packs | | | | | | | | | | | | | | | | | | |
| GWL | Gateway Line | | | | | | | | | | | | | | | | | | |
| IBRT | Integrated Bit Error Rate Tester packs | | | | | | | | | | | | | | | | | | |
| ILTG <i>n(nn)</i> | Incoming line trunk group number <i>n(nn)</i> | | | | | | | | | | | | | | | | | | |

CKT commands (Continued)

| Input Command | Description |
|-------------------|--|
| ITG <i>n(nn)</i> | Incoming trunk group number <i>n(nn)</i> |
| ITTK | Incoming Test Trunk packs |
| KEY | Stop hunt (SHU) and random-make-busy (RMB) key circuits. If SHU, the hunt group number is given. |
| LINE | Lines |
| LTRK | Line trunk packs |
| LTT | Line and Trunk Test packs |
| MTCE | Maintenance packs (PMA, NT2T14; PC1, NT2T12; PSC1, NT2T41) |
| NOLR | Noller Test Trunk packs |
| OLTG <i>n(nn)</i> | Outgoing line trunk group number <i>n(nn)</i> |
| OTG <i>n(nn)</i> | Outgoing trunk group number <i>n(nn)</i> |
| PEPR | Peripheral Processor (PEPR) packs |
| PMS | Peripheral Maintenance System |
| PWR | +48 V Power Converter pack |
| RCVR | DGT and MF Receiver packs |
| TRK | Trunks |
| VLIN | Virtual lines |

state can be one of:

| | |
|------|---|
| ALL | All circuits |
| BUSY | Call processing busy circuits |
| FALT | All faulty circuits |
| IDLE | All idle circuits |
| LKOT | Circuits in lockout |
| MMB | Maintenance busy circuits |
| RMMB | Remote man-made busy circuits |
| UNOC | Unoccupied CAMA Position Signaling circuits |
| COTF | Secondary continuity test failed |

Note 1: When inputting this command, use of the backslash symbol (\) before state means “not;” for example: “\ IDLE” means “not idle.”

Note 2: Valid numbers for ILTG, ITG, OLTG, and OTG are 1-127.

Note 3: COTF is only applicable to ISUP trunks.

CKT commands (Continued)

| Input Command | Description |
|--|--|
| PE GWE <i>gw l l</i> or PE (<i>site</i>) HUBE <i>b s lsg l</i> or PE (<i>site</i>) IDE <i>b n</i> or PE (<i>site</i>) LCE <i>b s lsg l</i> or PE (<i>site</i>) PE <i>b s p u</i> or PE <i>site</i> RSC <i>b s lsg l</i> or PE <i>site</i> RSC <i>b s p l ch</i> or PE <i>site</i> RSE <i>b s lsg l</i> or PE <i>site</i> SLE <i>b cb cu</i> or PE <i>site</i> UCE <i>b lsg l</i> or PE (<i>site</i>) VLIN <i>n</i> | List terminal numbers and directory numbers of specified lines. |
| QUE ALL LCE/RSE/ RSC <i>b s lsg l</i> | Query the status of ISDN layers 1, 2 and 3, for a location, in a single command. |
| QUE ANIM TG | Query the status of ANI message for all incoming trunk groups. |
| QUE ANIM TG <i>n(nn)</i> | Query the status of ANI message for incoming trunk group <i>n(nn)</i> . |
| QUE ANIM LTG | Query the status of ANI message for all incoming line trunk groups. |
| QUE ANIM LTG <i>n(nn)</i> | Query the status of ANI message for incoming line trunk group <i>n(nn)</i> . |
| QUE FLM | Query the status of the DMS-10 switch control of the singing margin line failure message (LIN022). System response is ENBL (enabled) or DSBL (disabled). |
| QUE PM01 LCE/RSE/ RSC <i>b s lsg l</i> or QUE PM01 <i>site</i> IDE <i>n(n) l</i> | Query the status of ISDN layer 1 (physical) transmission performance for a specified line location. Produces a count of block errors (BE), errored seconds (ES) and severely errored seconds (SES) based on the following: |
| | TXHR transmitted hourly |
| | RXHR received hourly |
| | TXDY transmitted daily |
| | RXDY received daily |

Note: Only counts of errored seconds (ES) and severely errored seconds (SES) are produced for IDEs.

CKT commands (Continued)

| Input Command | Description |
|--|---|
| QUE PM02 LCE/RSE/ RSC <i>b s lsg l</i> or QUE PM02 <i>site</i> IDE <i>n(n) l</i> | <p>Query the status of ISDN layer 2 (data link) transmission performance for a specified line location. For a specified line location, produces a list of High Protocol Abnormality and service disruption error counts for the following parameters:</p> <p><i>transmission performance</i> (not applicable to IDTs)</p> <ul style="list-style-type: none"> L200 frames received in error L201 total frames received L202 frames re-transmitted L203 total frames transmitted <p><i>service disruptions</i> (not applicable to IDTs)</p> <ul style="list-style-type: none"> L204 link reestablishment L205 received frames buffer overflow <p><i>protocol abnormalities</i> (L207 through L215 and L218 through L220 are also applicable to IDTs)</p> <ul style="list-style-type: none"> L206 Layer 2 high protocol abnormality counter (not applicable to IDTs) L207 link not successfully established by DMS-10. For IDT, disconnect mode received as response to Set Asynchronous Balanced Mode (SABME). L208 link not successfully established by user terminal equipment. For IDTs, disconnect mode sent in response to the SABME. L209 frames received with undefined control field L210 frames received with non-valid information field or incorrect length for a supervisory or unnumbered frame L211 frames received with non-valid sequence number L212 frames received with information field maximum length exceeded L213 valid frames received at wrong times. For IDTs, unexpected frames are received. L214 FRMR frames received L215 proper response (unnumbered acknowledgement or disconnect mode) not received to establish or reset the link after N200 SABME frames were sent L216 redundant terminal endpoint identifier (TEI) numbers on access line (D-channel only). (Not applicable for IDTs.) |

CKT commands (Continued)

| Input Command | Description |
|--|--|
| | L217 maximum allowable D-channel subscription limit for D1 (static TEI values 0-63) has been reached (Not applicable for IDTs.) |
| | L218 maximum allowable D-channel subscription limit for D2 (dynamic TEI values 64-126) has been reached. For IDTs, number of minutes under service disruption. |
| | L219 maximum allowable subscription limit D-channel packet links P1 (TEI 0-63) has been reached. For IDTs, number of times service disrupted. |
| | L220 maximum allowable subscription limit D-channel packet links P2 (TEI 64-126) has been reached. For IDTs, output as 0 or 1, where 0 = service not disrupted and 1 = service disrupted. |
| QUE PM03 LCE/RSE/ RSC <i>b s lsg l</i> or QUE PM03 <i>site</i> IDE <i>n(n) l</i> | Query the status of ISDN layer 3 (network) transmission performance. PM03 monitors non-call service disruptions on a TEI basis, therefore each terminal on a line has a separate count. An alert is generated when Layer 3 thresholds are exceeded. Further alerts do not occur until the counters are reset (every hour) and the threshold is again exceeded. The output lists the location and the Service Profile ID (SPID) and error count for each terminal at that line location, in the following format. The system response is in the following format: PM03 <i>site</i> LCE <i>b s lsg l</i> SPID <i>error count</i> where: SPID is the Service Profile ID for each terminal on the line. error count is the number of terminal service disruption error |
| QUE PRI2 <i>site</i> CE <i>b s p lk</i> | Query the ISDN PRI layer 2 performance monitoring counter values. A DSI module supports two PRI links, each with its own set of performance monitoring counters. Counters are automatically reset on a daily basis or reset when the DSI module is returned to service. Counters L201 through L207 have threshold limits that, when reached, cause an alert notification to be generated and the contributing counters to be reset. The following counts are generated: |
| | L201 number of frames received in error (non-octet aligned frames, abort sequence, CRC error, overrun, carrier detect loss) |
| | L202 number of information frames received |
| | L203 number of information frames re-transmitted |
| | L204 number of information frames transmitted |
| | L205 number of data-link re-establishments |
| | L206 number of buffer overflows received |

8-8 CKT (Circuit status)

CKT commands (Continued)

| Input Command | Description |
|--|---|
| | L207 layer 2 protocol abnormalities total |
| | L208 number of disconnect mode received in response to Set Asynchronous Balanced Mode (SABME) (link was not established) |
| | L209 number of disconnect mode transmitted in response to Set Asynchronous Balanced Mode (SABME) with invalid DLCI (requested link was not established). |
| | L210 number of frames received with invalid control field |
| | L211 number of frames received with invalid information field |
| | L212 number of frames received with invalid sequence number |
| | L213 number of frames received with information field exceeding maximum length |
| | L214 number of unexpected frames received |
| | L215 number of FRMR frames received |
| | L216 proper response not received to transmitted SABME |
| | L217 redundant terminal endpoint identifier (TEI) numbers found |
| | L218 D1 subscription limit exceeded |
| RTS ITG <i>n(nn)</i> or RTS OTG <i>n(nn)</i> | For all trunk groups other than type SIP packet, return to service all members of the specified incoming or outgoing trunk group, where <i>n(nn)</i> is the trunk group number (1-2047). For SIP packet trunk groups, change the status of the specified trunk group to INS (in-service). |
| RTS ILTG <i>n(nn)</i> or RTS OLTG <i>n(nn)</i> | Return to service all members of the specified incoming or outgoing line trunk group, where <i>n(nn)</i> is the line trunk group number (1-2047). |
| SCAN (<i>site</i>) PE <i>b s p</i> (PE-based line or analog trunk card) or SCAN (<i>site</i>) CE <i>b s p l u</i> (DSI digital trunk) or SCAN (<i>site</i>) PE <i>b s p u</i> (DCM digital trunk) | Issues a directed scan (response test) to the specified IS-based (Interface Signaling Chip) device and waits for a response. |

CKT commands (Continued)

| Input Command | Description |
|---|--|
| STAT GET <i>site</i> SLE <i>b cb cu</i> or | |
| STAT GET <i>site</i> UCE <i>b lsg l</i> | |
| STAT SET GWE <i>gw l ckt status</i> or | Force specified circuit to indicated status. <i>Note:</i> If a trunk is idle, the status is set immediately; if a trunk is call-processing busy, the status is set <u>after</u> the call has completed. |
| STAT SET <i>site</i> CE <i>b s p l ch ckt status</i> or | <i>status</i> can be one of: |
| | DSBL Disabled |
| | ENBL Enabled |
| STAT SET <i>site</i> HUBE <i>b s lsg l ckt status</i> or | FALT Disabled due to fault |
| | MMB Man-made-busy |
| | OK Idle or non-MMB. |
| STAT SET <i>site</i> IDE <i>n(n) l ckt status</i> or | <i>ckt</i> can be one of: |
| | ACT ac Tester |
| | AUXT Auxiliary Ringing and Tone pack |
| STAT SET (<i>site</i>) LCE <i>b s lsg l ckt status</i> or | BDCH ISDN Bd-channel (ENBL or DSBL only) |
| | CPSC CAMA Position Signaling pack |
| STAT SET (<i>site</i>) LCE <i>b s lsg ckt status</i> or | IBRT Integrated Bit Error Rate Tester |
| | ITTK Incoming Test Trunk pack |
| STAT SET (<i>site</i>) PE <i>b s p u ckt status</i> or | KEY key circuits |
| | LINE Line |
| | LTRK Line Trunk |
| STAT SET (<i>site</i>) RLDE <i>n lsg l ckt status</i> or | LTT Line and Trunk Test pack |
| | MTCE Maintenance pack (PMA, NT2T14; PC1, NT2T12; PSC1, NT2T41) |
| | NOLR Noller Test Trunk pack |
| STAT SET <i>site</i> RSC <i>b s lsg ckt status</i> or | PEPR Peripheral Processor pack |
| | PMS Peripheral Maintenance System |
| | RCVR DGT or MF Receiver pack |
| | TRK Trunk |
| STAT SET <i>site</i> RSC <i>b s lsg l ckt status</i> or | |
| STAT SET <i>site</i> RSC <i>b s p l ch ckt status</i> or | |

CKT commands (Continued)

| Input Command | Description |
|--|---|
| STAT SET <i>site</i> RSE <i>b s lsg ckt status</i> or STAT SET <i>site</i> RSE <i>b s lsg l ckt status</i> or STAT SET <i>site</i> SLE <i>b cb cu ckt status</i> or STAT SET <i>site</i> UCE <i>b lsg l ckt status</i> | |
| ZERO PM01 <i>site</i> LCE/RSE/RSC <i>b s lsg l</i> or ZERO PM01 <i>site</i> IDE <i>n(n)</i> | Resets IDT PM error counters for first Layer if the PM01 option is used. |
| ZERO PM02 <i>site</i> LCE/RSE/RSC <i>b s lsg l</i> or ZERO PM02 <i>site</i> IDE <i>n(n)</i> | Resets IDT PM error counters for second Layer if the PM02 option is used. |
| ZERO PM03 <i>site</i> LCE/RSE/RSC <i>b s lsg l</i> or ZERO PM03 <i>site</i> IDE <i>n(n)</i> | Resets IDT PM error counters for third Layer if the PM03 option is used. |
| ZERO PRI2 <i>site</i> CE <i>b s p lk</i> | Resets the ISDN PRI layer 2 performance monitoring counters to zero for the specified DSLK. |

Section 9: DED (Digital equipment diagnostic)

Description

Overlay DED is free-running when automatically loaded (once every 24 hr, if so scheduled) and interactive when requested by maintenance personnel.

Overlay DED tests the following equipment:

- Digital Carrier Modules (DCM)
- Digital Signal Interfaces (DSI)
- Digital trunks
- Enhanced Subscriber Carrier Module Access (ESMA) shelves
- ISDN Drawer Controller (IDC)
- Line Concentrating Equipment (LCE) for the DMS-10 switch and remote equipment
- Outside Plant Access Cabinet (OPAC)
- Outside Plant Module (OPM)
- Outside Plant Subscriber Module (OPSM), which is addressed through its RSLM shelf
- Packet Gateway Interface Controller (PGIC)
- Peripheral shelf Converter (PSC2) packs
- Peripheral shelves (PSHF)
- Remote Carrier Urban (RCU)
- Remote Equipment Module (REM)
- Remote Line Concentrating Module (RLCM)
- Remote Maintenance Module (RMM)
- Remote Subscriber Line Equipment (RSLE)

- Remote Subscriber Line Module (RSLM)
- Remote Switching Center (RSC-S)
- SCM-10S
- SCM-10U
- SLC-96 (SLC)
- Subscriber Remote Interface (SRI) pack and link

As part of the Large Cluster Controller (LCC) feature, Overlay DED performs additional tests on the DCMs.

In the free-running mode, Overlay DED will test all configured devices except an in-service Remote Carrier Urban (RCU). For information on the tests performed and the system response to those tests, refer to the TEST commands for specific devices in this section.

Input commands

This section lists the commands, with descriptions, that can be used once the program has been loaded. Because of different hardware configurations, not all commands are valid for all sites or for all generics. The system provides error messages when incorrect commands are input.

DED commands

| Input Command | Description |
|--|--|
| #### | Interrupts any maintenance-terminal output, stops execution of the current command, and places the maintenance terminal in input mode. Response is the prompt character >. |
| **** | Interrupts any maintenance-terminal output, aborts the overlay program, and places the maintenance terminal in the input mode. Response is the prompt character #. |
| ? | Lists all possible inputs for a command or for a command parameter. For example, ? <CR> reports all possible commands in the overlay, <command> ? reports all possible first level parameters for the given command in the overlay, and <command> <parameter1> ?, reports all possible second-level parameters for the given command. <i>Note:</i> All possible inputs for a given command or for a command parameter are listed even though all of the inputs displayed may not be valid for the given command/parameter combination. Valid command/parameter combinations can be determined by referring to the input command formats and descriptions in this section. |
| ABRT RCU <i>site</i> UCE <i>b s</i> | Causes the Automatic System Test (AST) to be aborted. <i>Note:</i> AST can be aborted only after the RCU has finished its CE testing. |

DED commands (Continued)

| Input Command | Description |
|---|--|
| APPL ESMC <i>n(n) site</i> MVIE <i>b s p</i> | Applies ESMA patch <i>n(n)</i> to the specified ESMC. In order for the command to be executed, the specified ESMC must be MMB. |
| APPL RSCC <i>n(n) site</i> RSC <i>b s p</i> | Applies Remote Switching Center (RSC-S) patch <i>n(n)</i> to the specified RSCC. In order for the command to be executed, the specified RSCC must be MMB. |
| APPL SCSC <i>n(n) site</i> SCE <i>b s</i> | Applies SCM-10S Control Complex (SCSC) patch <i>n(n)</i> to the specified SCSC. In order for the command to be executed, the specified SCSC must be MMB. |
| APPL SCUC <i>n(n) site</i> SCE <i>b s</i> | Applies SCM-10U Control Complex (SCUC) patch <i>n(n)</i> to the specified SCUC. In order for the command to be executed, the specified SCUC must be MMB. |
| BLCK D1LK SCE <i>b s p u</i> (IMED) | Applies only to a D1LK serving a SLC-96. Prevents (blocks) the protection DS-1 link from sparing a primary DS-1 link. If the protection link is already sparing the designated primary link, the protection link is placed back into standby and the primary link being spared cannot be protected unless the block is removed by the UBLK command. <i>Note:</i> The IMED option must be used if the protection link is already sparing the designated primary link. Example: BLCK D1LK SCE 1 1 3 2 |
| BLCK EOC0/EOC1 <i>site IDE b</i> | Blocks the standby embedded operations (EOC) channel of the specified IDT from being switched and becoming the active EOC channel. Example: BLCK EOC0 SITE IDE 1 |
| BLCK TMC0/TMC1 <i>site IDE b</i> | Blocks the standby time slot management (TMC) channel of the specified IDT from being switched and becoming the active TMC channel. Example: BLCK TMC0 SITE IDE 1 |
| BUSY D1LK SCE <i>b s p u</i> (IMED) | Places the specified DS-1 link in the man-made-busy (MMB) state. Example: BUSY D1LK SCE 1 3 4 1 |
| BUSY D1PK SCE <i>b s p</i> (IMED) | Places the specified DS-1 Interface pack in the man-made-busy (MMB) state. Example: BUSY D1PK SCE 1 3 4 |
| BUSY D30L <i>site</i> RSC <i>b s p u</i> (IMED) | Places the specified RSC-S P-side DS-30A link on an NTMX74 pack in the man-made-busy (MMB) state. Example: BUSY D30L SITE RSC 1 1 13 1 |
| BUSY DCM (<i>site</i>) PE <i>b s p</i> (IMED) | Places the specified Digital Carrier Module in the man-made-busy (MMB) state. The “ <i>p</i> ” in PE <i>b s p</i> is the leftmost pack of the DCM. <i>Note 1:</i> The IMED option must be used if the DCM being busied is attached to a remote DLC in a Large Cluster Controller (LCC). <i>Note 2:</i> When a DCM that is attached to a DLC in an LCC is busied, the data link between the DCM and DLC should become system-made-busy. However, to ensure that the link is busied, operating company personnel should manually busy the link through Overlay IOD (see DSBL DLNK command). Example: BUSY DCM PE 1 4 2 |

DED commands (Continued)

| Input Command | Description |
|--|---|
| BUSY DS1L <i>site</i> RSC/ MVIE/HUBE <i>b s p u</i> (IMED) | Places the specified RSC-S or ESMA P-side DS-1 link on an NTMX81 pack, or the specified Star Hub P-side DS-1 link on an NTTR77 pack, in the man-made-busy (MMB) state. Example: BUSY DS1L SITE RSC 1 1 12 4 BUSY DS1L MVIE 1 1 12 4 |
| BUSY DSI CE <i>b s p</i> (IMED) | Places the specified DSI module in the man-made-busy (MMB) state. All links or trunks associated with the module are made indirectly disabled. Spans are brought into local loop-back mode and all calls on the spans are dropped. In order for the command to be executed, all CCS7 signaling links carried by the module must be in a man-made-busy state; this prevents the busy command from disabling the CCS7 network. In addition, all HSO/SSO links carried by the module must be in man-made-busy state. The IMED option can cause loss of calls or can prevent new calls being placed outside the office. <i>Note:</i> <i>The LED on the NT4T24/NT4T50 pack faceplate lights when the BUSY DSI command is issued.</i> Example: BUSY DSI CE 1 1 4 |
| BUSY DSLK CE <i>b s p lk</i> (IMED) | Places the specified DSI link in the man-made-busy (MMB) state. This command indirectly disables all of the digital trunks associated with the link. In order for the command to be executed, all CCS7 signaling links carried by the associated DSI module must be in a man-made-busy state; this prevents the busy command from disabling the CCS7 network. In addition, all HSO/SSO links carried by the module must be in man-made-busy state. <i>Note:</i> <i>The LED on the NT4T24/NT4T50 pack faceplate lights when the last assigned DSI link on the pack has been made busy.</i> Example: BUSY DSLK CE 1 1 4 1 |
| BUSY DTRK (<i>site</i>) PE <i>b s p u</i> (DCM digital trunk) or BUSY DTRK (<i>site</i>) CE <i>b s p l u</i> (DSI digital trunk) or BUSY DTRK (<i>site</i>) RSC <i>b s p l u</i> (RSC-S digital trunk) | Places the specified digital trunk in the man-made-busy (MMB) state. Example: BUSY DTRK PE 2 5 2 4 BUSY DTRK CE 2 1 4 0 1 BUSY DTRK RSC 1 1 16 2 1 <i>Note:</i> <i>If a trunk is idle, it is immediately made busy; if a trunk is call-processing busy, it is made busy <u>after</u> the call has completed.</i> |
| BUSY EDCH MVIE <i>b s p</i> (IMED) | Places the specified Enhanced D-Channel Handler (EDCH) pack (NTBX02BA) in the MMB state. If the EDCH is assigned an ISDN System Group and there is no EDCH pack for sparing, the IMED option must be used to busy the EDCH. The IMED option places the EDCH in the MMB state and the associated ISG and ISDN IDTLs in the IND state. Example: BUSY EDCH MVIE 1 1 16 |

DED commands (Continued)

| Input Command | Description |
|--|---|
| BUSY EOC0/EOC1 <i>site IDE b</i> (IMED) | Places the specified embedded operations channel (EOC) channel in the man-made-busy (MMB) state. Example: BUSY EOC0 SITE IDE 1 |
| BUSY ESAC <i>site</i> LCE <i>b s</i> (IMED) or BUSY ESAC <i>site</i> RSE <i>b s p</i> (IMED) | Places the specified ESA processor in the MMB state. Example: BUSY ESAC SITE RSE 1 3 14 |
| BUSY ESMC MVIE <i>b s p</i> (IMED) | Places the specified ESMA unit in the MMB state. Example: BUSY ESMC MVIE 1 1 3 |
| BUSY GW GWE <i>gw#</i> (IMED) | Places the specified Gateway (GW) in the MMB state. The IMED option is required if the Gateway contains a line which is call processing busy. If the IMED option is used, any calls on the Gateway will be dropped. Example: BUSY GW GWE 1 |
| BUSY HUBC <i>site</i> HUBE <i>b s p</i> (IMED) | Places the specified Star Hub Remote Controller pack (NTTR77) in the MMB state. Example: BUSY HUBC SHUB HUBE 1 3 17 |
| BUSY IDC (<i>site</i>) LCE/ RSC/RSE <i>b s lsg</i> | Places the specified IDC pack in the man-made-busy (MMB) state. Example: BUSY IDC SITE LCE 1 1 8 |
| BUSY IDT <i>site IDE b</i> (IMED) | Places the specified Integrated Digital Terminal in the man-made-busy (MMB) state. Example: BUSY IDT SITE IDE 1 |
| BUSY LCMC (<i>site</i>) LCE/RSC <i>b s</i> (IMED) | Places the specified LCM control unit (packs NT6X51 and NT6X52) in the man-made-busy (MMB) state. The <i>s</i> may be either shelf of the LCM. The IMED option is necessary when trying to busy an LCMC whose mate LCMC is busy. <i>Note: The OPM or OPAC bay numbers may be any number from 1 through 32; however, only two bays may be assigned per site identification mnemonic and the numbers must be in consecutive order. For example, 3 and 4 are valid bay numbers, but 3 and 5 are not valid. The left bay contains LCA 1, LCA 0, Host Interface Equipment, and an Environmental Control Unit. The right bay contains the Battery Control Unit, Rectifiers 1 and 0, Frame Supervisory Panel, Remote Maintenance Module, and an Environmental Control Unit.</i> Examples: BUSY LCMC LCE 1 2 BUSY LRNG CAPK LCE 1 1 |
| BUSY LRNG (<i>site</i>) HUBE <i>b s p</i> (IMED) | Places the specified 6X60 Ringing Generator pack (NTTR60) in the man-made-busy (MMB) state. The Star Hub Remote Controller pack (NTTR77) pack associated with the NTTR60 will be placed in the INDIR DSBL state. |

DED commands (Continued)

| Input Command | Description |
|---|---|
| BUSY LRNG (<i>site</i>) LCE/RSE <i>b u</i> (IMED) | <p>Places the specified Ringing Generator pack in the man-made-busy (MMB) state. This command is valid for an RSLM Type A shelf only with the IMED option and it will make both RSLCs indirectly disabled.</p> <p>Note 1: The BUSY LRNG command causes the associated LCMC to be indirectly disabled. LRNG <i>b 1</i> is associated with the odd-numbered LCMC (LCMC LCE <i>b 1</i> and LCMC LCE <i>b 3</i>); LRNG <i>b 2</i> is associated with the even-numbered LCMC (LCMC LCE <i>b 2</i> and LCMC LCE <i>b 4</i>).</p> <p>Note 2: This command causes the associated RSLC to be indirectly disabled.</p> <p>Note 3: This command is not applicable for a Virtual Remote Line Concentrating Module (VLCM).</p> <p>Note 4: The OPM or OPAC bay numbers may be any number from 1 through 32; however, only two bays may be assigned per site identification mnemonic and the numbers must be in consecutive order. For example, 3 and 4 are valid bay numbers, but 3 and 5 are not valid. The left bay contains LCA 1, LCA 0, Host Interface Equipment, and an Environmental Control Unit. The right bay contains the Battery Control Unit, Rectifiers 1 and 0, Frame Supervisory Panel, Remote Maintenance Module, and an Environmental Control Unit.</p> |
| BUSY LSG (<i>site</i>) LCE/ RSE/RSC <i>b s lsg</i> (IMED) | <p>Places the specified line subgroup in the man-made-busy (MMB) state.</p> <p>Note 1: This command is not applicable for a Virtual Remote Line Concentrating Module (VLCM).</p> <p>Note 2: The OPM or OPAC bay numbers may be any number from 1 through 32; however, only two bays may be assigned per site identification mnemonic and the numbers must be in consecutive order. For example, 3 and 4 are valid bay numbers, but 3 and 5 are not valid. The left bay contains LCA 1, LCA 0, Host Interface Equipment, and an Environmental Control Unit. The right bay contains the Battery Control Unit, Rectifiers 1 and 0, Frame Supervisory Panel, Remote Maintenance Module, and an Environmental Control Unit.</p> |

Example: BUSY LRNG CAPK LCE 1 2

Example: BUSY LSG LCE 1 1 3

DED commands (Continued)

| Input Command | Description |
|---|--|
| BUSY LSGD (<i>site</i>) LCE/RSE/RSC <i>b s lsg</i> (IMED) | Places the specified line drawer in the man-made-busy (MMB) state. The “ <i>lsg</i> ” may be either subgroup of the drawer. Note 1: This command is not applicable for a Virtual Remote Line Concentrating Module (VLCM). Note 2: The OPM or OPAC bay numbers may be any number from 1 through 32; however, only two bays may be assigned per site identification mnemonic and the numbers must be in consecutive order. For example, 3 and 4 are valid bay numbers, but 3 and 5 are not valid. The left bay contains LCA 1, LCA 0, Host Interface Equipment, and an Environmental Control Unit. The right bay contains the Battery Control Unit, Rectifiers 1 and 0, Frame Supervisory Panel, Remote Maintenance Module, and an Environmental Control Unit. Example: BUSY LSGD CAPL LCE 1 1 7 |
| BUSY LTRK (<i>site</i>) PE/CE <i>b s p ch</i> | Places the specified line trunk in the man-made-busy (MMB) state. Example: BUSY LTRK PE 1 3 4 4 |
| BUSY PGIC ME/PE/ CE/IE <i>b p u</i> (IMED) | Places the specified Packet Gateway Interface Controller (PGIC) in a Man-Made-Busy (MMB) state. The IMED option is required if this is the last inservice PGIC. Example: BUSY PGIC ME 1 1 1 |
| BUSY PSC2 (<i>site</i>) PE <i>b s</i> (IMED) | Places the specified Peripheral Shelf Converter pack (NT2T42) in the man-made-busy (MMB) state. Example: BUSY PSC2 CAPB PE 1 1 |
| BUSY PSHF (<i>site</i>) PE <i>b s</i> | Places the specified peripheral shelf in the man-made-busy (MMB) state. Example: BUSY PSHF MVL PE 1 6 |
| BUSY RCU <i>site</i> UCE <i>b s</i> (IMED) | Places the specified RCU in the man-made-busy (MMB) state. Example: BUSY RCU SITE UCE 1 4 |
| BUSY REM <i>site</i> PE <i>b s p</i> (IMED) | Places the specified Remote Equipment Module in the man-made-busy (MMB) state. The “ <i>p</i> ” in PE <i>b s p</i> is the leftmost pack of the RCM (that is, position 2, 6, 11, or 15) or position 3, 7, 12, or 16 for the OCM. Example: BUSY REM NORW PE 1 1 15 IMED |
| BUSY RLD | Not operational. |

DED commands (Continued)

| Input Command | Description |
|--|---|
| BUSY RMM <i>site</i> LCE/ RSC <i>b s</i> (IMED) | <p>Places the specified Remote Maintenance Module in the man-made-busy (MMB) state. The “s” in LCE <i>b s</i> is always 4 for an RLCM and 1 for an OPM or OPAC.</p> <p><i>Note:</i> The OPM or OPAC bay numbers may be any number from 1 through 32; however, only two bays may be assigned per site identification mnemonic and the numbers must be in consecutive order. For example, 3 and 4 are valid bay numbers, but 3 and 5 are not valid. The left bay contains LCA 1, LCA 0, Host Interface Equipment, and an Environmental Control Unit. The right bay contains the Battery Control Unit, Rectifiers 1 and 0, Frame Supervisory Panel, Remote Maintenance Module, and an Environmental Control Unit.</p> <p>Example: BUSY RMM NORW LCE 1 1</p> |
| BUSY RSCC <i>site</i> RSC <i>b s p</i> (IMED) | <p>Places the specified Remote Switching Center (RSC-S) unit in the man-made-busy (MMB) state.</p> <p>Example: BUSY RSCC SITE RSC 1 1 3</p> |
| BUSY RSLC <i>site</i> RSE <i>b s p</i> (IMED) | <p>Places the RSLM/RSLE processor in the MMB state. The IMED option must be used with the RSLC command if the mate RSLC is in the BUSY state. (<i>p</i> may be 5 or 7 for RSLM shelves and 5 or 8 for RSLE shelves).</p> <p>Example: BUSY RSLC SITE RSE 1 4 5</p> |
| BUSY SCSC (<i>site</i>) SCE <i>b s</i> (IMED) | <p>Places the specified SCM-10S Control Complex in the man-made-busy (MMB) state. The “s” in SCE <i>b s</i> is either shelf of the SCM-10S.</p> <p>Example: BUSY SCSC SCE 1 2</p> |
| BUSY SCUC (<i>site</i>) SCE <i>b s</i> (IMED) | <p>Places the specified unit of the SCM-10U in the man-made-busy (MMB) state.</p> <p>Example: BUSY SCUC SCE 2 1</p> |
| BUSY SLC <i>site</i> SLE <i>b cb</i> (IMED) | <p>Places the specified SLC-96 in the man-made-busy (MMB) state.</p> <p>Example: BUSY SLC SITE SLE 1 2</p> |
| BUSY SLSH <i>site</i> SLE <i>b cb sh</i> (IMED) | <p>Places the specified SLC-96 shelf in the man-made-busy (MMB) state.</p> <p>Example: BUSY SLSH SITE SLE 1 5 A</p> |
| BUSY SRI PE/CE <i>b s p</i> (IMED) | <p>Places the NT4T24 (SRI) pack in the man-made-busy (MMB) state. The IMED option must be used if the SRI pack is the last communication path (signaling loop) to an RLCM.</p> <p>Whenever an SRI pack is busied, the SRI links and DS-30A loops (PELPs) connected to the pack are man-made-busy (MMB), and the LED on the SRI pack faceplate is illuminated.</p> <p>Example: BUSY SRI PE 7 6 6</p> |

DED commands (Continued)

| Input Command | Description |
|---|---|
| BUSY SRLK PE/CE <i>b s p u</i> (IMED) | Places the SRI link in the MMB state. The IMED option must be used if the SRLK is the last communication path (signaling loop) to an RLCM, RSLE, or an RSLM. Because the SRI links are extensions of the PELPs, busying an SRLK or a PELP busies its associated PELP or SRLK. Example: BUSY SRLK PE 7 6 4 1 |
| BUSY TMC0/TMC1 <i>site IDE b</i> (IMED) | Places the specified time slot management (TMC) channel in the man-made-busy (MMB) state. Example: BUSY TMC0 SITE IDE 1 |
| BUSY ULSG <i>site</i> UCE <i>b lsg</i> (IMED) | Places the specified line subgroup in the man-made-busy (MMB) state. Example: BUSY ULSG SITE UCE 1 0 |
| CPME IDC (<i>site</i>) LCE/ RSC/RSE <i>b s lsg</i> | Copies the contents of the active Flash Memory bank into the inactive bank, for the specified ISDN Drawer Controller (IDC). Flash Memory banks (1 and 2) store firmware program code. Under normal conditions the information in each bank is identical. Copying banks may be necessary in situations where the active bank contains the latest firmware version and the inactive bank contains an older version. Normally this command would be used in a three-command sequence. The DNLD IDC command copies the firmware from the file system to the inactive IDC bank. The SWME command switches the active/inactive banks to the opposite status. The CPME command brings both banks to current status. Executing this command requires that the IDC be in an INS or MMB condition. Example: CPME IDC SITE LCE 1 3 8 |
| CPME RLD | Not operational. |
| DNLD 7X05 <i>site</i> SCE <i>b s</i> (NEW/OLD) | Causes the flash memory in the NT7X05 to be erased and then downloaded through its associated SCM-10S or SCM-10U Control Complex. The NT7X05 pack may only be downloaded if the associated SCM-10S, or SCM-10U, Control Complex has completed downloading and is in service. The software package downloads may be optionally specified as NEW or OLD. Specifying NEW downloads the most recently dated software package. OLD downloads the oldest dated software package. If no option is entered, the currently activated software package is downloaded, without distinguishing by date. Example: DNLD 7X05 SITE SCE 1 2 |
| DNLD AX74 MVIE <i>b s p</i> (NEW/OLD) | Causes the two EEPROMs of the specified ESMA NTAX74 Cellular Application Processor pack to be downloaded. The NTAX74 pack must already have software loaded and must be in man-made-busy (MMB) state. If the downloading process fails due to an EEPROM problem, a <i>fault state</i> will be updated in the ESMC data base; the STAT ESMC command is used to output the fault state information. The fault state is reset only after a successful flash downloading has been achieved. |

DED commands (Continued)

| Input Command | Description |
|--|--|
| DNLD CMR MVIE <i>b s p/</i> <i>site RSC b s p (NEW/</i> <i>OLD)</i> | <p>The software package downloads may be optionally specified as NEW or OLD. Specifying NEW downloads the most recently dated software package. OLD downloads the oldest dated software package. If no option is entered, the currently activated software package is downloaded, without distinguishing by date.</p> <p>Example: DNLD AX74 MVIE 1 1 3</p> <p>Causes the specified CLASS Modem Resource pack (NT6X78) to be downloaded. In order for the command to be executed, the ESMA or RSC-S unit with which the NT6X78 pack is associated must be in service.</p> |
| DNLD DSI CE <i>b s p</i> (NEW/OLD) | <p>The software package downloads may be optionally specified as NEW or OLD. Specifying NEW downloads the most recently dated software package. OLD downloads the oldest dated software package. If no option is entered, the currently activated software package is downloaded, without distinguishing by date.</p> <p>Example: DNLD CMR MVIE 1 1 3</p> <p>Causes the Digital Signal Interface (DSI) to be downloaded. In order for the command to be executed, the DSI module must be man-made-busy and a minimum of one DSI link must be assigned. The system response to the command is a pass or fail indication.</p> |
| DNLD EDCH MVIE <i>b s p (NEW/OLD)</i> | <p>The software package downloads may be optionally specified as NEW or OLD. Specifying NEW downloads the most recently dated software package. OLD downloads the oldest dated software package. If no option is entered, the currently activated software package is downloaded, without distinguishing by date.</p> <p>Example: DNLD DSI CE 1 4 4</p> <p>Causes the Enhanced D-Channel Handler (EDCH) to be downloaded. In order for the command to be executed, the EDCH must be man-made-busy. The system response to the command is a pass or fail indication.</p> |
| DNLD ESAC <i>site</i> LCE <i>b s (NEW/OLD)</i> or DNLD ESAC <i>site</i> RSE <i>b s p (NEW/OLD)</i> | <p>The software package downloads may be optionally specified as NEW or OLD. Specifying NEW downloads the most recently dated software package. OLD downloads the oldest dated software package. If no option is entered, the currently activated software package is downloaded, without distinguishing by date.</p> <p>Example: DNLD EDCH MVIE 1 1 16</p> <p>Causes the RLCM/OPM/OPAC ESA processor or the RSLM/RSLE ESA processor to be downloaded with executable programs and program control logic. (Static data, such as subscriber information, translations, and emergency routing, is not downloaded by this command but is downloaded when the RTS ESAC command is input.) The ESA processor must be in the MMB state before downloading can take place.</p> |

DED commands (Continued)

| Input Command | Description |
|--|--|
| DNLD ESMC MVIE b s p (NEW/OLD) | <p>The software package downloads may be optionally specified as NEW or OLD. Specifying NEW downloads the most recently dated software package. OLD downloads the oldest dated software package. If no option is entered, the currently activated software package is downloaded, without distinguishing by date.</p> <p>Example: DNLD ESAC SITE RSE 1 4 3</p> <p>Causes the specified ESMA unit and associated CLASS Modem Resource (CMR) pack (NT6X78) to be downloaded. In order for the command to be executed, the ESMA unit must be man-made-busy.</p> <p>The software package downloads may be optionally specified as NEW or OLD. Specifying NEW downloads the most recently dated software package. OLD downloads the oldest dated software package. If no option is entered, the currently activated software package is downloaded, without distinguishing by date.</p> <p>Example: DNLD ESMA MVIE 1 1 25</p> |
| DNLD HUBC site HUBE b s p (NEW/ OLD) | <p>Updates the loadfile in the specified Star Hub Remote Controller (NTTR77) pack.</p> <p><i>Note: The NTTR77 must be in man-made busy state to be downloaded.</i></p> <p>The software package downloads may be optionally specified as NEW or OLD. Specifying NEW downloads the most recently dated software package. OLD downloads the oldest dated software package. If no option is entered, the currently activated software package is downloaded, without distinguishing by date.</p> <p>Example: DNLD HUBC SHUB HUBE 1 3 17</p> |
| DNLD IDC (site) LCE/ RSC/RSE b s lsg (NEW/OLD) | <p>Causes the firmware code to be downloaded into the IDC pack's (NT6X54) inactive Flash Memory bank. The IDC must be in the man-made-busy (MMB) or the in-service (INS) state before executing the DNLD command. The system response to the DNLD command is a pass (IDC firmware matches the version required for the generic) or fail (firmware does not match the version required for the generic) indication. Refer also to the SWME and CPME commands, which are normally used in conjunction with the DNLD command.</p> <p>The software package downloads may be optionally specified as NEW or OLD. Specifying NEW downloads the most recently dated software package. OLD downloads the oldest dated software package. If no option is entered, the currently activated software package is downloaded, without distinguishing by date.</p> <p>Example: DNLD IDC SITE LCE 1 1 8</p> |

DED commands (Continued)

| Input Command | Description |
|---|---|
| DNLD LCMC (<i>site</i>) LCE/RSC /LCE <i>b s</i> (NEW/OLD) | <p>Causes the LCM control unit (packs NT6X51 and NT6X52) to be downloaded. The LCM must be in the man-made-busy (MMB) state before executing the DNLD command. The system response to the DNLD command is a pass or fail indication.</p> <p>Note 1: This command is not applicable for Virtual Remote Line Concentrating Modules (VLCM).</p> <p>Note 2: The OPM or OPAC bay numbers may be any number from 1 through 32; however, only two bays may be assigned per site identification mnemonic and the numbers must be in consecutive order. For example, 3 and 4 are valid bay numbers, but 3 and 5 are not valid. The left bay contains LCA 1, LCA 0, Host Interface Equipment, and an Environmental Control Unit. The right bay contains the Battery Control Unit, Rectifiers 1 and 0, Frame Supervisory Panel, Remote Maintenance Module, and an Environmental Control Unit.</p> <p>The software package downloads may be optionally specified as NEW or OLD. Specifying NEW downloads the most recently dated software package. OLD downloads the oldest dated software package. If no option is entered, the currently activated software package is downloaded, without distinguishing by date.</p> <p>Example: DNLD LCMC LCE 2 1</p> |
| DNLD MX77 (<i>site</i>) RSC <i>b s p</i> (NEW/OLD) | <p>Causes the two EEPROMs of the specified RSC-S NTMX77 Unified Processor pack to be downloaded. The NTMX77 pack must already have software loaded and must be in man-made-busy (MMB) state. If the downloading process fails due to an EEPROM problem, a <i>fault state</i> will be updated in the RSC-S data base; the STAT RSCC command is used to output the fault state information. The fault state is reset only after a successful flash downloading has been achieved.</p> <p>The software package downloads may be optionally specified as NEW or OLD. Specifying NEW downloads the most recently dated software package. OLD downloads the oldest dated software package. If no option is entered, the currently activated software package is downloaded, without distinguishing by date.</p> <p>Example: DNLD MX77 SITE RSC 1 1 3</p> |
| DNLD PGIC ME/PE/ CE/IE <i>b p u</i> (NEW/ OLD) | <p>Causes the specified Packet Gateway Interface Controller (PGIC) to be downloaded. In order for the command to be executed, the PGIC must be in a Man Made Busy (MMB) state.</p> <p>The software package download may be optionally specified as New or OLD. Specifying NEW downloads the most recent dated software package. Specifying OLD downloads the oldest dated software package. If no option is specified, the currently activated software package is downloaded without distinguishing by date.</p> <p>Example: DNLD PGIC ME 1 1 1</p> |
| DNLD RLD | Not operational. |

DED commands (Continued)

| Input Command | Description |
|--|--|
| DNLD RMM <i>site</i> LCE/RSC <i>b s</i> (NEW/ OLD) | <p>Causes the random-access memory on the Remote Maintenance Module (RMM) Control pack (NT6X74) to be downloaded. The RMM must be in the man-made-busy (MMB) state before executing the DNLD command. The system response to the DNLD command is a pass or fail indication. The “s” in LCE <i>b s</i> is always 4 for an RLCM and 1 for an OPM or OPAC.</p> <p>Note 1: This command is not applicable for Virtual Remote Line Concentrating Modules (VLCM).</p> <p>Note 2: The OPM or OPAC bay numbers may be any number from 1 through 32; however, only two bays may be assigned per site identification mnemonic and the numbers must be in consecutive order. For example, 3 and 4 are valid bay numbers, but 3 and 5 are not valid. The left bay contains LCA 1, LCA 0, Host Interface Equipment, and an Environmental Control Unit. The right bay contains the Battery Control Unit, Rectifiers 1 and 0, Frame Supervisory Panel, Remote Maintenance Module, and an Environmental Control Unit.</p> <p>The software package downloads may be optionally specified as NEW, OLD or DFLT. Specifying NEW downloads the most recently dated software package. OLD downloads the oldest dated software package. DFLT downloads the currently activated software package without distinguishing by date.</p> <p>Example: DNLD RMM LCE 1 4</p> |
| DNLD RSCC <i>site</i> RSC <i>b s p</i> (NEW/OLD) | <p>Causes the Remote Switching Center (RSC-S) control unit to be downloaded. The RSC-S unit must be in the MMB state before downloading can take place. It may take more than 40 minutes to download to the RSC Control Complex.</p> <p>The software package downloads may be optionally specified as NEW or OLD. Specifying NEW downloads the most recently dated software package. OLD downloads the oldest dated software package. If no option is entered, the currently activated software package is downloaded, without distinguishing by date.</p> <p>Example: DNLD RSCC SITE RSC 1 1 3</p> |
| DNLD RSLC <i>site</i> RSE <i>b s p</i> (NEW/OLD) | <p>Causes the RSLM/RSLE processor to be downloaded. The RSLM Processor must be in the MMB state before downloading can take place. (<i>p</i> may be 5 or 7 for RSLM shelves and 5 or 8 for RSLE shelves)</p> <p>The software package downloads may be optionally specified as NEW or OLD. Specifying NEW downloads the most recently dated software package. OLD downloads the oldest dated software package. If no option is entered, the currently activated software package is downloaded, without distinguishing by date.</p> <p>Example: DNLD RSLC SITE RSE 1 4 5</p> |
| DNLD SCSC <i>site</i> SCE <i>b s</i> (NEW/OLD) | <p>Causes the specified SCM-10S Control Complex to be downloaded. Before the DNLD process can begin, the SCM-10S Control Complex must be in the MMB state. The system response to the DNLD command is a pass or fail indication.</p> |

DED commands (Continued)

| Input Command | Description | | | | | | | | |
|---|---|-----|------------|-----|---------------|-----|----------------|-----|------------------|
| DNLD SCUC <i>site</i> SCE <i>b s</i> (NEW/OLD) | <p>The software package downloads may be optionally specified as NEW or OLD. Specifying NEW downloads the most recently dated software package. OLD downloads the oldest dated software package. If no option is entered, the currently activated software package is downloaded, without distinguishing by date.</p> <p>Example: DNLD SCUC SCE 2 1</p> <p>Causes the specified SCM-10U Control Complex to be downloaded. Before the DNLD process can begin, the SCM-10U Control Complex must be in the MMB state. The system response to the DNLD command is a pass or fail indication.</p> | | | | | | | | |
| EXIT ESAC <i>site</i> LCE <i>b s</i> or EXIT ESAC <i>site</i> RSE <i>b s p</i> | <p>The software package downloads may be optionally specified as NEW or OLD. Specifying NEW downloads the most recently dated software package. OLD downloads the oldest dated software package. If no option is entered, the currently activated software package is downloaded, without distinguishing by date.</p> <p>Example: DNLD SCUC SCE 2 1</p> <p>Manual command for the RLCM/OPM/OPAC ESA processor or the RSLM/RSLE ESA processor to initiate the procedure of exiting from the ESA mode.</p> <p>Example: EXIT ESAC SITE RSE 1 4 3</p> | | | | | | | | |
| FELP D1LK SCE <i>b s p u</i> | <p>Applies only to a D1LK serving a SLC-96. Sets a far-end loop condition (looparound) on a DS-1 link and automatically switches the protection link for this DS-1 link. This command allows operating company personnel to isolate DS-1 link problems.</p> <p>Example: FELP D1LK SCE 1 4 4 2</p> | | | | | | | | |
| LIST DCM (<i>b s p</i>) or LIST DCM ALL or LIST DCM <i>condition</i> | <p>Lists the specified DCM or all DCMs.</p> <p><i>condition</i> may be one of:</p> <table border="0"> <tr> <td>INS</td> <td>in service</td> </tr> <tr> <td>MMB</td> <td>man-made busy</td> </tr> <tr> <td>OOS</td> <td>out of service</td> </tr> <tr> <td>SMB</td> <td>system-made busy</td> </tr> </table> | INS | in service | MMB | man-made busy | OOS | out of service | SMB | system-made busy |
| INS | in service | | | | | | | | |
| MMB | man-made busy | | | | | | | | |
| OOS | out of service | | | | | | | | |
| SMB | system-made busy | | | | | | | | |
| LIST DS1L <i>site</i> RSC/MVIE/HUBE <i>b s p u</i> or LIST DS1L ALL or LIST DS1L <i>condition</i> | <p>Lists the specified RSC-S, ESMA, or Star Hub P-side DS-1 link. The ALL option causes all RSC-S, ESMA, or Star Hub P-side DS-1 links to display.</p> <p><i>condition</i> may be one of:</p> <table border="0"> <tr> <td>INS</td> <td>in service</td> </tr> <tr> <td>MMB</td> <td>man-made busy</td> </tr> <tr> <td>OOS</td> <td>out of service</td> </tr> <tr> <td>SMB</td> <td>system-made busy</td> </tr> </table> | INS | in service | MMB | man-made busy | OOS | out of service | SMB | system-made busy |
| INS | in service | | | | | | | | |
| MMB | man-made busy | | | | | | | | |
| OOS | out of service | | | | | | | | |
| SMB | system-made busy | | | | | | | | |

DED commands (Continued)

| Input Command | Description |
|--|--|
| LIST DSI CE <i>b s p</i> or LIST DSI ALL or LIST DSI TRK or LIST DSI PRI or LIST DSI <i>condition</i> | Lists the specified Digital Signal Interface (DSI), or all DSIs. In the designated location, <i>p</i> is the position of the rightmost pack of the DSI module. The TRK option lists all DSI modules that have the digital trunking application. The PRI option lists all DSI modules in the DMS-10 switch that have the PRI application. <i>condition</i> may be one of: INS in service MMB man-made busy OOS out of service SMB system-made busy |
| LIST DSLK CE <i>b s p lk</i> or LIST DSLK ALL or LIST DSLK TRK or LIST DSLK PRI or LIST DSLK <i>condition</i> | Lists the specified Digital Signal Interface (DSI) link or all DSI links. The TRK option lists all DSI links in the DMS-10 switch that have the digital trunking application. The PRI option lists all DSI links in the DMS-10 switch that have the PRI application. <i>condition</i> may be one of: INS in service MMB man-made busy OOS out of service SMB system-made busy |
| LIST PSHF (<i>site</i>) PE <i>b s</i> or LIST PSHF <i>condition</i> or LIST PSHF ALL | Lists the peripheral shelf by location or condition, or lists all peripheral shelves. <i>condition</i> may be one of: INS in service MMB man-made busy OOS out of service SMB system-made busy |
| OFFL D1LK SCE <i>b s p u</i> | Places the specified DS-1 link into the man-made-offline state. The D1LK must be in the MMB state before using the OFFL command. To bring the D1LK back online, busy it, then return it to service. Example: OFFL D1LK SCE 1 3 5 1 |
| OFFL D1PK SCE <i>b s p</i> | Places the specified DS-1 Interface pack into the man-made-offline state. The D1PK must be in the MMB state before using the OFFL command. To bring the D1PK back online, busy it, then return it to service. Example: OFFL D1PK SCE 1 2 4 |
| OFFL D30L <i>site</i> RSC <i>b s p u</i> | Places the specified RSC-S P-side DS-30A link on an NTMX74 pack in the man-made-offline state. Example: OFFL D30L SITE RSC 1 1 13 1 |
| OFFL DS1L <i>site</i> RSC <i>b s p u</i> | Places the specified RSC-S P-side DS-1 link on an NTMX81 pack in the man-made-offline state. Example: OFFL DS1L SITE RSC 1 1 12 4 |

DED commands (Continued)

| Input Command | Description |
|--|--|
| OFFL ESAC <i>site</i> LCE <i>b s</i> or OFFL ESAC <i>site</i> RSE <i>b s p</i> | Places the RLCM/OPM/OPAC ESA processor or the RSLM/RSLE ESA processor in the man-made-offline state. The ESA processor must be in the MMB state before using the OFFL command. To bring the ESA processor back online, busy it, then return it to service. Example: OFFL ESAC SITE RSE 1 4 3 |
| OFFL HUBC <i>site</i> HUBE <i>b s p</i> | Places the specified Star Hub Remote Controller pack (NTTR77) in the offline state. Example: OFFL HUBC SHUB HUBE 1 3 17 |
| OFFL LCMC (<i>site</i>) LCE/RSC <i>b s</i> | Places the specified LCM control unit (LCMC) into the man-made-offline state. The LCMC (packs NT6X51 and NT6X52) must be in the MMB state before using the OFFL command. To bring the LCMC back online, busy it, then return it to service. The "s" in the LCMC location may be either shelf of the LCM. Note 1: This command is not applicable for Virtual Remote Line Concentrating Modules (VLCM). Note 2: The OPM or OPAC bay numbers may be any number from 1 through 32; however, only two bays may be assigned per site identification mnemonic and the numbers must be in consecutive order. For example, 3 and 4 are valid bay numbers, but 3 and 5 are not valid. The left bay contains LCA 1, LCA 0, Host Interface Equipment, and an Environmental Control Unit. The right bay contains the Battery Control Unit, Rectifiers 1 and 0, Frame Supervisory Panel, Remote Maintenance Module, and an Environmental Control Unit. Example: OFFL LCMC CAPK LCE 2 1 |
| OFFL RCU <i>site</i> UCE <i>b s</i> | Places the specified RCU into the man-made-offline state. The RCU must be in the MMB state before the OFFL command can be used. Example: OFFL RCU SITE UCE 1 4 |
| OFFL RSCC <i>site</i> RSC <i>b s p</i> | Places the specified Remote Switching Center (RSC-S) unit in the man-made-offline state. The RSCC must be in the MMB state before the OFFL command can be used. Example: OFFL RSCC SITE RSC 1 1 3 |
| OFFL RSLC <i>site</i> RSE <i>b s p</i> | Places the RSLM/RSLE processor in the man-made-offline state. The RSLM/RSLE processor must be in the MMB state before using the OFFL command. To bring the RSLM/RSLE processor back online, busy it, then return it to service. (<i>p</i> may be 5 or 7 for RSLM shelves and 5 or 8 for RSLE shelves) Example: OFFL RSLC SITE RSE 1 4 5 |
| OFFL SCSC (<i>site</i>) SCE <i>b s</i> | Places the specified SCM-10S Control Complex (SCSC) into the man-made-offline state. The SCSC must be in the MMB state before using the OFFL command. To bring the SCSC back online, busy it, then return it to service. The "s" in the SCSC location may be either shelf of the SLC-96. Example: OFFL SCSC SCE 1 2 |

DED commands (Continued)

| Input Command | Description |
|---|---|
| OFFL SCUC <i>(site)</i> SCE <i>b s</i> | Places the specified unit of the SCUC into the man-made-offline state. The SCUC must be in the MMB state before using the OFFL command. Example: OFFL SCUC SCE 2 1 |
| OFFL SLC <i>site</i> SLE <i>b cb</i> | Places the specified SLC-96 into the man-made-offline state. The SLC-96 must be in the MMB state before using the OFFL command. To bring the SLC-96 back online, busy it, then return it to service. Example: OFFL SLC CAPK SLE 1 3 |
| OFFL SLSH <i>site</i> SLE <i>b cb sh</i> | Places the specified SLC-96 shelf into the man-made-offline state. The SLSH must be in the MMB state before using the OFFL command. To bring the SLSH back online, busy it, then return it to service. Example: OFFL SLSH CAPK SLE 1 3 C |
| OFFL SRI PE <i>b s p</i> | Places the SRI pack in the man-made-offline state. The SRI must be in the MMB state before the OFFL command is entered. Example: OFFL SRI PE 7 6 6 |
| OFFL SRLK PE/CE <i>b s p u</i> | Places the SRI link in the man-made-offline state. The SRLK must first be in the MMB state before the OFFL command is entered. Because the SRLKs are extensions of the PELPs, whenever an SRLK is placed in the MMOF state, the associated PELP is placed in the MMOF state. Example: OFFL SRLK PE 7 6 6 0 <i>Note:</i> If an SRI link is not currently equipped, it can be placed in this state temporarily and no system alarm will be raised. |
| QPAT ESMC <i>site</i> MVIE <i>b s p</i> | Queries ESMA patches on the specified ESMC and lists all ESMA patches available. |
| QPAT RSCC <i>site</i> RSC <i>b s p</i> | Queries Remote Switching Center (RSC-S) patches on the specified RSCC and lists all RSC-S patches available. |
| QPAT SCSC <i>site</i> SCE <i>b s</i> | Queries SCM-10S Control Complex (SCSC) patches on the specified SCSC and lists all SCSC patches available. |
| QPAT SCUC <i>site</i> SCE <i>b s</i> | Queries SCM-10U Control Complex (SCUC) patches on the specified SCUC and lists all SCUC patches available. |
| REMV ESMC <i>n(n) site</i> MVIE <i>b s p</i> | Removes ESMA patch <i>n(n)</i> from the specified ESMC. In order for the command to be executed, the specified ESMC must be MMB. |
| REMV RSCC <i>n(n) site</i> RSC <i>b s p</i> | Removes Remote Switching Center (RSC-S) patch <i>n(n)</i> from the specified RSCC. In order for the command to be executed, the specified RSCC must be MMB. |
| REMV SCSC <i>n(n) site</i> SCE <i>b s</i> | Removes SCM-10S Control Complex (SCSC) patch <i>n(n)</i> from the specified SCSC. In order for the command to be executed, the specified SCSC must be MMB. |
| REMV SCUC <i>n(n) site</i> SCE <i>b s</i> | Removes SCM-10U Control Complex (SCUC) patch <i>n(n)</i> from the specified SCUC. In order for the command to be executed, the specified SCUC must be MMB. |

DED commands (Continued)

| Input Command | Description | | | | | | | | | | | | |
|--|---|-------------------------|-----------|-----------------------|---------------------|-------------------------------------|--------------------------|-------------------------------------|---|---|--|---|--|
| RFLP D1LK SCE <i>b s p u</i> | <p>Applies only to a D1LK serving a SLC-96. Removes the far-end loop condition on a DS-1 link and automatically unswitches the protection link for this DS-1 link. The RFLP command is used in conjunction with the FELP command.</p> <p>Example: RFLP D1LK SCE 1 2 4 2</p> | | | | | | | | | | | | |
| RSTR D1LK SCE <i>b s p u</i> | <p>Applies only to a D1LK serving a SLC-96. Restores traffic to a primary link that was spared by the protection link.</p> <p>Example: RSTR D1LK SCE 1 2 4 2</p> | | | | | | | | | | | | |
| RTS <i>device site/(site) location</i> (BOOT) (IMED) | <p>Returns to service the man-made-busy (MMB) device. The <i>site</i> must be specified for devices at a remote site. When the IMED option applies to devices LSG, LSGD, ULSG, and IDC, it is used to return all SMB or MMB lines in the LSG, LSGD, ULSG or IDC to service. When the IMED option applies to devices SCUC or RCU, the SCUC or RCU will not be tested when returned to service, thus returning the device to service in less time.</p> <p>For the Remote Switching Center (RSC-S) unit, IMED must be used to return a unit with faults to service. For example, if a unit was OOS due to a faulty pack, and the other unit became disabled, IMED would return to service the unit with the faulty pack without completely losing subscriber service.</p> <p>For an IDC, IMED must be used to return the IDC to service when the active flash memory bank does not contain the version required for the generic. For example, before upgrading to a newer generic, use the IMED option to RTS an IDC to service that has the newer generic firmware installed.</p> <p>For a DSI, IMED must be used to return the DSI or RLD to service when the flash download version does not contain the version required for the generic. For example, before upgrading to a newer generic, use the IMED option to RTS an DSI to service that has the newer generic firmware installed.</p> <p>For a PGIC, IMED must be used to return the PGIC to service if the firmware version on the PGIC is not the current version.</p> <p>The BOOT option applies to LCMC and RSLC devices and downloads the pack processor from the mate packs processor instead of from the file system. The BOOT option is not applicable for the VLCM.</p> <p><i>device</i> and <i>location</i> can be one of:</p> <table border="0"> <tr> <td>D1LK SCE <i>b s p u</i></td> <td>DS-1 link</td> </tr> <tr> <td>D1PK SCE <i>b s p</i></td> <td>DS-1 Interface pack</td> </tr> <tr> <td>D30L <i>site</i> RSC <i>b s p u</i></td> <td>RSC-S P-side DS-30A link</td> </tr> <tr> <td>DCM (<i>site</i>) PE <i>b s p</i></td> <td>Digital Carrier Module (<i>p</i> is the leftmost DCM pack) (see Note 1)</td> </tr> <tr> <td>DS1L <i>site</i> RSC/MVIE/ HUBE <i>b s p u</i></td> <td>RSC-S, ESMA, or Star Hub P-side DS-1 link</td> </tr> <tr> <td>DSI <i>site</i> CE <i>b s p</i> (IMED)</td> <td>Digital Signal Interface module (<i>p</i> is the position of the rightmost pack of the module)</td> </tr> </table> | D1LK SCE <i>b s p u</i> | DS-1 link | D1PK SCE <i>b s p</i> | DS-1 Interface pack | D30L <i>site</i> RSC <i>b s p u</i> | RSC-S P-side DS-30A link | DCM (<i>site</i>) PE <i>b s p</i> | Digital Carrier Module (<i>p</i> is the leftmost DCM pack) (see Note 1) | DS1L <i>site</i> RSC/MVIE/ HUBE <i>b s p u</i> | RSC-S, ESMA, or Star Hub P-side DS-1 link | DSI <i>site</i> CE <i>b s p</i> (IMED) | Digital Signal Interface module (<i>p</i> is the position of the rightmost pack of the module) |
| D1LK SCE <i>b s p u</i> | DS-1 link | | | | | | | | | | | | |
| D1PK SCE <i>b s p</i> | DS-1 Interface pack | | | | | | | | | | | | |
| D30L <i>site</i> RSC <i>b s p u</i> | RSC-S P-side DS-30A link | | | | | | | | | | | | |
| DCM (<i>site</i>) PE <i>b s p</i> | Digital Carrier Module (<i>p</i> is the leftmost DCM pack) (see Note 1) | | | | | | | | | | | | |
| DS1L <i>site</i> RSC/MVIE/ HUBE <i>b s p u</i> | RSC-S, ESMA, or Star Hub P-side DS-1 link | | | | | | | | | | | | |
| DSI <i>site</i> CE <i>b s p</i> (IMED) | Digital Signal Interface module (<i>p</i> is the position of the rightmost pack of the module) | | | | | | | | | | | | |

DED commands (Continued)

| Input Command | Description |
|--|---|
| DSLK <i>site</i> CE <i>b s p lk</i> (IMED) | Digital Signal Interface link |
| DTRK <i>(site)</i> PE <i>b s p u</i> | Digital trunk (DCM) |
| DTRK <i>(site)</i> CE <i>b s p l u</i> | Digital trunk (DSI) |
| DTRK <i>(site)</i> RSC <i>b s p l u</i> | Digital trunk (RSC-S) |
| GW GWE <i>gw#</i> Gateway | |
| EDCH MVIE <i>b s p</i> | Enhanced D-Channel Handler |
| EOC0/EOC1 <i>site</i> IDE <i>b</i> (IMED) | embedded operations channel (EOC) |
| ESAC <i>site</i> LCE <i>b s</i> | RLCM/OPM/OPAC ESA processor |
| ESAC <i>site</i> RSE <i>b s p</i> | RSLM/RSLE ESA processor |
| ESMC MVIE <i>b s p</i> (IMED) | ESMA unit |
| IDC <i>site</i> LCE/RSC <i>/RSE b s lsg</i> (IMED) | ISDN Drawer Controller |
| IDT <i>site</i> IDE <i>b</i> | Integrated Digital Terminal |
| IDTL <i>site</i> IDE <i>b n</i> | Integrated Digital Terminal line |
| HUBC <i>site</i> HUBE <i>b s</i> <i>p</i> (IMED) | Star Hub Remote Controller pack |
| LCMC <i>(site)</i> LCE <i>/RSC b s</i> | LCM control unit (<i>s</i> may be either shelf of the LCM) - packs NT6X51 and NT6X52 |
| LRNG <i>(site)</i> HUBE <i>b s p</i> | Ringing Generator pack |
| LRNG <i>(site)</i> LCE <i>/RSE/RSC b u</i> | Ringing Generator pack (not valid for RSLM Type A shelf) (see Note 4) |
| LSG <i>(site)</i> LCE <i>/RSE/RSC b s lsg</i> (IMED) | Line subgroup (see Note 4) |
| LSGD <i>(site)</i> LCE <i>/RSE/RSC b s</i> <i>lsg</i> (IMED) | Line drawer (<i>lsg</i> may be either subgroup of the drawer) (see Note 4) |
| LTRK <i>site</i> PE <i>b s p ch</i> | Line trunks |
| PGIC ME/PE/CE/IE <i>b p u</i> (IMED) | Packet Gateway Interface Controller (PGIC) |
| PSC2 <i>(site)</i> PE <i>b s</i> | Peripheral Shelf Converter pack (NT2T42) |

DED commands (Continued)

| Input Command | Description |
|---|--|
| PSHF <i>(site)</i> PE <i>b s</i> | PE shelf |
| RCU <i>site</i> UCE <i>b s</i> (IMED) | specified RCU |
| REM <i>site</i> PE <i>b s p</i> | Remote Equipment Module. The <i>p</i> is the leftmost pack of the RCM (that is, position 2, 6, 11, or 15) or position 3, 7, 12, or 16 for the OCM. |
| RLD | Not operational. |
| RMM <i>site</i> LCE/RSC <i>b s</i> | Remote Maintenance Module |
| RSCC <i>site</i> RSC <i>b s p</i> (IMED) | RSC-S unit |
| RSLC <i>site</i> RSE <i>b s p</i> | RSLE or RSLM processor (<i>p</i> may be 5 or 7 for RSLM shelves and 5 or 8 for RSLE shelves) |
| SCSC <i>(site)</i> SCE <i>b s</i> | SCM-10S Control Complex (see Note 2) |
| SCUC <i>(site)</i> SCE <i>b s</i> (IMED) | specified unit of the SCUC (see Note 2) |
| SLC <i>site</i> SLE <i>b cb</i> | SLC-96 |
| SLSH <i>site</i> SLE <i>b cb sh</i> | SLC-96 shelf |
| SRI PE <i>b s p</i> | SRI pack. Before the SRI pack is returned to service, at least one of the PELPs connected to the SRI pack must be in service. |
| SRLK PE/CE <i>b s p u</i> | SRI link. Before the SRLKs can be returned to service, the SRI pack must be in service. |
| TMC0/TMC1 <i>site</i> IDE <i>b timeslot</i> (IMED) | maintenance channel (TMC) |
| ULSG <i>site</i> UCE <i>b lsg</i> (IMED) | specified LSG of the RCU |

DED commands (Continued)

| Input Command | Description |
|--|---|
| | <p>Note 1: When a DCM that is attached to a DLC in a Large Cluster Controller is returned to service, Overlay DED will attempt to configure the DCM to allow data transfer on the DLC link. If the DCM cannot be configured to allow this transfer, an output message will indicate that the DLC link (DLNK) is not operational.</p> <p>Note 2: After a unit is powered up and before it is returned to service, the NT6X80 pack should be re-seated.</p> <p>Note 3: The RTS ESAC command initiates processor activity and the downloading of static data, such as subscriber information, translations, and emergency routing, to the specified processor.</p> <p>Note 4: The RTS LSG, LSGD, and LRNG commands are not applicable for Virtual Remote Line Concentrating Modules (VLCM).</p> |
| SEL PGIC ME/PE/CE/ IE <i>b p u</i> | <p>Selects the specified Packet Gateway Interface Controller (PGIC) as the signaling PGIC.</p> <p>Example: SEL PGIC ME 1 1 1</p> |
| STAT BCU <i>site</i> LCE <i>b</i> or STAT BCU ALL | <p>Gives the status of the Battery Control Unit (BCU) in the Outside Plant Module by location or gives the status of all BCUs. Provides information on the Battery Charge Controller (BCC) packs and battery string pairs (BSPR).</p> <p>Note: <i>The OPM or OPAC bay numbers may be any number from 1 through 32; however, only two bays may be assigned per site identification mnemonic and the numbers must be in consecutive order. For example, 3 and 4 are valid bay numbers, but 3 and 5 are not valid. The left bay contains LCA 1, LCA 0, Host Interface Equipment, and an Environmental Control Unit. The right bay contains the Battery Control Unit, Rectifiers 1 and 0, Frame Supervisory Panel, Remote Maintenance Module, and an Environmental Control Unit.</i></p> <p>Example: STAT BCU OPM LCE 2</p> <p>The system response to the STAT BCU command is: REJECTED: UNEQUP (if the BCU is not equipped) or BCU <i>site</i> LCE <i>b</i> <i>direct state (indirect state) hardware state OPM battery state</i> AUTO CHRG ENABLED/DISABLED (<i>BCU fault[s]</i>) BCC 0 <i>BCC state(s)</i> BCC 1 <i>BCC state(s)</i> BSPR 0 <i>battery string pair 0 location / state (MAN)</i> BSPR 1 <i>battery string pair 1 location / state (MAN)</i> BSPR 2 <i>battery string pair 2 location / state (MAN)</i> BSPR 3 <i>battery string pair 3 location / state (MAN)</i></p> |

DED commands (Continued)

| Input Command | Description |
|----------------------------|--|
| | <i>direct state</i> can be one of: |
| INS | in service |
| MMB | man-made busy |
| SMB | system-made busy |
| | <i>indirect state</i> is INDR, if the parent device is out of service, or blank |
| | <i>hardware state</i> can be one of: |
| ENBL | enabled |
| DSBL | disabled |
| | <i>OPM battery state</i> can be one of: |
| ACFM | ac-failure-mode |
| NBRM | normal-battery-rotation mode |
| PACM | post-ac-failure mode |
| AUTO CHRG ENABLED/DISABLED | automatic daily battery rotation to the charge bus is enabled or disabled |
| | <i>BCU fault(s)</i> can be one or more of: |
| ACF | ac failure alarm |
| FALM | fan failure alarm |
| FDR | front door alarm |
| FSP | frame supervisory panel alarm |
| HTMP | high temperature alarm |
| LTMP | low temperature alarm |
| SDR | side door alarm |
| | <i>BCC state(s)</i> can be one or more of: |
| BCF0 | BCC 0 fuse failure |
| BCF1 | BCC 1 fuse failure |
| NORM | normal (no fault) |
| RCF0 | rectifier 0 failure |
| RCF1 | rectifier 1 failure |
| RCL0 | current limit reached on rectifier 0 |
| RCL1 | current limit reached on rectifier 1 |
| | <i>Note: If the BCC state is other than normal (NORM), the OPM/OPAC batteries are in the ac-failure mode and all battery string pairs should be on the load bus.</i> |
| | <i>Battery string pair n location / state</i> can be one of: |
| CHRG | battery string pair is on the charge bus |

DED commands (Continued)

| Input Command | Description |
|----------------------------|--|
| | LOAD battery string pair is on the load bus |
| | OPEN battery string pair is in the open circuit condition |
| | UNEQ battery string pair is unequipped |
| | MAN indicates that the battery string pair was manually placed on the bus. |
| STAT D1LK | Gives the status of one or all DS-1 links. |
| SCE <i>b s p u</i> | <i>condition</i> may be one of: |
| or | INS in service |
| STAT D1LK ALL | MMB man-made busy |
| or | OOS out of service |
| STAT D1LK <i>condition</i> | SMB system-made busy |
| | Example: STAT D1LK SCE 1 2 3 2 |
| | The system response is in the following format: |
| | D1LK (NT6X85) <i>site</i> SCE <i>b s p u</i> <i>direct state</i> (<i>indirect state</i>) <i>hardware state</i> <i>activity state</i> (BLCK) (FELP) (<i>fault</i>) |
| | <i>direct state</i> can be one of: |
| | INS in service |
| | MMB man-made busy |
| | MMOF man-made offline |
| | OOS out of service |
| | SMB system-made busy |
| | SMOF system-made offline |
| | <i>indirect state</i> is INDR if the parent device is busied |
| | <i>hardware state</i> can be one of: |
| | DSBL disabled |
| | ENBL enabled |
| | <i>activity state</i> can be one of: |
| | ACTV active |
| | DXFR data transfer |
| | INAC inactive |
| | NORM normal |
| | SPRD spared |
| | SPNG sparing |
| | STBY standby |
| | For a D1LK serving a SLC-96, BLCK is output if the primary link cannot be spared by a protection link. |
| | For a D1LK serving a SLC-96, FELP is output if the far-end loop condition is set on the link. |
| | <i>fault</i> = LOCAL ALARM |

DED commands (Continued)

| Input Command | Description |
|---|--|
| STAT D1PK SCE <i>b s p</i> or STAT D1PK <i>condition</i> or STAT D1PK ALL | Gives the status of the DS-1 Interface pack by location or condition, or gives the status of all DS-1 Interface packs. <i>condition</i> may be one of: INS in service MMB man-made busy OOS out of service SMB system-made busy |

Example: STAT D1PK SCE 1 2 3

The system response is in the following format:

D1PK (NT6X85) *site* SCE *b s p* *direct state* (*indirect state*)
activity state

D1LK (NT6X85) *site* SCE *b s p u* *direct state* (*indirect state*) *hardware state* *activity state* (BLCK) (FELP)

D1LK (NT6X85) *site* SCE *b s p u* *direct state* (*indirect state*) *hardware state* *activity state* (BLCK) (FELP)

direct state can be one of:

- INS in service
- MMB man-made busy
- MMOF man-made offline
- OOS out of service
- SMB system-made busy
- SMOF system-made offline

indirect state is INDR if the parent device is busied

hardware state can be one of:

- DSBL disabled
- ENBL enabled

activity state can be one of:

- ACTV active
- DXFR data transfer
- INAC inactive
- NORM normal
- SPRD spared
- SPNG sparing
- STBY standby

For a D1LK serving a SLC-96, BLCK is output if the primary link cannot be spared by a protection link

For a D1LK serving a SLC-96, FELP is output if the far-end loop condition is set on the link.

DED commands (Continued)

| Input Command | Description | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|-----|------------|-----|---------------|-----|----------------|-----|------------------|-----|------------|-----|---------------|------|---|-----|------------------|------|--|------|---------|------|----------|------|--------|
| STAT D3A CE <i>b s p</i> or STAT D3A <i>condition</i> or STAT D3A ALL | <p>Gives the status of the DS-30A Interface pack by location or condition, or gives the status of all DS-30A Interface packs.</p> <p><i>condition</i> may be one of:</p> <table> <tr> <td>INS</td> <td>in service</td> </tr> <tr> <td>MMB</td> <td>man-made busy</td> </tr> <tr> <td>OOS</td> <td>out of service</td> </tr> <tr> <td>SMB</td> <td>system-made busy</td> </tr> </table> <p>Examples: STAT D3A CE 3 2 16 STAT D3A OOS</p> | INS | in service | MMB | man-made busy | OOS | out of service | SMB | system-made busy | | | | | | | | | | | | | | | | |
| INS | in service | | | | | | | | | | | | | | | | | | | | | | | | |
| MMB | man-made busy | | | | | | | | | | | | | | | | | | | | | | | | |
| OOS | out of service | | | | | | | | | | | | | | | | | | | | | | | | |
| SMB | system-made busy | | | | | | | | | | | | | | | | | | | | | | | | |
| STAT D30L <i>site</i> RSC <i>b s p u</i> or STAT D30L ALL | <p>Gives the status of the specified RSC-S P-side DS-30A link on an NTMX74 pack.</p> <p>Example: STAT D30L SITE RSC 1 1 13 1</p> | | | | | | | | | | | | | | | | | | | | | | | | |
| STAT DCM (<i>site</i>) PE <i>b s p</i> or STAT DCM <i>condition</i> or STAT DCM ALL | <p>Gives the status of the Digital Carrier Module (DCM) by location or condition, or gives the status of all DCMs. The "p" in PE <i>b s p</i> is the leftmost pack of the DCM.</p> <p><i>condition</i> may be one of:</p> <table> <tr> <td>INS</td> <td>in service</td> </tr> <tr> <td>MMB</td> <td>man-made busy</td> </tr> <tr> <td>OOS</td> <td>out of service</td> </tr> <tr> <td>SMB</td> <td>system-made busy</td> </tr> </table> <p>The system response is in the following format:</p> <p>DCM (NT2T30) <i>site b s p direct state (indirect state) hardware state</i> DTRK (NT2T30) <i>site PE b s p u direct state (indirect state) hardware state activity state</i> FLTS = fault</p> <p>Note: Unlike the LIST DCM command, the STAT DCM command shows all associated D trunks.</p> <p><i>direct state</i> can be one of:</p> <table> <tr> <td>INS</td> <td>in service</td> </tr> <tr> <td>MMB</td> <td>man-made busy</td> </tr> <tr> <td>MMOF</td> <td>man-made offline (does not apply to RMM or BCU)</td> </tr> <tr> <td>SMB</td> <td>system-made busy</td> </tr> <tr> <td>SMOF</td> <td>system-made offline (does not apply to RMM or BCU)</td> </tr> </table> <p><i>indirect state</i> is INDR if the parent device is out of service</p> <p><i>hardware state</i> can be one of:</p> <table> <tr> <td>ENBL</td> <td>enabled</td> </tr> <tr> <td>DSBL</td> <td>disabled</td> </tr> </table> <p><i>activity state</i> can be one of:</p> <table> <tr> <td>ACTV</td> <td>active</td> </tr> </table> | INS | in service | MMB | man-made busy | OOS | out of service | SMB | system-made busy | INS | in service | MMB | man-made busy | MMOF | man-made offline (does not apply to RMM or BCU) | SMB | system-made busy | SMOF | system-made offline (does not apply to RMM or BCU) | ENBL | enabled | DSBL | disabled | ACTV | active |
| INS | in service | | | | | | | | | | | | | | | | | | | | | | | | |
| MMB | man-made busy | | | | | | | | | | | | | | | | | | | | | | | | |
| OOS | out of service | | | | | | | | | | | | | | | | | | | | | | | | |
| SMB | system-made busy | | | | | | | | | | | | | | | | | | | | | | | | |
| INS | in service | | | | | | | | | | | | | | | | | | | | | | | | |
| MMB | man-made busy | | | | | | | | | | | | | | | | | | | | | | | | |
| MMOF | man-made offline (does not apply to RMM or BCU) | | | | | | | | | | | | | | | | | | | | | | | | |
| SMB | system-made busy | | | | | | | | | | | | | | | | | | | | | | | | |
| SMOF | system-made offline (does not apply to RMM or BCU) | | | | | | | | | | | | | | | | | | | | | | | | |
| ENBL | enabled | | | | | | | | | | | | | | | | | | | | | | | | |
| DSBL | disabled | | | | | | | | | | | | | | | | | | | | | | | | |
| ACTV | active | | | | | | | | | | | | | | | | | | | | | | | | |

DED commands (Continued)

| Input Command | Description |
|--|--|
| | CPBY call-processing busy |
| | IDLE idle |
| | INAC inactive |
| | NORM normal |
| | SPRD spared |
| | SPNG sparing |
| | STBY standby |
| | FALT may be one of: |
| | CARR carrier fault |
| | OVLN overload |
| | PWR power fault |
| | If FALT = CARR, then one of the following faults is indicated: |
| | BPVM number of bipolar violations exceeded maintenance threshold |
| | BPVO number of bipolar violations exceeded out-of-service limit |
| | FRLM number of frame losses exceeded maintenance threshold |
| | FRLO number of frame losses exceeded out-of-service limit |
| | RALM DCM remote alarm received |
| | SLPM number of slips exceeded maintenance threshold |
| | SLPO number of slips exceeded out-of-service limit |
| | SYNC synchronization |
| | Examples: STAT DCM PE 1 6 2 STAT DCM MMB |
| STAT DS1L (<i>site</i>) RSC/MVIE/HUBE <i>b s p u</i> or STAT DS1L <i>condition</i> or STAT DS1L AT <i>site</i> or STAT DS1L ALL | Gives the status of the specified RSC-S or ESMA P-side DS-1 link(s) on an NTMX81 pack, or the status of the specified Star Hub P-side DS-1 link(s) on an NTTR77 pack. <i>condition</i> may be one of: INS in service MMB man-made busy OOS out of service SMB system-made busy Examples: STAT DS1L SITE RSC 1 1 12 4 STAT MVIE 1 1 12 4 The system response is in the following format: |

DED commands (Continued)

| Input Command | Description |
|---------------|---|
| | DS1L (NTMX81) MVIE/RSC <i>b s p u</i> <i>direct state (indirect state) hardware state</i> |
| | IDT site IDE <i>n(n)</i> <i>direct state (indirect state) hardware state</i> sign/spch FAULTS = <i>fault</i> |
| | EOCi <i>direct state (indirect state) hardware state</i> |
| | TMCi <i>direct state (indirect state) hardware state</i> |
| | Note 1: If the DS-1 link is dedicated to signaling (sign), the status of the EOC and TMC channels also displays. |
| | Note 2: Unlike the LIST DS1L command, the STAT DS1L command shows all associated D trunks. |
| | <i>direct state</i> can be one of: |
| | INS in service |
| | MMB man-made-busy |
| | MMOF man-made-offline |
| | SMB system-made-busy |
| | <i>indirect state</i> is INDR if the parent device is busied. |
| | <i>hardware state</i> can be one of: |
| | DSBL disabled |
| | ENBL enabled |
| | <i>fault</i> conditions include: |
| | AIS all-is-set failure |
| | BPVM number of bipolar violations exceeded maintenance threshold |
| | BPVO number of bipolar violations exceeded out-of-service limit |
| | CRCM number of cyclic redundancy check failures exceeded maintenance threshold |
| | CRCO number of cyclic redundancy check failures exceeded out-of-service limit |
| | FRLM number of frame losses exceeded maintenance threshold |
| | FRLO number of frame losses exceeded out-of-service limit |
| | LALM local alarm |
| | PAKR pack removed; no card in designated slot |
| | RALM remote alarm received |
| | SLPM number of slips exceeded maintenance threshold |
| | SLPO number of slips exceeded out-of-service limit |

DED commands (Continued)

| Input Command | Description | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|-----|------------|-----|---------------|-----|----------------|-----|------------------|-----|------------|-----|---------------|------|------------------|-----|------------------|-----|---------------|------|------------------|------|------------------|------|--------------------------|
| STAT DSI CE <i>b s p</i> or STAT DSI ALL or STAT DSI TRK or STAT DSI PRI or STAT DSI <i>condition</i> | <p>Gives the status of the specified Digital Signal Interface module or of all Digital Signal Interface modules in the switch. In the designated location, <i>p</i> is the position of the rightmost pack of the module. The TRK option lists all DSI modules that have the digital trunking application. The PRI option lists all DSI modules in the DMS-10 that have the PRI application.</p> <p><i>condition</i> may be one of:</p> <table style="margin-left: 2em;"> <tr><td>INS</td><td>in service</td></tr> <tr><td>MMB</td><td>man-made busy</td></tr> <tr><td>OOS</td><td>out of service</td></tr> <tr><td>SMB</td><td>system-made busy</td></tr> </table> <p>Example: STAT DSI CE 1 1 4</p> <p>The system response is in the following format:</p> <p>DSI (NT6X50) <i>site</i> CE <i>b s p</i> <i>direct state</i> (<i>indirect state</i>) <i>application</i></p> <p style="margin-left: 2em;">DSLK <i>link #</i> <i>site</i> CE <i>b s p</i> <i>direct state</i> (<i>indirect state</i>)</p> <p style="margin-left: 4em;">ADCx CE <i>b s p l n</i> SNL <i>site</i> CE/PE <i>b s p</i> <i>direct state</i></p> <p style="margin-left: 4em;">DTRK CE <i>b s p l n</i> <i>direct state</i> (<i>indirect state</i>)</p> <p><i>direct state</i> can be one of:</p> <table style="margin-left: 2em;"> <tr><td>INS</td><td>in service</td></tr> <tr><td>MMB</td><td>man-made-busy</td></tr> <tr><td>MMOF</td><td>man-made-offline</td></tr> <tr><td>SMB</td><td>system-made-busy</td></tr> </table> <p><i>indirect state</i> is INDR if the parent device is busied.</p> <p><i>application</i> is either TRK or PRI</p> <p>The system response may indicate a fault (FALT):</p> <p><i>fault</i> conditions include:</p> <table style="margin-left: 2em;"> <tr><td>PWR</td><td>power failure</td></tr> <tr><td>FMWR</td><td>firmware problem</td></tr> <tr><td>DNLF</td><td>download problem</td></tr> <tr><td>DNLR</td><td>download request failure</td></tr> </table> | INS | in service | MMB | man-made busy | OOS | out of service | SMB | system-made busy | INS | in service | MMB | man-made-busy | MMOF | man-made-offline | SMB | system-made-busy | PWR | power failure | FMWR | firmware problem | DNLF | download problem | DNLR | download request failure |
| INS | in service | | | | | | | | | | | | | | | | | | | | | | | | |
| MMB | man-made busy | | | | | | | | | | | | | | | | | | | | | | | | |
| OOS | out of service | | | | | | | | | | | | | | | | | | | | | | | | |
| SMB | system-made busy | | | | | | | | | | | | | | | | | | | | | | | | |
| INS | in service | | | | | | | | | | | | | | | | | | | | | | | | |
| MMB | man-made-busy | | | | | | | | | | | | | | | | | | | | | | | | |
| MMOF | man-made-offline | | | | | | | | | | | | | | | | | | | | | | | | |
| SMB | system-made-busy | | | | | | | | | | | | | | | | | | | | | | | | |
| PWR | power failure | | | | | | | | | | | | | | | | | | | | | | | | |
| FMWR | firmware problem | | | | | | | | | | | | | | | | | | | | | | | | |
| DNLF | download problem | | | | | | | | | | | | | | | | | | | | | | | | |
| DNLR | download request failure | | | | | | | | | | | | | | | | | | | | | | | | |
| STAT DSLK CE <i>b s p lk</i> or STAT DSLK <i>condition</i> or STAT DSLK ALL or STAT DSLK TRK or STAT DSLK PRI | <p>Gives the status of the specified Digital Signal Interface link or of all Digital Signal Interface links in the switch. In the designated location, <i>p</i> is the position of the rightmost pack of the module. The TRK option lists all DSI links in the DMS-10 that have the digital trunking application. The PRI option lists all DSI links in the DMS-10 that have the PRI application.</p> <p>Example: STAT DSLK CE 1 1 4 1</p> <p><i>condition</i> may be one of:</p> <table style="margin-left: 2em;"> <tr><td>INS</td><td>in service</td></tr> <tr><td>MMB</td><td>man-made busy</td></tr> <tr><td>OOS</td><td>out of service</td></tr> <tr><td>SMB</td><td>system-made busy</td></tr> </table> <p>DSLK <i>link #</i> <i>site</i> CE <i>b s p l</i> <i>direct state</i> (<i>indirect state</i>)</p> | INS | in service | MMB | man-made busy | OOS | out of service | SMB | system-made busy | | | | | | | | | | | | | | | | |
| INS | in service | | | | | | | | | | | | | | | | | | | | | | | | |
| MMB | man-made busy | | | | | | | | | | | | | | | | | | | | | | | | |
| OOS | out of service | | | | | | | | | | | | | | | | | | | | | | | | |
| SMB | system-made busy | | | | | | | | | | | | | | | | | | | | | | | | |

DED commands (Continued)

| Input Command | Description |
|---|---|
| | ADCx CE <i>b s p l n</i> SNL <i>site</i> CE/PE <i>b s p</i> <i>direct state</i> |
| | DTRK CE <i>b s p l n</i> <i>direct state (indirect state)</i> |
| | <i>direct state</i> can be one of: |
| | INS in service |
| | MMB man-made-busy |
| | MMOF man-made-offline |
| | SMB system-made-busy |
| | <i>indirect state</i> is INDR if the parent device is busied. |
| | <i>application</i> is either TRK or PRI |
| | The system response may indicate a fault (FALT): |
| | FALT may be one of: |
| | CARR carrier fault |
| | OVLN overload |
| | NORP no response |
| | DNLF download failure |
| | DNLR download request failure |
| | If FALT = CARR, then one of the following faults is indicated: |
| | BPVM number of bipolar violations exceeded maintenance threshold |
| | BPVO number of bipolar violations exceeded out-of-service limit |
| | FRLM number of frame losses exceeded maintenance threshold |
| | FRLO number of frame losses exceeded out-of-service limit |
| | RALM DCM remote alarm received |
| | SLPM number of slips exceeded maintenance threshold |
| | SLPO number of slips exceeded out-of-service limit |
| | SYNC synchronization |
| | CRCO cyclic redundancy character OOS |
| | CRCM cyclic redundancy character MTC |
| STAT DTRK (<i>site</i>) CE <i>b s p l u</i> (DSI digital trunk) or STAT DTRK (<i>site</i>) RSC <i>b s p l u</i> (RSC-S digital trunk) or STAT DTRK (<i>site</i>) PE <i>b s p u</i> (DCM digital trunk) | Gives the status of specified digital trunks. Example: STAT DTRK PE 1 2 4 3 |

DED commands (Continued)

| Input Command | Description | | | | | | | | | | | | |
|---|--|------|--|------|--|------|--|------|---|------|----------|------|---------|
| STAT EDCH MVIE <i>b s</i> <i>p</i> or STAT EDCH <i>condition</i> or STAT EDCH ALL | <p>Gives the status of specified Enhanced D-Channel Handler (EDCH) pack, of all EDCH packs, or EDCH packs in the specified maintenance state.</p> <p><i>condition</i> may be one of:</p> <table border="0"> <tr> <td>INS</td> <td>in service</td> </tr> <tr> <td>MMB</td> <td>man-made busy</td> </tr> <tr> <td>OOS</td> <td>out of service</td> </tr> <tr> <td>SMB</td> <td>system-made busy</td> </tr> </table> <p>Example: STAT EDCH MVIE 1 1 16</p> | INS | in service | MMB | man-made busy | OOS | out of service | SMB | system-made busy | | | | |
| INS | in service | | | | | | | | | | | | |
| MMB | man-made busy | | | | | | | | | | | | |
| OOS | out of service | | | | | | | | | | | | |
| SMB | system-made busy | | | | | | | | | | | | |
| STAT ESAC <i>site</i> LCE <i>b s</i> or STAT ESAC <i>site</i> RSE <i>b s p</i> or STAT ESAC ALL | <p>Gives the status of the requested ESAC or of all ESACs.</p> <p>Example: STAT ESAC SITE RSE 1 4 3</p> <p>The system response is in the following format: ESAC (MX45/6X45/9Y15/9Y19) <i>site</i> LCE <i>b s</i> / RSE <i>b s p</i> <i>direct state (indirect state) hardware state</i></p> <p><i>direct state</i> can be one of:</p> <table border="0"> <tr> <td>INS</td> <td>in service</td> </tr> <tr> <td>MMB</td> <td>man-made-busy</td> </tr> <tr> <td>MMOF</td> <td>man-made-offline</td> </tr> <tr> <td>SMB</td> <td>system-made-busy</td> </tr> </table> <p><i>indirect state</i> is INDR if the parent device is busied.</p> <p><i>hardware state</i> can be one of:</p> <table border="0"> <tr> <td>DSBL</td> <td>disabled</td> </tr> <tr> <td>ENBL</td> <td>enabled</td> </tr> </table> | INS | in service | MMB | man-made-busy | MMOF | man-made-offline | SMB | system-made-busy | DSBL | disabled | ENBL | enabled |
| INS | in service | | | | | | | | | | | | |
| MMB | man-made-busy | | | | | | | | | | | | |
| MMOF | man-made-offline | | | | | | | | | | | | |
| SMB | system-made-busy | | | | | | | | | | | | |
| DSBL | disabled | | | | | | | | | | | | |
| ENBL | enabled | | | | | | | | | | | | |
| STAT ESMA MVIE <i>b s (unit)</i> or STAT ESMA ALL | <p>Gives the status of the requested ESMA or of all ESMA's.</p> <p>Example: STAT ESMA MVIE 1 1 CSID</p> <p><i>unit</i> may be one of:</p> <table border="0"> <tr> <td>NODE</td> <td>returns the unit status and fault list, and the status of the RDTs</td> </tr> <tr> <td>CSID</td> <td>returns the unit status and fault list, and the status of the C-side ports</td> </tr> <tr> <td>PSID</td> <td>returns the unit status and fault list, and the status of the P-side ports</td> </tr> <tr> <td>CSPS</td> <td>returns the unit status and fault list, and the status of the C-side and P-side ports</td> </tr> </table> <p>The system response is in the following format:</p> | NODE | returns the unit status and fault list, and the status of the RDTs | CSID | returns the unit status and fault list, and the status of the C-side ports | PSID | returns the unit status and fault list, and the status of the P-side ports | CSPS | returns the unit status and fault list, and the status of the C-side and P-side ports | | | | |
| NODE | returns the unit status and fault list, and the status of the RDTs | | | | | | | | | | | | |
| CSID | returns the unit status and fault list, and the status of the C-side ports | | | | | | | | | | | | |
| PSID | returns the unit status and fault list, and the status of the P-side ports | | | | | | | | | | | | |
| CSPS | returns the unit status and fault list, and the status of the C-side and P-side ports | | | | | | | | | | | | |

DED commands (Continued)

| Input Command | Description |
|----------------------|--|
| | ESMC (NTAX74) MVIE <i>b s p</i> <i>direct state (indirect state) hardware state activity state</i> FLTS = <i>fault</i> |
| | PELP (NT4T04/NT8T04) CE <i>b s p u</i> <i>direct state (indirect state) hardware state activity state</i> |
| | DS1L (NTMX81) MVIE <i>b s p u</i> <i>direct state (indirect state) hardware state activity state</i> |
| | IDT site IDE <i>n(n)</i> <i>direct state (indirect state) hardware state</i> |
| | EDCH (NTBX02BA) MVIE <i>b s p</i> <i>direct state (indirect state) hardware state activity state</i> |
| | <i>direct state</i> can be one of: |
| | INS in service |
| | MMB man-made-busy |
| | SMB system-made-busy |
| | <i>indirect state</i> is INDR if the parent device is busied. |
| | <i>hardware state</i> can be one of: |
| | DSBL disabled |
| | ENBL enabled |
| | <i>activity state</i> can be one of: |
| | ACTV active |
| | DXFR data transfer |
| | INAC inactive |
| | STBY standby |
| | <i>fault</i> can be one of: |
| | CMRF CMR pack failure |
| | CMRL CMR pack has not been loaded |
| | UTR0 UTR pack 0 failure |
| | UTR1 UTR pack 1 failure |
| | IMC Inter-module connection failure |
| | EISP EISP pack failure |
| | EXT Extension |

DED commands (Continued)

| Input Command | Description |
|----------------------------|--|
| STAT ESMC | Gives the status of the requested ESMC or of all ESMCs. |
| MVIE <i>b s p</i> | Example: STAT ESMC MVIE 1 1 3 |
| or | |
| STAT ESMC <i>condition</i> | The system response is in the following format: |
| or | |
| STAT ESMC ALL | ESMC (NTAX74) MVIE <i>b s p</i> <i>direct state (indirect state) hardware state activity state</i> FLTS = <i>fault</i> PELP (NT4T04) CE <i>b s p u</i> <i>direct state (indirect state) hardware state activity state</i> |
| | <i>condition</i> can be one of: |
| | INS in service |
| | MMB man-made-busy |
| | OOS out-of-service |
| | SMB system-made-busy |
| | <i>direct state</i> can be one of: |
| | INS in service |
| | MMB man-made-busy |
| | SMB system-made-busy |
| | <i>indirect state</i> is INDR if the parent device is busied. |
| | <i>hardware state</i> can be one of: |
| | DSBL disabled |
| | ENBL enabled |
| | <i>activity state</i> can be one of: |
| | ACTV active |
| | DXFR data transfer |
| | INAC inactive |
| | STBY standby |
| | <i>fault</i> can be one of: |
| | CMRF CMR pack failure |
| | CMRL CMR pack has not been loaded |
| | UTR0 UTR pack 0 failure |
| | UTR1 UTR pack 1 failure |
| | IMC Inter-module connection failure |
| | EISP EISP pack failure |
| | EXT Extension |

DED commands (Continued)

| Input Command | Description | | | | | | | | | | | | | | | | | | | | |
|--|---|-----|------------|-----|---------------|-----|----------------|-----|------------|-----|---------------|------|----------|------|---------|--------|-----------------------|---------|-------------------|---------|------------------------|
| STAT GW GWE <i>gw#</i> (FULL/GWDN) or STAT GW ALL or STAT GW <i>condition</i> | <p>Gives the status of the specified Gateway (GW) or all GWs. The FULL option lists all GW lines defined for the specified GW. The GWDN option lists the maintenance state, DN, and registration status of all GW lines defined for the specified GW. (FULL and GWDN options are not valid with the ALL option.)</p> <p><i>condition</i> may be one of:</p> <table> <tr> <td>INS</td> <td>in service</td> </tr> <tr> <td>MMB</td> <td>man-made busy</td> </tr> <tr> <td>OOS</td> <td>out of service</td> </tr> </table> <p>Examples: STAT GW GWE 1</p> <p>The system response is in the following format:</p> <p>GW GWE <i>gw# direct state (indirect state) hardware state</i></p> <p>GWL GWE <i>gw# ln# direct state (indirect state) hardware state registration state</i></p> <p>DN 528 6031 **NOT REGISTERED** or **OUT OF SERVICE** or GAVE ADDRESS: 172.16.4.29 5060 REAL ADDRESS: 47.143.136.120 25562 RENEWS EVERY: 120 SECONDS</p> <p>.</p> <p>. (Repeated for each defined GWL with the FULL or GWDN option)</p> <p>.</p> <p><i>direct state</i> may be one of:</p> <table> <tr> <td>INS</td> <td>in service</td> </tr> <tr> <td>MMB</td> <td>man-made busy</td> </tr> </table> <p><i>indirect state</i> is INDR for the GW if no PGICs are inservice and INDR for the GWL if the Gateway is out of service.</p> <p><i>hardware state</i> may be one of:</p> <table> <tr> <td>DSBL</td> <td>disabled</td> </tr> <tr> <td>ENBL</td> <td>enabled</td> </tr> </table> <p><i>registration state</i> for GWL may be one of:</p> <table> <tr> <td>REG=NO</td> <td>GWL DN not registered</td> </tr> <tr> <td>REG=YES</td> <td>GWL DN registered</td> </tr> <tr> <td>DN UNAS</td> <td>DN not assigned to GWL</td> </tr> </table> | INS | in service | MMB | man-made busy | OOS | out of service | INS | in service | MMB | man-made busy | DSBL | disabled | ENBL | enabled | REG=NO | GWL DN not registered | REG=YES | GWL DN registered | DN UNAS | DN not assigned to GWL |
| INS | in service | | | | | | | | | | | | | | | | | | | | |
| MMB | man-made busy | | | | | | | | | | | | | | | | | | | | |
| OOS | out of service | | | | | | | | | | | | | | | | | | | | |
| INS | in service | | | | | | | | | | | | | | | | | | | | |
| MMB | man-made busy | | | | | | | | | | | | | | | | | | | | |
| DSBL | disabled | | | | | | | | | | | | | | | | | | | | |
| ENBL | enabled | | | | | | | | | | | | | | | | | | | | |
| REG=NO | GWL DN not registered | | | | | | | | | | | | | | | | | | | | |
| REG=YES | GWL DN registered | | | | | | | | | | | | | | | | | | | | |
| DN UNAS | DN not assigned to GWL | | | | | | | | | | | | | | | | | | | | |
| STAT GWL GWE <i>gw# ln#</i> or STAT GWL ALL or STAT GWL <i>condition</i> | <p>Gives the status of the specified Gateway line (GWL) or all GWLs.</p> <p><i>condition</i> may be one of:</p> <table> <tr> <td>INS</td> <td>in service</td> </tr> <tr> <td>MMB</td> <td>man-made busy</td> </tr> <tr> <td>OOS</td> <td>out of service</td> </tr> </table> <p>Examples: STAT GWL GWE 1 1</p> <p>The system response is in the following format:</p> <p>GWL GWE <i>gw# ln# direct state (indirect state) hardware state registration state</i></p> | INS | in service | MMB | man-made busy | OOS | out of service | | | | | | | | | | | | | | |
| INS | in service | | | | | | | | | | | | | | | | | | | | |
| MMB | man-made busy | | | | | | | | | | | | | | | | | | | | |
| OOS | out of service | | | | | | | | | | | | | | | | | | | | |

DED commands (Continued)

| Input Command | Description |
|--|---|
| | <p><i>direct state</i> may be one of: INS in service MMB man-made busy</p> <p><i>indirect state</i> is INDR if the Gateway is out of service.</p> <p><i>call processing state</i> may be one of: IDLE idle CPBY call processing busy</p> <p><i>registration state</i> may be one of: REG=NO GWL DN not registered REG=YES GWL DN registered DN UNAS DN not assigned to GWL</p> |
| STAT HUB <i>site</i> HUBE <i>b s</i> (CSID) (PSID) or STAT HUB <i>condition</i> or STAT HUB ALL (PSID) | <p>Gives the status of both control units of a Star Hub or of all Star Hubs. The CSID option asks for the status of the Star Hub's C-side. The PSID option asks for the status of the Star Hub's P-side.</p> <p><i>condition</i> may be one of: INS in service MMB man-made busy OOS out of service SMB system-made busy</p> |
| | <p>Examples: STAT HUB SHUB HUBE 1 3</p> <p>The system response is in the following format: HUBC (NTTR77) <i>site b s direct state (indirect state) hardware state activity state</i> SRLK (NT4T09) <i>site PE b s p u direct state (indirect state) hardware state activity state</i> FLTS = fault PELP (NT4T04/NT8T04) CE <i>b s p l direct state (indirect state) hardware state activity state</i> UMP (NTTR73) <i>site b s p direct state (indirect state) hardware state activity state</i> LRNG (NTTR60) <i>site b s p direct state (indirect state) hardware state activity state</i></p> <p>or HUBC (NTMY77) <i>site b s direct state (indirect state) hardware state activity state</i> DS1L (NTMX87) <i>site HUBE b s p u direct state (indirect state) hardware state activity state</i> FLTS = fault</p> <p><i>direct state</i> can be one of: INS in service MMB man-made busy</p> |

DED commands (Continued)

| Input Command | Description |
|--|---|
| | MMOF man-made offline (does not apply to RMM or BCU) |
| | SMB system-made busy |
| | SMOF system-made offline (does not apply to RMM or BCU) |
| | <i>indirect state</i> is INDR if the parent device is out of service |
| | <i>hardware state</i> can be one of: |
| | ENBL enabled |
| | DSBL disabled |
| | <i>activity state</i> can be one of: |
| | ACTV active |
| | CPBY call-processing busy |
| | IDLE idle |
| | INAC inactive |
| | NORM normal |
| | SPRD spared |
| | SPNG sparing |
| | STBY standby |
| | <i>fault</i> refers to SRLK fault and can be one of: |
| | BPVO Number of bipolar violations exceeded out-of-service threshold (set in Overlay NET [SRI]) |
| | BTST Test fault found during background run of Overlay DED |
| | FRLO Frame losses exceeded out-of-service threshold (set in Overlay NET [SRI]) |
| | RALM Remote alarm received |
| | RBPV Remote bipolar violations exceeded 10^{-3} violations per bit |
| | RCLK Remote clock fault |
| | SLPO Number of frame slips exceeded out-of-service threshold (set in Overlay NET [SRI]) |
| | SPWR SRI shelf power failure |
| | SYNC Transient synchronization fault (if the SRLK is INS, then SYNC will not be output as a fault) |
| STAT HUBC <i>site</i> HUBE <i>b s p</i> (CSID) or STAT HUBC ALL | Gives the status of the specified control unit of a Star Hub or of all Star Hubs. The CSID option asks for the status of the Star Hub's C-side. Examples: STAT HUB SHUB 1 3 The system response is in the same format as the STAT HUB command. |

DED commands (Continued)

| Input Command | Description |
|--|---|
| STAT IDC (<i>site</i>) LCE/RSC/RSE <i>b s lsg</i> or STAT IDC <i>condition</i> or STAT IDC ALL | Gives the status of the ISDN Controller pack by location or condition, or gives the status of all ISDN Controller packs. <i>condition</i> may be one of: INS in service MMB man-made busy OOS out of service SMB system-made busy |

Examples: STAT IDC LCE 1 1 8
STAT IDC OOS

The system response is in the following format:

IDC (NT6X54) *site* LCE *b s lsg* *direct state* (*indirect state*) *hardware state*
DSMX *status*

direct state can be one of:

| | |
|-----|------------------|
| INS | in service |
| MMB | man-made busy |
| SMB | system-made busy |

indirect state is INDR if the parent device is busied

hardware state can be one of:

| | |
|------|----------|
| DSBL | disabled |
| ENBL | enabled |

DMSX status can be one of:

| | |
|------|--|
| NONE | no active DMSX channels |
| DMS0 | DMSX channel active for LCM0 only |
| DMS1 | DMSX channel active for LCM1 only |
| BOTH | DMSX channels active for LCM0 and LCM1 |

DED commands (Continued)

| Input Command | Description |
|--|---|
| STAT IDT <i>site</i> IDE <i>b</i> or STAT IDT <i>condition</i> or STAT IDT ALL | Gives the status of the specified Integrated Digital Terminal (IDT) or of all IDTs. <i>condition</i> may be one of: INS in service MMB man-made busy OOS out of service SMB system-made busy |

Example: STAT IDT SITE IDE 1

The system response is in the following format:

IDT *site* IDE *b* *direct state* (*indirect state*) *hardware state* *fault*
 DS1L (NTMX81) MVIE *b s p u* *direct state* (*indirect state*)
hardware state sign/spch
 EOC0 *direct state* (*indirect state*)
 TMC0 *direct state* (*indirect state*)
 DS1L (NTMX81) MVIE *b s p u* *direct state* (*indirect state*)
hardware state sign/spch
 EOC1 *direct state* (*indirect state*)
 TMC1 *direct state* (*indirect state*)

Note: If the DS-1 link is dedicated to signaling (*sign*), the status of the EOC and TMC channels also displays.

direct state can be one of:

INS in service
MMB man-made-busy

indirect state is INDR if the parent device is busied.

hardware state can be one of:

DSBL disabled
ENBL enabled

fault can be one of:

EOCF EOC channel out-of-service
MCCF maintenance control failure

DED commands (Continued)

| Input Command | Description | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|-----|------------|-----|---------------|-----|----------------|-----|------------------|-----|------------|-----|---------------|------|----------|------|---------|------|------|------|----------------------|------|-------------------------|-----|---------------|-------|-----------------|-------|------------------------|--------|-----------------------|--------|----------------------------|
| STAT IDTL <i>site</i> IDE <i>b n</i> or STAT IDTL <i>condition</i> or STAT IDTL ALL | <p>Gives the status of the specified Integrated Digital Terminal line (IDTL). <i>condition</i> may be one of:</p> <table border="0"> <tr> <td>INS</td> <td>in service</td> </tr> <tr> <td>MMB</td> <td>man-made busy</td> </tr> <tr> <td>OOS</td> <td>out of service</td> </tr> <tr> <td>SMB</td> <td>system-made busy</td> </tr> </table> <p>Example: STAT IDTL SITE IDE 1 1</p> <p>The system response is in the following format:</p> <p>IDTL <i>site (sub-site)</i> IDE <i>b n</i> <i>direct state (indirect state) hardware state cp state fault</i></p> <p>or</p> <p>REJECTED: <i>reason</i></p> <p><i>direct state</i> can be one of:</p> <table border="0"> <tr> <td>INS</td> <td>in service</td> </tr> <tr> <td>MMB</td> <td>man-made-busy</td> </tr> </table> <p><i>indirect state</i> is INDR if the parent device is busied.</p> <p><i>hardware state</i> can be one of:</p> <table border="0"> <tr> <td>DSBL</td> <td>disabled</td> </tr> <tr> <td>ENBL</td> <td>enabled</td> </tr> </table> <p><i>cp state</i> can be one of:</p> <table border="0"> <tr> <td>IDLE</td> <td>idle</td> </tr> <tr> <td>CPBY</td> <td>call-processing busy</td> </tr> </table> <p><i>fault</i> can be one of:</p> <table border="0"> <tr> <td>STDT</td> <td>static data not updated</td> </tr> <tr> <td>EOC</td> <td>EOC is absent</td> </tr> </table> <p><i>reason</i> can be one of:</p> <table border="0"> <tr> <td>PARAM</td> <td>wrong parameter</td> </tr> <tr> <td>RANGE</td> <td>parameter out of range</td> </tr> <tr> <td>SYNTAX</td> <td>faulty command syntax</td> </tr> <tr> <td>UNEQUP</td> <td>device not defined in data</td> </tr> </table> | INS | in service | MMB | man-made busy | OOS | out of service | SMB | system-made busy | INS | in service | MMB | man-made-busy | DSBL | disabled | ENBL | enabled | IDLE | idle | CPBY | call-processing busy | STDT | static data not updated | EOC | EOC is absent | PARAM | wrong parameter | RANGE | parameter out of range | SYNTAX | faulty command syntax | UNEQUP | device not defined in data |
| INS | in service | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MMB | man-made busy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OOS | out of service | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SMB | system-made busy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| INS | in service | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MMB | man-made-busy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DSBL | disabled | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENBL | enabled | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IDLE | idle | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CPBY | call-processing busy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STDT | static data not updated | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EOC | EOC is absent | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PARAM | wrong parameter | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RANGE | parameter out of range | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SYNTAX | faulty command syntax | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| UNEQUP | device not defined in data | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

DED commands (Continued)

| Input Command | Description | | | | | | | | | | | | |
|--|--|-----|------------|-----|---------------|------|------------------|-----|----------------|-----|------------------|------|---------------------|
| STAT IFPK CE <i>b s p</i> or STAT IFPK <i>condition</i> or STAT IFPK ALL or STAT IFPK ALL FULL | <p>Gives the status of the Network Interface pack (NT8T04) by location or condition, or gives the status of all DS-30A Interface packs. If the ALL option is entered, the status of all NT8T04 packs is given. If the FULL option is entered when a particular NT8T04 pack is specified, the report also includes the status of the two on-board Global Tone Services Banks (GTSB), the status of the four associated DS256 ports, and the associated peripheral loops (PELP). If preceded by the ALL option, the FULL option provides the FULL status for all NT8T04 packs.</p> <p><i>condition</i> may be one of:</p> <table> <tr> <td>INS</td> <td>in service</td> </tr> <tr> <td>MMB</td> <td>man-made busy</td> </tr> <tr> <td>MMOF</td> <td>man-made offline</td> </tr> <tr> <td>OOS</td> <td>out of service</td> </tr> <tr> <td>SMB</td> <td>system-made busy</td> </tr> <tr> <td>SMOF</td> <td>system-made offline</td> </tr> </table> <p>Examples: STAT IFPK CE 3 2 16 STAT IFPK OOS</p> | INS | in service | MMB | man-made busy | MMOF | man-made offline | OOS | out of service | SMB | system-made busy | SMOF | system-made offline |
| INS | in service | | | | | | | | | | | | |
| MMB | man-made busy | | | | | | | | | | | | |
| MMOF | man-made offline | | | | | | | | | | | | |
| OOS | out of service | | | | | | | | | | | | |
| SMB | system-made busy | | | | | | | | | | | | |
| SMOF | system-made offline | | | | | | | | | | | | |
| STAT ISHF CE <i>b s</i> or STAT ISHF CE <i>b s</i> FULL or STAT ISHF ALL or STAT ISHF FULL | <p>If the switch is configured with the DMS-10 Classic Network, gives the status of the interface packs (Conference, DS-30A Interface, MLI, TDS) on one or all network shelves. If the switch is configured with the DMS-10EN Network, gives the status of all NT8T04 Network Interface packs on one or all CNI shelves. If the FULL option is entered when a particular shelf is specified, the report also includes, for each NT8T04 pack, the status of the two on-board Global Tone Services Banks (GTSB), the status of the four associated DS256 ports, and the associated peripheral loops (PELP). If preceded by the ALL option, the FULL option provides the FULL status for all NT8T04 packs on all CNI shelves.</p> <p>Example: STAT ISHF CE 3 2</p> | | | | | | | | | | | | |
| STAT LCM (<i>site</i>) LCE/RSC <i>b s</i> or STAT LCM ALL | <p>Gives the status of both control units (LCMC) of one or all Line Concentrating Modules (LCMs). The "s" may be either shelf of the LCM.</p> <p><i>Note: The OPM or OPAC bay numbers may be any number from 1 through 32; however, only two bays may be assigned per site identification mnemonic and the numbers must be in consecutive order. For example, 3 and 4 are valid bay numbers, but 3 and 5 are not valid. The left bay contains LCA 1, LCA 0, Host Interface Equipment, and an Environmental Control Unit. The right bay contains the Battery Control Unit, Rectifiers 1 and 0, Frame Supervisory Panel, Remote Maintenance Module, and an Environmental Control Unit.</i></p> <p>Examples: STAT LCM LCE 2 2 STAT LCM CAPK LCE 1 1</p> <p>The system response is in the following format: LCMC (NT6X51) <i>site</i> LCE/RSC <i>b s direct state (indirect state)</i> <i>hardware state activity state</i></p> | | | | | | | | | | | | |

DED commands (Continued)

| Input Command | Description | | | | | | | | | | | | | | | | |
|---------------|--|-----|------------|-----|---------------|------|---|-----|------------------|------|--|------|---------|------|----------|------|--------|
| | <p>SRLK (NT4T09) <i>site PE b s p u direct state (indirect state) hardware state activity state</i></p> <p style="padding-left: 40px;">FLTS = fault</p> <p style="padding-left: 80px;">PELP (NT4T04/NT8T04) CE <i>b s p l direct state (indirect state) hardware state activity state</i></p> <p>SRLK (NT4T09) <i>site PE b s p u direct state (indirect state) hardware state activity state</i></p> <p style="padding-left: 40px;">FLTS = fault</p> <p style="padding-left: 80px;">PELP (NT4T04/NT8T04) CE <i>b s p l direct state (indirect state) hardware state activity state</i></p> <p>LRNG (NT6X60) <i>site LCE b u direct state hardware state</i></p> <p>RMM (NT6X74) <i>site LCE/RSC b s direct state (indirect state) hardware state</i></p> <p>BCU <i>site LCE b direct state (indirect state) hardware state OPM battery state (BCU fault)</i></p> <p>The SRLK and FLTS lines are output for an RLCM, OPM, or OPAC only. The RMM line is output if the LCM controls communication to a Remote Maintenance Module (RMM) or the LCM is connected to an RMM. The BCU lines are output if the LCM is an Outside Plant Module (OPM) or Outside Plant Access Cabinet (OPAC).</p> <p><i>direct state</i> can be one of:</p> <table border="0" style="margin-left: 40px;"> <tr><td>INS</td><td>in service</td></tr> <tr><td>MMB</td><td>man-made busy</td></tr> <tr><td>MMOF</td><td>man-made offline (does not apply to RMM or BCU)</td></tr> <tr><td>SMB</td><td>system-made busy</td></tr> <tr><td>SMOF</td><td>system-made offline (does not apply to RMM or BCU)</td></tr> </table> <p><i>indirect state</i> is INDR if the parent device is out of service</p> <p><i>Note:</i> <i>The LCMC will be in an INDR state when the signaling SRI link (SRLK) associated with that LCMC is in an out-of-service state or the link is in the process of being returned to service. When an SRLK is automatically returned to service, the status of an LCMC can show the link as in-service, but the LCMC will be in an INDR state. The INDR indication will remain for up to 2 min.</i></p> <p><i>hardware state</i> can be one of:</p> <table border="0" style="margin-left: 40px;"> <tr><td>ENBL</td><td>enabled</td></tr> <tr><td>DSBL</td><td>disabled</td></tr> </table> <p><i>activity state</i> can be one of:</p> <table border="0" style="margin-left: 40px;"> <tr><td>ACTV</td><td>active</td></tr> </table> | INS | in service | MMB | man-made busy | MMOF | man-made offline (does not apply to RMM or BCU) | SMB | system-made busy | SMOF | system-made offline (does not apply to RMM or BCU) | ENBL | enabled | DSBL | disabled | ACTV | active |
| INS | in service | | | | | | | | | | | | | | | | |
| MMB | man-made busy | | | | | | | | | | | | | | | | |
| MMOF | man-made offline (does not apply to RMM or BCU) | | | | | | | | | | | | | | | | |
| SMB | system-made busy | | | | | | | | | | | | | | | | |
| SMOF | system-made offline (does not apply to RMM or BCU) | | | | | | | | | | | | | | | | |
| ENBL | enabled | | | | | | | | | | | | | | | | |
| DSBL | disabled | | | | | | | | | | | | | | | | |
| ACTV | active | | | | | | | | | | | | | | | | |

DED commands (Continued)

| Input Command | Description |
|--|---|
| CPBY | call-processing busy |
| IDLE | idle |
| INAC | inactive |
| NORM | normal |
| SPRD | spared |
| SPNG | sparing |
| STBY | standby |
| <i>OPM battery state</i> can be one of: | |
| ACFM | ac failure mode |
| NBRM | normal battery rotation mode |
| PACM | post ac failure mode |
| <i>BCU fault</i> can be one of: | |
| ACF | ac failure alarm |
| FALM | fan failure alarm |
| FDR | front door alarm |
| FSP | frame supervisory panel alarm |
| HTMP | high temperature alarm |
| LTMP | low temperature alarm |
| SDR | side door alarm |
| <i>fault</i> refers to SRLK fault and can be one of: | |
| BPVO | Number of bipolar violations exceeded out-of-service threshold (set in Overlay NET [SRI]) |
| BTST | Test fault found during background run of Overlay DED |
| FRLO | Frame losses exceeded out-of-service threshold (set in Overlay NET [SRI]) |
| RALM | Remote alarm received |
| RBPV | Remote bipolar violations exceeded 10^{-3} violations per bit |
| RCLK | Remote clock fault |
| SLPO | Number of frame slips exceeded out-of-service threshold (set in Overlay NET [SRI]) |
| SPWR | SRI shelf power failure. |
| SYNC | Transient synchronization fault (if the SRLK is INS, then SYNC will not be output as a fault) |

DED commands (Continued)

| Input Command | Description |
|---|--|
| STAT LCMC (site) LCE/RSC b s or STAT LCMC condition or STAT LCMC ALL | Gives the status of the specified LCM control unit (LCMC) and all loops connected to it by location or condition, or gives the status of all LCMCs. The LCMC consists of packs NT6X51 and NT6X52. condition may be one of: INS in service MMB man-made busy OOS out of service SMB system-made busy |

Note: The OPM or OPAC bay numbers may be any number from 1 through 32; however, only two bays may be assigned per site identification mnemonic and the numbers must be in consecutive order. For example, 3 and 4 are valid bay numbers, but 3 and 5 are not valid. The left bay contains LCA 1, LCA 0, Host Interface Equipment, and an Environmental Control Unit. The right bay contains the Battery Control Unit, Rectifiers 1 and 0, Frame Supervisory Panel, Remote Maintenance Module, and an Environmental Control Unit.

Examples: STAT LCMC LCE 2 3
STAT LCMC MMB

The system response is in the same format as the STAT LCM command.

STAT LPK (site) LCE/
RSC/RSE b s lsg l Gives the status of the designated line card by location.

Note: The OPM or OPAC bay numbers may be any number from 1 through 32; however, only two bays may be assigned per site identification mnemonic and the numbers must be in consecutive order. For example, 3 and 4 are valid bay numbers, but 3 and 5 are not valid. The left bay contains LCA 1, LCA 0, Host Interface Equipment, and an Environmental Control Unit. The right bay contains the Battery Control Unit, Rectifiers 1 and 0, Frame Supervisory Panel, Remote Maintenance Module, and an Environmental Control Unit.

Example: STAT LPK LCE 2 3 7 12
STAT LPK SITE RSC 2 3 7 12

The system response is in the following format:

LPK (pack code) site (sub-site) LCE/RSC b s lsg l direct state (indirect state)
hardware state activity state protocol

FLTS = fault

BPVO = XXX NO TCM

Note: This line of output applies only to the NT6X71AB/BA Data Line Card.

direct state can be one of:

DED commands (Continued)

| Input Command | Description |
|---------------|--|
| INS | in service |
| MMB | man-made busy |
| MMOF | man-made offline (does not apply to RMM or BCU) |
| SMB | system-made busy |
| SMOF | system-made offline (does not apply to RMM or BCU) |

indirect state is INDR if the parent device is out of service

Note: The LCMC will be in an INDR state when the signaling SRI link (SRLK) associated with that LCMC is in an out-of-service state or the link is in the process of being returned to service. When an SRLK is automatically returned to service, the status of an LCMC can show the link as in-service, but the LCMC will be in an INDR state. The INDR indication will remain for up to 2 min.

hardware state can be one of:

| | |
|------|----------|
| ENBL | enabled |
| DSBL | disabled |

activity state can be one of:

| | |
|------|----------------------|
| ACTV | active |
| CPBY | call-processing busy |
| IDLE | idle |
| INAC | inactive |
| NORM | normal |
| SPRD | spared |
| SPNG | sparing |
| STBY | standby |

OPM battery state can be one of:

| | |
|------|------------------------------|
| ACFM | ac failure mode |
| NBRM | normal battery rotation mode |
| PACM | post ac failure mode |

BCU fault can be one of:

| | |
|------|-------------------------------|
| ACF | ac failure alarm |
| FALM | fan failure alarm |
| FDR | front door alarm |
| FSP | frame supervisory panel alarm |
| HTMP | high temperature alarm |
| LTMP | low temperature alarm |
| SDR | side door alarm |

fault refers to SRLK fault and can be one of:

DED commands (Continued)

| Input Command | Description |
|---------------|---|
| | BPVO Number of bipolar violations exceeded out-of-service threshold (set in Overlay NET [SRI]) |
| | BTST Test fault found during background run of Overlay DED |
| | FRLO Frame losses exceeded out-of-service threshold (set in Overlay NET [SRI]) |
| | RALM Remote alarm received |
| | RBPV Remote bipolar violations exceeded 10 ⁻³ violations per bit |
| | RCLK Remote clock fault |
| | SLPO Number of frame slips exceeded out-of-service threshold (set in Overlay NET [SRI]) |
| | SPWR SRI shelf power failure. |
| | SYNC Transient synchronization fault (if the SRLK is INS, then SYNC will not be output as a fault) |

protocol can be TLNK if T-link protocol is used in a DU to DU connection (see the Datapath Line Card feature description in NTP 297-3601-105, *Features and Services Description*)

A fault (FLTS) condition will cause one or more of the following codes to be displayed:

- OVLD Overload
- HAZD Hazard (does not display for the NT6X71)

BPVO is the number of times the Bipolar Violation threshold was exceeded since the last reset; the *BPVO* condition is cleared after hardware audit or after an RTS command is issued. *NO TCM* indicates no Time Compression Multiplexing synchronization. This line prints only for NT6X71AB/BA Data Line Cards.

| | |
|--|--|
| STAT LRNG (<i>site</i>) LCE/RSC/RSE <i>b u</i> or STAT LRNG <i>condition</i> or STAT LRNG ALL | Gives the status of the Ringing Generator pack by location or condition, or gives the status of all Ringing Generators at both the base DMS-10 switch and at the remote sites. <i>condition</i> may be one of: INS in service MMB man-made busy OOS out of service SMB system-made busy |
|--|--|

The “*u*” is either 1 or 2:

LRNG at the base DMS-10 switch:

- u* = 1 for the left position in the Frame Supervisory Panel (FSP)
- u* = 2 for the right position.

DED commands (Continued)

| Input Command | Description |
|---------------|---|
| | <p>LRNG at the remote:</p> <p>$u = 1$ for the LRNG in position 1 of the HIE shelf</p> <p>$u = 2$ for the LRNG in position 5 of the HIE shelf.</p> <p>For an RSLE shelf or an RSLM Type B shelf:</p> <p>$u = 1$ for the left Frame Supervisory Panel (FSP) position</p> <p>$u = 2$ for the right FSP position.</p> <p>For an RSLM Type A shelf:</p> <p>$u = 1$ for "shelf 1"</p> <p>Note 1: This command is not applicable for Virtual Remote Line Concentrating Modules (VLCM).</p> <p>Note 2: The OPM or OPAC bay numbers may be any number from 1 through 32; however, only two bays may be assigned per site identification mnemonic and the numbers must be in consecutive order. For example, 3 and 4 are valid bay numbers, but 3 and 5 are not valid. The left bay contains LCA 1, LCA 0, Host Interface Equipment, and an Environmental Control Unit. The right bay contains the Battery Control Unit, Rectifiers 1 and 0, Frame Supervisory Panel, Remote Maintenance Module, and an Environmental Control Unit.</p> <p>Examples: STAT LRNG LCE 2 2 STAT LRNG SMB STAT LRNG CAPL LCE 1 2</p> |

DED commands (Continued)

| Input Command | Description |
|---|--|
| STAT LSG (<i>site</i>) LCE/RSC/RSE <i>b s lsg</i> (NOLN) or STAT LSG <i>condition</i> (NOLN) or STAT LSG ALL (NOLN) | Gives the status of all lines in the designated line subgroup (LSG) by location or condition, or gives the status of all LSGs at the base DMS-10 switch and at the remote site(s). <i>condition</i> may be one of: INS in service MMB man-made busy OOS out of service SMB system-made busy |

Note: The OPM or OPAC bay numbers may be any number from 1 through 32; however, only two bays may be assigned per site identification mnemonic and the numbers must be in consecutive order. For example, 3 and 4 are valid bay numbers, but 3 and 5 are not valid. The left bay contains LCA 1, LCA 0, Host Interface Equipment, and an Environmental Control Unit. The right bay contains the Battery Control Unit, Rectifiers 1 and 0, Frame Supervisory Panel, Remote Maintenance Module, and an Environmental Control Unit.

The NOLN option gives the status of LSGs without giving the status of all lines in that LSG.

Examples: STAT LSG LCE 2 3 5
STAT LSG MMB
STAT LSG LCE 2 3 NOLN

The system response is in the following form:

LSG (NT6X54) *site* LCE/RSC/RSE *b s lsg direct state (indirect state) hardware state activity state*

LPK (*pack code*) *site (sub-site)* LCE/RSC/RSE *b s lsg / direct state (indirect state)*

LPK (*pack code*) *site (sub-site)* LCE/RSC/RSE *b s lsg / direct state (indirect state)*

direct state can be one of:

- INS in service
- MMB man-made busy
- MMOF man-made offline (does not apply to RMM or BCU)
- SMB system-made busy
- SMOF system-made offline (does not apply to RMM or BCU)

DED commands (Continued)

| Input Command | Description |
|---------------|---|
| | <i>indirect state</i> is INDR if the parent device is out of service |
| | <i>Note:</i> The LCMC will be in an INDR state when the signaling SRI link (SRLK) associated with that LCMC is in an out-of-service state or the link is in the process of being returned to service. When an SRLK is automatically returned to service, the status of an LCMC can show the link as in-service, but the LCMC will be in an INDR state. The INDR indication will remain for up to 2 min. |
| | <i>hardware state</i> can be one of: |
| | ENBL enabled |
| | DSBL disabled |
| | <i>activity state</i> can be one of: |
| | ACTV active |
| | CPBY call-processing busy |
| | IDLE idle |
| | INAC inactive |
| | NORM normal |
| | SPRD spared |
| | SPNG sparing |
| | STBY standby |
| | <i>OPM battery state</i> can be one of: |
| | ACFM ac failure mode |
| | NBRM normal battery rotation mode |
| | PACM post ac failure mode |
| | <i>BCU fault</i> can be one of: |
| | ACF ac failure alarm |
| | FALM fan failure alarm |
| | FDR front door alarm |
| | FSP frame supervisory panel alarm |
| | HTMP high temperature alarm |
| | LTMP low temperature alarm |
| | SDR side door alarm |
| | <i>fault</i> refers to SRLK fault and can be one of: |
| | BPVO Number of bipolar violations exceeded out-of-service threshold (set in Overlay NET [SRI]) |
| | BTST Test fault found during background run of Overlay DED |

DED commands (Continued)

| Input Command | Description |
|---|--|
| | FRLO Frame losses exceeded out-of-service threshold (set in Overlay NET [SRI]) |
| | RALM Remote alarm received |
| | RBPV Remote bipolar violations exceeded 10 ⁻³ violations per bit |
| | RCLK Remote clock fault |
| | SLPO Number of frame slips exceeded out-of-service threshold (set in Overlay NET [SRI]) |
| | SPWR SRI shelf power failure. |
| | SYNC Transient synchronization fault (if the SRLK is INS, then SYNC will not be output as a fault) |
| STAT LSGD (site) LCE/RSC/RSE b s lsg or STAT LSGD ALL | <p>Gives the status of the two subgroups contained in one or all LCM drawers. The <i>lsg</i> may be either subgroup in the drawer. The "STAT LSGD ALL" command gives the status of all line subgroups at the base DMS-10 switch and at all remote sites.</p> <p><i>Note: The OPM or OPAC bay numbers may be any number from 1 through 32; however, only two bays may be assigned per site identification mnemonic and the numbers must be in consecutive order. For example, 3 and 4 are valid bay numbers, but 3 and 5 are not valid. The left bay contains LCA 1, LCA 0, Host Interface Equipment, and an Environmental Control Unit. The right bay contains the Battery Control Unit, Rectifiers 1 and 0, Frame Supervisory Panel, Remote Maintenance Module, and an Environmental Control Unit.</i></p> <p>Examples: STAT LSGD LCE 2 3 5</p> <p>The system response is in the following format:</p> <p>LSG (NT6X54) site LCE/RSC/RSE b s lsg direct state (indirect state) hardware state activity state</p> <p>LSG (NT6X54) site LCE/RSC/RSE b s lsg direct state (indirect state) hardware state activity state</p> <p><i>direct state</i> can be one of:</p> <p>INS in service MMB man-made busy MMOF man-made offline (does not apply to RMM or BCU) SMB system-made busy SMOF system-made offline (does not apply to RMM or BCU)</p> |

DED commands (Continued)

| Input Command | Description |
|---------------|---|
| | <i>indirect state</i> is INDR if the parent device is out of service |
| | <i>Note:</i> The LCMC will be in an INDR state when the signaling SRI link (SRLK) associated with that LCMC is in an out-of-service state or the link is in the process of being returned to service. When an SRLK is automatically returned to service, the status of an LCMC can show the link as in-service, but the LCMC will be in an INDR state. The INDR indication will remain for up to 2 min. |
| | <i>hardware state</i> can be one of: |
| | ENBL enabled |
| | DSBL disabled |
| | <i>activity state</i> can be one of: |
| | ACTV active |
| | CPBY call-processing busy |
| | IDLE idle |
| | INAC inactive |
| | NORM normal |
| | SPRD spared |
| | SPNG sparing |
| | STBY standby |
| | <i>OPM battery state</i> can be one of: |
| | ACFM ac failure mode |
| | NBRM normal battery rotation mode |
| | PACM post ac failure mode |
| | <i>BCU fault</i> can be one of: |
| | ACF ac failure alarm |
| | FALM fan failure alarm |
| | FDR front door alarm |
| | FSP frame supervisory panel alarm |
| | HTMP high temperature alarm |
| | LTMP low temperature alarm |
| | SDR side door alarm |
| | <i>fault</i> refers to SRLK fault and can be one of: |
| | BPVO Number of bipolar violations exceeded out-of-service threshold (set in Overlay NET [SRI]) |
| | BTST Test fault found during background run of Overlay DED |

DED commands (Continued)

| Input Command | Description |
|---------------|---|
| | FRLO Frame losses exceeded out-of-service threshold (set in Overlay NET [SRI]) |
| | RALM Remote alarm received |
| | RBPV Remote bipolar violations exceeded 10 ⁻³ violations per bit |
| | RCLK Remote clock fault |
| | SLPO Number of frame slips exceeded out-of-service threshold (set in Overlay NET [SRI]) |
| | SPWR SRI shelf power failure. |
| | SYNC Transient synchronization fault (if the SRLK is INS, then SYNC will not be output as a fault) |

STAT LSHF (*site*)
LCE/RSC *b s*
or
STAT LSHF ALL

Gives the status of the LCM control unit (LCMC), the loops connected to it, and all equipped LCM line subgroups on a specified LCM shelf, or of all LCM shelves. The LCMC consists of packs NT6X51 and NT6X52.

Note: The OPM or OPAC bay numbers may be any number from 1 through 32; however, only two bays may be assigned per site identification mnemonic and the numbers must be in consecutive order. For example, 3 and 4 are valid bay numbers, but 3 and 5 are not valid. The left bay contains LCA 1, LCA 0, Host Interface Equipment, and an Environmental Control Unit. The right bay contains the Battery Control Unit, Rectifiers 1 and 0, Frame Supervisory Panel, Remote Maintenance Module, and an Environmental Control Unit.

Examples: STAT LSHF LCE 2 2

The output message is in the following format:

LCMC (NT6X51) *site* LCE/RSC *b s* *direct state (indirect state) hardware state activity state*

PELP (NT4T04) CE *b s p l* *direct state (indirect state) hardware state activity state*

PELP (NT4T04) CE *b s p l* *direct state (indirect state) hardware state activity state*

LSG (NT6X54) *site* LCE *b s lsg* *direct state (indirect state) hardware state activity state*

LSG (NT6X54) *site* LCE/RSC *b s lsg* *direct state (indirect state) hardware state activity state*

Note: PELP is repeated for all peripheral loops (DS-30A loops) connected to the LCM on the specified LCM shelf. LSG is repeated for all equipped subgroups physically located on the LCM shelf (either subgroups 0 through 9 or subgroups 10 through 19).

DED commands (Continued)

| Input Command | Description |
|---------------|---|
| | <i>direct state</i> can be one of: |
| INS | in service |
| MMB | man-made busy |
| MMOF | man-made offline (does not apply to RMM or BCU) |
| SMB | system-made busy |
| SMOF | system-made offline (does not apply to RMM or BCU) |
| | <i>indirect state</i> is INDR if the parent device is out of service |
| | <i>Note:</i> The LCMC will be in an INDR state when the signaling SRI link (SRLK) associated with that LCMC is in an out-of-service state or the link is in the process of being returned to service. When an SRLK is automatically returned to service, the status of an LCMC can show the link as in-service, but the LCMC will be in an INDR state. The INDR indication will remain for up to 2 min. |
| | <i>hardware state</i> can be one of: |
| ENBL | enabled |
| DSBL | disabled |
| | <i>activity state</i> can be one of: |
| ACTV | active |
| CPBY | call-processing busy |
| IDLE | idle |
| INAC | inactive |
| NORM | normal |
| SPRD | spared |
| SPNG | sparing |
| STBY | standby |
| | <i>OPM battery state</i> can be one of: |
| ACFM | ac failure mode |
| NBRM | normal battery rotation mode |
| PACM | post ac failure mode |
| | <i>BCU fault</i> can be one of: |
| ACF | ac failure alarm |
| FALM | fan failure alarm |
| FDR | front door alarm |
| FSP | frame supervisory panel alarm |
| HTMP | high temperature alarm |
| LTMP | low temperature alarm |
| SDR | side door alarm |

DED commands (Continued)

| Input Command | Description |
|---|---|
| | <i>fault</i> refers to SRLK fault and can be one of: |
| | BPVO Number of bipolar violations exceeded out-of-service threshold (set in Overlay NET [SRI]) |
| | BTST Test fault found during background run of Overlay DED |
| | FRLO Frame losses exceeded out-of-service threshold (set in Overlay NET [SRI]) |
| | RALM Remote alarm received |
| | RBPV Remote bipolar violations exceeded 10 ⁻³ violations per bit |
| | RCLK Remote clock fault |
| | SLPO Number of frame slips exceeded out-of-service threshold (set in Overlay NET [SRI]) |
| | SPWR SRI shelf power failure. |
| | SYNC Transient synchronization fault (if the SRLK is INS, then SYNC will not be output as a fault) |
| STAT LSHF <i>site</i> RSE <i>b s p</i> | Gives the status of an RSLE or RSLM shelf. <i>p</i> may be 5 or 7 (location of the NT9Y14 packs on an RSLM shelf) and 5 or 8 (location of the NT9Y22 packs on an RSLE shelf). Example: STAT LSHF RSLE RSE 1 3 5 The output is in the following format: RSLC (E) (NT9Y22) <i>site RSE b s p direct state (indirect state)</i> <i>hardware state activity state</i> SRLK (NT4T09) <i>site PE b s p l direct state (indirect state)</i> <i>hardware state activity state</i> PELP (NT4T04/NT8T04) <i>site CE b s p l direct state (indirect state) hardware state activity state</i> SRLK (NT4T09) <i>site PE b s p l direct state (indirect state)</i> <i>hardware state activity state</i> PELP (NT4T04/NT8T04) <i>site CE b s p l direct state (indirect state) hardware state activity state</i> RMP (NT9Y13) <i>site RSE b s p direct state (indirect state)</i> <i>hardware state</i> ESAC (NT9Y19) <i>site RSE b s p direct state (indirect state)</i> <i>hardware state</i> LSG (NT6X54) <i>site RSE b s lsg direct state (indirect state)</i> <i>hardware state activity state</i> LSG (NT6X54) <i>site RSE b s lsg direct state (indirect state)</i> <i>hardware state activity state</i> |

DED commands (Continued)

| Input Command | Description |
|--|---|
| STAT LTRK (<i>site</i>) PE <i>b s p ch</i> or STAT LTRK ALL | Gives the status of specified line trunks or all line trunks. Example: STAT LTRK PE 1 2 4 3 |
| STAT MLI CE <i>b s p</i> or STAT MLI <i>condition</i> or STAT MLI ALL | Gives the status of the Multiplex Loop Interface (MLI) pack by location or condition, or gives the status of all MLI packs. <i>condition</i> may be one of: INS in service MMB man-made busy OOS out of service SMB system-made busy Examples: STAT MLI CE 3 2 16 STAT MLI SMB |
| STAT PGI ME/PE/CE IE <i>b p</i> or STAT PGI ALL | Gives the status of the Controllers on the specified Packet Gateway Interface (PGI) or the Controllers on all PGIs. Example: STAT PGI ME 1 1 The system response is in the same format as the STAT PGIC command. |
| STAT PGIC ME/PE/ CE/IE <i>b p c</i> or STAT PGIC SIG or STAT PGIC ALL or STAT PGIC <i>condition</i> | Gives the status of the specified Packet Gateway Interface Controller (PGIC), the signaling (SIG) PGIC, all PGICs, or all PGICs by condition. <i>condition</i> may be one of: INS in service MMB man-made busy OOS out of service SMB system-made busy Examples: STAT PGIC ME 1 1 1 STAT PGIC MMB The system response is in the following format: PGIC (NT6T01) ME <i>b p c direct state (indirect state) hardware state activity state</i> (ALRM = <i>PGIC fault(s)</i>) (<i>Output only when an alarm is set.</i>) PELP (NT4T04/NT8T04) CE <i>b s c p direct state (indirect state) hardware state</i> <i>direct state</i> can be one of: INS in service MMB man-made busy SMB system-made busy <i>indirect state</i> is INDR if the DS30 or DS30 signaling loop is out of service. <i>hardware state</i> may be one of: DSBL disabled ENBL enabled <i>activity state</i> is SIG if this is the signaling PGIC. |

DED commands (Continued)

| Input Command | Description |
|--|---|
| | <i>PGIC fault(s)</i> can be one or more of: |
| | TEMP Temperature alarm |
| | PWRA Power alarm, feed A |
| | PWRB Power alarm, feed B |
| | LAN0 Local Area Network (LAN) port 0 alarm |
| | LAN1 Local Area Network (LAN) port 1 alarm |
| STAT PELP CE <i>b s p l</i> or STAT PELP <i>condition</i> or STAT PELP ALL | Gives the status of the peripheral loop by location or condition, or gives the status of all peripheral loops. <i>condition</i> may be one of: INS in service MMB man-made busy MMOF man-made offline OOS out of service SMB system-made busy SMOF system-made offline |
| | Examples: STAT PELP CE 1 3 18 6 STAT PELP MMB |
| STAT PEPK (<i>site</i>) PE <i>b s p</i> or STAT PEPK ALL | Gives the status of a specified peripheral pack or of all peripheral packs. Example: STAT PEPK PE 1 2 14 |
| STAT PPS <i>site</i> IDE <i>b</i> | Gives the status of embedded operations channels (EOC) and timeslot maintenance channels (TMC) of the specified Integrated Digital Terminal (IDT). Example: STAT PPS SITE IDE 1 |
| STAT PSC2 (<i>site</i>) PE <i>b s</i> | Gives the status of a specified Peripheral Shelf Converter pack (NT2T42). Example: STAT PSC2 PE 1 1 A fault (FLTS) condition will cause one or more of the following codes to be displayed: |
| | OVLD Overload |
| | NORP No response |
| | DATI Data input fault |
| | PWR Power fault |
| | SPAC Sparing activated |
| | SPNF Sparing not functional |

DED commands (Continued)

| Input Command | Description |
|---|---|
| STAT PSHF (<i>site</i>) PE <i>b s</i> or STAT PSHF <i>condition</i> or STAT PSHF ALL | Gives the status of the peripheral shelf by location or condition, or gives the status of all peripheral shelves. <i>condition</i> may be one of: INS in service MMB man-made busy OOS out of service SMB system-made busy |

Example: STAT PSHF PE 1 5

The system response is in the following format:

PSHF (NT2T41) *site* PE *b s* *direct state* (*indirect state*)
hardware state *activity state*

pack mnemonic (pack number) site PE *b s p* N/A
(*indirect state*) *hardware state* *activity state*

pack mnemonic (pack number) site PE *b s p* N/A
(*indirect state*) *hardware state* *activity state*

direct state can be one of:

INS in service
MMB man-made busy
MMOF man-made offline (does not apply to RMM or BCU)
SMB system-made busy
SMOF system-made offline (does not apply to RMM or BCU)

indirect state is INDR if the parent device is out of service

Note: *The LCMC will be in an INDR state when the signaling SRI link (SRLK) associated with that LCMC is in an out-of-service state or the link is in the process of being returned to service. When an SRLK is automatically returned to service, the status of an LCMC can show the link as in-service, but the LCMC will be in an INDR state. The INDR indication will remain for up to 2 min.*

hardware state can be one of:

ENBL enabled
DSBL disabled

activity state can be one of:

ACTV active
CPBY call-processing busy
IDLE idle
INAC inactive
NORM normal
SPRD spared
SPNG sparing

DED commands (Continued)

| Input Command | Description |
|---------------|---|
| | STBY standby |
| | <i>OPM battery state</i> can be one of: |
| | ACFM ac failure mode |
| | NBRM normal battery rotation mode |
| | PACM post ac failure mode |
| | <i>BCU fault</i> can be one of: |
| | ACF ac failure alarm |
| | FALM fan failure alarm |
| | FDR front door alarm |
| | FSP frame supervisory panel alarm |
| | HTMP high temperature alarm |
| | LTMP low temperature alarm |
| | SDR side door alarm |
| | <i>fault</i> refers to SRLK fault and can be one of: |
| | BPVO Number of bipolar violations exceeded out-of-service threshold (set in Overlay NET [SRI]) |
| | BTST Test fault found during background run of Overlay DED |
| | FRLO Frame losses exceeded out-of-service threshold (set in Overlay NET [SRI]) |
| | RALM Remote alarm received |
| | RBPV Remote bipolar violations exceeded 10^{-3} violations per bit |
| | RCLK Remote clock fault |
| | SLPO Number of frame slips exceeded out-of-service threshold (set in Overlay NET [SRI]) |
| | SPWR SRI shelf power failure. |
| | SYNC Transient synchronization fault (if the SRLK is INS, then SYNC will not be output as a fault) |
| | A fault (FLTS) condition will cause one or more of the following codes to be displayed: |
| | OVLN Overload |
| | NORP No response |
| | DATI Data input fault |
| | PWR Power fault |
| | SPAC Sparing activated |
| | SPNF Sparing not functional |

DED commands (Continued)

| Input Command | Description | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|-----|------------|-----|---------------|------|------------------|-----|------------------|-----|------------|-----|---------------|------|------------------|-----|----------------|-----|------------------|------|---------------------|------|----------|------|---------|-----|----------------|------|-------------|
| STAT RCU <i>site</i> UCE <i>b s</i> or STAT RCU <i>condition</i> or STAT RCU ALL or STAT RCU AST | <p>Gives the status of the RCU by location or condition, or gives the status of all RCUs.</p> <p><i>condition</i> may be one of:</p> <table> <tr> <td>INS</td> <td>in service</td> </tr> <tr> <td>MMB</td> <td>man-made-busy</td> </tr> <tr> <td>OOS</td> <td>out-of-service</td> </tr> <tr> <td>SMB</td> <td>system-made-busy</td> </tr> </table> <p><i>Note:</i> When the STAT RCU AST command is entered, only the status of RCUs with active ASTs is output.</p> <p>Example: STAT RCU SITE UCE 1 4</p> <p>The system response is in the following format: RCU <i>site</i> UCE <i>b s</i> <i>direct state</i> (<i>indirect state</i>) <i>hardware state</i> <i>AST state</i> D1LK (NT6X85) <i>site</i> SCE <i>b s p u</i> <i>direct state</i> (<i>indirect state</i>) <i>hardware state</i> <i>link type</i></p> <p><i>direct state</i> can be one of:</p> <table> <tr> <td>INS</td> <td>in service</td> </tr> <tr> <td>MMB</td> <td>man-made busy</td> </tr> <tr> <td>MMOF</td> <td>man-made offline</td> </tr> <tr> <td>OOS</td> <td>out of service</td> </tr> <tr> <td>SMB</td> <td>system-made busy</td> </tr> <tr> <td>SMOF</td> <td>system-made offline</td> </tr> </table> <p><i>indirect state</i> is INDR if the parent device is busied</p> <p><i>hardware state</i> can be one of:</p> <table> <tr> <td>DSBL</td> <td>disabled</td> </tr> <tr> <td>ENBL</td> <td>enabled</td> </tr> </table> <p><i>link type</i> can be one of:</p> <table> <tr> <td>SIG</td> <td>signaling link</td> </tr> <tr> <td>SPCH</td> <td>speech link</td> </tr> </table> <p><i>AST state</i> is always AST ACTIVE</p> | INS | in service | MMB | man-made-busy | OOS | out-of-service | SMB | system-made-busy | INS | in service | MMB | man-made busy | MMOF | man-made offline | OOS | out of service | SMB | system-made busy | SMOF | system-made offline | DSBL | disabled | ENBL | enabled | SIG | signaling link | SPCH | speech link |
| INS | in service | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MMB | man-made-busy | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OOS | out-of-service | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SMB | system-made-busy | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| INS | in service | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MMB | man-made busy | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MMOF | man-made offline | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OOS | out of service | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SMB | system-made busy | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SMOF | system-made offline | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DSBL | disabled | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENBL | enabled | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SIG | signaling link | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SPCH | speech link | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STAT RCUC <i>site</i> UCE <i>b s</i> (ALL) | <p>Gives the status of all CE cards in an RCU.</p> <p>Example: STAT RCUC SITE UCE 1 4</p> <p>The system response is in the following format: RCU <i>site</i> UCE <i>b s</i> <i>direct state</i> (<i>indirect state</i>) <i>hardware state</i> <i>card type</i> (NT <i>pack code</i>) <i>site</i> UCE <i>b s p</i> <i>status</i></p> <p><i>direct state</i> can be one of:</p> <table> <tr> <td>INS</td> <td>in service</td> </tr> <tr> <td>MMB</td> <td>man-made busy</td> </tr> <tr> <td>MMOF</td> <td>man-made offline</td> </tr> </table> | INS | in service | MMB | man-made busy | MMOF | man-made offline | | | | | | | | | | | | | | | | | | | | | | |
| INS | in service | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MMB | man-made busy | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MMOF | man-made offline | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

DED commands (Continued)

| Input Command | Description |
|--|---------------------|
| OOS | out of service |
| SMB | system-made busy |
| SMOF | system-made offline |
| <i>indirect state</i> is INDR if the parent device is busied | |
| <i>hardware state</i> can be one of: | |
| DSBL | disabled |
| ENBL | enabled |
| <i>card type</i> can be one of: | |
| CEXT | Control extension |
| SPVR | Supervisory |
| SWCH | Switch |
| DGRP | Digroup |
| RPTR | Office repeater |
| CNTL | Control processor |
| MSGP | Message processor |
| PWRC | Power converter |
| RGEN | Ring generator |
| LTA | Line test access |
| TIME | Timing |
| MTCE | Maintenance |
| <i>status</i> can be one or more of: | |
| INST | installed |
| ACT | active |
| FAIL | failed |
| TEST | card being tested |
| INHB | inhibited |
| RALM | RCU alarm is set |
| SALM | SCU alarm is set |
| NPWR | no power |

DED commands (Continued)

| Input Command | Description |
|---|---|
| STAT REM <i>site</i> PE <i>b s p</i> or STAT REM <i>condition</i> or STAT REM ALL | Gives the status of the Remote Equipment Module (REM) by location or condition, or gives the status of all REMs. The <i>p</i> in PE <i>b s p</i> is the leftmost pack of the RCM (that is, position 2, 6, 11, or 15) or position 3, 7, 12, or 16 for the OCM. <i>condition</i> may be one of: INS in service MMB man-made busy OOS out of service SMB system-made busy Examples: STAT REM PE 1 4 7 STAT REM CAPK PE 1 2 6 STAT REM INS STAT REM ALL |
| STAT RLD | Not operational. |
| STAT RMM <i>site</i> LCE/RSC <i>b s</i> or STAT RMM <i>condition</i> or STAT RMM ALL | Gives the status of the Remote Maintenance Module (RMM) by location or condition, or gives the status of all RMMs. The <i>s</i> in LCE <i>b s</i> is always 4 for an RLCM and 1 for an OPM or OPAC. <i>condition</i> may be one of: INS in service MMB man-made busy OOS out of service SMB system-made busy |

Note: The OPM or OPAC bay numbers may be any number from 1 through 32; however, only two bays may be assigned per site identification mnemonic and the numbers must be in consecutive order. For example, 3 and 4 are valid bay numbers, but 3 and 5 are not valid. The left bay contains LCA 1, LCA 0, Host Interface Equipment, and an Environmental Control Unit. The right bay contains the Battery Control Unit, Rectifiers 1 and 0, Frame Supervisory Panel, Remote Maintenance Module, and an Environmental Control Unit.

Examples: STAT RMM ALEX LCE 1 4
STAT RMM INS

The system response is in the following format:

RMM (NT6X74) *site* LCE/RSC *b s* *direct state* (*indirect state*)
hardware state

LCMC (NT6X51) (*site*) LCE/RSC/LCE *b s* *direct state*
(*indirect state*) *hardware state* *activity state*

LCMC (NT6X51) (*site*) LCE/RSC/LCE *b s* *direct state*
(*indirect state*) *hardware state* *activity state*

DED commands (Continued)

Input Command

Description

Note: When an RMM is being used to provide maintenance capabilities for more than one RLCM, the status of each LCM Processor (NT6X51) pack that the RMM serves is output. The two LCM Processors through which the RMM communicates are output first.

direct state can be one of:

- INS in service
- MMB man-made busy
- MMOF man-made offline (does not apply to RMM or BCU)
- SMB system-made busy
- SMOF system-made offline (does not apply to RMM or BCU)

indirect state is INDR if the parent device is out of service

Note: The LCMC will be in an INDR state when the signaling SRI link (SRLK) associated with that LCMC is in an out-of-service state or the link is in the process of being returned to service. When an SRLK is automatically returned to service, the status of an LCMC can show the link as in-service, but the LCMC will be in an INDR state. The INDR indication will remain for up to 2 min.

hardware state can be one of:

- ENBL enabled
- DSBL disabled

activity state can be one of:

- ACTV active
- CPBY call-processing busy
- IDLE idle
- INAC inactive
- NORM normal
- SPRD spared
- SPNG sparing
- STBY standby

OPM battery state can be one of:

- ACFM ac failure mode
- NBRM normal battery rotation mode
- PACM post ac failure mode

BCU fault can be one of:

- ACF ac failure alarm
- FALM fan failure alarm

DED commands (Continued)

| Input Command | Description |
|--|--|
| | FDR front door alarm |
| | FSP frame supervisory panel alarm |
| | HTMP high temperature alarm |
| | LTMP low temperature alarm |
| | SDR side door alarm |
| | <i>fault</i> refers to SRLK fault and can be one of: |
| | BPVO Number of bipolar violations exceeded out-of-service threshold (set in Overlay NET [SRI]) |
| | BTST Test fault found during background run of Overlay DED |
| | FRLO Frame losses exceeded out-of-service threshold (set in Overlay NET [SRI]) |
| | RALM Remote alarm received |
| | RBPV Remote bipolar violations exceeded 10^{-3} violations per bit |
| | RCLK Remote clock fault |
| | SLPO Number of frame slips exceeded out-of-service threshold (set in Overlay NET [SRI]) |
| | SPWR SRI shelf power failure. |
| | SYNC Transient synchronization fault (if the SRLK is INS, then SYNC will not be output as a fault) |
| STAT RMPK <i>site</i> LCE/RSC <i>b s p</i> or STAT RMPK ALL | <p>Gives the status of the Remote Maintenance Module (RMM) packs by location or gives the status of all RMM packs.</p> <p><i>Note: The OPM or OPAC bay numbers may be any number from 1 through 32; however, only two bays may be assigned per site identification mnemonic and the numbers must be in consecutive order. For example, 3 and 4 are valid bay numbers, but 3 and 5 are not valid. The left bay contains LCA 1, LCA 0, Host Interface Equipment, and an Environmental Control Unit. The right bay contains the Battery Control Unit, Rectifiers 1 and 0, Frame Supervisory Panel, Remote Maintenance Module, and an Environmental Control Unit.</i></p> <p>Example: STAT RMPK ALEX LCE 1 4 5</p> <p>The system response is in the following format: RMPK (pack code) <i>site</i> LCE/RSC <i>b s p</i> <i>direct state</i> (<i>indirect state</i>) <i>hardware state</i> <i>activity state</i></p> <p><i>direct state</i> can be one of:</p> <p>INS in service MMB man-made busy</p> |

DED commands (Continued)

| Input Command | Description |
|---|--|
| MMOF | man-made offline (does not apply to RMM or BCU) |
| SMB | system-made busy |
| SMOF | system-made offline (does not apply to RMM or BCU) |
| <i>indirect state</i> is INDR if the parent device is out of service | |
| <i>Note:</i> The LCMC will be in an INDR state when the signaling SRI link (SRLK) associated with that LCMC is in an out-of-service state or the link is in the process of being returned to service. When an SRLK is automatically returned to service, the status of an LCMC can show the link as in-service, but the LCMC will be in an INDR state. The INDR indication will remain for up to 2 min. | |
| <i>hardware state</i> can be one of: | |
| ENBL | enabled |
| DSBL | disabled |
| <i>activity state</i> can be one of: | |
| ACTV | active |
| CPBY | call-processing busy |
| IDLE | idle |
| INAC | inactive |
| NORM | normal |
| SPRD | spared |
| SPNG | sparing |
| STBY | standby |
| <i>OPM battery state</i> can be one of: | |
| ACFM | ac failure mode |
| NBRM | normal battery rotation mode |
| PACM | post ac failure mode |
| <i>BCU fault</i> can be one of: | |
| ACF | ac failure alarm |
| FALM | fan failure alarm |
| FDR | front door alarm |
| FSP | frame supervisory panel alarm |
| HTMP | high temperature alarm |
| LTMP | low temperature alarm |
| SDR | side door alarm |
| <i>fault</i> refers to SRLK fault and can be one of: | |

DED commands (Continued)

| Input Command | Description |
|--|---|
| BPVO | Number of bipolar violations exceeded out-of-service threshold (set in Overlay NET [SRI]) |
| BTST | Test fault found during background run of Overlay DED |
| FRLO | Frame losses exceeded out-of-service threshold (set in Overlay NET [SRI]) |
| RALM | Remote alarm received |
| RBPV | Remote bipolar violations exceeded 10^{-3} violations per bit |
| RCLK | Remote clock fault |
| SLPO | Number of frame slips exceeded out-of-service threshold (set in Overlay NET [SRI]) |
| SPWR | SRI shelf power failure. |
| SYNC | Transient synchronization fault (if the SRLK is INS, then SYNC will not be output as a fault) |
| STAT RSCS <i>site</i> RSC <i>b s</i> or | Gives the status of the requested RSC-S unit status, units fault list, Cside port status, Pside port status, and RSC-S shelf status. |
| STAT RSCS <i>site</i> RSC <i>b s</i> CSID or | Examples: STAT RSCS SITE RSC 1 1 STAT RSCS SITE RSC 1 1 CSID STAT RSCS SITE RSC 1 1 PSID STAT RSCS SITE RSC 1 1 CSPS STAT RSCS SITE RSC 1 1 NODE STAT RSCS ALL STAT RSCC SITE RSC 1 1 2 STAT RSCC ALL |
| STAT RSCS <i>site</i> RSC <i>b s</i> PSID or | The system response to the STAT RSCS <i>site</i> RSC <i>b s</i> command includes the two units status, the units fault list, and the signaling Cside ports list and is in the following format: |
| STAT RSCS <i>site</i> RSC <i>b s</i> CSPS or | RSCC (NTMX77) <i>site</i> RSC <i>b s p</i> <i>direct state (indirect state) hardware state activity state</i> |
| STAT RSCS <i>site</i> RSC <i>b s</i> NODE or | FLTS = <CMR, UTR0, UTR1, IMC, FESA> |
| STAT RSCS ALL or | SRLK (NT4T09) <i>site</i> PE <i>b s p u</i> <i>direct state hardware state activity state</i> PELP (NT4T04/NT8T04) CE <i>b s p u</i> <i>direct state hardware state activity state</i> |
| STAT RSCC <i>site b s p</i> or | RSCC (NTMX77) <i>site</i> RSC <i>b s p</i> <i>direct state (indirect state) hardware state activity state</i> FLTS = <CMR, UTR0, UTR1, IMC, FESA> |
| STAT RSCC ALL | SRLK (NT4T09) <i>site</i> PE <i>b s p u</i> <i>direct state hardware state activity state</i> PELP (NT4T04/NT8T04) CE <i>b s p u</i> <i>direct state hardware state activity state</i> |

DED commands (Continued)

| Input Command | Description |
|---------------|--|
| | <p>The system response to the STAT RSCS site RSC b s CSID command includes the two units status, the units faults list, and the Cside ports status, and is in the following format:</p> <p>RSCC (NTMX77) <i>site RSC b s p direct state (indirect state) hardware state activity state</i></p> <p>FLTS = <CMR, UTR0, UTR1, IMC, FESA></p> <p>RSCC (NTMX77) <i>site RSC b s p direct state (indirect state) hardware state activity state</i></p> <p>FLTS = <CMR, UTR0, UTR1, IMC, FESA></p> <p>SRLK (NT4T09) <i>site PE b s p u direct state hardware state activity state</i></p> <p>PELP (NT4T04/NT8T04) <i>CE b s p u direct state hardware state activity state</i></p> <p>The system response to the STAT RSCS site RSC b s PSID command includes the unit status, the units faults list, and the Pside ports status, and is in the following format:</p> <p>RSCC (NTMX77) <i>site RSC b s p direct state (indirect state) hardware state activity state</i></p> <p>FLTS = <CMR, UTR0, UTR1, IMC, FESA></p> <p>RSCC (NTMX77) <i>site RSC b s p direct state (indirect state) hardware state activity state</i></p> <p>FLTS = <CMR, UTR0, UTR1, IMC, FESA></p> <p>D30L (NTMX74) <i>site RSC b s p u direct state hardware state activity state</i></p> <p>The system response to the STAT RSC b s CSPS command includes the unit status, the units faults list, and the Cside/Pside ports status, and is in the following format:</p> <p>RSCC (NTMX77) <i>site RSC b s p direct state (indirect state) hardware state activity state</i></p> <p>FLTS = <CMR, UTR0, UTR1, IMC, FESA></p> <p>RSCC (NTMX77) <i>site RSC b s p direct state (indirect state) hardware state activity state</i></p> <p>FLTS = <CMR, UTR0, UTR1, IMC, FESA></p> <p>SRLK (NT4T09) <i>site PE b s p u direct state hardware state activity state</i></p> <p>PELP (NT4T04/NT8T04) <i>CE b s p u direct state hardware state activity state</i></p> <p>D30L (NTMX74) <i>site RSC b s p u direct state hardware state activity state</i></p> <p>The system response to the STAT RSCS site RSC b s NODE command is a list of equipment connected to the RSC-S nodes, in node number order, and appears in the following format:</p> <p>RSCC (NTMX77) <i>site RSC b s p direct state (indirect state) hardware state activity state</i></p> |

DED commands (Continued)

| Input Command | Description |
|---------------|---|
| | RMM (NT6X74) <i>site RSC b s direct state (indirect state) hardware state activity state</i> |
| | LCMC (NT6X51) <i>site RSC b s direct state (indirect state) hardware state activity state</i> |
| | RSLC (NT9Y14) <i>site RSE b s p direct state (indirect state) hardware state activity state</i> |
| | The system response to the STAT RSCS all command includes all of the units status, the faults list, the signaling Cside ports status, and the status of all of the RCS-S shelves, and is in the following format: |
| | RSCC (NTMX77) <i>site RSC b s p direct state (indirect state) hardware state activity state</i> |
| | FLTS = <CMR, UTR0, UTR1, IMC, FESA> |
| | SRLK (NT4T09) <i>site PE b s p u direct state hardware state activity state</i> |
| | PELP (NT4T04) <i>CE b s p u direct state hardware state activity state</i> |
| | RSCC (NTMX77) <i>site RSC b s p direct state (indirect state) hardware state activity state</i> |
| | FLTS = <CMR, UTR0, UTR1, IMC, FESA> |
| | SRLK (NT4T09) <i>site PE b s p u direct state hardware state activity state</i> |
| | PELP (NT4T04/NT8T04) <i>CE b s p u direct state hardware state activity state</i> |
| | The system response to the STAT RSCC RSC site b s p command includes the unit status, the unit faults list, and the signaling Cside ports status, and is in the following format: |
| | RSCC (NTMX77) <i>site RSC b s p direct state (indirect state) hardware state activity state</i> |
| | FLTS = <CMR, UTR0, UTR1, IMC, FESA> |
| | SRLK (NT4T09) <i>site PE b s p u direct state hardware state activity state</i> |
| | PELP (NT4T04/NT8T04) <i>CE b s p u direct state hardware state activity state</i> |
| | The system response to the STAT RSCC ALL command includes all of the units status, the faults list, the signaling Cside ports status of all of the RSC-S shelves, and is in the same format as that for the STAT RSCS All command. |
| | <i>direct state</i> can be one of: |
| | INS in service |
| | MMB man-made-busy |
| | MMOF man-made-offline |
| | SMB system-made-busy |
| | <i>indirect state</i> is |
| | INDR if the parent device is busied. |

DED commands (Continued)

| Input Command | Description |
|---|--|
| | <p><i>hardware state</i> can be one of:</p> <p style="padding-left: 40px;">DSBL disabled</p> <p style="padding-left: 40px;">ENBL enabled</p> <p><i>activity state</i> can be one of:</p> <p style="padding-left: 40px;">ACTV active</p> <p style="padding-left: 40px;">INAC inactive</p> <p style="padding-left: 40px;">DXFR data transfer</p> <p style="padding-left: 40px;">STBY standby</p> <p>FLTS can be one of:</p> <p style="padding-left: 40px;">CMRL CLASS Modem Resource pack load</p> <p style="padding-left: 40px;">CMRF CLASS Modem Resource pack fault</p> <p style="padding-left: 40px;">UTR0 first UTR pack</p> <p style="padding-left: 40px;">UTR1 second UTR pack</p> <p style="padding-left: 40px;">IMC inter-message communication</p> <p style="padding-left: 40px;">FESA ESA static data failure</p> <p style="padding-left: 40px;">MX77 MX77 EPROM version</p> |
| <p>STAT RSLC <i>site</i> RSE <i>b s p</i> or STAT RSLC <i>condition</i> or STAT RSLC ALL</p> | <p>Gives the status of the requested RSLC or of all RSLCs by condition, or of all equipped RSLCs.</p> <p>Examples: STAT RSLC SITE RSE 1 4 5 STAT RSLC INS STAT RSLC ALL</p> <p><i>condition</i> may be one of:</p> <p style="padding-left: 40px;">INS in service</p> <p style="padding-left: 40px;">MMB man-made-busy</p> <p style="padding-left: 40px;">OOS out-of-service</p> <p style="padding-left: 40px;">SMB system-made-busy</p> <p>The system response is in the following format:</p> <p>RSLC <i>type</i> (NT9Y14/NT9Y22) <i>site</i> RSE <i>b s p</i> <i>direct state</i> (<i>indirect state</i>) <i>hardware state</i> <i>activity state</i></p> <p>SRLK (NT4T09) <i>site</i> PE <i>b s p</i> <i>port</i> <i>direct state</i> <i>hardware state</i> <i>activity state</i></p> <p style="padding-left: 40px;">PELP (NT4T04/NT8T04) CE <i>b s p</i> <i>port</i> <i>direct state</i> <i>hardware state</i> <i>activity state</i></p> <p>or, if configured off of an RSC-S</p> <p>DS1L (NTMX87) <i>site</i> RSC <i>b s p u</i> <i>direct state</i> (<i>indirect state</i>) <i>hardware state</i> <i>activity state</i></p> <p style="padding-left: 40px;">LRNG (NT6X30) <i>site</i> RSE <i>b s</i> <i>direct state</i> <i>hardware state</i></p> <p style="padding-left: 40px;">RMP (NT9Y13) <i>site</i> RSE <i>b s p</i> <i>direct state</i> <i>hardware state</i></p> |

DED commands (Continued)

| Input Command | Description | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|---|---|---|--------------------------------------|---|------------|-----|------------|-----|---------------|------|------------------|-----|------------------|------|----------|------|---------|------|--------|------|----------|------|--------|------|--------|------|---------|------|---------|
| | <p>ESAC (NT9Y15/NT9Y19) <i>site RSE b s p direct state (indirect state) hardware state</i></p> <p>The above rows are repeated for each equipped RSLC. Each RSLE bay has two RMPs, the status of which will be shown along with the controlling RSLC only (see Note). Some RSLCs may not have ESAC, depending upon their configuration.</p> <p><i>Note: In an RSLE bay, each RMP is controlled by a separate RSLE Processor (RSLC) pack. In the upper RSLE shelf, the RSLC in position 5 controls the RMP in position 6. In either shelf, the RSLC in position 8 controls the RMP in position 9.</i></p> <p><i>type</i> can be one of:</p> <table> <tr> <td>A</td> <td>RSLM with 256 lines and a single ringer</td> </tr> <tr> <td>B</td> <td>RSLM with 192 lines and dual ringers</td> </tr> <tr> <td>E</td> <td>RSLE shelf</td> </tr> </table> <p><i>direct state</i> can be one of:</p> <table> <tr> <td>INS</td> <td>in service</td> </tr> <tr> <td>MMB</td> <td>man-made-busy</td> </tr> <tr> <td>MMOF</td> <td>man-made-offline</td> </tr> <tr> <td>SMB</td> <td>system-made-busy</td> </tr> </table> <p><i>indirect state</i> is</p> <p>INDR if the parent device is busied.</p> <p><i>hardware state</i> can be one of:</p> <table> <tr> <td>DSBL</td> <td>disabled</td> </tr> <tr> <td>ENBL</td> <td>enabled</td> </tr> </table> <p><i>activity state</i> can be one of:</p> <table> <tr> <td>ACTV</td> <td>active</td> </tr> <tr> <td>INAC</td> <td>inactive</td> </tr> <tr> <td>NORM</td> <td>normal</td> </tr> <tr> <td>SPRD</td> <td>spared</td> </tr> <tr> <td>SPNG</td> <td>sparing</td> </tr> <tr> <td>STBY</td> <td>standby</td> </tr> </table> | A | RSLM with 256 lines and a single ringer | B | RSLM with 192 lines and dual ringers | E | RSLE shelf | INS | in service | MMB | man-made-busy | MMOF | man-made-offline | SMB | system-made-busy | DSBL | disabled | ENBL | enabled | ACTV | active | INAC | inactive | NORM | normal | SPRD | spared | SPNG | sparing | STBY | standby |
| A | RSLM with 256 lines and a single ringer | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B | RSLM with 192 lines and dual ringers | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| E | RSLE shelf | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| INS | in service | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MMB | man-made-busy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MMOF | man-made-offline | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SMB | system-made-busy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DSBL | disabled | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENBL | enabled | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ACTV | active | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| INAC | inactive | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NORM | normal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SPRD | spared | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SPNG | sparing | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STBY | standby | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STAT RSLE <i>site</i> RSE <i>b (s)</i> or STAT RSLE ALL | <p>Gives the status of one or two RSLE Control shelves, depending on whether a shelf number is entered or not, or the status of all equipped RSLEs. If no shelf number is entered, the status of the complete RSLE will be given.</p> <p>Example: STAT RSLE SITE RSE 1 4</p> <p>The system response is the same as that for the STAT RSLC command, except that all rows relevant to the specified RSLE are output, instead of only the output that is obtained in response to the STAT RSLC command.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

DED commands (Continued)

| Input Command | Description |
|--|---|
| STAT RSLM <i>site</i> RSE <i>b s</i> or STAT RSLM ALL | Gives the status of the requested RSLM shelf or of all equipped RSLM shelves. Example: STAT RSLM SITE RSE 1 4 The system response is the same as that for the STAT RSLC command, except that all rows relevant to the specified RSLM are output, instead of only the output that is obtained in response to the STAT RSLC command. |
| STAT SCS SCE <i>b s</i> or STAT SCS ALL | Gives the status of a specified SCM-10S module or of all SCM-10S modules. Examples: STAT SCS SCE 1 2 The system response is in the following format: SCSC (NT6X45) <i>site SCE b s direct state (indirect state) hardware state activity state</i> PELP (NT4T04/NT8T04) CE <i>b s p l direct state (indirect state) hardware state activity state</i> PELP (NT4T04/NT8T04) CE <i>b s p l direct state (indirect state) hardware state activity state</i> SCSC (NT6X45) <i>site SCE b s direct state (indirect state) hardware state activity state</i> PELP (NT4T04/NT8T04) CE <i>b s p l direct state (indirect state) hardware state activity state</i> PELP (NT4T04/NT8T04) CE <i>b s p l direct state (indirect state) hardware state activity state</i> D1PK (NT6X85) <i>site SCE b s p direct state (indirect state) hardware state</i> D1LK (NT6X85) <i>site SCE b s p u direct state (indirect state) hardware state activity state (BLCK) (FELP)</i> D1PK (NT6X85) <i>site SCE b s p direct state (indirect state) hardware state</i> D1LK (NT6X85) <i>site SCE b s p u direct state (indirect state) hardware state activity state (BLCK) (FELP)</i> <i>or, for an RSC-S</i> D30L (NTMX74) <i>site SCE b s p direct state (indirect state) hardware state</i> <i>direct state can be one of:</i> INS in service MMB man-made busy MMOF man-made offline SMB system-made busy |

DED commands (Continued)

| Input Command | Description |
|----------------------------|--|
| | <p>SMOF system-made offline</p> <p><i>indirect state</i> is INDR if the parent device is busied</p> <p><i>hardware state</i> can be one of:</p> <p>DSBL disabled</p> <p>ENBL enabled</p> <p><i>activity state</i> can be one of:</p> <p>ACTV active</p> <p>DXFR data transfer</p> <p>INAC inactive</p> <p>NORM normal</p> <p>SPRD spared</p> <p>SPNG sparing</p> <p>STBY standby</p> |
| | BLCK is output if the primary link cannot be spared by a protection link. |
| | FELP is output if the far-end loop condition is set on the link. |
| STAT SCSC (<i>site</i>) | Gives the status of the SCM-10S Control Complex by location or condition, or |
| SCE <i>b s</i> | gives the status of all SCM-10S Control Complexes. |
| or | <i>condition</i> may be one of: |
| STAT SCSC <i>condition</i> | INS in service |
| or | MMB man-made busy |
| STAT SCSC ALL | OOS out of service |
| | SMB system-made busy |
| | Examples: STAT SCSC SCE 1 2 |
| | The system response is in the following format: |
| | SCSC (NT6X45) <i>site</i> SCE <i>b s</i> <i>direct state</i> (<i>indirect state</i>) |
| | hardware state activity state |
| | 7X05 = <i>status</i> |
| | PELP (NT4T04/NT8T04) CE <i>b s p l</i> <i>direct state</i> (<i>indirect state</i>) <i>hardware state</i> <i>activity state</i> |
| | PELP (NT4T04/NT8T04) CE <i>b s p l</i> <i>direct state</i> (<i>indirect state</i>) <i>hardware state</i> <i>activity state</i> |
| | <i>direct state</i> can be one of: |
| | INS in service |
| | MMB man-made busy |
| | MMOF man-made offline |
| | SMB system-made busy |
| | SMOF system-made offline |
| | <i>indirect state</i> is INDR if the parent device is busied |

DED commands (Continued)

| Input Command | Description |
|---|---|
| | <p><i>hardware state</i> can be one of:</p> <p style="padding-left: 40px;">DSBL disabled</p> <p style="padding-left: 40px;">ENBL enabled</p> <p><i>activity state</i> can be one of:</p> <p style="padding-left: 40px;">ACTV active</p> <p style="padding-left: 40px;">DXFR data transfer</p> <p style="padding-left: 40px;">INAC inactive</p> <p style="padding-left: 40px;">NORM normal</p> <p style="padding-left: 40px;">SPRD spared</p> <p style="padding-left: 40px;">SPNG sparing</p> <p style="padding-left: 40px;">STBY standby</p> <p><i>status</i> can be one of:</p> <p style="padding-left: 40px;">INSV in service</p> <p style="padding-left: 40px;">FALT fault</p> <p style="padding-left: 40px;">UNAS unassigned</p> |
| <p>STAT SCU (<i>site</i>) SCE <i>b s</i> or STAT SCU ALL</p> | <p>Gives the status of the SCM-10U Control Complex by location, or gives the status of all SCM-10U Control Complexes.</p> <p>Example: STAT SCU SCE 2 1</p> <p>The system response is in the following format:</p> <p>SCUC (NT6X45) <i>site SCE b s direct state (indirect state) hardware state activity state</i></p> <p style="padding-left: 40px;">PELP (NT4T04/NT8T04) <i>site CE b s p u direct state (indirect state) hardware state activity state</i></p> <p>D1PK (NT6X85) <i>site SCE b s p direct state (indirect state) hardware state activity state</i></p> <p style="padding-left: 40px;">D1LK (NT6X85) <i>site SCE b s p u direct state (indirect state) hardware state link type</i></p> <p><i>direct state</i> can be one of:</p> <p style="padding-left: 40px;">INS in service</p> <p style="padding-left: 40px;">MMB man-made busy</p> <p style="padding-left: 40px;">MMOF man-made offline</p> <p style="padding-left: 40px;">OOS out of service</p> <p style="padding-left: 40px;">SMB system-made busy</p> <p style="padding-left: 40px;">SMOF system-made offline</p> <p><i>indirect state</i> is INDR if the parent device is busied</p> <p><i>hardware state</i> can be one of:</p> <p style="padding-left: 40px;">DSBL disabled</p> <p style="padding-left: 40px;">ENBL enabled</p> |

DED commands (Continued)

| Input Command | Description |
|--|--|
| | <p><i>activity state</i> can be one of:</p> <p>ACTV active</p> <p>DXFR data transfer</p> <p>NORM normal</p> <p><i>link type</i> can be one of:</p> <p>SIG signaling link</p> <p>SPCH speech link</p> |
| STAT SCUC (<i>site</i>) SCE <i>b s</i> or STAT SCUC <i>condition</i> or STAT SCUC ALL | <p>Gives the status of the SCM-10U control complex by location or condition, or gives the status of all SCM-10U control complexes.</p> <p><i>condition</i> may be one of:</p> <p>INS in service</p> <p>MMB man-made-busy</p> <p>OOS out-of-service</p> <p>SMB system-made-busy</p> |
| | <p>Example: STAT SCUC SCE 2 1</p> <p>The system response is in the following format:</p> <p>SCUC (NT6X45) <i>site</i> SCE <i>b s</i> <i>direct state</i> (<i>indirect state</i>) <i>hardware state</i> <i>activity state</i></p> <p>7X05 = <i>status</i></p> <p>PELP (NT4T04/NT8T04) <i>site</i> CE <i>b s p u</i> <i>direct state</i> (<i>indirect state</i>) <i>hardware state</i> <i>activity state</i></p> <p><i>direct state</i> can be one of:</p> <p>INS in service</p> <p>MMB man-made busy</p> <p>MMOF man-made offline</p> <p>SMB system-made busy</p> <p>SMOF system-made offline</p> <p><i>indirect state</i> is INDR if the parent device is busied</p> <p><i>hardware state</i> can be one of:</p> <p>DSBL disabled</p> <p>ENBL enabled</p> <p><i>activity state</i> can be one of:</p> <p>ACTV active</p> <p>DXFR data transfer</p> <p>INAC inactive</p> <p>STBY standby</p> <p><i>status</i> can be one of:</p> <p>INSV in service</p> |

DED commands (Continued)

| Input Command | Description |
|--|--|
| | FALT fault |
| | UNAS unassigned |
| STAT SLC <i>site</i> SLE <i>b</i> <i>cb</i> | Gives the status of the SLC-96 by location or condition, or gives the status of all SLC-96s. |
| or | <i>condition</i> may be one of: |
| STAT SLC <i>condition</i> | INS in service |
| or | MMB man-made busy |
| STAT SLC ALL | OOS out of service |
| | SMB system-made busy |

Examples: STAT SLC CAPL SLE 1 3

The system response is in the following format:

SLC *site* SLE *b* *cb* *direct state* (*indirect state*) *hardware state*

D1LK (NT6X85) *site* SCE *b s p u* *direct state* (*indirect state*) *hardware state* *activity state* (BLCK) (FELP)

D1LK (NT6X85) *site* SCE *b s p u* *direct state* (*indirect state*) *hardware state* *activity state* (BLCK) (FELP)

SLSH *site* SLE *b cb sh* *direct state* (*indirect state*) *hardware state*

SLSH *site* SLE *b cb sh* *direct state* (*indirect state*) *hardware state*

FAULT = *fault*

fault can be one of:

SHLF SHFX Major alarm condition exists against the specified SLC-96 shelf (*X* = A, B, C, or D)

MISC SLC-96 is reporting a power or miscellaneous fault condition

MAJR Entire SLC-96 has a major fault condition and needs immediate attention.

MINR SLC-96 has a minor alarm condition.

direct state can be one of:

INS in service

MMB man-made busy

MMOF man-made offline

SMB system-made busy

SMOF system-made offline

indirect state is INDR if the parent device is busied

hardware state can be one of:

DSBL disabled

ENBL enabled

DED commands (Continued)

| Input Command | Description | | | | | | | | | | | | | | |
|---|---|----------------------|----------------------|---------------|---------------|------------------|----------|------------------|--------|---------------------|--------|---------|---------|---------|---------|
| STAT SLIN <i>site</i> SLE <i>b cb cu</i> | <i>activity state</i> can be one of: | | | | | | | | | | | | | | |
| | <table> <tr><td>ACTV</td><td>active</td></tr> <tr><td>DXFR</td><td>data transfer</td></tr> <tr><td>INAC</td><td>inactive</td></tr> <tr><td>NORM</td><td>normal</td></tr> <tr><td>SPRD</td><td>spared</td></tr> <tr><td>SPNG</td><td>sparing</td></tr> <tr><td>STBY</td><td>standby</td></tr> </table> | ACTV | active | DXFR | data transfer | INAC | inactive | NORM | normal | SPRD | spared | SPNG | sparing | STBY | standby |
| | ACTV | active | | | | | | | | | | | | | |
| | DXFR | data transfer | | | | | | | | | | | | | |
| | INAC | inactive | | | | | | | | | | | | | |
| | NORM | normal | | | | | | | | | | | | | |
| | SPRD | spared | | | | | | | | | | | | | |
| | SPNG | sparing | | | | | | | | | | | | | |
| | STBY | standby | | | | | | | | | | | | | |
| | BLCK is output if the primary link cannot be spared by a protection link. | | | | | | | | | | | | | | |
| | FELP is output if the far-end loop condition is set on the link. | | | | | | | | | | | | | | |
| | Gives the status of the specified SLC-96 subscriber line. | | | | | | | | | | | | | | |
| | Example: STAT SLIN CAPL SLE 1 3 21 | | | | | | | | | | | | | | |
| | The system response is in the following format: | | | | | | | | | | | | | | |
| | SLIN <i>site (sub-site)</i> SLE <i>b cb cu</i> <i>direct state (indirect state) hardware state call processing state</i> | | | | | | | | | | | | | | |
| | <i>call processing state</i> can be one of: | | | | | | | | | | | | | | |
| | <table> <tr><td>CPBY</td><td>Call processing busy</td></tr> <tr><td>IDLE</td><td>Idle</td></tr> </table> | CPBY | Call processing busy | IDLE | Idle | | | | | | | | | | |
| | CPBY | Call processing busy | | | | | | | | | | | | | |
| | IDLE | Idle | | | | | | | | | | | | | |
| | <i>direct state</i> can be one of: | | | | | | | | | | | | | | |
| <table> <tr><td>INS</td><td>in service</td></tr> <tr><td>MMB</td><td>man-made busy</td></tr> <tr><td>MMOF</td><td>man-made offline</td></tr> <tr><td>SMB</td><td>system-made busy</td></tr> <tr><td>SMOF</td><td>system-made offline</td></tr> </table> | INS | in service | MMB | man-made busy | MMOF | man-made offline | SMB | system-made busy | SMOF | system-made offline | | | | | |
| INS | in service | | | | | | | | | | | | | | |
| MMB | man-made busy | | | | | | | | | | | | | | |
| MMOF | man-made offline | | | | | | | | | | | | | | |
| SMB | system-made busy | | | | | | | | | | | | | | |
| SMOF | system-made offline | | | | | | | | | | | | | | |
| <i>indirect state</i> is INDR if the parent device is busied | | | | | | | | | | | | | | | |
| <i>hardware state</i> can be one of: | | | | | | | | | | | | | | | |
| <table> <tr><td>DSBL</td><td>disabled</td></tr> <tr><td>ENBL</td><td>enabled</td></tr> </table> | DSBL | disabled | ENBL | enabled | | | | | | | | | | | |
| DSBL | disabled | | | | | | | | | | | | | | |
| ENBL | enabled | | | | | | | | | | | | | | |
| <i>activity state</i> can be one of: | | | | | | | | | | | | | | | |
| <table> <tr><td>ACTV</td><td>active</td></tr> <tr><td>DXFR</td><td>data transfer</td></tr> <tr><td>INAC</td><td>inactive</td></tr> <tr><td>NORM</td><td>normal</td></tr> <tr><td>SPRD</td><td>spared</td></tr> <tr><td>SPNG</td><td>sparing</td></tr> <tr><td>STBY</td><td>standby</td></tr> </table> | ACTV | active | DXFR | data transfer | INAC | inactive | NORM | normal | SPRD | spared | SPNG | sparing | STBY | standby | |
| ACTV | active | | | | | | | | | | | | | | |
| DXFR | data transfer | | | | | | | | | | | | | | |
| INAC | inactive | | | | | | | | | | | | | | |
| NORM | normal | | | | | | | | | | | | | | |
| SPRD | spared | | | | | | | | | | | | | | |
| SPNG | sparing | | | | | | | | | | | | | | |
| STBY | standby | | | | | | | | | | | | | | |
| BLCK is output if the primary link cannot be spared by a protection link. | | | | | | | | | | | | | | | |

DED commands (Continued)

| Input Command | Description | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|------|----------------------|------|------|-----|------------|-----|---------------|------|------------------|-----|------------------|------|---------------------|------|----------|------|---------|------|--------|------|---------------|------|----------|------|--------|------|--------|------|---------|------|---------|
| | FELP is output if the far-end loop condition is set on the link. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STAT SLPK <i>site</i> SLE <i>b cb cu</i> or STAT SLPK ALL | <p>Gives the status of a specified SLC-96 Channel Unit pack or of all SLC-96 Channel Unit packs.</p> <p>Example: STAT SLPK CAPJ SLE 1 3 4</p> <p>The system response is in the following format:</p> <p>SLPK (SCS pack code) <i>site (sub-site)</i> SLE <i>b cb cu/cu</i> N/A (<i>indirect state</i>) <i>hardware state call processing state</i></p> <p style="padding-left: 40px;">SLIN <i>site (sub-site)</i> SLE <i>b cb cu</i> <i>direct state (indirect state)</i> <i>hardware state call processing state</i></p> <p style="padding-left: 40px;">SLIN <i>site (sub-site)</i> SLE <i>b cb cu</i> <i>direct state (indirect state)</i> <i>hardware state call processing state</i></p> <p>(SCS pack code) is the Channel Unit pack code N/A means not applicable (the device SLPK has no direct state) <i>call processing state</i> can be one of:</p> <table border="0" style="margin-left: 40px;"> <tr> <td>CPBY</td> <td>Call processing busy</td> </tr> <tr> <td>IDLE</td> <td>Idle</td> </tr> </table> <p><i>direct state</i> can be one of:</p> <table border="0" style="margin-left: 40px;"> <tr> <td>INS</td> <td>in service</td> </tr> <tr> <td>MMB</td> <td>man-made busy</td> </tr> <tr> <td>MMOF</td> <td>man-made offline</td> </tr> <tr> <td>SMB</td> <td>system-made busy</td> </tr> <tr> <td>SMOF</td> <td>system-made offline</td> </tr> </table> <p><i>indirect state</i> is INDR if the parent device is busied <i>hardware state</i> can be one of:</p> <table border="0" style="margin-left: 40px;"> <tr> <td>DSBL</td> <td>disabled</td> </tr> <tr> <td>ENBL</td> <td>enabled</td> </tr> </table> <p><i>activity state</i> can be one of:</p> <table border="0" style="margin-left: 40px;"> <tr> <td>ACTV</td> <td>active</td> </tr> <tr> <td>DXFR</td> <td>data transfer</td> </tr> <tr> <td>INAC</td> <td>inactive</td> </tr> <tr> <td>NORM</td> <td>normal</td> </tr> <tr> <td>SPRD</td> <td>spared</td> </tr> <tr> <td>SPNG</td> <td>sparing</td> </tr> <tr> <td>STBY</td> <td>standby</td> </tr> </table> <p>BLCK is output if the primary link cannot be spared by a protection link. FELP is output if the far-end loop condition is set on the link.</p> | CPBY | Call processing busy | IDLE | Idle | INS | in service | MMB | man-made busy | MMOF | man-made offline | SMB | system-made busy | SMOF | system-made offline | DSBL | disabled | ENBL | enabled | ACTV | active | DXFR | data transfer | INAC | inactive | NORM | normal | SPRD | spared | SPNG | sparing | STBY | standby |
| CPBY | Call processing busy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IDLE | Idle | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| INS | in service | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MMB | man-made busy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MMOF | man-made offline | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SMB | system-made busy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SMOF | system-made offline | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DSBL | disabled | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENBL | enabled | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ACTV | active | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DXFR | data transfer | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| INAC | inactive | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NORM | normal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SPRD | spared | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SPNG | sparing | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STBY | standby | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

DED commands (Continued)

| Input Command | Description |
|--|---|
| STAT SLSH <i>site</i> SLE <i>b cb sh</i> or STAT SLSH <i>condition</i> or STAT SLSH ALL | Gives the status of the SLC-96 shelf by location or condition, or gives the status of all SLC-96 shelves. <i>condition</i> may be one of: INS in service MMB man-made busy OOS out of service SMB system-made busy |

Example: STAT SLSH CAPM SLE 1 3 B

The system response is in the following format:

SLSH *site* SLE *b cb sh* *direct state* (*indirect state*) *hardware state*

D1LK (NT6X85) *site* SCE *b s p u* *direct state* (*indirect state*) *hardware state* *activity state* (BLCK) (FELP)

SLPK (SCS pack code) *site* (*sub-site*) SLE *b cb cu/cu* N/A (*indirect state*)
hardware state *call processing state*

SLIN *site* (*sub-site*) SLE *b cb cu* *direct state* (*indirect state*)
hardware state *call processing state*

SLIN *site* (*sub-site*) SLE *b cb cu* *direct state* (*indirect state*)
hardware state *call processing state*

SLPK (SCS pack code) *site* (*sub-site*) SLE *b cb cu/cu* N/A (*indirect state*)
hardware state *call processing state*

SLIN *site* (*sub-site*) SLE *b cb cu* *direct state* (*indirect state*)
hardware state *call processing state*

SLIN *site* (*sub-site*) SLE *b cb cu* *direct state* (*indirect state*)
hardware state *call processing state*

FAULT = *fault*

call processing state can be one of:

CPBY Call processing busy
IDLE Idle

fault can be one of:

SHLF SHFX Major alarm condition exists against the specified SLC-96 shelf (*X* = A, B, C, or D)

MISC SLC-96 is reporting a power or miscellaneous fault condition

MAJR Entire SLC-96 has a major fault condition and needs immediate attention.

MINR SLC-96 has a minor alarm condition.

direct state can be one of:

INS in service
MMB man-made busy
MMOF man-made offline

DED commands (Continued)

| Input Command | Description |
|---|--|
| | SMB system-made busy |
| | SMOF system-made offline |
| | <i>indirect state</i> is INDR if the parent device is busied |
| | <i>hardware state</i> can be one of: |
| | DSBL disabled |
| | ENBL enabled |
| | <i>activity state</i> can be one of: |
| | ACTV active |
| | DXFR data transfer |
| | INAC inactive |
| | NORM normal |
| | SPRD spared |
| | SPNG sparing |
| | STBY standby |
| | BLCK is output if the primary link cannot be spared by a protection link. |
| | FELP is output if the far-end loop condition is set on the link. |
| STAT SRI PE/CE <i>b s p</i> or STAT SRI ALL | Gives the status of a specified SRI pack or a specified DSI module, and the SRLKs and PELPs that are connected to it, or of all SRI packs or DSI modules. Example: STAT SRI PE 3 2 3 The system response is in the following format: SRI (NT4T09) <i>site</i> PE/CE <i>b s p</i> (<i>indirect state</i>) <i>hardware state</i> SRLK (NT4T09) <i>site</i> PE/CE <i>b s p u</i> <i>direct state</i> (<i>indirect state</i>) <i>hardware state</i> <i>activity state</i> FLTS = <i>fault</i> PELP (NT4T04/NT8T04) CE <i>b s p l</i> <i>direct state</i> (<i>indirect state</i>) <i>hardware state</i> <i>activity state</i> SRLK (NT4T09) <i>site</i> PE/CE <i>b s p u</i> <i>direct state</i> (<i>indirect state</i>) <i>hardware state</i> <i>activity state</i> FLTS = <i>fault</i> PELP (NT4T04/NT8T04) CE <i>b s p l</i> <i>direct state</i> (<i>indirect state</i>) <i>hardware state</i> <i>activity state</i> <i>direct state</i> can be one of: INS in service MMB man-made busy MMOF man-made offline SMB system-made busy |

DED commands (Continued)

| Input Command | Description |
|---------------|---|
| SMOF | system-made offline |
| | <i>indirect state</i> is INDR if a higher-order device is out of service (that is, the higher-order device is MMB, MMOF, SMB, or SMOF). |
| | <i>hardware state</i> can be one of: |
| DSBL | disabled |
| ENBL | enabled |
| | <i>activity state</i> can be one of: |
| ACTV | active |
| INAC | inactive |
| NORM | normal |
| SPRD | spared |
| SPNG | sparing |
| STBY | standby |
| | Note: ACTV and INAC indicate the SRI link (SRLK) maintenance state; therefore, if an SRLK is INAC, the SRLK will not report any link faults being set or cleared until the SRLK is ACTV. |
| | <i>fault</i> refers to SRLK fault and may be one of: |
| BPVO | Number of bipolar violations exceeded out-of-service threshold (set in Overlay NET [SRI]) |
| BTST | Test fault found during background run of Overlay DED |
| FRLO | Frame losses exceeded out-of-service threshold (set in Overlay NET [SRI]) |
| RALM | Remote alarm received |
| RBPV | Remote bipolar violations exceeded 10^{-3} violations per bit |
| RCLK | Remote clock fault |
| SLPO | Number of frame slips exceeded out-of-service threshold (set in Overlay NET [SRI]) |
| SPWR | SRI shelf power failure. |
| SYNC | Transient synchronization fault (if the SRLK is INS, then SYNC will not be output as a fault) |
| | If faults are not present, then the FLTS = <i>fault</i> line is omitted. |
| | If the SRI pack is not fully configured (that is, if it is not configured with two PELPs or SRLKs), then the appropriate system response lines are omitted. |

DED commands (Continued)

| Input Command | Description |
|-----------------------------------|---|
| STAT SRLK PE/CE <i>b s p u</i> | Gives the status of the SRI or the DSI link by location or condition, or gives the status of all SRI or DSI links. |
| or | |
| STAT SRLK <i>condition</i> | <i>condition</i> may be one of: |
| or | |
| STAT SRLK ALL | INS in service MMB man-made busy OOS out of service SMB system-made busy |

Example: STAT SRLK PE 2 1 4 0

The system response is in the following format:

SRLK (NT4T09/NT4T24) *site* PE/CE *b s p u* *direct state* (*indirect state*)
hardware state *activity state*

FLTS = *fault*

PELP (NT4T04/NT8T04) CE *b s p l* *direct state*
(*indirect state*) *hardware state* *activity state*

SRLK (NT4T09/NT4T24) *site* PE/CE *b s p u* *direct state* (*indirect state*)
hardware state *activity state*

FLTS = *fault*

PELP (NT4T04/NT8T04) CE *b s p l* *direct state*
(*indirect state*) *hardware state* *activity state*

direct state can be one of:

- INS in service
- MMB man-made busy
- MMOF man-made offline
- SMB system-made busy
- SMOF system-made offline

indirect state is INDR if a higher-order device is out of service (that is, the higher-order device is MMB, MMOF, SMB, or SMOF).

hardware state can be one of:

- DSBL disabled
- ENBL enabled

activity state can be one of:

- ACTV active
- INAC inactive
- NORM normal
- SPRD spared
- SPNG sparing
- STBY standby

DED commands (Continued)

| Input Command | Description | | | | | | | | | | | | | | | | | | |
|--|---|------|---|------|---|------|---|------|-----------------------|------|---|------|----------------------|------|--|------|--------------------------|------|---|
| | <p><i>Note:</i> ACTV and INAC indicate the SRLK link (SRLK) maintenance state; therefore, if an SRLK is INAC, the SRLK will not report any link faults being set or cleared until the SRLK is ACTV.</p> <p><i>fault</i> refers to SRLK fault and may be one of:</p> <table border="0"> <tr> <td>BPVO</td> <td>Number of bipolar violations exceeded out-of-service threshold (set in Overlay NET [SRI])</td> </tr> <tr> <td>BTST</td> <td>Test fault found during background run of Overlay DED</td> </tr> <tr> <td>FRLO</td> <td>Frame losses exceeded out-of-service threshold (set in Overlay NET [SRI])</td> </tr> <tr> <td>RALM</td> <td>Remote alarm received</td> </tr> <tr> <td>RBPV</td> <td>Remote bipolar violations exceeded 10^{-3} violations per bit</td> </tr> <tr> <td>RCLK</td> <td>Remote clock fault</td> </tr> <tr> <td>SLPO</td> <td>Number of frame slips exceeded out-of-service threshold (set in Overlay NET [SRI])</td> </tr> <tr> <td>SPWR</td> <td>SRI shelf power failure.</td> </tr> <tr> <td>SYNC</td> <td>Transient synchronization fault (if the SRLK is INS, then SYNC will not be output as a fault)</td> </tr> </table> <p>If faults are not present, then the FLTS = <i>fault</i> line is omitted.</p> | BPVO | Number of bipolar violations exceeded out-of-service threshold (set in Overlay NET [SRI]) | BTST | Test fault found during background run of Overlay DED | FRLO | Frame losses exceeded out-of-service threshold (set in Overlay NET [SRI]) | RALM | Remote alarm received | RBPV | Remote bipolar violations exceeded 10^{-3} violations per bit | RCLK | Remote clock fault | SLPO | Number of frame slips exceeded out-of-service threshold (set in Overlay NET [SRI]) | SPWR | SRI shelf power failure. | SYNC | Transient synchronization fault (if the SRLK is INS, then SYNC will not be output as a fault) |
| BPVO | Number of bipolar violations exceeded out-of-service threshold (set in Overlay NET [SRI]) | | | | | | | | | | | | | | | | | | |
| BTST | Test fault found during background run of Overlay DED | | | | | | | | | | | | | | | | | | |
| FRLO | Frame losses exceeded out-of-service threshold (set in Overlay NET [SRI]) | | | | | | | | | | | | | | | | | | |
| RALM | Remote alarm received | | | | | | | | | | | | | | | | | | |
| RBPV | Remote bipolar violations exceeded 10^{-3} violations per bit | | | | | | | | | | | | | | | | | | |
| RCLK | Remote clock fault | | | | | | | | | | | | | | | | | | |
| SLPO | Number of frame slips exceeded out-of-service threshold (set in Overlay NET [SRI]) | | | | | | | | | | | | | | | | | | |
| SPWR | SRI shelf power failure. | | | | | | | | | | | | | | | | | | |
| SYNC | Transient synchronization fault (if the SRLK is INS, then SYNC will not be output as a fault) | | | | | | | | | | | | | | | | | | |
| STAT ULIN <i>site</i> UCE <i>b lsg l</i> or STAT ULIN ALL | <p>Gives the status of a single subscriber line, or the status of all subscriber lines, connected to an RCU.</p> <p>Example: STAT ULIN SITE UCE 1 0 1</p> <p>The system response is in the following format: ULIN <i>site</i> UCE <i>b lsg l</i> <i>direct state</i> (<i>indirect state</i>) <i>hardware state</i> <i>call processing state</i></p> <p><i>direct state</i> can be one of:</p> <table border="0"> <tr> <td>INS</td> <td>in service</td> </tr> <tr> <td>MMB</td> <td>man-made busy</td> </tr> <tr> <td>SMB</td> <td>system-made busy</td> </tr> </table> <p><i>indirect state</i> is INDR if the parent device is busied</p> <p><i>hardware state</i> can be one of:</p> <table border="0"> <tr> <td>DSBL</td> <td>disabled</td> </tr> <tr> <td>ENBL</td> <td>enabled</td> </tr> </table> <p><i>call processing state</i> can be one of:</p> <table border="0"> <tr> <td>CPBY</td> <td>Call processing busy</td> </tr> <tr> <td>IDLE</td> <td>Idle</td> </tr> </table> | INS | in service | MMB | man-made busy | SMB | system-made busy | DSBL | disabled | ENBL | enabled | CPBY | Call processing busy | IDLE | Idle | | | | |
| INS | in service | | | | | | | | | | | | | | | | | | |
| MMB | man-made busy | | | | | | | | | | | | | | | | | | |
| SMB | system-made busy | | | | | | | | | | | | | | | | | | |
| DSBL | disabled | | | | | | | | | | | | | | | | | | |
| ENBL | enabled | | | | | | | | | | | | | | | | | | |
| CPBY | Call processing busy | | | | | | | | | | | | | | | | | | |
| IDLE | Idle | | | | | | | | | | | | | | | | | | |

DED commands (Continued)

| Input Command | Description |
|---|---|
| STAT ULPK <i>site</i> UCE <i>b lsg l</i> or STAT ULPK ALL | Gives the status of a single line pack, or the status of all line packs, in an RCU. Example: STAT ULPK SITE UCE 1 0 1 The system response is in the following format: ULPK (NT3Ann,NT3Ann) <i>site</i> UCE <i>b lsg l</i> <i>direct state (indirect state) hardware state call processing state</i> ULIN <i>site</i> UCE <i>b lsg l</i> <i>direct state (indirect state) hardware state call processing state</i> <i>direct state</i> can be one of: INS in service MMB man-made busy SMB system-made busy <i>indirect state</i> is INDR if the parent device is busied <i>hardware state</i> can be one of: DSBL disabled ENBL enabled <i>call processing state</i> can be one of: CPBY Call processing busy IDLE Idle |
| STAT ULSG <i>site</i> UCE <i>b lsg</i> (NOLN) or STAT ULSG <i>condition</i> (NOLN) or STAT ULSG ALL (NOLN) | Gives the status of a line subgroup in an RCU by location or condition, or gives the status of all line subgroups in an RCU. <i>condition</i> may be one of: INS in service MMB man-made-busy OOS out-of-service SMB system-made-busy Example: STAT ULSG SITE UCE 1 4 The system response is in the following format: ULSG <i>site</i> UCE <i>b s</i> <i>direct state (indirect state) hardware state call processing state</i> <i>direct state</i> can be one of: INS in service MMB man-made busy SMB system-made busy <i>indirect state</i> is INDR if the parent device is busied <i>hardware state</i> can be one of: DSBL disabled ENBL enabled <i>call processing state</i> can be one of: CPBY Call processing busy |

DED commands (Continued)

| Input Command | Description | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|-----|------------|-----|---------------|------|------------------|-----|----------------|-----|------------------|------|---------------------|------|----------|------|---------|------|-------------------|------|-------------|------|--------|------|---------|------|-----------------|------|-------------------|------|-------------------|------|-----------------|------|----------------|-----|------------------|------|--------|------|-------------|------|-----------|-----|--------|------|--------|------|-------------------|------|-----------|
| STAT USHF <i>site</i> UCE <i>b s</i> | <p>IDLE Idle</p> <p>Gives the status of all CE cards on a specified shelf in an RCU.</p> <p>Example: STAT USHF SITE UCE 1 4</p> <p>The system response is in the following format:</p> <p>RCU <i>site</i> UCE <i>b s</i> <i>direct state</i> (<i>indirect state</i>) <i>hardware state</i></p> <p><i>card type</i> (NT <i>pack code</i>) <i>site</i> UCE <i>b s p status</i></p> <p><i>direct state</i> can be one of:</p> <table> <tr><td>INS</td><td>in service</td></tr> <tr><td>MMB</td><td>man-made busy</td></tr> <tr><td>MMOF</td><td>man-made offline</td></tr> <tr><td>OOS</td><td>out of service</td></tr> <tr><td>SMB</td><td>system-made busy</td></tr> <tr><td>SMOF</td><td>system-made offline</td></tr> </table> <p><i>indirect state</i> is INDR if the parent device is busied</p> <p><i>hardware state</i> can be one of:</p> <table> <tr><td>DSBL</td><td>disabled</td></tr> <tr><td>ENBL</td><td>enabled</td></tr> </table> <p><i>card type</i> can be one of:</p> <table> <tr><td>CEXT</td><td>Control extension</td></tr> <tr><td>SPVR</td><td>Supervisory</td></tr> <tr><td>SWCH</td><td>Switch</td></tr> <tr><td>DGRP</td><td>Digroup</td></tr> <tr><td>RPTR</td><td>Office repeater</td></tr> <tr><td>CNTL</td><td>Control processor</td></tr> <tr><td>MSGP</td><td>Message processor</td></tr> <tr><td>PWRC</td><td>Power converter</td></tr> <tr><td>RGEN</td><td>Ring generator</td></tr> <tr><td>LTA</td><td>Line test access</td></tr> <tr><td>TIME</td><td>Timing</td></tr> <tr><td>MTCE</td><td>Maintenance</td></tr> </table> <p><i>status</i> can be one or more of:</p> <table> <tr><td>INST</td><td>installed</td></tr> <tr><td>ACT</td><td>active</td></tr> <tr><td>FAIL</td><td>failed</td></tr> <tr><td>TEST</td><td>card being tested</td></tr> <tr><td>INHB</td><td>inhibited</td></tr> </table> | INS | in service | MMB | man-made busy | MMOF | man-made offline | OOS | out of service | SMB | system-made busy | SMOF | system-made offline | DSBL | disabled | ENBL | enabled | CEXT | Control extension | SPVR | Supervisory | SWCH | Switch | DGRP | Digroup | RPTR | Office repeater | CNTL | Control processor | MSGP | Message processor | PWRC | Power converter | RGEN | Ring generator | LTA | Line test access | TIME | Timing | MTCE | Maintenance | INST | installed | ACT | active | FAIL | failed | TEST | card being tested | INHB | inhibited |
| INS | in service | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MMB | man-made busy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MMOF | man-made offline | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OOS | out of service | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SMB | system-made busy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SMOF | system-made offline | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DSBL | disabled | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENBL | enabled | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CEXT | Control extension | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SPVR | Supervisory | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SWCH | Switch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DGRP | Digroup | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RPTR | Office repeater | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CNTL | Control processor | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MSGP | Message processor | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PWRC | Power converter | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RGEN | Ring generator | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LTA | Line test access | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TIME | Timing | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MTCE | Maintenance | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| INST | installed | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ACT | active | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FAIL | failed | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TEST | card being tested | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| INHB | inhibited | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

DED commands (Continued)

| Input Command | Description |
|--|--|
| | RALM RCU alarm is set |
| | SALM SCU alarm is set |
| | NPWR no power |
| SWCH D1LK SCE <i>b s p u</i> | Applies only to a D1LK serving a SLC-96. Forces a primary DS-1 link to be spared by the protection link. Example: SWCH D1LK SCE 1 4 4 2 |
| SWCH EDCH MVIE <i>b s p</i> | Switches an ISDN System Group (ISG) associated with the specified EDCH pack to another EDCH pack. Example: SWCH EDCH MVIE 1 1 16 |
| SWCH EOC0/EOC1 <i>site IDE b (IMED)</i> | Switches the embedded operations (EOC) channel of the specified IDT from in-service to standby state. If the mate EOC is in man-made busy state, the IMED parameter is required in order for the switch to be performed. Example: SWCH EOC1 SITE IDE 1 |
| SWCH ESMC MVIE <i>b s p (IMED)</i> | Switches activity from the specified ESMA unit to the standby ESMA unit. In order for the switch to be performed, both ESMA units must be service and the mate unit must be in standby state. Example: SWCH ESMC MVIE 1 1 3 <i>Note:</i> <i>The IMED parameter also enables a switch to a unit that has faults.</i> |
| SWCH RCU <i>site</i> UCE <i>b s</i> | Switches the statuses of the RCU controller (that is, the in-service active controller becomes the in-service standby controller, and the in-service standby controller becomes the in-service active controller). Example: SWCH RCU SITE UCE 1 4 |
| SWCH RSCC <i>site</i> RSC <i>b s p (IMED)</i> | Switches the statuses of the specified RSC-S unit. The SWCH can be performed only on the active unit; both units must be in service and the mate unit must be in standby mode. If only a cold SWCH is permitted, the IMED parameter must be used. <i>Note 1:</i> The IMED parameter also enables a switch to a unit that has faults. <i>Note 2:</i> Enter additional commands for this controller only after the RCS814 message displays. Example: SWCH RSCC SITE RSC 1 1 3 |
| SWCH SCSC (<i>site</i>) SCE <i>b s (IMED)</i> | Switches the statuses of the SCM-10S control complexes (that is, the in-service active controller becomes the in-service standby controller, and the in-service standby controller becomes the in-service active controller). The <i>s</i> in SCE <i>b s</i> is the shelf of the currently active controller. The IMED parameter enables a switch to the standby controller to occur without a pre-Swact query taking place. Example: SWCH SCSC SCE 1 2 <i>Note:</i> <i>Enter additional commands for this controller only after the SCS814 message displays.</i> |

DED commands (Continued)

| Input Command | Description |
|--|--|
| SWCH SCUC (<i>site</i>) SCE <i>b s</i> (IMED) | <p>Switches the statuses of the SCM-10U control complexes (that is, the in-service active controller becomes the in-service standby controller, and the in-service standby controller becomes the in-service active controller). The <i>s</i> in SCE <i>b s</i> is the shelf of the currently active controller. The IMED parameter enables a switch to the standby controller to occur without a pre-Swact query taking place.</p> <p>Example: SWCH SCUC SCE 2 1</p> <p><i>Note:</i> Enter additional commands for this controller only after the SCU814 message displays.</p> |
| SWCH TMC0/TMC1 <i>site</i> IDE <i>b</i> (IMED) | <p>Switches the time slot management (TMC) channel of the specified IDT from in-service to standby state. If the mate TMC is in man-made busy state, the IMED parameter is required in order for the switch to be performed.</p> <p>Example: SWCH TMC0 SITE IDE 1</p> |
| SWME IDC (<i>site</i>) LCE/ RSC/RSE <i>b s lsg</i> | <p>Switches the inactive Flash Memory bank status to active status, and the active bank to inactive status, for the specified IDC. Flash Memory banks (1 and 2) store firmware program code. Under normal conditions the information in each bank is identical. Switching banks may be necessary if the code in the active bank is destroyed or to allow the IDC to execute a specific firmware version. Refer also to the DNLD IDC and CPME IDC commands, which are normally used in conjunction with the SWME command. Executing this command requires that the IDC be in an MMB condition.</p> <p>Example: SWME IDC SITE LCE 1 3 8</p> |
| SWME RLD | Not operational. |
| TEST ALL | Performs one test cycle of Overlay DED. (Does not include testing of PSC2). |
| TEST D1LK SCE <i>b s p u</i> (REP <i>n</i>) or TEST D1LK ALL | <p>Tests the specified DS-1 link or all DS-1 links.</p> <p>The REP <i>n</i> option specifies the number of times a command is repeated; <i>n</i> may be 1 to 32,767. If <i>n</i> is not specified, the default value is 32,767. Operating company personnel may abort the repeating test by entering #####.</p> <p><i>Note:</i> The D1LK must be in the man-made-busy state before it is tested.</p> <p>Example: TEST D1LK SCE 1 3 4 1</p> |
| TEST D1PK SCE <i>b s p</i> (REP <i>n</i>) or TEST D1PK ALL | <p>Tests the specified DS-1 Interface pack or all DS-1 Interface packs.</p> <p>The REP <i>n</i> option specifies the number of times a command is repeated; <i>n</i> may be 1 to 32,767. If <i>n</i> is not specified, the default value is 32,767. Operating company personnel may abort the repeating test by entering #####.</p> <p><i>Note:</i> The D1PK must be in the man-made-busy state before it is tested.</p> <p>Example: TEST D1PK SCE 1 3 4</p> |

DED commands (Continued)

| Input Command | Description |
|--|--|
| TEST D30L <i>site</i> RSC <i>b s p u</i> (REP <i>n</i>) or TEST D30L ALL | <p>Tests the specified RSC-S P-side DS-30A link on an NTMX74 pack. While in the interactive (manual) mode, the DS-30A link (D30L) must be man-made busy before any manual testing can be preformed.</p> <p>The REP <i>n</i> option specifies the number of times a command is repeated; <i>n</i> may be 1 to 32,767. If <i>n</i> is not specified, the default value is 32,767. Operating company personnel may abort the repeating test by entering #####.</p> <p>Example: TEST D30L SITE RSC 1 1 13 1</p> |
| TEST DCM (<i>site</i>) PE <i>b s p</i> (REP <i>n</i>) or TEST DCM ALL (REP <i>n</i>) | <p>Tests a specified Digital Carrier Module (DCM) or all DCMs. The <i>p</i> in PE <i>b s p</i> is the leftmost pack of the DCM.</p> <p>If the DCM is in the free-running mode (background), a continuity test and signaling test are performed. If a system-made-busy (SMB) DCM passes the tests, it will be returned to service. In-service DCMs that do not pass the tests will be made SMB. When a SMB DCM that is attached to a DLC in a Large Cluster Controller (LCC) is returned to service, Overlay DED will attempt to set the bits in the DCM to allow data transfer. If these bits cannot be set, the DCM will remain SMB.</p> <p>The REP <i>n</i> option specifies the number of times a command is repeated; <i>n</i> may be 1 to 32,767. If <i>n</i> is not specified, the default value is 32,767. Operating company personnel may abort the repeating test by entering #####.</p> <p>Examples: TEST DCM PE 1 4 2 TEST DCM ALL REP 2</p> |
| TEST DS1L <i>site</i> RSC/MVIE/HUBE <i>b s p u</i> (REP <i>n</i>) or TEST DS1L ALL | <p>Tests the specified RSC-S or ESMA P-side DS-1 link on an NTMX81 pack, or tests the specified Star Hub P-side DS-1 link on an NTTR77 pack. When the ALL option is entered, all of the DS-1 links are tested. The DSI must be man-made-busy before any manual testing can be performed.</p> <p>The REP <i>n</i> option specifies the number of times a command is repeated; <i>n</i> may be 1 to 32,767. If <i>n</i> is not specified, the default value is 32,767. Operating company personnel may abort the repeating test by entering #####.</p> <p>Example: TEST DS1L SITE RSC 1 1 12 4 TEST DS1L MVIE 1 1 12 4</p> |
| TEST DSI CE <i>b s p</i> or TEST DSI ALL (REP <i>n</i>) | <p>Tests the specified Digital Signal Interface module or all Digital Signal Interface modules in the switch. In the designated location, <i>p</i> is the position of the rightmost pack of the module.</p> <p>The REP <i>n</i> option specifies the number of times a command is repeated; <i>n</i> may be 1 to 32,767. If <i>n</i> is not specified, the default value is 32,767. Operating company personnel may abort the repeating test by entering #####.</p> <p>Example: TEST DSI CE 1 1 4</p> |

DED commands (Continued)

| Input Command | Description |
|--|--|
| TEST DSLK CE <i>b s p lk</i> or TEST DSLK ALL (REP <i>n</i>) | <p>Tests the specified Digital Signal Interface link or all Digital Signal Interface links in the switch. In the designated location, <i>p</i> is the position of the rightmost pack of the module.</p> <p>The REP <i>n</i> option specifies the number of times a command is repeated; <i>n</i> may be 1 to 32,767. If <i>n</i> is not specified, the default value is 32,767. Operating company personnel may abort the repeating test by entering #####.</p> <p>Example: TEST DSLK CE 1 1 4 1</p> |
| TEST EDCH MVIE <i>b s p</i> or TEST EDCH ALL (REP <i>n</i>) | <p>Tests the specified Enhanced D-Channel Handler (EDCH) pack or all EDCH packs.</p> <p>The REP <i>n</i> option specifies the number of times a command is repeated; <i>n</i> may be 1 to 32,767. If <i>n</i> is not specified, the default value is 32,767. Operating company personnel may abort the repeating test by entering #####.</p> <p>Example: TEST DSLK CE 1 1 4 1</p> |
| TEST ESMC MVIE <i>b s p</i> (ROM) or TEST ESMC ALL (REP <i>n</i>) | <p>Tests the specified ESMA control unit or all ESMA control units.</p> <p>The REP <i>n</i> option specifies the number of times a command is repeated; <i>n</i> may be 1 to 32,767. If <i>n</i> is not specified, the default value is 32,767. Operating company personnel may abort the repeating test by entering #####.</p> <p>The ROM option specifies that only the ROM partial will be performed during the unit's test. The unit must be man-made busy and loaded.</p> <p>Example: TEST ESMA MVIE 1 1 3</p> |
| TEST ESAC <i>site</i> RSE <i>b s p</i> (REP <i>n</i>) or TEST ESAC <i>site</i> LCE <i>b s</i> (REP <i>n</i>) or TEST ESAC ALL (REP <i>n</i>) | <p>Tests the specified ESA processor or tests all ESA processors.</p> <p>The REP <i>n</i> option specifies the number of times a command is repeated; <i>n</i> may be 1 to 32,767. If <i>n</i> is not specified, the default value is 32,767. Operating company personnel may abort the repeating test by entering #####.</p> <p>Example: TEST ESAC SITE RSE 1 4 3</p> |
| TEST HUB <i>site</i> HUBE <i>b s</i> | <p>Tests both Star Hub Remote Controller packs (NTTR77).</p> <p>Example: TEST HUB SHUB HUBE 1 3</p> <p><i>Note: The NTTR77 packs must be in-service or man-made busy before this command can be issued.</i></p> |
| TEST HUBC <i>site</i> HUBE <i>b s p</i> or TEST HUBC <i>site</i> HUBE <i>b s p</i> (REP <i>n</i>) or TEST HUBC ALL (REP <i>n</i>) | <p>Tests the specified Star Hub Remote Controller pack (NTTR77).</p> <p>Example: TEST HUBC SHUB HUBE 1 3 17</p> <p><i>Note: The NTTR77 must be in-service or man-made busy before this command can be issued.</i></p> <p>The REP <i>n</i> option specifies the number of times a command is repeated; <i>n</i> may be 1 to 32,767. If <i>n</i> is not specified, the default value is 32,767. Operating company personnel may abort the repeating test by entering #####.</p> |

DED commands (Continued)

| Input Command | Description |
|--|--|
| TEST IDC (<i>site</i>) LCE/RSC/RSE <i>b s lsg</i> (REP <i>n</i>) or TEST IDC ALL (REP <i>n</i>) | <p>Tests the specified ISDN Drawer Controller. This command requires that the IDC is in an INS or MMB state, and not in an indirect state. A range of tests are performed, with service interrupting tests performed only when the IDC is in an MMB state.</p> <p>The REP <i>n</i> option specifies the number of times a command is repeated; <i>n</i> may be 1 to 32,767. If <i>n</i> is not specified, the default value is 32,767. Operating company personnel may abort the repeating test by entering #####.</p> <p>Example: TEST IDC SITE LCE 1 3 8</p> |
| TEST LCM (<i>site</i>) LCE/RSC <i>b s</i> (LSGL) (REP <i>n</i>) | <p>Tests both LCM control units that make up a specified LCM or all LCMs. The <i>s</i> in LCE/RSC <i>b s</i> can be either shelf of the LCM. The Processor, Digroup Control card, Bus Interface card, Ringing Generator, and line card communication tests are performed. If DED finds a failure while running in the free-running (automatic) mode, the failed device is placed in the system-made-busy state.</p> <p>The LSGL option limits the testing to the subgroups and the lines. Only the Bus Interface card and line card communication tests are performed.</p> <p>The REP <i>n</i> option specifies the number of times a command is repeated; <i>n</i> may be 1 to 32,767. If <i>n</i> is not specified, the default value is 32,767. Operating company personnel may abort the repeating test by entering #####.</p> <p>Note 1: This command is not applicable for Virtual Remote Line Concentrating Modules (VLCM).</p> <p>Note 2: The OPM or OPAC bay numbers may be any number from 1 through 32; however, only two bays may be assigned per site identification mnemonic and the numbers must be in consecutive order. For example, 3 and 4 are valid bay numbers, but 3 and 5 are not valid. The left bay contains LCA 1, LCA 0, Host Interface Equipment, and an Environmental Control Unit. The right bay contains the Battery Control Unit, Rectifiers 1 and 0, Frame Supervisory Panel, Remote Maintenance Module, and an Environmental Control Unit.</p> <p>Examples: TEST LCM LCE 1 3 TEST LCM LCE 1 1 LSGL TEST LCM LCE 2 1 REP 3 TEST LCM LCE 2 3 LSGL REP 2</p> |
| TEST LCMC (<i>site</i>) LCE/RSC <i>b s</i> (LSGL) (REP <i>n</i>) or TEST LCMC ALL (LSGL) (REP <i>n</i>) | <p>Tests the specified LCM control unit (packs NT6X51 and NT6X52) or all LCM control units. The Processor, Digroup Control card, Bus Interface card, Ringing Generator, and line card communication tests are performed. If DED finds a failure while running in the free-running (automatic) mode, the failed device is placed in the system-made-busy state.</p> <p>The LSGL option limits the testing to the subgroups and the lines. Only the Bus Interface card and line card communication tests are performed.</p> |

DED commands (Continued)

| Input Command | Description |
|--|---|
| | <p>The REP <i>n</i> option specifies the number of times a command is repeated; <i>n</i> may be 1 to 32,767. If <i>n</i> is not specified, the default value is 32,767. Operating company personnel may abort the repeating test by entering #####.</p> <p>Note 1: This command is not applicable for Virtual Remote Line Concentrating Modules (VLCM).</p> <p>Note 2: The OPM or OPAC bay numbers may be any number from 1 through 32; however, only two bays may be assigned per site identification mnemonic and the numbers must be in consecutive order. For example, 3 and 4 are valid bay numbers, but 3 and 5 are not valid. The left bay contains LCA 1, LCA 0, Host Interface Equipment, and an Environmental Control Unit. The right bay contains the Battery Control Unit, Rectifiers 1 and 0, Frame Supervisory Panel, Remote Maintenance Module, and an Environmental Control Unit.</p> <p>Examples: TEST LCMC LCE 2 1 TEST LCMC LCE 2 4 REP TEST LCMC LCE 2 3 LSGP REP 2</p> |
| TEST LRNG (<i>site</i>) LCE/RSC/RSE <i>b u</i> (REP <i>n</i>) or TEST LRNG ALL (REP <i>n</i>) | <p>Tests the specified Ringing Generator pack or all Ringing Generator packs. If the LCM reports a failed Ringing Generator while in the interactive (manual) mode, a maintenance-terminal error message is output. If an error is reported while in the free-running mode, the Ringing Generator is placed in the system-made-offline state.</p> <p>The <i>u</i> in LCE/RSC <i>b u</i> is either 1 or 2:</p> <p>LRNG at the host: <i>u</i> = 1 for the left position in the Frame Supervisory Panel (FSP); <i>u</i> = 2 for the right position.</p> <p>LRNG at the remote: <i>u</i> = 1 for the LRNG in position 1 of the HIE shelf; <i>u</i> = 2 for the LRNG in position 5 of the HIE shelf.</p> <p>The REP <i>n</i> option specifies the number of times a command is repeated; <i>n</i> may be 1 to 32,767. If <i>n</i> is not specified, the default value is 32,767. Operating company personnel may abort the repeating test by entering #####.</p> <p>Note: This command is not applicable for Virtual Remote Line Concentrating Modules (VLCM).</p> <p>Examples: TEST LRNG LCE 2 1 TEST LRNG LCE 2 2 REP 3</p> |

DED commands (Continued)

| Input Command | Description |
|--|--|
| TEST LRNG <i>site</i> RSE <i>b u</i> (REP <i>n</i>) | <p>Tests the specified RSLE/RSLM/OPSM Ringing Generator pack. If a failed Ringing Generator is reported while in the interactive (manual) mode, a maintenance-terminal error message is output. If an error is reported while in the free-running state, the Ringing Generator is placed in the system-made-offline mode.</p> <p><i>Note:</i> The OPM or OPAC bay numbers may be any number from 1 through 32; however, only two bays may be assigned per site identification mnemonic and the numbers must be in consecutive order. For example, 3 and 4 are valid bay numbers, but 3 and 5 are not valid. The left bay contains LCA 1, LCA 0, Host Interface Equipment, and an Environmental Control Unit. The right bay contains the Battery Control Unit, Rectifiers 1 and 0, Frame Supervisory Panel, Remote Maintenance Module, and an Environmental Control Unit.</p> <p>Example: TEST LRNG SITE RSE 1 1</p> |
| TEST LSG (<i>site</i>) LCE/ RSC <i>b s p</i> | <p>Tests the specified Line Subgroup (LSG).</p> <p>Examples: TEST LSG 4 4 10</p> |
| TEST PGIC ME/PE/ CE/IE <i>b p u</i> (REP <i>n</i>) or TEST PGIC ALL (REP <i>n</i>) | <p>Tests the specified Packet Gateway Interface Controller (PGIC) or all PGICs. The REP <i>n</i> option specifies the number of times the command is repeated; <i>n</i> may be between 1 and 32,767. If <i>n</i> is not specified, the default value is 32,767. Operating company personnel may abort the repeating test by entering #####.</p> <p>Example: TEST PGIC ME 1 1 1</p> |
| TEST PSC2 (<i>site</i>) PE <i>b s</i> (REP <i>n</i>) | <p>Verifies that the specified PE shelf is a dual PE shelf with a mate. Tests power on both shelves, and transfers and restores power.</p> <p>The REP <i>n</i> option specifies the number of times a command is repeated; <i>n</i> may be 1 to 32,767. If <i>n</i> is not specified, the default value is 32,767. Operating company personnel may abort the repeating test by entering #####.</p> <p>Examples: TEST PSC2 PE 1 1 TEST PSC2 PE 1 4 REP 2</p> |
| TEST PSHF (<i>site</i>) PE <i>b s</i> (REP <i>n</i>) or TEST PSHF ALL (REP <i>n</i>) | <p>Tests the specified PE shelf or all PE shelves. A PE shelf is not taken out of service if faults are found.</p> <p>The REP <i>n</i> option specifies the number of times a command is repeated; <i>n</i> may be 1 to 32,767. If <i>n</i> is not specified, the default value is 32,767. Operating company personnel may abort the repeating test by entering #####.</p> <p>Examples: TEST PSHF PE 1 3 TEST PSHF ALL TEST PSHF PE 1 2 REP</p> |

DED commands (Continued)

| Input Command | Description |
|---|---|
| TEST RCU <i>site</i> UCE <i>b s</i> (REP <i>n</i>) (FULL) or TEST RCU ALL (REP <i>n</i>) | <p>Tests either the specified RCU controller or the specified RCU controller and all ULINs (FULL option).</p> <p>The REP <i>n</i> option specifies the number of times a command is repeated; <i>n</i> may be 1 to 32,767. If <i>n</i> is not specified, the default value is 32,767. Operating company personnel may abort the repeating test by entering #####.</p> <p>If the RCU is equipped with EAST, the FULL option initiates automatic line CKT testing.</p> <p>Note 1: As indicated in the description of prompt EAST in Overlay NET (RCU) (see NTP 297-3601-311, <i>Data Modification Manual</i>), running EAST may cause lines in the RCU to go to lockout and the RCU to go system-made-busy. Therefore, the FULL option should be performed only during off hours in order to ensure minimum service impact on subscribers controlled by the DMS-1 Urban.</p> <p>Note 2: When an in-service RCU is tested, dial tone is lost for several seconds.</p> <p>Example: TEST RCU SITE UCE 1 4</p> |
| TEST REM <i>site</i> PE <i>b s p</i> (REP <i>n</i>) or TEST REM ALL (REP <i>n</i>) | <p>Tests the specified Remote Equipment Module (REM) or all REMs. The <i>p</i> in PE <i>b s p</i> is the leftmost pack of the RCM (that is, position 2, 6, 11, or 15) or position 3, 7, 12, or 16 for the OCM. The site option must be specified for RCMs. If the REM is in the free-running mode (background), a continuity test and signaling test are performed.</p> <p>The REP <i>n</i> option specifies the number of times a command is repeated; <i>n</i> may be 1 to 32,767. If <i>n</i> is not specified, the default value is 32,767. Operating company personnel may abort the repeating test by entering #####.</p> <p>Examples: TEST REM PE 1 2 3 (test an OCM) TEST REM CAPK PE 1 4 2 (test an RCM) TEST REM PE 1 2 3 REP</p> |
| TEST RLD | Not operational. |
| TEST RMM <i>site</i> LCE/RSC <i>b s</i> (REP <i>n</i>) or TEST RMM ALL (REP <i>n</i>) | <p>Tests the specified Remote Maintenance Module (RMM) or all RMMs. The RMM must be either in-service (INS) or man-made-busy (MMB) and not in indirect (INDR) state before a manual test may be performed. Memory, checksum and invalid trunk interrupt tests are performed. A message is output to indicate either that the tests passed, that one or more of the tests failed, or a timeout occurred before the RMM responded to a test. If the RMM fails the test and is in a MMB state, additional memory, timer, interrupt, and trunk tests are performed.</p> <p>The RMM must be either INS or system-made-busy (SMB) before a free-running (background) test may be performed. If the RMM is INS and fails the test, it will be removed from service (placed in SMB state). If the RMM is SMB and passes the test, it will be returned to service (placed in INS state).</p> <p>The "s" in LCE <i>b s</i> is always 4 for an RLCM and 1 for an OPM or OPAC.</p> |

DED commands (Continued)

| Input Command | Description |
|--|--|
| <p>TEST RSCC <i>site</i> RSC <i>b s p</i> (REP <i>n</i>) (ROM) or TEST RSCC ALL (REP <i>n</i>)</p> | <p>The REP <i>n</i> option specifies the number of times a command is repeated; <i>n</i> may be 1 to 32,767. If <i>n</i> is not specified, the default value is 32,767. Operating company personnel may abort the repeating test by entering #####.</p> <p>Note 1: This command is not applicable for Virtual Remote Line Concentrating Modules (VLCM).</p> <p>Note 2: The OPM or OPAC bay numbers may be any number from 1 through 32; however, only two bays may be assigned per site identification mnemonic and the numbers must be in consecutive order. For example, 3 and 4 are valid bay numbers, but 3 and 5 are not valid. The left bay contains LCA 1, LCA 0, Host Interface Equipment, and an Environmental Control Unit. The right bay contains the Battery Control Unit, Rectifiers 1 and 0, Frame Supervisory Panel, Remote Maintenance Module, and an Environmental Control Unit.</p> <p>Example: TEST RMM ALEX LCE 1 4</p> <p>Tests the specified Remote Switching Center (RSC-S) unit or tests all RSC-S units. For an out-of-service test, the unit must be in MMB state. For an in-service test, the unit must be in INSV state.</p> <p>The REP <i>n</i> option specifies the number of times a command is repeated; <i>n</i> may be 1 to 32,767. If <i>n</i> is not specified, the default value is 32,767. Operating company personnel may abort the repeating test by entering #####.</p> <p>The ROM option specifies that only the ROM partial will be performed during the unit's test. The unit must be man-made busy and loaded.</p> <p>Example: TEST RSCC SITE RSC 1 1 3</p> |
| <p>TEST RSLC <i>site</i> RSE <i>b s p</i> (REP <i>n</i>) or TEST RSLC ALL (REP <i>n</i>)</p> | <p>Tests the specified RSLE/RSLM processor or tests all equipped RSLE/RSLM processors.</p> <p>The REP <i>n</i> option specifies the number of times a command is repeated; <i>n</i> may be 1 to 32,767. If <i>n</i> is not specified, the default value is 32,767. Operating company personnel may abort the repeating test by entering #####.</p> <p>Example: TEST RSLC SITE RSE 1 3 8</p> |
| <p>TEST RSLE <i>site</i> RSE <i>b (s)</i> (REP <i>n</i>)</p> | <p>Tests the RSLCs of the RSLE shelf. If a shelf is not specified, then all RSLCs in that bay will be tested.</p> <p>The REP <i>n</i> option specifies the number of times a command is repeated; <i>n</i> may be 1 to 32,767. If <i>n</i> is not specified, the default value is 32,767. Operating company personnel may abort the repeating test by entering #####.</p> <p>Example: TEST RSLE SITE RSE 1 3</p> |
| <p>TEST RSLM <i>site</i> RSE <i>b s</i> (REP <i>n</i>)</p> | <p>Tests the RSLM shelf processor.</p> <p>The REP <i>n</i> option specifies the number of times a command is repeated; <i>n</i> may be 1 to 32,767. If <i>n</i> is not specified, the default value is 32,767. Operating company personnel may abort the repeating test by entering #####.</p> <p>Example: TEST RSLM SITE RSE 1 1</p> |

DED commands (Continued)

| Input Command | Description |
|---|---|
| TEST SCSC <i>site</i> SCE <i>b s</i> (REP <i>n</i>) or TEST SCSC ALL (REP <i>n</i>) | Tests the specified SCM-10S Control Complex or all SCM-10S Control Complexes. The REP <i>n</i> option specifies the number of times a command is repeated; <i>n</i> may be 1 to 32,767. If <i>n</i> is not specified, the default value is 32,767. Operating company personnel may abort the repeating test by entering #####. Example: TEST SCSC SCE 1 2 |
| TEST SCUC <i>site</i> SCE <i>b s</i> (REP <i>n</i>) or TEST SCUC ALL (REP <i>n</i>) | Tests the specified SCM-10U controller. The REP <i>n</i> option specifies the number of times a command is repeated; <i>n</i> may be 1 to 32,767. If <i>n</i> is not specified, the default value is 32,767. Operating company personnel may abort the repeating test by entering #####. <i>Note:</i> The SCM-10U controller must be either in the man-made-busy state or in the in-service standby state before it is tested. Example: TEST SCUC SCE 1 2 |
| TEST SLC <i>site</i> SLE <i>b cb</i> (REP <i>n</i>) or TEST SLC ALL (REP <i>n</i>) | Tests the specified SLC-96 or all SLC-96s. The REP <i>n</i> option specifies the number of times a command is repeated; <i>n</i> may be 1 to 32,767. If <i>n</i> is not specified, the default value is 32,767. Operating company personnel may abort the repeating test by entering #####. Example: TEST SLC CAPL SLE 1 2 |
| TEST SRI PE <i>b s p</i> (REP <i>n</i>) | Performs the following tests on both SRLKs on the SRI pack: response test, DS-30A to SRI looparound, and remote alarm test. Before testing the SRI pack, ensure that the SRI pack and the DS-30A loops connected to the SRI pack are in service (INS). The REP <i>n</i> option specifies the number of times a command is repeated; <i>n</i> may be 1 to 32,767. If <i>n</i> is not specified, the default value is 32,767. Operating company personnel may abort the repeating test by entering #####. Example: TEST SRI PE 7 6 4 |
| TEST SRLK PE <i>b s p u</i> (REP <i>n</i>) or TEST SRLK ALL (REP <i>n</i>) | Performs the following tests on the SRI link: response test, DS-30A to SRI looparound, and remote alarm test. Before testing the SRI link, ensure that the DS-30A loop controlling the SRLK being tested is INS. If the SRLK being tested is INS, only the response test is performed. If the SRLK is MMB, the response test, looparound, and remote tests are performed. The REP <i>n</i> option specifies the number of times a command is repeated; <i>n</i> may be 1 to 32,767. If <i>n</i> is not specified, the default value is 32,767. Operating company personnel may abort the repeating test by entering #####. Examples: TEST SRLK PE 7 6 4 1 TEST SRLK ALL REP 2 |
| TFLP D1LK SCE <i>b s p u</i> (REP <i>n</i>) | Applies only to a D1LK serving a SLC-96. This command, which is entered after the FELP command, runs a continuity test on the DS-1 link in the far-end condition (looparound). |

DED commands (Continued)

| Input Command | Description |
|--|---|
| UBLK D1LK SCE <i>b s p u</i> | Applies only to a D1LK serving a SLC-96. Allows the protection link to spare a designated primary link. If the primary link being unblocked is faulty and the protection link is available, traffic is switched from the primary link to the protection link. Example: UBLK D1LK SCE 1 4 4 1 |
| UBLK EOC0/EOC1 <i>site IDE b</i> | Removes the blocking of the embedded operations (EOC) channel of the specified IDT from being switched and becoming the active EOC channel. Example: UBLK EOC0 SITE IDE 1 |
| UBLK TMC0/TMC1 <i>site IDE b</i> | Removes the blocking of the time slot management (TMC) channel of the specified IDT from being switched and becoming the active TMC channel. Example: UBLK TMC0 SITE IDE 1 |
| VERS AX74 MVIE <i>b s p</i> | Reports the version of the ROM load resident on the specified Cellular Application Processor (CAP) pack or on all CAP packs. Example: VERS AX74 MVIE 1 1 3 |
| VERS CMR MVIE <i>b s p</i> | Reports the version of the firmware load resident on the specified CLASS Modem Resource (CMR) pack (NT6X78). Example: VERS CMR MVIE 1 1 5 |
| VERS CMR <i>site</i> RSC <i>b s p</i> | Reports the version of the firmware load resident on the specified CLASS Modem Resource (CMR) pack (NT6X78). Example: VERS CMR RSCS 1 1 5 |
| VERS DSI CE <i>b s p</i> or VERS DSI ALL | Reports the version of the firmware resident on the NT4T24, Span Interface Controller pack or the NT4T50, CALEA Dialed Digit Extraction (DDE) pack. <i>Note: In order to execute this command, the DSI must be either in-service (INS) or in man-made busy (MMB) state, and not in indirect (INDR) state.</i> Example: VERS DSI CE 1 1 4 The system response is in the following format: DSI <i>packtype site CE b s p</i> RESIDENT VERSION: <i>x.xx</i> DOWNLOAD VERSION: <i>x.xx / NONE</i> REQUIRED VERSION: <i>x.xx</i> RUNNING RESIDENT/DOWNLOAD CODE |

DED commands (Continued)

| Input Command | Description | | | | | | | | | | | | | | |
|---|---|-----|------------|-----|---------------|------|---|-----|------------------|------|--|------|---------|------|----------|
| | <p>where:</p> <p>RESIDENT VERSION is the version of firmware loaded in the FLASH memory bank</p> <p>DOWNLOAD VERSION is the version of firmware loaded in the download FLASH memory bank; NONE indicates that the download FLASH memory bank does not contain a firmware load and can be downloaded with firmware from the file system using the DNLD DSI command.</p> <p>REQUIRED VERSION is the version of firmware that the DSI should be running for the software generic loaded in the DMS-10 switch.</p> <p>RUNNING RESIDENT/DOWNLOAD CODE indicates which FLASH memory bank the firmware is running from.</p> | | | | | | | | | | | | | | |
| VERS EDCH MVIE <i>b s p</i> or VERS EDCH ALL | <p>Reports the version of the firmware resident on the NTB02, Enhanced D-Channel Handler (EDCH) pack.</p> <p>Example: VERS EDCH MVIE 1 1 16</p> <p>The system response is in the following format: EDCH (BX02BA) MVIE <i>b s p</i> LOAD <i>load name</i></p> | | | | | | | | | | | | | | |
| VERS ESMC MVIE <i>b s p</i> or VERS ESMC ALL | <p>Reports the version of the RAM load resident on the specified ESMA unit or on all ESMA units.</p> <p>Example: VERS ESMC MVIE 1 1 3</p> <p>The system response is in the following format: ESMA (NTAX74) MVIE <i>b s p</i> VERSION = SMAXXX</p> | | | | | | | | | | | | | | |
| VERS HUBC <i>site</i> HUBE <i>b s p</i> | <p>Reports the version of the loadfile resident on the specified Star Hub Remote Controller (NTTR77) pack.</p> <p>Example: VERS HUBC SHUB HUBE 1 3 7</p> <p>The system response is in the following format: HUBC (NTTR77) <i>site</i> HUBE <i>b s p direct state hardware state activity state</i> LOADNAME = XXXXXXXX[*]</p> <p><i>direct state</i> can be one of:</p> <table border="0"> <tr> <td>INS</td> <td>in service</td> </tr> <tr> <td>MMB</td> <td>man-made busy</td> </tr> <tr> <td>MMOF</td> <td>man-made offline (does not apply to RMM or BCU)</td> </tr> <tr> <td>SMB</td> <td>system-made busy</td> </tr> <tr> <td>SMOF</td> <td>system-made offline (does not apply to RMM or BCU)</td> </tr> </table> <p><i>hardware state</i> can be one of:</p> <table border="0"> <tr> <td>ENBL</td> <td>enabled</td> </tr> <tr> <td>DSBL</td> <td>disabled</td> </tr> </table> <p><i>activity state</i> can be one of:</p> | INS | in service | MMB | man-made busy | MMOF | man-made offline (does not apply to RMM or BCU) | SMB | system-made busy | SMOF | system-made offline (does not apply to RMM or BCU) | ENBL | enabled | DSBL | disabled |
| INS | in service | | | | | | | | | | | | | | |
| MMB | man-made busy | | | | | | | | | | | | | | |
| MMOF | man-made offline (does not apply to RMM or BCU) | | | | | | | | | | | | | | |
| SMB | system-made busy | | | | | | | | | | | | | | |
| SMOF | system-made offline (does not apply to RMM or BCU) | | | | | | | | | | | | | | |
| ENBL | enabled | | | | | | | | | | | | | | |
| DSBL | disabled | | | | | | | | | | | | | | |

DED commands (Continued)

| Input Command | Description |
|---|---|
| | ACTV active |
| | CPBY call-processing busy |
| | IDLE idle |
| | INAC inactive |
| | NORM normal |
| | SPRD spared |
| | SPNG sparing |
| | STBY standby |
| | <i>Note: If the loadfile in the Star Hub controller does not match the loadfile in the system reference table, an asterisk (*) displays.</i> |
| VERS IDC (site) LCE/ RSC/RSE b s lsg or VERS IDC ALL | <p>Reports the version of the current downloadable firmware code, for both FLASH memory banks, either in the specified ISDN Drawer Controller (IDC) or for all IDCs in all LCMs. Executing this command requires that the IDC be in an INS or MMB condition and not in an indirect state. The site must be specified for devices at a remote location.</p> <p>Example: VERS IDC SITE LCE 1 3 8</p> <p>The system response is in the following format:</p> <p>IDC (NT6X54) site LCE b s lsg BANK1 version activity state (*) BANK2 version activity state (*)</p> <p>activity state can be one of:</p> <p>ACTV active INAC inactive</p> <p>* indicates that the IDC pack firmware version, residing in that memory bank, does not match the IDC pack firmware version expected by the current DMS-10 generic software.</p> |
| VERS LCM/LCMC (site) LCE b s or VERS LCM/LCMC ALL | <p>Reports the version of the current download either in the specified Line Concentrating Module (LCM) or in LCM control units in all the LCMs. The site must be specified for devices at a remote site.</p> <p><i>Note: This command is not applicable for Virtual Remote Line Concentrating Modules (VLCM).</i></p> <p>Example: VERS LCM BASE LCE 2 2</p> <p>The system response is in the following format:</p> <p>LCM site LCE b s VERSION = XLCMnna XLCMnna refers to the download version.</p> |

DED commands (Continued)

| Input Command | Description |
|--|---|
| VERS MX77 <i>(site)</i> RSC <i>b s p</i> | <p>Reports the version and the issue of the two EEPROMs on the NTMX77 Unified Processor pack, and the value stored in the DMS-10 SYSDATA table.</p> <p>Example: VERS MX77 BASE RSC 1 1 3</p> <p>The system response is in the following format: EEPR Executable: NH08, EEPR Loadable: NH08, GENERIC: NH08</p> |
| VERS PGIC ME/PE/ CE <i>/IE b p u</i> or VERS PGIC ALL | <p>Reports the version of the load resident on the specified Packet Gateway Interface Controller (PGIC) or all PGICs. The PGIC must be in-service.</p> <p>Example: VERS PGIC ME 1 1 1</p> |
| VERS RLD | Not operational. |
| VERS RSCC <i>site</i> RSC <i>b s p</i> or VERS RSCC ALL | <p>Reports the version of the download file stored in the RSC-S control unit. The RSC-S control unit must be in service in order for the command to be issued.</p> <p>Example: VERS RSCC RSCS RSC 1 1 25</p> <p>The system response is in the following format: RSCC RSCS RSC 01 1 25 VERSION = CPMC10AI</p> |
| VERS RSLC <i>site</i> RSE <i>b s p</i> or VERS RSLC ALL | <p>Reports the version of the download file stored in the RSLE or RSLM processor. The RSLE or RSLM processor must be in service in order for the command to be issued.</p> <p>Example: VERS RSLC RSLE RSE 1 3 5</p> <p>The system response is in the following format: RSLC RSLE RSE 01 3 05 VERSION = RSRB1401</p> |
| VERS SCSC <i>site</i> SCE <i>b s</i> | <p>Reports the version of the download file stored in the SCM-10S control unit and in each associated NT7X05 Flash Memory card.</p> <p>Example: VERS SCSC BASE SCE 2 1</p> <p>The system response is in the following format: NT6X45 Version: SSR01CW8, GENERIC: SSR01CW8 NT7X05 Version: SSR01CW8</p> |
| VERS SCUC <i>site</i> SCE <i>b s</i> | <p>Reports the version of the download file stored in the SCM-10U control unit and in each associated NT7X05 Flash Memory card.</p> <p>Example: VERS SCUC BASE SCE 1 2</p> <p>The system response is in the following format: NT6X45 Version: SCU01CWG, GENERIC: SCU01CWG NT7X05 Version: SCU01CWG</p> |

Section 10: DNLD (Manual download overlay)

Description

Overlay DNLD provides the facility to transfer software from magneto-optical drive to the Peripheral Processor pack (NT2T46). Manual downloading will be required:

- After the NT2T46 pack is plugged in
- After a system reload for software issue update
- After an IPM021 or PPF099 message indicating a pack fault
- After loss of power to the shelf or pack

Input commands

This section lists the commands (with descriptions) that can be used once Overlay DNLD is loaded.

DNLD commands

| Input Command | Description |
|---|---|
| ? | Queries the system for valid input. |
| DNLD (<i>site</i>) PE <i>b s p</i> (NEW OLD) | <p>Transfers software from the file system to the microprocessor on the Peripheral Processor pack (NT2T46). Successful downloading is indicated by the output message DLD001.</p> <p>Software package downloads may be optionally specified as NEW or OLD. Specifying NEW downloads the most recently dated software package. OLD downloads the oldest dated software package. If no option is entered, the currently activated software package is downloaded, without distinguishing by date.</p> <p><i>Note: The version of the download file on the PEPR pack cannot be verified.</i></p> |

Section 11: EPD (ESA processor download)

Description

The EPD overlay (ESA Processor Download) enables the system to download static data to:

- a Remote Subscriber Line Module (RSLM) Emergency Stand-Alone (ESA) pack
- a Remote Line Concentrating Module (RLCM) or Outside Plant Module (OPM) ESA pack
- a Remote Subscriber Line Equipment (RSLE) ESA pack
- an Outside Plant Access Cabinet (OPAC) ESA pack
- a Remote Switching Center (RSC-S) controller

This overlay updates subscriber line information so that when the remote enters the ESA mode, the line will maintain all current relevant data. Overlay EPD is free-running when automatically loaded and interactive when requested by maintenance personnel. This overlay should be scheduled to run once a day.

Input commands

This section lists the commands, with descriptions, that can be used once the program has been loaded.

EPD commands

| Input Command | Description | | | | | | | | | | | | | | |
|---|--|----------------------------|---------------|----------------------------|--------------|-------------------------------|---------------|-------------------------------------|---|----------------------------|---------------|--|------------------|---|---------------------|
| #### | Interrupts any maintenance-terminal output, stops execution of the current command, and places the maintenance terminal in input mode. Response is the prompt character >. | | | | | | | | | | | | | | |
| **** | Interrupts any maintenance-terminal output and aborts the overlay program. Response is the prompt character #. | | | | | | | | | | | | | | |
| ? | Queries the system for valid input. Can be used with any command. | | | | | | | | | | | | | | |
| STAT <i>site location</i> or STAT ALL | <p>Gives the status of the specified ESA pack or of all ESA packs.</p> <p><i>location</i> can be one of:</p> <table border="0"> <tr> <td><i>site</i> LCE <i>b</i> 3</td> <td>RLCM ESA pack</td> </tr> <tr> <td><i>site</i> LCE <i>b</i> 1</td> <td>OPM ESA pack</td> </tr> <tr> <td><i>site</i> RSE <i>b</i> 3 14</td> <td>RSLE ESA pack</td> </tr> <tr> <td><i>site</i> RSE <i>b</i> <i>s</i> 3</td> <td>RSLM ESA pack (the shelf may be 1 or 2)</td> </tr> <tr> <td><i>site</i> LCE <i>b</i> 1</td> <td>OPAC ESA pack</td> </tr> <tr> <td><i>site</i> RSC <i>b</i> <i>s</i> <i>p</i></td> <td>RSC-S controller</td> </tr> <tr> <td><i>site</i> HUBE <i>b</i> <i>s</i> <i>p</i></td> <td>Star Hub controller</td> </tr> </table> <p>The system response will be in one of the following formats:</p> <p>ESAC (6X45) <i>site</i> LCE <i>b</i> <i>s</i> <i>direct state</i> (<i>indirect state</i>) <i>hardware state</i></p> <p>ESAC (MX45) <i>site</i> LCE <i>b</i> <i>s</i> <i>direct state</i> (<i>indirect state</i>) <i>hardware state</i></p> <p>ESAC (9Y19) <i>site</i> RSE <i>b</i> 3 14 <i>direct state</i> (<i>indirect state</i>) <i>hardware state</i></p> <p>ESAC (9Y15) <i>site</i> RSE <i>b</i> <i>s</i> 3 <i>direct state</i> (<i>indirect state</i>) <i>hardware state</i></p> <p>RSCC (MX77) <i>site</i> RSC <i>b</i> <i>s</i> <i>p</i> <i>direct state</i> (<i>indirect state</i>) <i>hardware state</i></p> <p>HUBC (NTTR77) <i>site</i> HUBE <i>b</i> <i>s</i> <i>p</i> <i>direct state</i> (<i>indirect state</i>) <i>hardware state</i></p> | <i>site</i> LCE <i>b</i> 3 | RLCM ESA pack | <i>site</i> LCE <i>b</i> 1 | OPM ESA pack | <i>site</i> RSE <i>b</i> 3 14 | RSLE ESA pack | <i>site</i> RSE <i>b</i> <i>s</i> 3 | RSLM ESA pack (the shelf may be 1 or 2) | <i>site</i> LCE <i>b</i> 1 | OPAC ESA pack | <i>site</i> RSC <i>b</i> <i>s</i> <i>p</i> | RSC-S controller | <i>site</i> HUBE <i>b</i> <i>s</i> <i>p</i> | Star Hub controller |
| <i>site</i> LCE <i>b</i> 3 | RLCM ESA pack | | | | | | | | | | | | | | |
| <i>site</i> LCE <i>b</i> 1 | OPM ESA pack | | | | | | | | | | | | | | |
| <i>site</i> RSE <i>b</i> 3 14 | RSLE ESA pack | | | | | | | | | | | | | | |
| <i>site</i> RSE <i>b</i> <i>s</i> 3 | RSLM ESA pack (the shelf may be 1 or 2) | | | | | | | | | | | | | | |
| <i>site</i> LCE <i>b</i> 1 | OPAC ESA pack | | | | | | | | | | | | | | |
| <i>site</i> RSC <i>b</i> <i>s</i> <i>p</i> | RSC-S controller | | | | | | | | | | | | | | |
| <i>site</i> HUBE <i>b</i> <i>s</i> <i>p</i> | Star Hub controller | | | | | | | | | | | | | | |
| UPDT <i>site location</i> or UPDT ALL | <p>Downloads static data, such as subscriber information, translations, and emergency routing, to the specified ESA processor or to all ESA processors.</p> <p><i>location</i> can be one of:</p> <table border="0"> <tr> <td><i>site</i> LCE <i>b</i> 3</td> <td>RLCM ESA pack</td> </tr> <tr> <td><i>site</i> LCE <i>b</i> 1</td> <td>OPM ESA pack</td> </tr> <tr> <td><i>site</i> RSE <i>b</i> 3 14</td> <td>RSLE ESA pack</td> </tr> <tr> <td><i>site</i> RSE <i>b</i> <i>s</i> 3</td> <td>RSLM ESA pack (the shelf may be 1 or 2)</td> </tr> <tr> <td><i>site</i> LCE <i>b</i> 1</td> <td>OPAC ESA pack</td> </tr> <tr> <td><i>site</i> RSC <i>b</i> <i>s</i> <i>p</i></td> <td>RSC-S controller</td> </tr> <tr> <td><i>site</i> HUBE <i>b</i> <i>s</i> <i>p</i></td> <td>Star Hub controller</td> </tr> </table> | <i>site</i> LCE <i>b</i> 3 | RLCM ESA pack | <i>site</i> LCE <i>b</i> 1 | OPM ESA pack | <i>site</i> RSE <i>b</i> 3 14 | RSLE ESA pack | <i>site</i> RSE <i>b</i> <i>s</i> 3 | RSLM ESA pack (the shelf may be 1 or 2) | <i>site</i> LCE <i>b</i> 1 | OPAC ESA pack | <i>site</i> RSC <i>b</i> <i>s</i> <i>p</i> | RSC-S controller | <i>site</i> HUBE <i>b</i> <i>s</i> <i>p</i> | Star Hub controller |
| <i>site</i> LCE <i>b</i> 3 | RLCM ESA pack | | | | | | | | | | | | | | |
| <i>site</i> LCE <i>b</i> 1 | OPM ESA pack | | | | | | | | | | | | | | |
| <i>site</i> RSE <i>b</i> 3 14 | RSLE ESA pack | | | | | | | | | | | | | | |
| <i>site</i> RSE <i>b</i> <i>s</i> 3 | RSLM ESA pack (the shelf may be 1 or 2) | | | | | | | | | | | | | | |
| <i>site</i> LCE <i>b</i> 1 | OPAC ESA pack | | | | | | | | | | | | | | |
| <i>site</i> RSC <i>b</i> <i>s</i> <i>p</i> | RSC-S controller | | | | | | | | | | | | | | |
| <i>site</i> HUBE <i>b</i> <i>s</i> <i>p</i> | Star Hub controller | | | | | | | | | | | | | | |

Section 12: IOD (Input/output device diagnostic)

Description

Overlay IOD is free-running when automatically loaded through the ETTY (utility interrupt switch), when system-requested, or once every 24 hours if so scheduled. Overlay IOD is interactive when requested by maintenance personnel. The diagnostic tests:

- The maintenance terminals and associated electronics
- The magneto-optical drive, hard disk drive, and associated electronics
- Data Link Controller packs and their associated simplex or duplex data links
- Input/Output Interface (IOI) packs
- Dual Serial Data Interface (DSDI) packs and associated Simplified Message Desk Interface (SMDI) ports

In the free-running mode when scheduled through an overlay or when system-requested, the program performs a simplified test sequence consisting of:

- Testing assigned Data Link Controllers
- Enabling all defined maintenance terminals

In the free-running mode when requested through ETTY, the program performs a simplified test sequence consisting of:

- Testing assigned Data Link Controllers
- Enabling all defined or responding teletypes and returning them to a pre-login state

Note: EIO will not be deactivated.

Input commands

This section lists the commands, with descriptions, that can be used once the requested program has been loaded (that is, the maintenance terminal has printed out IOD000). Because of different hardware configurations, not all commands are valid for all sites or for all generics. The system provides error messages when incorrect commands are input.

IOD commands

| Input Command | Description |
|-----------------------------------|---|
| #### | Interrupts any maintenance-terminal output, aborts execution of the current command, and places the maintenance terminal in the input mode. Response is the prompt character >. |
| **** | Interrupts any maintenance-terminal output and aborts the overlay program. Response is the prompt character #. |
| ? | Queries the system for valid input. Can be used with any command. |
| BKUP <i>from device to device</i> | <p>Synchronizes the contents of <i>to device</i> with the contents of <i>from device</i>. Both parameters refer to disk devices subtending the SCSI Bus I/O and Disk Drive pack (NT8T90) on the active CPU shelf (for example, HD0, HD1, or MO0). During a backup, <i>to device</i> and <i>from device</i> will be disabled by the system. If possible, another device will be enabled, to provide data access while the backup is in progress. When a backup completes successfully, <i>to device</i> and <i>from device</i> will be left in the states they were in when the backup was initiated. If a backup fails, or if the system initializes in the middle of a backup attempt, <i>to device</i> will be left disabled in the BKUP REQD state (see STAT IOI).</p> <p>Note 1: If configured with the AMA BACKUP feature, it is recommended that no IOD BKUPs be performed when AMA BACKUP is active. Doing so may cause the loss of AMA data. If the BKUP command is entered when AMA BACKUP is active, the system will indicate this fact and prompt the user to confirm or cancel the BKUP request.</p> <p>Note 2: The integrated billing Storage and Retrieval (IBSR) feature stores AMA records on the Redundant File System (RFS) using the native DMS-10 8T90 hard disk drives. The duration of the BKUP from one hard disk to the other may vary greatly depending on the number of AMA records being copied to the <i>device</i>. In extreme cases (e.g. backups to new or newly formatted hard disk drives involving a large number of AMA records), a BKUP may take in excess of 24 hours.</p> |
| CLR DISP | Sets active CPU display to blank. |
| CLR MAJ | Clears major system-detected alarms. |
| CLR MIN | Clears minor system-detected alarms. |

IOD commands (Continued)

| Input Command | Description |
|------------------------------------|--|
| DNLD IOI (NEW) (OLD) (DFLT) | <p>Downloads the firmware for the SCSI Bus I/O and Disk Drive pack (NT8T90) on the active CPU shelf. When more than one download version is available, the NEW option causes the newest version to be used. The OLD option causes the oldest option to be used. If no option is given, or if the DFLT option is specified, then the version identified as standard for the currently active generic release is used.</p> <p>Up to three versions (new, old, and default) are available at any time. Use the VERS IOI command to determine the availability of a particular download version.</p> <p><i>Note:</i> <i>efore beginning a download, the NT8T90 pack must be disabled. The pack remains disabled after the download, but it should be enabled manually as soon as possible to restore system disk access.</i></p> |
| EJCT <i>device</i> | <p>Ejects the media from the specified removable-media device, which, in Generic 501, is MO0. The MO0 must be disabled prior to executing the EJCT command.</p> <p><i>Note:</i> <i>This is the recommended method for removing magneto-optical disks from the magneto-optical drive (NT4T32BA). Thus, it is strongly recommended that the manual eject button present on some NT4T32s not be used for this purpose.</i></p> |
| ENBL/DSBL ALRM | <p>Enables/disables the extended alarm interface port to the extended alarm device.</p> |
| ENBL/DSBL DAS | <p>Enables/disables digital alarm scanner (DAS).</p> |
| ENBL/DSBL DLC <i>n</i> (IMED) | <p>Enables/disables Data Link Controller <i>n</i>, where <i>n</i> is the number of the associated Data Link Controller (0 through 15). This command incorporates all tests done through the TEST DLC command and establishes Layer 2 communications.</p> <p><i>Note 1:</i> This command is valid for an HSO/SSO or LCC/SSO cluster configuration.</p> <p><i>Note 2:</i> The IMED option must be input when the DLC being disabled is attached to a simplex link or is the last in-service DLC.</p> |
| ENBL/DSBL DLNK <i>nn</i> (IMED) | <p>Enables/disables Data Link <i>n</i>, where the first <i>n</i> equals the number of the associated Data Link Controller (0 through 15) and the second <i>n</i> equals the number of the Link (0 or 1). This command incorporates all tests done through the TEST DLNK command and also establishes Layer 2 communications.</p> <p><i>Note 1:</i> This command is valid for duplex links in an HSO/SSO cluster configuration and for simplex or duplex links in an HSO/SSO or LCC/SSO cluster configuration.</p> <p><i>Note 2:</i> The IMED option must be input when the data link being disabled is a simplex link or is the last in-service link.</p> |

IOD commands (Continued)

| Input Command | Description |
|---|---|
| ENBL/DSBL ESCI <i>n</i> | <p>Enables/disables the specified ESCI device, where <i>n</i> is the device number (2-31).</p> <p><i>Note:</i> Disabling an ESCI will prevent most CED commands that need to communicate to the ethernet switch over this interface from working.</p> |
| ENBL IOI (IMED RES) (IMED DNLD) / DSBL IOI (IMED) | <p>The ENBL IOI command enables the SCSI Bus I/O and Disk Drive pack (NT8T90) on the active CPU shelf and all attached devices (for example, HD0, HD1, or MO0) which are determined to be free of faults and which were not manually disabled prior to the SCSI Bus I/O and Disk Drive pack being disabled.</p> <p>For the ENBL IOI command, the IMED option is necessary to enable the NT8T90 pack with a version of firmware other than the version specified for the generic. The IMED option can also be used with the DSBL IOI command to force immediate execution of the command.</p> <p><i>Note 1:</i> The RES option, which applies only to the ENBL IOI command, indicates that an override to the resident firmware is requested.</p> <p><i>Note 2:</i> The DNLD option, which applies only to the ENBL IOI command, indicates that an override to the downloaded firmware is requested. This option can only succeed if a valid download resides on the pack.</p> <p>The DSBL IOI command disables the SCSI Bus I/O and Disk Drive pack (NT8T90) on the active CPU shelf and all attached devices (for example, HD0, HD1, or MO0). It is strongly recommended that this command be executed prior to initiating a controlled system initialization or reload, to reduce the the possibility of data loss or corruption. In addition, this command MUST be executed prior to the removal of the NT8T90 from the active CPU shelf, to avoid an uncontrolled system initialization.</p> <p>CAUTION: Disabling the active NT8T90 pack robs the system of all disk access. Under some circumstances this may result in loss of critical office or billing data. Thus, rather than disabling the NT8T90 while it is active state, the pack should be made inactive through the SWCH CORE command in Overlay CED, which forces the currently-inactive NT8T90 pack to take control of the disk subsystem.</p> |

IOD commands (Continued)

| Input Command | Description |
|--|--|
| ENBL <i>device</i> /DSBL <i>device</i> (IMED) | The ENBL <i>device</i> command enables the specified disk device attached to the SCSI Bus I/O and Disk Drive pack (NT8T90) on the active CPU shelf (for example, HD0, HD1, or MO0). Attached disk devices may include hard disk drives (HD0 or HD1) and magneto-optical disk drives (MO0). If no other disk device is enabled when this command is executed (see STAT IOI command), the specified device becomes the primary (PRIM) disk device. Commands that access data on disk but do not allow a disk to be specified will use the PRIM disk unless otherwise noted. If another disk is already PRIM, the specified device becomes a secondary (SEC) disk device. |

CAUTION: After being enabled, a disk is available for asynchronous, simultaneous reads and writes by any process within the system. Thus, a disk device **MUST NOT** be powered down, removed, or (in the case of a magneto-optical drive) have its media manually ejected, while it is enabled. Any of these events will be treated as a hardware failure and resulting recovery action may include a system initialization.

The DSBL *device* command disables the specified disk device attached to the SCSI Bus I/O and Disk Drive pack (NT8T90) on the active CPU shelf (for example, HD0, HD1, or MO0). The command must be used prior to the device being powered down and removed unless the device resides on the active NT8T90 (HD0 or HD1), in which case the DSBL IOI IMED command must be used. If the specified device is currently in use by the system, the DSBL *device* command will fail. If a forcible disable is necessary, the IMED option may be used. If the device is currently the primary (PRIM) disk device, the DSBL command will only execute if the IMED option is used, since disabling the PRIM device forces all disk devices to be disabled. Thus, it is strongly recommended that another PRIM device be selected and enabled (see the ENBL *device* command) as soon as possible in order to restore system disk access.

ENBL/DSBL SMDI *n(n)* Enables/disables the SMDI port *n(n)* (0-31).

ENBL/DSBL TTY *n(n)* Enables/disables maintenance terminal (TTY) or telnet logical unit, where: *n(n)* is the maintenance terminal number or telnet logical unit number (0-31).

Note 1: The maintenance terminal (TTY) on which this command is entered cannot be disabled.

Note 2: Enabling/disabling a telnet logical unit drops the current telnet connection.

Note 3: Disabling a script logical unit immediately terminates execution of any active script. This may generate errors with subsequent script executions if a long duration, non-abortable command is still in progress. If a script is active, it is recommended that its execution be terminated with the SCRP STOP resident command.

IOD commands (Continued)

| Input Command | Description |
|--------------------------|--|
| FRMT <i>device</i> | <p>Formats the specified disk device attached to the SCSI Bus I/O and Disk Drive pack (NT8T90) on the active CPU shelf (for example, HD0, HD1, or MO0). Prior to starting a FRMT, the specified device must be disabled. Formatting prepares a disk for use by detecting and taking out of service any faulty areas, and installing a label with information about disk size and partition layout. If a FRMT command fails, or if the system initializes while a FRMT is in progress, the device being formatted will be left disabled in the FRMT REQD state. If a format is successful, the formatted device will be left disabled in the BKUP REQD state (see STAT IOI command). In general, the FRMT command only needs to be used when suggested by the system through STAT IOI or error messages.</p> <p style="text-align: center;">CAUTION: This command requires extreme caution. It irrevocably destroys all data stored on the disk.</p> |
| GO | <p>For Generics 412.20 and earlier, tests all maintenance terminals for response only. Also tests the DLCs, the IOI packs (NT3T09, NT3T80, NT3T50, NT3T90), the IOI device on Bus A, and the IOI device on Bus B, if equipped. In Generics 501 and later, tests all maintenance terminals for response only (NT3T09, NT3T80) and tests any DLCs (NT3T50).</p> |
| STAT ALRM | <p>Gives the status of the extended alarm interface port. The response is in the form:</p> <pre>CE b s p pt ALRM ENBL CE b s p pt ALRM DSBL</pre> |
| STAT DAS | <p>Gives the status of the digital alarm scanner (DAS).</p> |
| STAT DLC (<i>n(n)</i>) | <p>Gives the status of Data Link Controller <i>n(n)</i> (or all DLCs if no number is input) and its/their Data Links (DLNKs). <i>n(n)</i> is the number of the associated Data Link Controller (0 through 15). Valid only for HSO/SSO and LCC/SSO cluster configurations.</p> <p><i>Note:</i> When the STAT DLC command is used at an SSO, the system response will not contain some of the information in parentheses. The DLC fault condition is displayed only when the DLC is in the DSBL SMB state.</p> <p>The system response is of the form:</p> <pre>DLC n (NT3T50) site CE b s p (DLC n) vintage hardware state direct state (DLC faults) DLNK n (NT3T50) SSO n direct state (indirect state) link fault layer 3 state DCM (NT2T30) site (PE b s p direct state (indirect state) hardware state) MODM BAUD baud rate DCM REMT</pre> |

IOD commands (Continued)

| Input Command | Description |
|---------------|---|
| | DRIN BAUD <i>baud rate</i> <i>Note: The third line of the system response is one of the four lines indicated above. The type of response is determined by the data link connection. The connection is to a local DCM, modem, remote DCM, or drop and insert system, respectively.</i> |
| | where: <i>n</i> is the DLC, DLNK, or SSO number. <i>site</i> may be LCC for the host or REMT for the remote DCM. |
| | <i>vintage</i> is one of: CNFG NT3T50CB and later vintage DLC (configurable) NCFG NT3T50AA and NT3T50BA DLC (not configurable). AA and BA are below baseline and are not recommended. |
| | <i>hardware state</i> is one of: DSBL disabled ENBL enabled. |
| | <i>direct state</i> is one of: INS in-service MMB man-made busy SMB system-made busy. |
| | <i>DLC fault</i> is one of: CNFG configuration failure DMA direct memory access failure DMTO DMA response timeout DRDY DLC stuck ready FIFO first-in/first-out failure HWFL hardware failure ISR invalid status register LPFL loop-around failure MPSC multi-protocol serial controller failure MTO maintenance timeout PIC programmable interrupt controller failure RAM random-access memory failure RESP response failure ROM read-only memory failure SEND send failure SRDY shelf stuck ready SWFL software failure |

IOD commands (Continued)

Input Command

Description

TMR timer failure
 WDOG watchdog failure.

indirect state is INDR if the parent device is busied.

link fault is one of:

AUDT audit found timing problem
 BOOS DLC out of service
 CARR carrier lost
 CTS clear to send
 DCM DCM failure
 DDMI no DCM DLC interface
 L3TO layer 3 timeout
 L4TO message timeout
 MTO maintenance timeout
 RCV receive failure
 RDLC remote DLC failure
 SYNC synchronization lost
 XMIT excessive transmission errors.

layer 3 state is one of:

ACQR link is acquiring connection
 CONN link is connected
 DACQ link is acquiring disconnection
 DISC link is disconnected.

baud rate is one of:

56K 56 kbit/s
 1200 1200 b/s
 2400 2400 b/s
 4800 4800 b/s
 9600 9600 b/s.

Example:

(input) STAT DLC 2
 (output) DLC 00 (NT3T50) LCC CE 1 2 4 (DLC 0)
 CNFG ENBL INS
 DLNK 0 (NT3T50) SSO 0 SMB INDR L3TO
 DISC DRIN BAUD 2400

STAT ESCI

Displays the status of both ethernet switch console interfaces.

The response is of the form:

IOD commands (Continued)

| Input Command | Description |
|---------------|---|
| | CE <i>b s p</i> ESCI <i>x</i> ENBL CE <i>b s p</i> ESCI <i>x</i> DSBL <i>reason</i> where <i>reason</i> is one of: |
| | MMB Man-made-busy |
| | NORP No response |
| | SLOW Device too slow |
| | STKI Stuck interrupt |
| | UNDF Undefined cause |
| | UNEQ Unequipped |
| STAT IOI | Gives the status of the disk subsystem, which includes the SCSI Bus I/O and Disk Drive pack (NT8T90) on the active CPU shelf, as well as all attached disk devices (for example, HD0, HD1, or MO0). The system response is of the form: CE <i>b s p</i> (IOI <i>n</i> CPU <i>n</i>) NT8T90 <i>hardware state</i> , DMON <i>disk monitor state</i> <i>dev</i> (BUS <i>a</i> ID <i>n</i>) <i>device hardware state</i> <i>dev</i> (BUS <i>a</i> ID <i>n</i>) <i>device hardware state</i> VERSION <i>vvv</i> ISSUE <i>ii</i> WI <i>www</i> ACTV <i>partition</i> PART ENBL <i>size</i> MB <i>free</i> MB FREE . . where <i>hardware state</i> is one of: ENBL enabled DSBL disabled DSBL(<i>h/w fault</i>) disabled due to <i>h/w fault</i> If present, <i>h/w fault</i> is one of: RESPONSE TIMEOUT STUCK INTERRUPT NOT RESPONDING STUCK CPU INTERRUPT <i>Note:</i> If <i>h/w fault</i> indicator is present, perform TEST IOI, take note of the message number that is printed, and consult the Output Message Manual for more information. <i>dev monitor state</i> is one of: ACTV Disk recovery in progress |

IOD commands (Continued)

Input Command

Description

INAC Disk recovery finished (normal state)

dev is one of:

HD0 Hard Disk 0 (NT8T90, Core 0))

HD1 Hard Disk 1 (NT8T90, Core 1)

MO0 Magneto-Optical Disk (NT4T32BA)

device hardware state is one of:

INDR DSBL Indirectly disabled

ENBL PRIM Enabled, primary disk

ENBL SEC Enabled, secondary disk

DSBL (NO FAULTS) Disabled, no known faults

DSBL (*msg. num.*) Disabled, consult OMM

DSBL (disk fault) Disabled due to *disk fault*

If present, *disk fault* is one of:

UNKN STAT Unknown status (try TEST *dev*)

DMON DSBL Disabled by DMON due to fault

NOT FOUND Not detected after ENBL IOI

RESP FALT Not responding to commands

DISK REQD Cartridge missing (MO0)

FMT REQD Must be formatted

BKUP REQD Must be target of a backup

TEST SUGG Test of this disk is suggested

BKUP SUGG Backup to this disk is suggested

DSBL SUGG DSBL of this disk is suggested

vvv, *ii*, and *www* give the version, issue, and working issue of the generic load that is active on the disk (for example, 503.10 has version 503, issue 10, and working issue REL).

Note: Under ordinary circumstances, all disks should report the same software version information as is displayed by *QUE VERS* in overlay *CNFG*.

partition is one of:

BOOT Raw OS image

CODE Programs, patches, and f/w downloads

DATA Office and custom calling databases

MISC Everything else

size is the total size of the partition.

free is the amount of free space remaining in the partition.

STAT SMDI

Gives the status of all SMDI ports.

IOD commands (Continued)

| Input Command | Description | | | | | | | | | | | | | | | | | | |
|---------------|---|------|---------------|------|--------------------------|------|-----------------|------|-----------------|------|--|------|---------------------------|------|-------------------------------|-----|---------------|------|-------------|
| | <p>The response is of the form:</p> <p>CE <i>b s p pt</i> SMDI <i>n</i> ENBL</p> <p>CE <i>b s p pt</i> SMDI <i>n</i> DSBL <i>reason</i></p> <p><i>reason</i> is one of:</p> <table border="0"> <tr> <td>MMB</td> <td>Man-made-busy</td> </tr> <tr> <td>NORP</td> <td>No response</td> </tr> <tr> <td>SLOW</td> <td>Device too slow</td> </tr> <tr> <td>STKI</td> <td>Stuck interrupt</td> </tr> <tr> <td>UNDF</td> <td>Undefined cause</td> </tr> <tr> <td>UNEQ</td> <td>Unequipped.</td> </tr> </table> | MMB | Man-made-busy | NORP | No response | SLOW | Device too slow | STKI | Stuck interrupt | UNDF | Undefined cause | UNEQ | Unequipped. | | | | | | |
| MMB | Man-made-busy | | | | | | | | | | | | | | | | | | |
| NORP | No response | | | | | | | | | | | | | | | | | | |
| SLOW | Device too slow | | | | | | | | | | | | | | | | | | |
| STKI | Stuck interrupt | | | | | | | | | | | | | | | | | | |
| UNDF | Undefined cause | | | | | | | | | | | | | | | | | | |
| UNEQ | Unequipped. | | | | | | | | | | | | | | | | | | |
| STAT TTY | <p>Lists the status of all maintenance terminals and the associated electronics in the system, including the Dual Integrated Modem pack.</p> <p>The response is of the form:</p> <p>CE <i>b s p</i> TTY <i>x</i> ENBL <i>device</i> or <i>application</i> <i>device status</i> <i>download status</i></p> <p>CE <i>b s p</i> TTY <i>x</i> DSBL <i>reason</i></p> <p>where</p> <p><i>device</i> is one of:</p> <table border="0"> <tr> <td>MODM</td> <td>Modem port</td> </tr> </table> <p><i>application</i> is one of:</p> <table border="0"> <tr> <td>MDR</td> <td>Message Detail Recording</td> </tr> </table> <p><i>device status</i> is one of:</p> <table border="0"> <tr> <td>ACTV</td> <td>Active</td> </tr> <tr> <td>INAC</td> <td>Inactive</td> </tr> <tr> <td>NDTR</td> <td>Applies only to MDR device; No data terminal ready</td> </tr> </table> <p><i>download status</i> is one of:</p> <table border="0"> <tr> <td>DNLD</td> <td>Modem has been downloaded</td> </tr> <tr> <td>NONE</td> <td>Modem has not been downloaded</td> </tr> </table> <p><i>Note:</i> The Dual Integrated Modem (DIM) pack (NT3T93) is automatically downloaded after an ENBL TTY <i>x</i> or TEST TTY <i>x</i> MODM command is entered. In addition, idle NT3T93 modems are downloaded, one per minute, after system initialization. The download, which uses system memory instead of the IOI device memory, prevents modem cutoffs during DMS-10 switch network sparing.</p> <p><i>reason</i> is one of:</p> <table border="0"> <tr> <td>MMB</td> <td>Man-made-busy</td> </tr> <tr> <td>NORP</td> <td>No response</td> </tr> </table> | MODM | Modem port | MDR | Message Detail Recording | ACTV | Active | INAC | Inactive | NDTR | Applies only to MDR device; No data terminal ready | DNLD | Modem has been downloaded | NONE | Modem has not been downloaded | MMB | Man-made-busy | NORP | No response |
| MODM | Modem port | | | | | | | | | | | | | | | | | | |
| MDR | Message Detail Recording | | | | | | | | | | | | | | | | | | |
| ACTV | Active | | | | | | | | | | | | | | | | | | |
| INAC | Inactive | | | | | | | | | | | | | | | | | | |
| NDTR | Applies only to MDR device; No data terminal ready | | | | | | | | | | | | | | | | | | |
| DNLD | Modem has been downloaded | | | | | | | | | | | | | | | | | | |
| NONE | Modem has not been downloaded | | | | | | | | | | | | | | | | | | |
| MMB | Man-made-busy | | | | | | | | | | | | | | | | | | |
| NORP | No response | | | | | | | | | | | | | | | | | | |

IOD commands (Continued)

Input Command

Description

SLOW Device too slow
 STKI Stuck interrupt
 UNDF Undefined cause
 UNEQ Unequipped

or

TTY *nn* SNMP *conn status*
 TTY *nn* TELNET *conn status* to *IP address*

where

conn status is one of:

NOT CONN Not connected
 CONN Connected

or

SCRIPT TTY *nn* DSBL MMB
 SCRIPT TTY *nn* ENBL IDLE
 SCRIPT TTY *nn* EXEC *script* BY [TTY *xx* | SYSTEM]
 (ABRT INPROG)

where

nn is the number of the script TTY
script is the name of the script currently executing
xx is the number of the initiating TTY (if applicable)

Example:

```
(input) STAT TTY
(output) CE 3 2 08 TTY 0 ENBL
          CE 3 3 08 TTY 1 ENBL
          CE 1 5 08 TTY 6 ENBL
          CE 1 5 5 1 TTY 3 ENBL MODM ACTV
          NONE
          CE 1 5 5 2 TTY 4 ENBL MODM INAC
          NONE
          CE 1 5 6 1 TTY 5 ENBL MODM ACTV
          DNLD
          IOD001
          TTY 7 TELNET CONN
```

TEST ALRM Test the extended alarm interface port plus the extended alarm device.
 TEST DAS Tests digital alarm scanner (DAS).

IOD commands (Continued)

| Input Command | Description |
|---------------------------|--|
| TEST DLC $n(n)$ | <p>Tests Data Link Controller n, where n is the number of the associated Data Link Controller (0 through 15). This command performs three tests: Hardware Reset (which includes self diagnostics), Loop-around DMS Interface, and Loop-around DCM (up to two links).</p> <p><i>Note:</i> The TEST DLC n command is valid only for HSO/SSO and for LCC/SSO cluster configurations.</p> |
| TEST DLNK $n(n) n$ | <p>Tests Data Link n, where $n(n)$ equals the number of the associated Data Link Controller (0 through 15) and n equals the number of the Link (0 or 1). Performs the Loop-around DCM test when the DCM is out-of-service.</p> <p><i>Note:</i> This command is valid for duplex links in an HSO/SSO cluster configuration and for simplex or duplex links in an HSO/SSO or LCC/SSO cluster configuration.</p> |
| TEST ESCI n | Tests the maintenance terminal $n(n)$ (2-31) and the associated electronics, including the Serial Data Interface pack. |
| TEST IOI | Tests the SCSI Bus I/O and Disk Drive pack (NT8T90) on the active CPU shelf. Only a subset of the test are performed if the SCSI Bus I/O and Disk Drive pack is enabled, in order to avoid disrupting access to disk devices. |
| TEST <i>device</i> | Tests the specified disk device attached to the SCSI Bus I/O and Disk Drive pack (NT8T90) on the active CPU shelf, where <i>device</i> may be HD0, HD1, or MO0. The specified device must be disabled prior to execution of the test command. The test regimen includes SCSI response testing and data integrity verification. If problems are found which cannot be corrected automatically, the device may be left in the BKUP REQD or FRMT REQD states, or device replacement may be recommended. |
| TEST SMDI n | Tests the DSDI pack and the SMDI port n (0-31). |
| TEST TTY $n(n)$ (MODM) | <p>Tests the maintenance terminal $n(n)$ (0-31) and the associated electronics, including the Serial Data Interface pack and the Dual Integrated Modem pack, where MODM is the option to test the modem processor only.</p> <p>The response to this command is a sequence of completely filled lines cycling all characters through all columns.</p> <p><i>Note 1:</i> This command may be inappropriate for use with some devices such as the SCCS maintenance terminal (TTY 7) and the MDR CP billing record collector. Invalid responses may occur from the downstream processor due to unexpected output from the TTY port.</p> <p><i>Note 2:</i> This command cannot be used for telnet logical units.</p> |

IOD commands (Continued)

| Input Command | Description |
|----------------------|---|
| VERS IOI | <p>Displays version information associated with the firmware currently loaded on the NT8T90 pack on the active CPU shelf, as well as the downloadable version(s) available for the pack.</p> <p>A maximum of two firmware versions can be present on the NT8T90 itself: the resident load (RES) and a download (DNLD). The firmware version that is currently running is marked ACTV. Up to three alternative downloads can be stored on the hard disks or magneto-optical disk, and these downloads can be placed on the pack by using the DNLD IOI command.</p> |

Section 13: LED (Lan equipment diagnostic)

Description

Overlay LED is free-running when automatically loaded (once every 24 hr, if so scheduled) and interactive when requested by maintenance personnel. In the interactive mode, this diagnostic tests:

- Local Area Network (LAN) equipment
- Messaging (LAN) shelf
- LAN/CPU Interface (LCI) packs
- LAN Shelf Controller (LSC) packs
- LAN Application Controller (LAC) packs.

In the free-running mode, the program tests and automatically disables any LAN equipment found faulty, switching LAN activity if the standby LAN is fault-free. If the standby LAN is not fault-free, the program attempts to correct the fault condition by downloading to the faulty equipment and returning it to service.

Input commands

This section lists the commands, with descriptions, that can be used once the interactive program is loaded (that is, the maintenance terminal has displayed the message LED000).

LED commands

| Command | Result |
|---------|---|
| #### | Interrupts any maintenance-terminal output, stops execution of the current command, and places the maintenance terminal in input mode. System response is the character >. |
| **** | Interrupts any maintenance terminal output, stops execution of the current command, aborts the overlay program, and places the maintenance terminal in input mode. System response is the prompt character #. |
| ? | Queries the system for valid input. Can be used with any command. |

LED commands (Continued)

| Command | Result |
|---------------------------------------|--|
| BUSY LAC CE/PE <i>b s p</i> (IMED) | Places the specified LAC pack in the man-made-busy (MMB) state. <i>Note: The IMED option makes the specified pack MMB even if the mate pack is not in service.</i> Example: BUSY LAC PE 2 4 3 IMED |
| BUSY LCI CE <i>b s p</i> (IMED) | Places the specified LCI pack in the man-made-busy (MMB) state. <i>Note: The IMED option makes the specified pack MMB even if the mate pack is not in service.</i> Example: BUSY LCI CE 3 1 4 IMED |
| BUSY LSC CE/PE <i>b s p</i> (IMED) | Places the specified LSC pack in the man-made-busy (MMB) state. <i>Note: The IMED option makes the specified pack MMB even if the mate pack is not in service.</i> Example: BUSY LSC PE 2 4 2 IMED |
| DNLD LAC CE/PE <i>b s p</i> (NEW/OLD) | Downloads the specified LAC pack with SAE operating system and application from the file system. The LAC pack must be in the man-made-busy (MMB) state before the DNLD command is used. The software package downloads may be optionally specified as NEW or OLD. Specifying NEW downloads the most recently dated software package. OLD downloads the oldest dated software package. If no option is entered, the currently activated software package is downloaded, without distinguishing by date. Example: DNLD LAC PE 2 4 3 |
| DNLD LCI CE <i>b s p</i> (NEW/OLD) | Downloads the specified LCI pack with the SAE operating system from the file system. The LCI pack must be in the man-made-busy (MMB) state before the DNLD command is used. The software package downloads may be optionally specified as NEW or OLD. Specifying NEW downloads the most recently dated software package. OLD downloads the oldest dated software package. If no option is entered, the currently activated software package is downloaded, without distinguishing by date. Example: DNLD LCI CE 3 1 4 |
| DNLD LSC CE/PE <i>b s p</i> (NEW/OLD) | Downloads the specified LSC pack with the SAE operating system from the file system. The LSC pack must be in the man-made-busy (MMB) state before the DNLD command is used. The software package downloads may be optionally specified as NEW or OLD. Specifying NEW downloads the most recently dated software package. OLD downloads the oldest dated software package. If no option is entered, the currently activated software package is downloaded, without distinguishing by date. Example: DNLD LSC PE 2 4 2 |

LED commands (Continued)

| Command | Result |
|---|---|
| OFFL LAC CE/PE <i>b s p</i> | Places the specified LAC pack in the man-made-offline (OFFL) state. The LAC pack must be in the man-made-busy (MMB) state before the OFFL command is used. Example: OFFL LAC PE 2 4 3 |
| OFFL LCI CE <i>b s p</i> | Places the specified LCI pack in the man-made-offline (OFFL) state. The LCI pack must be in the man-made-busy (MMB) state before the OFFL command is used. Example: OFFL LCI CE 3 1 4 |
| OFFL LSC CE/PE <i>b s p</i> | Places the specified LSC pack in the man-made-offline (OFFL) state. The LSC pack must be in the man-made-busy (MMB) state before the OFFL command is used. Example: OFFL LSC PE 2 4 2 |
| RTS LAC CE/PE <i>b s p</i> | Returns a man-made-busy (MMB) LAC pack to service. Example: RTS LAC PE 2 4 3 |
| RTS LCI CE <i>b s p</i> | Returns the specified man-made-busy (MMB) LCI pack to service. Example: RTS LCI CE 3 1 4 |
| RTS LSC CE/PE <i>b s p</i> | Returns a man-made-busy (MMB) LSC pack to service. Example: RTS LSC PE 2 4 2 |
| STAT LAC CE/PE <i>b s p</i> or STAT LAC ALL <i>condition</i> or STAT LAC ALL | Gives the status of the LAC pack(s) specified by location or condition, or gives the status of all LCI packs <i>condition</i> is one of: INS in service MMB man-made busy MMOF man-made offline OOS out of service SMB system-made busy SMOF system-made offline. The report for each pack is displayed in the form: LAC (NT4T20) <i>site</i> CE/PE <i>b s p condition1</i> (INDR) <i>condition2 type (link) (code) (alignment) (block) activity</i> where: <i>condition1</i> is one of: INS in service MMB man-made busy MMOF man-made offline SMB system-made busy SMOF system-made offline. INDR indicates the parent device is busied. <i>condition2</i> is one of: |

LED commands (Continued)

| Command | Result |
|----------|--|
| | DSBL disabled |
| | ENBL enabled. |
| | <i>activity</i> is one of: |
| | ACTV active |
| | STBY standby. |
| | <i>type</i> is one of: |
| | SNC signaling network controller |
| | SNL signaling link. |
| | <i>alignment</i> is one of: |
| | ACT activated |
| | DACT deactivated |
| | RSTR restoring. |
| | <i>block</i> is one of: |
| | NRML normal |
| | MBLK man-made-blocked. |
| | <i>link</i> is a digit, from 1 through 8, specifying the signaling link set of the SNL. |
| | <i>code</i> is a digit, from 0 through 15, specifying the signaling link code of the SNL. |
| STAT LAN | Gives the location and status of all LAN equipment in the office. |
| | The report for each pack or device is displayed in the form: |
| | LCI <i>qualifier</i> (NT4T16) CE <i>b s p condition1</i> (INDR) <i>condition2</i> <i>activity</i> |
| | LSHF <i>site</i> CE/PE <i>b s p</i> |
| | LSC (NT4T18) <i>site</i> CE/PE <i>b s p condition1</i> (INDR) <i>condition2 activity</i> |
| | LAC (NT4T20) <i>site</i> CE/PE <i>b s p condition1</i> (INDR) <i>condition2 type (link) (code) (alignment) (block)</i> <i>activity</i> |
| | where: |
| | <i>qualifier</i> is one of: |
| | A (LAN A) |
| | B (LAN B) |
| | <i>condition1</i> is one of: |
| | INS in service |
| | MMB man-made busy |
| | MMOF man-made offline |
| | SMB system-made busy |
| | SMOF system-made offline. |

LED commands (Continued)

| Command | Result |
|---|--|
| | <p>INDR indicates the parent device is busied.</p> <p><i>condition2</i> is one of:</p> <p>DSBL disabled</p> <p>ENBL enabled.</p> <p><i>activity</i> is one of:</p> <p>ACTV active</p> <p>STBY standby.</p> <p><i>type</i> is one of:</p> <p>SNC signaling network controller</p> <p>SNL signaling link.</p> <p><i>alignment</i> is one of:</p> <p>ACT activated</p> <p>DACT deactivated</p> <p>RSTR restoring.</p> <p><i>block</i> is one of:</p> <p>NRML normal</p> <p>MBLK man-made-blocked.</p> <p><i>link</i> is a digit, from 1 through 8, specifying the signaling link set of the SNL.</p> <p><i>code</i> is a digit, from 0 through 15, specifying the signaling link code of the SNL.</p> |
| STAT LCI CE <i>b s p</i> or STAT LCI ALL <i>condition</i> or STAT LCI ALL | <p>Gives the status of the LCI pack(s) specified by position or condition, or gives the status of all LCI packs.</p> <p><i>condition</i> is one of:</p> <p>INS in service</p> <p>MMB man-made busy</p> <p>MMOF man-made offline</p> <p>OOS out of service</p> <p>SMB system-made busy</p> <p>SMOF system-made offline</p> <p>The report for each pack is displayed in the form: LCI <i>qualifier</i> (NT4T16) <i>site</i> CE <i>b s p</i> <i>condition1</i> (INDR) <i>condition2</i> <i>activity</i> where:</p> <p><i>qualifier</i> is one of:</p> <p>A (LAN A)</p> <p>B (LAN B)</p> <p><i>condition1</i> is one of:</p> <p>INS in service</p> |

LED commands (Continued)

| Command | Result |
|---|---|
| | MMB man-made busy |
| | MMOF man-made offline |
| | SMB system-made busy |
| | SMOF system-made offline |
| | INDR indicates the parent device is busied. |
| | <i>condition2</i> is one of: |
| | DSBL disabled |
| | ENBL enabled. |
| | <i>activity</i> is one of: |
| | ACTV active |
| | STBY standby. |
| STAT LSC CE/PE <i>b s p</i> or STAT LSC ALL <i>condition</i> or STAT LSC ALL | Gives the status of the LSC pack(s) specified by location or condition, or gives the status of all LSC packs. <i>condition</i> is one of: INS in service MMB man-made busy MMOF man-made offline OOS out of service SMB system-made busy SMOF system-made offline. The report for each LSC pack is displayed in the form: LSC (NT4T18) <i>site</i> CE/PE <i>b s p condition1</i> (INDR) <i>condition2 activity</i> where: <i>condition1</i> is one of: INS in service MMB man-made busy MMOF man-made offline SMB system-made busy SMOF system-made offline. INDR indicates the parent device is busied. <i>condition2</i> is one of: DSBL disabled ENBL enabled. <i>activity</i> is one of: ACTV active STBY standby. |

LED commands (Continued)

| Command | Result |
|--|---|
| STAT LSHF CE/PE <i>b s</i> or STAT LSHF ALL | Gives the status of all LAN equipment on the specified Messaging (LAN) shelf or on all Messaging shelves. The report for each pack or device is displayed in the form: |

LSHF *site* CE/PE *b s p*

LSC (NT4T18) *site* CE/PE *b s p condition1* (INDR)
condition2 activity

LAC (NT4T20) *site* CE/PE *b s p condition1* (INDR)
condition2 type (link) (code) (alignment) (block)
activity

where:

condition1 is one of:

INS in service
MMB man-made busy
MMOF man-made offline
SMB system-made busy
SMOF system-made offline.

INDR indicates the parent device is busied.

condition2 is one of:

DSBL disabled
ENBL enabled.

activity is one of:

ACTV active
STBY standby.

type is one of:

SNC signaling network controller
SNL signaling link.

alignment is one of:

ACT activated
DACT deactivated
RSTR restoring.

block is one of:

NRML normal
MBLK man-made-blocked.

link is a digit, from 1 through 8, specifying the signaling link set of the SNL.

code is a digit, from 0 through 15, specifying the signaling link code of the SNL.

LED commands (Continued)

| Command | Result |
|---|--|
| SWCH LAN (IMED) | <p>Switches the activity of the active LAN to the mate LAN. The active LAN CPU Interface (LCI) and LAN Shelf Controller (LSC) packs are put on standby and the mate LCI and LSC are made active.</p> <p>The IMED option is required if the inactive LAN contains faulty devices.</p> |
| TEST LAC CE/PE <i>b s p</i> (LPL / LPR) (REP <i>n</i>) or TEST LAC ALL | <p>Tests the specified LAC pack or tests all LAC packs. A LAC pack is not taken out of service if faults are found.</p> <p>The LPL option specifies that a local loopback test be performed on the link transmission equipment associated with the LAC pack.</p> <p>The LPR option specifies that a remote (far-end) loopback test be performed on the link transmission equipment associated with the LAC pack.</p> <p>The LPL and LPR options are valid only for SNL (L2) LAC packs with a maintenance status of man-made-busy (MMB). The loopback tests can be performed only if the link transmission equipment associated with the SNL LAC supports loopback functionality.</p> <p>The REP <i>n</i> option specifies the number of times the test is repeated; <i>n</i> may be 1 through 32,767. If <i>n</i> is not specified, the default value is 32,767. Operating Company Personnel may abort the test by entering #####.</p> <p>The test results are displayed in the form:</p> <p>PASSED</p> <p style="padding-left: 40px;">[for each LAC pack that successfully completed the test sequence]</p> <p style="text-align: center;">or</p> <p>LED <i>nnn</i> LAC <i>site</i> (NT4T20) CE/PE <i>b s p</i> OVLY = LED</p> <p style="padding-left: 40px;">[for each LAC pack that failed the test sequence]</p> <p>where:</p> <p>LED <i>nnn</i> is a code that indicates a specific fault in the LAN. See the Output Message Manual for the appropriate action for clearing this fault.</p> |
| TEST LAN (REP <i>n</i>) | <p>Tests all LAN equipment in the office.</p> <p>The REP <i>n</i> option specifies the number of times the test is repeated; <i>n</i> may be 1 through 32,767. If <i>n</i> is not specified, the default value is 32,767. Operating Company Personnel may abort the test by entering #####.</p> <p>The test results are displayed in the form:</p> <p>PASSED</p> <p style="padding-left: 40px;">[for each LAN device that successfully completed the test sequence]</p> <p style="text-align: center;">or</p> <p>LED <i>nnn device mnemonic pack code site</i> CE/PE <i>b s p</i></p> <p style="padding-left: 40px;">[for each LAN device that failed the test sequence]</p> <p>where:</p> |

LED commands (Continued)

| Command | Result |
|--|--|
| | LED <i>nnn</i> is a code that indicates a specific fault in the LAN. See the <i>Output Message Manual</i> for the appropriate action for clearing this fault. |
| | <i>device mnemonic</i> is one of: |
| | LCI A or B LAN CPU Interface pack (LAN A or B) |
| | LSHF Messaging (LAN) shelf |
| | LSC LAN Shelf Controller pack |
| | LAC LAN Application Controller pack. |
| | <i>pack code</i> is the NT code of the shelf or pack. |
| TEST LCI CE <i>b s p</i> (REP <i>n</i>) | Tests the specified LCI pack or all LCI packs. An LCI pack is not taken out of service if faults are found. |
| or | The REP <i>n</i> option specifies the number of times the test is repeated; <i>n</i> may be 1 through 32,767. If <i>n</i> is not specified, the default value is 32,767. Operating Company Personnel may abort repetitive testing by entering #####. |
| TEST LCI ALL (REP <i>n</i>) | The test results are displayed in the form: |
| | PASSED |
| | [for each LCI pack that successfully completed the test sequence] |
| | or |
| | LED <i>nnn</i> LCI <i>qualifier site</i> (NT4T16) CE <i>b s p</i> OVLY = LED |
| | [for each LCI pack that failed the test sequence] |
| | where: |
| | LED <i>nnn</i> is a code that indicates a specific fault in the LAN. See the <i>Output Message Manual</i> for the appropriate action for clearing this fault. |
| | <i>qualifier</i> is one of: |
| | A (LAN A) |
| | B (LAN B) |
| TEST LSC CE/PE <i>b s p</i> (REP <i>n</i>) | Tests the specified LSC pack or all LSC packs. An LSC pack is not taken out of service if faults are found. |
| or | The REP <i>n</i> option specifies the number of times the test is repeated; <i>n</i> may be 1 through 32,767. If <i>n</i> is not specified, the default value is 32,767. Operating Company Personnel may abort the test by entering #####. |
| TEST LSC ALL (REP <i>n</i>) | The test results are displayed in the form: |
| | PASSED |
| | [for each LSC pack that successfully completed the test sequence] |
| | or |
| | LED <i>nnn</i> LSC <i>site</i> (NT4T18) CE/PE <i>b s p</i> OVLY = LED |
| | [for each LSC pack that failed the test sequence] |
| | where: |
| | LED <i>nnn</i> is a code that indicates a specific fault in the LAN. See the <i>Output Message Manual</i> for the appropriate action for clearing this fault. |

LED commands (Continued)

| Command | Result |
|--|---|
| <p>VERS LAN</p> | <p>Gives the version of SAE operating system downloaded in the LAC, LCI, and LSC packs associated with all of the LAN shelves. In addition, the application software version is displayed for LAC packs. The packs must be in service before the VERS command is used. An LEDxxx system message will be displayed in place of the status for any out-of-service packs.</p> <p>The versions are displayed in the form:</p> <p>LCI <i>qualifier</i> (NT4T16) CE <i>b s p</i> SAE <i>nnn.n</i> LSHF PE <i>b s</i> LSC (NT4T18) <i>site</i> CE/PE <i>b s p</i> SAE <i>nnn.n</i> LAC (NT4T20) <i>site</i> CE/PE <i>b s p</i> SAE <i>nnn.n</i> APPL <i>mmm.m application type</i></p> <p>where:</p> <p><i>qualifier</i> is one of:</p> <p style="padding-left: 40px;">A (LAN A) B (LAN B)</p> <p><i>nnn.n</i> is the version of SAE operating system <i>mmm.m</i> is the version of the application software.</p> |
| <p>VERS LAC CE/PE <i>b s p</i> or VERS LAC ALL</p> | <p>Gives the version of SAE operating system and application software downloaded either in the specified LAC pack or in all LAC packs. The LAC pack(s) must be in service before the VERS command is used. An LEDxxx system message will be displayed in place of the status for any out-of-service packs.</p> <p>The versions are displayed in the form:</p> <p>LAC (NT4T20) <i>site</i> CE/PE <i>b s p</i> SAE <i>nnn.n</i> APPL <i>mmm.m application type</i></p> <p>where:</p> <p><i>nnn.n</i> is the version of SAE operating system <i>mmm.m</i> is the version of the application software.</p> |
| <p>VERS LCI CE <i>b s p</i> or VERS LCI ALL</p> | <p>Gives the version of SAE operating system downloaded either in the specified LCI pack or in all LCI packs. The LCI pack(s) must be in service before the VERS command is used. An LEDxxx system message will be displayed in place of the status for any out-of-service packs.</p> <p>The versions are displayed in the form:</p> <p>LCI <i>qualifier</i> (NT4T16) CE <i>b s p</i> SAE <i>nnn.n</i></p> <p>where:</p> <p><i>qualifier</i> is one of:</p> <p style="padding-left: 40px;">A (LAN A) B (LAN B)</p> <p><i>nnn.n</i> is the version of SAE operating system</p> |

LED commands (Continued)

| Command | Result |
|---|---|
| VERS LSC CE/PE <i>b s p</i> or VERS LSC ALL | <p>Gives the version of SAE operating system downloaded either in the specified LSC pack or in all LSC packs. The LSC pack(s) must be in service before the VERS command is used. An LEDxxx system message will be displayed in place of the status for any out-of-service packs.</p> <p>The versions are displayed in the form: LSC (NT4T18) <i>site CE/PE b s p</i> SAE <i>nnn.n</i> where: <i>nnn.n</i> is the version of SAE operating system</p> |

Section 14: LIT (Line Insulation Testing)

Description

Overlay LIT enables operating company personnel to change the parameters set for the LIT section in Overlay CNFG and to query and activate Overlay LIT. LIT detects faults in subscriber loops by using the peripheral maintenance system (PMS), Line Test Unit (LTU), or Remote Maintenance Pack (RMP), to test for foreign battery, foreign ground, and tip-to-ring leakage fault conditions. The PMS is used for most applications. The LTU is used on the Remote Maintenance Module (RMM) to test Remote Line Concentrating Module (RLCM), Outside Plant Access Cabinet (OPAC), Outside Plant Module (OPM), or Remote Switching Center (RSC-S) subscriber loops. The RMP is used to test Remote Subscriber Line Equipment (RSLE or RSLM) or Outside Plant Subscriber Module (OPSM) subscriber loops.

After LIT is loaded, the PMS, LTU, or RMP is tested and calibrated. If either the PMS, LTU, or RMP is faulty, then a message is output to the maintenance terminal and line insulation testing is not performed. When the LTU is used, the Metallic Test Access (MTA) pack, which is also located on the RMM, provides the connection between the LTU and the RLCM, OPM, OPAC, or RSC-S line packs.

Input commands

This section lists the commands, with descriptions, that can be used once the interactive program is loaded (that is, the maintenance terminal has displayed the message LIT000).

LIT commands

| Input Command | Description |
|---------------|--|
| #### | Interrupts any maintenance-terminal output, stops execution of the current command, and places the maintenance terminal in input mode. Response is the prompt character >. |
| **** | Interrupts any maintenance-terminal output and aborts the overlay program. Response is the prompt character #. |
| ? | Queries the system for valid input. Can be used with any command. |

LIT commands (Continued)

| Input Command | Description |
|---|--|
| HAZ (nnn) nnn nnnn PE/LCE/RSE/RSC b s card/lsg u/l ON/OFF | <p>Causes the specified line to be marked as hazardous, or removes the hazardous marking from the line. When the line is marked hazardous, its CO relay is operated, and the line's status is made system-made-busy. The hazardous marking can be turned on only if the line is idle. When the hazardous marking is turned off, the line's CO relay is released, and the line status is changed to in-service.</p> <p><i>Note:</i> When the Duplicate NXX feature is configured, either a seven- or ten-digit DN can be entered. A ten-digit DN must be entered when the thousands group (nxx n) specified has more than one associated HNPA.</p> |
| LHT (nnn) nnn nnnn PE/LCE/RSE/RSC b s card/lsg u/l | <p>Causes a line hazard test to be performed on the specified line. If the line is already marked as hazardous, then the HAZ OFF command must be entered before the line can be manually tested.</p> <p><i>Note 1:</i> A line hazard test invoked via the LHT command runs only if an automatic line hazard test is not already running. The line hazard test invoked via the LHT command will, however, take priority over any automatic tests that are queued to run.</p> <p><i>Note 2:</i> When the Duplicate NXX feature is configured, either a seven- or ten-digit DN can be entered. A ten-digit DN must be entered when the thousands group (nxx n) specified has more than one associated HNPA.</p> |
| PARM (site) command | <p>Allows operating company personnel to change the line insulation testing parameters that are specified in Overlay CNFG. These changes are for manual testing only and do not apply to automatic testing. The changes are deleted from the system when operating company personnel abort Overlay LIT. The system parameters return to the default values when the overlay is reloaded.</p> <p>site is the mnemonic of the site for which the parameters are being changed.</p> <p><i>Note:</i> If a site is not specified, the system will prompt for a site. A null entry for site will default to the base site.</p> <p>command can be one of:</p> <ul style="list-style-type: none"> LIT n change line insulation test to run ACVR V change ac voltage reference DCVR V change dc voltage reference RESR n change resistance sensitivity MBSR change MBS resistance sensitivity EXFC x change failure codes to exclude from reporting <p><i>Note:</i> Define n, V, n, and x by using the ranges listed below for those variables associated with LIT, ACVR, DCVR, RESR, MBSR, and EXFC.</p> |

LIT commands (Continued)

| Input Command | Description |
|---------------|--|
| | <p>If PARM <i>site</i> is input, the system will respond with the following series of prompts. For each prompt, operating company personnel may enter a new value for the variable or may depress the ENTER key to use the current variable.</p> <p>ENTR LIT <i>n</i>, where <i>n</i> is:</p> <ul style="list-style-type: none"> ALL All LIT tests FGB Foreign battery test only FGG Foreign ground test only TRL Tip-to-ring leak test only. <p><i>Note:</i> The ENTR LIT variable may reflect different pass/fail results based on the error encountered on the loop under test. For example, the result of a loop tested with the LIT parameter set to ALL indicates foreign battery on the loop and a trouble type 12 (1 = 1K or 10K ohm sensitivity range; 2 = foreign battery fault type). If the LIT parameter is subsequently changed to FGG (foreign ground test only) or TRL (tip-to-ring leak test only) and the loop is retested, the result will indicate no failure but will show the foreign battery in the test result output. This allows more selective testing if the outside plant is known to be somewhat deficient in certain aspects.</p> <p>ENTR ACVR <i>V</i>, where <i>V</i> is a number from 1 to 200 that represents the ac voltage reference.</p> <p>ENTR DCVR <i>V</i>, where <i>V</i> is a number from 1 to 200 that represents the dc voltage reference.</p> <p>ENTR RESR <i>n</i>, where <i>n</i> is the current measuring sensitivity code in kΩ <i>n</i> can be 10, 25, 50, 75, 125, or 250.</p> <p>ENTR MBSR <i>n</i>, where <i>n</i> is the current MBS measuring sensitivity code in kΩ <i>n</i> can be 1, 2, 5, 10, 25, or 50.</p> <p>ENTR EXFC <i>x . . . x</i>, where <i>x</i> is one or more of the fault condition codes that are not being saved and reported. <i>x</i> can be any of the following:</p> <ul style="list-style-type: none"> NONE Do not exclude any codes from reporting BUSY Busy code is excluded LKOT Lockout code is excluded ICP Intercept code is excluded GNDS Ground start code is excluded INAC Inaccessible code is excluded. <p><i>Note:</i> EXFC affects only the RTST command. If the EXFC failure codes are modified when the RTST command is issued, then any stored error encountered on the loop will not be output if the error matches one of the EXFC codes.</p> |

LIT commands (Continued)

| Input Command | Description | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------|---|---------|-----------|----------|---------------------|--|--------------------------|--|----------|--|-----------|--|-----------|--|----------|--|-----------|--|----------|--|----------|--|----------|--|-----------|--|-----------|--|----------------|--|---------------------|--|---------------------|
| | <p>If PARM (<i>site</i>) command is input, the system will respond with the appropriate prompt. For example, if PARM <i>site</i> LIT is input, the system will respond with ENTR LIT <i>n</i>. For each prompt, operating company personnel may enter a new value for the variable or may depress the ENTER key to use the current variable. Refer to the list above for definitions of the variables. Operating company personnel may enter more than one PARM command on a line.</p> <p>Examples: PARM CAPK ACVR 1 PARM CAPC ALL 10 10 25 LKOT</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| QUE <i>option (site)</i> | <p>Allows operating company personnel to query a specific option. <i>option</i> may be one of:</p> <p style="padding-left: 40px;"><i>abc defg</i> directory number</p> <p style="padding-left: 40px;">LKOT all directory numbers that are in LOCKOUT</p> <p style="padding-left: 40px;">PARM line insulation test parameters</p> <p><i>site</i> may be used only with the PARM option.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RTST | <p>Allows operating company personnel to retest all directory numbers that failed the last automatic LIT test and were stored by the automatic reporting section of the overlay.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STAT <i>type of test</i> | <p>Provides a summary of the test results for either the last cycle of the automatic reporting from the overlay or the last cycle of the manual TEST command. <i>type of test</i> can be one of:</p> <p style="padding-left: 40px;">AUTO Automatic test</p> <p style="padding-left: 40px;">MAN Manual test.</p> <p>Example:</p> <table border="0" style="margin-left: 40px;"> <tr> <td style="padding-right: 20px;">(input)</td> <td>STAT AUTO</td> </tr> <tr> <td>(output)</td> <td>LIT STATUS RTP AUTO</td> </tr> <tr> <td></td> <td>DATE 17/08/00 TIME 01:35</td> </tr> <tr> <td></td> <td>BASE PMS</td> </tr> <tr> <td></td> <td>SLC2 NONE</td> </tr> <tr> <td></td> <td>RLMA NONE</td> </tr> <tr> <td></td> <td>OPM NONE</td> </tr> <tr> <td></td> <td>ACCS NONE</td> </tr> <tr> <td></td> <td>RCU1 LTA</td> </tr> <tr> <td></td> <td>AFC NONE</td> </tr> <tr> <td></td> <td>SLCB PMS</td> </tr> <tr> <td></td> <td>TR08 NONE</td> </tr> <tr> <td></td> <td>FUJI NONE</td> </tr> <tr> <td></td> <td>LIT CYCLE PRMT</td> </tr> <tr> <td></td> <td>NUM LINE TEST 00000</td> </tr> <tr> <td></td> <td>NUM LINE PASS 00000</td> </tr> </table> | (input) | STAT AUTO | (output) | LIT STATUS RTP AUTO | | DATE 17/08/00 TIME 01:35 | | BASE PMS | | SLC2 NONE | | RLMA NONE | | OPM NONE | | ACCS NONE | | RCU1 LTA | | AFC NONE | | SLCB PMS | | TR08 NONE | | FUJI NONE | | LIT CYCLE PRMT | | NUM LINE TEST 00000 | | NUM LINE PASS 00000 |
| (input) | STAT AUTO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (output) | LIT STATUS RTP AUTO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | DATE 17/08/00 TIME 01:35 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | BASE PMS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | SLC2 NONE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | RLMA NONE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | OPM NONE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | ACCS NONE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | RCU1 LTA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | AFC NONE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | SLCB PMS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | TR08 NONE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | FUJI NONE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | LIT CYCLE PRMT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | NUM LINE TEST 00000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | NUM LINE PASS 00000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

LIT commands (Continued)

| Input Command | Description |
|---|---|
| | NUM LINE FAIL 00000 NUM LINE LKOT 00000 NUM LINE BUSY 00000 NUM LINE INAC 00000 LIT TEST USED ALL/FGG/FGB/TRL |
| | <p><i>Note:</i> The date is output only if the type of test is AUTO. The test equipment listed for each site indicates the type of test being performed at the site.</p> |
| TEST <i>number</i> (REP <i>n</i>) or TEST PE/LCE/RSE/ RSC/HUBE/IDE <i>b s</i> card/lsg u/l (REP <i>n</i>) | <p>Allows operating company personnel to run the LIT test against a single directory number. The resulting output provides the usual line insulation test results plus precise measurements of the electrical characteristics of the directory number.</p> <p>Note 1: The tip-to-ring measurements on an NT6X21 loop can be affected by the active components in the M5000-Series business set; therefore, in order to obtain an accurate tip-to-ring measurement of an NT6X21 loop, the M5000-Series business set must be disconnected from the loop.</p> <p>Note 2: For an RLCM, OPAC, or OPM: ac and dc tip-to-ring voltages (indicated in the output as TR) cannot be measured; line capacitance (indicated in the output as CAP) will be measured in the manual mode only; line resistance will not be as accurate as that measured in overlay TLT.</p> <p><i>number</i> is a directory number in the form abc defg. <i>number</i> is either a seven- or ten-digit number in the form npa abc defg, when the Duplicated NXX feature is configured; <i>number</i> must be ten-digits long if the abc d digits have more than one associated HNPA.</p> <p>The REP <i>n</i> option specifies the number of times the test is repeated; <i>n</i> may be 1 to 32,767. If <i>n</i> is not specified, the default value is 32,767. Operating company personnel may abort the repeating test by entering #####.</p> <p>The results are displayed in the form:</p> <pre> DN <i>nnn nnnn</i> LIT <i>test result</i> ACV:<i>nn</i> DCV:<i>nn</i> RES:<i>nnK</i> (<i>trouble type</i>) ELEC CHAR TR TGRG AC (VRMS) vv vvvv DC (VOLTS) vv vvvv RES (KOHM) rrrr. rrrr.rrrr. CAP (UF) c.ccc c.cccc.ccc </pre> <p>where:</p> <p>DN <i>nnn nnnn</i> is the directory number tested</p> <p><i>test result</i> is one of:</p> <p>FAIL - the line failed a test</p> |

LIT commands (Continued)

Input Command

Description

PASS - the line passed the tests.
ACV:*nn* is the ac voltage reference value
DCV:*nn* is the dc voltage reference value
RES:*nnK* is the resistance-sensitivity reference value and is one of:
regular telephone sets:
10K ohm
25K ohm
50K ohm
75K ohm
125K ohm
250K ohm
M5000-Series business sets:
1K ohm
2K ohm
5K ohm
10K ohm
25K ohm
50K ohm
vv is either the ac or dc voltage measurement
rrrr. is a resistance measurement in kilo-ohms
ccc.c is a capacitance measurement in microfarads
trouble type is a two-digit code, where:
the first digit represents the sensitivity range, as follows:
regular telephone sets:
1 = 10K ohm
2 = 25K ohm
3 = 50K ohm
4 = 75K ohm
5 = 125K ohm
6 = 250K ohm
M5000-Series business sets:
1 = 1K ohm
2 = 2K ohm
3 = 5K ohm
4 = 10K ohm
5 = 25K ohm

LIT commands (Continued)

| Input Command | Description |
|---------------|-------------|
|---------------|-------------|

6 = 50K ohm

the second digit represents the fault type, as follows:

1 = foreign ground

2 = foreign battery

3 = tip-to-ring leak

Section 15: MPD (Microprocessor download overlay)

Description

Overlay MPD provides the facility to transfer software from the file system to the ac Tester (ACT) or Peripheral Maintenance System (PMS).

Input commands

This section lists the commands, with descriptions, that can be used once Overlay MPD has been loaded.

MPD commands

| Input Command | Description |
|---------------------------------------|--|
| ? | Queries the system for valid input. Can be used with any command. |
| DNLD ACT (<i>site</i>) (NEW/OLD) | <p>Transfers software from the file system to the ACT. Successful downloading is indicated by the output message MPD001.</p> <p>The software package downloads may be optionally specified as NEW or OLD. Specifying NEW downloads the most recently dated software package. OLD downloads the oldest dated software package. If no option is entered, the currently activated software package is downloaded, without distinguishing by date.</p> <p><i>Note: The version of the download file on the ACT cannot be verified.</i></p> |
| DNLD PMS (<i>site</i>) (NEW/OLD) | <p>Transfers software from the file system to the PMS. Successful downloading is indicated by the output message MPD001.</p> <p>The PMS must be downloaded at a REM site during a very low-traffic period. Otherwise, traffic flow through the span lines will overflow, causing alarm messages to be printed and REMs to be system-made-busy (SMB).</p> |

MPD commands (Continued)

Input Command

Description

The software package downloads may be optionally specified as NEW or OLD. Specifying NEW downloads the most recently dated software package. OLD downloads the oldest dated software package. If no option is entered, the currently activated software package is downloaded, without distinguishing by date.

Note: The version of the download file on the PMS cannot be verified.

Section 16: MTD (Magnetic tape diagnostic)

Description

Overlay MTD is free-running when automatically loaded (once every 24 hr, if so scheduled) and interactive when requested by maintenance personnel. In the free-running mode, the overlay tests all enabled Automatic Message Accounting (AMA) or utility magnetic tape units (MTUs) and the hardware listed below.

The following hardware is tested for the 800 bpi AMA system:

- The Magnetic Tape Controller (MTC) pack (NT3T10)
- The Magnetic Tape Interface pack (NT3T11) (housed in the MTU)
- The cable (including paddleboard) connecting these pieces of equipment.

The following hardware is tested for the 1600 bpi AMA system:

- The Input/Output Interface (IOI) pack (NT3T90)
- The disk drive
- The cables connecting the IOI packs, disk drives, and MTU.

Note: Information on the hardware configurations for the 800- and 1600-bpi AMA systems is located in the NTP entitled *Automatic Message Accounting System (297-3101-124)*.

The interactive mode is used to more thoroughly test an AMA or utility magnetic tape unit. In addition, the program tests the 800- or 1600-bpi tape drive and actual read/write functions. The interactive mode is also used when changing tapes.

Billing media alarms

A catastrophic alarm is raised by the system if complete loss of billing has occurred. For example, a catastrophic alarm is raised if both disk drives in a 1600-bpi system are faulty. A major alarm is raised if only one MTU (800- or 1600-bpi) has lost billing capability, if only one disk drive in a 1600-bpi system is faulty, or if one IOI pack in a 1600-bpi system is faulty. All fault conditions must be cleared prior to clearing either of these alarms. (Exception: either the catastrophic alarm or the major alarm may be downgraded to two minor alarms by manually disabling the faulty units.)

Input commands

This section gives the commands, with descriptions, that can be used once the requested (interactive) program is loaded (that is, the maintenance terminal has printed MTD000). Because of different hardware configurations, not all commands are valid for all sites or for all generics. The system provides error messages when incorrect commands are input.

MTD commands

| Input Command | Description |
|------------------------------|--|
| #### | Interrupts any maintenance-terminal output, stops execution of the current command, and places the maintenance terminal in input mode. Response is the prompt character >. |
| **** | Interrupts any maintenance-terminal output and aborts the overlay program. Response is the prompt character #. |
| ? | Queries the system for valid input. Can be used with any command. |
| AMA COPY (HDR / NHR2 / NEXP) | <p>Applies only to the 1600-bpi AMA system. Copies billing data from the disk drive on Bus B (Bus A will be used if there is a fault on Bus B) to the AMA tape. Places the indicated header(s) on the tape. This command is usually used to provide a second copy of billing data (after the first copy has been made using the "AMA RLSE" command and a new tape is inserted).</p> <p>The "HDR" option specifies that all standard labels (headers) will be placed on the AMA tape. This option is usually used if the Regional Accounting Office (RAO) has not placed labels on the tape.</p> <p>The "NHR2" option specifies that the AMA tape does not contain an HDR2 label. The DMS-10 switch will generate the HDR2 label and put it on the tape after the HDR1 label.</p> <p>The "NEXP" option specifies that the DMS-10 switch will not validate the expiration date on the tape. This option is normally used if the RAO has placed the HDR1 label, which contains an expiration date, on the tape.</p> <p>Note 1: The AMA tape onto which the billing data will be copied must be in the released state before this command is entered. Once a tape has been seized, it cannot be copied.</p> <p>Note 2: When the HDR option is used, the expiration date is ignored if the HDR1 label is already on the tape.</p> <p>Example: AMA COPY HDR</p> |

MTD commands (Continued)

| Input Command | Description |
|------------------------------|---|
| AMA RLSE | <p>Applies only to the 1600-bpi AMA system. Dumps billing data from the DMS-10 switch buffer onto the disk drives, and dumps all the billing data from the disk drive on Bus B (Bus A will be used if there is a fault on Bus B) to the AMA tape. Places the appropriate trailer information onto the AMA tape, and places the tape in the released state.</p> <p>Note: The AMA tape must be in the seized state before this command is entered.</p> |
| AMA SEIZ (HDR / NHR2 / NEXP) | <p>Applies only to the 1600-bpi AMA system. Seizes the AMA tape for use by the DMS-10 switch and places the indicated header(s) on the tape.</p> <p>Refer to the AMA COPY command for definitions and use of the HDR, NHR2, and NEXP options.</p> <p>Note 1: The AMA tape must be in the released state before this command is entered. The appropriate command, 'AMA RLSE' or 'ENBL NTRA,' should be used to place the tape in the released state.</p> <p>Note 2: When the HDR option is used, the expiration date is ignored if the HDR1 label is already on the tape.</p> <p>Example: AMA SEIZ NHR2</p> |
| CLR MAJ | Clears major system-detected alarms. (Faults must be cleared prior to clearing alarms.) |
| CLR MIN | Clears minor system-detected alarms. |
| DSBL DISK A / B | <p>Applies only to the 1600-bpi AMA system. Places the disk drive on Bus A or Bus B, as indicated, in the man-made-busy state.</p> <p>Example: DSBL DISK A</p> |
| DSBL LIOI <i>n</i> (EMER) | <p>Applies only to the 1600-bpi AMA system. Disables IOI pack (NT3T90) <i>n</i>, where <i>n</i> is 1, 2 or 3. The IOI pack designation is assigned in Overlay CNFG (IOI prompting sequence). To determine which number has been used to designate a specific IOI pack, enter the STAT LIOI command.</p> <p>The "EMER" option is used when the IOI pack being disabled is the active IOI pack. When possible, use the "SWCH LIOI" command to place the IOI pack to be disabled in the inactive state and then disable the IOI pack.</p> <p>Example: DSBL LIOI 2 EMER</p> |
| DSBL MTU <i>n</i> (EMER) | <p>Applies only to the 800-bpi AMA system. Disables magnetic tape unit <i>n</i>, where <i>n</i> is 0 through 3. The "EMER" option is used when the magnetic tape unit being disabled is the active magnetic tape unit.</p> <p>Example: DSBL MTU 0 EMER</p> |
| DSBL NTRA | <p>Applies only to the 1600-bpi AMA system. Converts the state of the AMA tape from system-made-busy to man-made-busy. The AMA tape must be in the system-made-busy state before this command is entered.</p> <p>Note: When a tape becomes system-made-busy, a fault condition is indicated. To prevent loss of billing data that have been stored on the tape, Nortel recommends that a new tape be placed in the drive and the data on the disk be copied onto the new tape.</p> |

MTD commands (Continued)

| Input Command | Description |
|------------------------|--|
| ENBL AMA | <p>Applies only to the 1600-bpi AMA system. Enables both disk drives when the AMA system is in the down state.</p> <p>Note: The AMA system must be in the down state before this command is entered.</p> |
| ENBL DISK A / B (UPDT) | <p>Applies only to the 1600-bpi AMA system. Enables the disk drive on Bus A or Bus B, as indicated. Also performs the following tests: a response test, a directory validation, and a read/write test (billing data are not destroyed by this test).</p> <p>Note: The “UPDT” option must be used if only one disk drive is disabled. This option updates the indicated disk to match the data on the currently enabled disk. If both disks are disabled, the first disk may be enabled using the “ENBL DISK A / B” command and the second disk must be enabled using the “ENBL DISK A / B UPDT” command.</p> <p>Example: ENBL DISK A UPDT</p> |
| ENBL LIOI <i>n</i> | <p>Applies only to the 1600-bpi AMA system. Enables IOI pack (NT3T90) <i>n</i>, where <i>n</i> is 1, 2 or 3. The IOI pack designation is assigned in Overlay CNFG (IOI prompting sequence). To determine which number has been used to designate a specific IOI pack, enter the STAT LIOI command.</p> <p>Example: ENBL LIOI 2</p> |
| ENBL MTU <i>n</i> | <p>Applies only to the 800-bpi AMA system. Enables magnetic tape unit <i>n</i>, where <i>n</i> is 0 through 3. The tape unit then has OFFL (off-line) or RLSE (released) status. Tape must be in DSBL state to implement this command.</p> <p>Example: ENBL MTU 3</p> |
| ENBL NTRA | <p>Applies only to the 1600-bpi AMA system. Enables the nine-track AMA tape and places the tape in the released state.</p> <p>Note: The tape must be spooled on to the takeup reel before this command is entered. The tape drive must be powered on and be in an ONLINE state. At least one disk drive must be enabled.</p> <p style="text-align: center;">CAUTION: This command places the AMA tape in a released state so that billing data cannot be transferred to the tape. The data should be recovered by using the AMA COPY command.</p> |
| FRMT DISK A/B DIR/UPDT | <p>Applies only to the 1600-bpi AMA system. Formats the disk drive on Bus A or Bus B. The disk to be formatted must be disabled. Disk formatting takes approximately 10 to 12 minutes.</p> <p>The “DIR” option is used to initialize a disk directory. Initialization of the directory is required when any disk is first formatted or when both disks have been corrupted.</p> |

MTD commands (Continued)

| Input Command | Description |
|--|--|
| | <p>The "UPDT" option, which is valid only if at least one disk is enabled, is used to update the formatted disk to match the data on the currently enabled disk.</p> <p>CAUTION: The FRMT DISK command requires extreme caution. It destroys all billing data on the disk. This command should be performed during low traffic hours and only during the initial installation of a disk or if a bad sector is encountered during disk operation. Be certain not to leave a disk that is formatting unattended. If the switch initializes during this procedure, formatting stops and the disk is left only partially formatted. This command cannot be aborted by the user.</p> |
| | <p>Example: FRMT DISK A DIR</p> <p>Applies only to the 800-bpi AMA system. Releases magnetic tape unit <i>n</i>, where <i>n</i> is 0 through 3, from DMS-10 switch control and enables the front-panel switches on the tape drive (for changing tape or manual testing). The parameter <i>use</i> must be either AMA or UTIL (utility).</p> |
| <p>RLSE MTU <i>n use</i></p> | <p>Example: RLSE MTU 2 AMA</p> <p>Applies only to the 800-bpi AMA system. Seizes magnetic tape unit <i>n</i>, where <i>n</i> is 0 through 3, for use by the DMS-10 switch. This command also disables the front-panel switches on the tape drive. The command also performs the equivalent of TEST MTU.</p> <p>The "NHR2" option specifies that the AMA tape does not contain an HDR2 label. The DMS-10 switch will generate the HDR2 label and put it on the tape after the HDR1 label.</p> <p>The "NEXP" option specifies that the DMS-10 switch will not validate the expiration date on the tape. This option is usually used if the RAO has placed the HDR1 label, which contains an expiration date, on the tape.</p> |
| <p>SEIZ MTU <i>n</i> (NHR2) (NEXP)</p> | <p>Examples: SEIZ MTU 2 NHR2 SEIZ MTU 0 SEIZ MTU 1 NEXP</p> |
| <p>STAT (LIOI)</p> | <p>Applies only to the 1600-bpi AMA system. Gives the status of the AMA system and the associated input/output interfaces and attached devices.</p> <p>The "LIOI" option provides the same output as the STAT command.</p> <p>Response is of the form:</p> <p>LIOI 1 CE <i>b s p</i> (IOI <i>x</i>) <i>hardware state pack state</i> <i>pack activity</i> AMA <i>AMA system state (tape state)</i></p> <p>LIOI 2 CE <i>b s p</i> (IOI <i>x</i>) <i>hardware state pack state</i> DISK A <i>hardware state device state</i> DISK B <i>hardware state device state</i></p> |

MTD commands (Continued)

Input Command

Description

NTRA *hardware state device state*

where:

x is the number of the IOI pack and is 1, 2, or 3

hardware state is the state of the indicated device (IOI pack, disk, or AMA tape) and is one of:

- DSBL disabled
- ENBL enabled

pack state is the state of the IOI pack and is one of:

- ACTV active
- FALT system-made-busy because of a fault
- MMB man-made-busy
- STBY standby
- STKI stuck interrupt

pack activity is one of:

- BUSY active
- IDLE inactive

AMA system state is one of:

- DOWN not operational
- NRML operational
- TOD time-of-day clock is not operational

tape state is the state of the AMA tape and is one of:

- EHLN tape system has been placed in an error hold state because of an unresolvable situation
- POSN tape system is attempting to resolve ambiguous data placement or content
- RLSE tape drive is released (is not seized or prepped)
- SEIZ tape drive has been seized and is ready to record billing data

device state is the state of the indicated IOI device and is one of:

- ACTV active
- FALT system-made-busy because of a fault
- FBAD failed format
- MMB man-made-busy
- NORP no response from the device
- NRDY offline condition (applies only to AMA tape)
- UPDT being updated (applies only to disk)

Example:

MTD commands (Continued)

| Input Command | Description |
|---------------|---|
| | (input) STAT |
| | (output) LIOI 1 CE 1 4 04 (IOI 1) ENBL ACTV IDLE AMA NRML (RLSE) LIOI 2 CE 1 4 05 (IOI 2) DSBL STBY DISK A ENBL ACTV DISK B ENBL ACTV NTRA ENBL ACTV |
| STAT MTU | <p>Applies only to the 800-bpi AMA system. Gives the status of all equipped magnetic tape units. Response is of the form:</p> <p>MTU <i>n</i> CE <i>b s p use stat</i></p> <p>where:</p> <p><i>n</i> is the tape unit number (0 through 3).</p> <p>CE <i>b s p</i> is the physical address of the Magnetic Tape Controller pack.</p> <p><i>use</i> is the use assigned to the MTU and can be one of:</p> <p>AMA Automatic Message Accounting UTIL utility</p> <p><i>stat</i> is the status of the MTU and is one of:</p> <p>ACTV equivalent to SEIZ status, but for AMA MTU currently recording AMA data</p> <p>INAC equivalent to SEIZ status, but for standby AMA magnetic tape unit</p> <p>MAN-DSBL MTU has been disabled by manual intervention. This includes system action while overlay MTD is manually loaded.</p> <p>OFFL MTU is switched off-line, and can be controlled by front-panel switches only</p> <p>RLSE MTU is on-line but not seized. May be switched off-line at MTU or seized via TTY</p> <p>SEIZ MTU is on-line and seized. Front-panel switches disabled. Appears only for utility MTU</p> <p>SYS-DSBLMTU has been disabled by system action</p> |
| | Example: |
| | (input) STAT MTU |
| | (output) MTU 3 CE 1 2 4 AMA ACTV |
| SWCH AMA | Applies only to the 800-bpi AMA system. Transfers active status from currently-active AMA tape unit to currently-inactive AMA tape unit. |
| SWCH LIOI | Applies only to the 1600-bpi AMA system. Transfers active status from the currently-active IOI pack to the currently-inactive IOI pack |

MTD commands (Continued)

| Input Command | Description |
|---------------------------------|--|
| TEST DISK A/ B | Applies only to the 1600-bpi AMA system. Tests the disk drive on Bus A or Bus B, as indicated. Performs a response test, a directory validation, and a read/write test (billing data are not destroyed by this test). The disk being tested should be disabled, but this is not required. Example: TEST DISK A |
| TEST LIOI <i>n</i> | Applies only to the 1600-bpi AMA system. Tests IOI pack (NT3T90) <i>n</i> , where <i>n</i> is 1, 2, or 3. The IOI pack designation is assigned in Overlay CNFG (IOI prompting sequence). To determine which number has been used to designate a specific IOI pack, enter the STAT LIOI command. Example: TEST LIOI 2 |
| TEST MTU <i>n</i> (NEXP) (BLTP) | Applies only to the 800-bpi AMA system. Tests magnetic tape unit <i>n</i> , where <i>n</i> is 0 through 3, and associated equipment. Tests the associated Magnetic Tape Controller (MTC) pack, the Magnetic Tape Cable Interface pack, and the cable (including paddleboard) between them, then performs a functional test on the tape unit. Note that the MTU must be in the RLSE state before it can be tested. The "NEXP" option specifies that the DMS-10 switch will not validate the expiration date on the tape. This option is normally used if the RAO has placed the HDR1 label, which contains an expiration date, on the tape. Without this option, the test will abort if the expiration date is valid. The "BLTP" (blank tape) option should be used for new or degaussed tapes. When this option is entered, the test command skips all label verification. Examples: TEST MTU 0 TEST MTU 1 NEXP TEST MTU 1 BLTP CAUTION: This test writes on and reads from the tape and rewrites tape header information. Ensure that the tape does not contain irreplaceable data before using this command. |
| TEST NTRA | Applies only to the 1600-bpi AMA system. Performs a response test on the AMA tape. The tape should be disabled, but this is not required. |

Section 17: NED (Network equipment diagnostic)

Description

Overlay NED can be loaded and run in either a free-running (automatic) or interactive (manual) mode. Typically, NED is scheduled to run whenever the overlay area is not needed by another overlay.

Overlay NED tests the following Network Equipment:

- Conference packs (NT4T03)
- Diloops, which connect the network interface packs to the Network packs
- DS-30A Interface packs (NT4T04)
- Multiplex Loop Interface packs (NT4T05)
- Network packs (NT4T06)
- Network packs (NT8T06)
- Network Interface packs (NT8T04)
- Peripheral loops, which connect the network interface packs to the peripheral equipment
- Remote Carrier Urban (RCU) and RCU subscriber lines
- SCM-10S and SCM-10U control complex
- Tone and Digit Sender packs (NT4T01)

Overlay NED is also used to determine the status of network, peripheral, line concentrating, remote, and subscriber carrier equipment.

In the free-running mode, the overlay automatically disables faulty network equipment, initiates sparing of a network interface or a network module, activates appropriate alarm indicators, and outputs fault data on the terminal. Network interfaces and modules are arranged in pairs. Sparing of a network module switches established calls (loops) from the faulty interface or module to the mate loop. One or more sparing interfaces carry the additional load until repair of the faulty interface has taken place.

In the manual mode, NED allows maintenance personnel to:

- Busy/return to service network equipment including switching in standby network equipment
- Test network equipment and the digital paths to peripheral shelves (including the Digital Carrier Modules)
- Determine the status of network, peripheral, line concentrating, and subscriber carrier equipment.

NED has three levels of testing, which range from very isolated testing (for example, testing a single pack) to testing functional units of the system (for example, communication between the network and a PE shelf). NED tests all devices at one level before advancing to a higher level.

If a fault is detected while NED is in the interactive mode, NED will complete testing in the current level, but it will not advance to a higher level of testing. When NED is in the free-running mode, it will make an exception for a faulty system-made-busy (SMB) device and will advance to a higher level of testing; however, the testing will stop in the next level(s) if the device becomes faulty again. By making the initial exception to an SMB device and advancing to a higher testing level, NED may detect faults that may not have otherwise been found. The three testing levels are:

- Level 1-Test single packs
- Level 2-Test communication between two packs
- Level 3-Test communication between several packs.

Input commands

This section lists the commands, with descriptions, that can be used once the overlay has been loaded. Because of different hardware configurations, not all commands are valid for all sites or for all generics. The system provides error messages when incorrect commands are input.

Note: The OPM, or OPAC bay numbers may be any number from 1 through 32; however, only two bays may be assigned per site identification mnemonic and the numbers must be in consecutive order. For example, 3 and 4 are valid bay numbers, but 3 and 5 are not valid. The left bay contains LCA 1, LCA 0, Host Interface Equipment, and an Environmental Control Unit. The right bay contains the Battery Control Unit, Rectifiers 1 and 0, Frame Supervisory Panel, Remote Maintenance Module, and an Environmental Control Unit.

NED commands

| Input Command | Description | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------|--|---------------------|-----------------|------------------------|------------------------------|---------------------|-----------------------|------------------------|---|------------------------|---------------------------|----------------------|------------------------|------------------------|---|---------------------|-------------------------------|------------------------|-----------------------|----------------------|--------------|------------------------|-------------------|
| #### | Interrupts any maintenance-terminal output, stops execution of the current command, and places the maintenance terminal in input mode. Response is the prompt character >. | | | | | | | | | | | | | | | | | | | | | | |
| **** | Interrupts any maintenance-terminal output, aborts the overlay program, and places the maintenance terminal in the input mode. Response is the prompt character #. | | | | | | | | | | | | | | | | | | | | | | |
| ? | Lists all possible inputs for a command or for a command parameter. For example, ? <CR> reports all possible commands in the overlay, <command> ? reports all possible first level parameters for the given command in the overlay, and <command> <parameter1> ?, reports all possible second-level parameters for the given command. <i>Note:</i> All possible inputs for a given command or for a command parameter are listed even though all of the inputs displayed may not be valid for the given command/parameter combination. Valid command/parameter combinations can be determined by referring to the input command formats and descriptions in this section. | | | | | | | | | | | | | | | | | | | | | | |
| BUSY device location (IMED) | Causes a device to be put in the MMB state and, if required, switches traffic to the mate device. System-made-busy devices must first be changed to the MMB state using the BUSY command. <i>device and location can be one of:</i> <table border="0"> <tbody> <tr> <td>CNF CE <i>b s p</i></td> <td>Conference pack</td> </tr> <tr> <td>CNFP CE <i>b s p t</i></td> <td>Conference pack network port</td> </tr> <tr> <td>D3A CE <i>b s p</i></td> <td>DS-30A Interface pack</td> </tr> <tr> <td>D3AP CE <i>b s p t</i></td> <td>DS-30A Interface pack network port (Classic Network only)</td> </tr> <tr> <td>GTSB CE <i>b s p n</i></td> <td>Global Tone Services Bank</td> </tr> <tr> <td>IFPK CE <i>b s p</i></td> <td>Network Interface pack</td> </tr> <tr> <td>IFPP CE <i>b s p t</i></td> <td>Network Interface pack port (Expanded Network only)</td> </tr> <tr> <td>MLI CE <i>b s p</i></td> <td>Multiplex Loop Interface pack</td> </tr> <tr> <td>MLIP CE <i>b s p t</i></td> <td>MLI pack network port</td> </tr> <tr> <td>NWPK CE <i>b s p</i></td> <td>Network pack</td> </tr> <tr> <td>NWPP CE <i>b s p n</i></td> <td>Network pack port</td> </tr> </tbody> </table> | CNF CE <i>b s p</i> | Conference pack | CNFP CE <i>b s p t</i> | Conference pack network port | D3A CE <i>b s p</i> | DS-30A Interface pack | D3AP CE <i>b s p t</i> | DS-30A Interface pack network port (Classic Network only) | GTSB CE <i>b s p n</i> | Global Tone Services Bank | IFPK CE <i>b s p</i> | Network Interface pack | IFPP CE <i>b s p t</i> | Network Interface pack port (Expanded Network only) | MLI CE <i>b s p</i> | Multiplex Loop Interface pack | MLIP CE <i>b s p t</i> | MLI pack network port | NWPK CE <i>b s p</i> | Network pack | NWPP CE <i>b s p n</i> | Network pack port |
| CNF CE <i>b s p</i> | Conference pack | | | | | | | | | | | | | | | | | | | | | | |
| CNFP CE <i>b s p t</i> | Conference pack network port | | | | | | | | | | | | | | | | | | | | | | |
| D3A CE <i>b s p</i> | DS-30A Interface pack | | | | | | | | | | | | | | | | | | | | | | |
| D3AP CE <i>b s p t</i> | DS-30A Interface pack network port (Classic Network only) | | | | | | | | | | | | | | | | | | | | | | |
| GTSB CE <i>b s p n</i> | Global Tone Services Bank | | | | | | | | | | | | | | | | | | | | | | |
| IFPK CE <i>b s p</i> | Network Interface pack | | | | | | | | | | | | | | | | | | | | | | |
| IFPP CE <i>b s p t</i> | Network Interface pack port (Expanded Network only) | | | | | | | | | | | | | | | | | | | | | | |
| MLI CE <i>b s p</i> | Multiplex Loop Interface pack | | | | | | | | | | | | | | | | | | | | | | |
| MLIP CE <i>b s p t</i> | MLI pack network port | | | | | | | | | | | | | | | | | | | | | | |
| NWPK CE <i>b s p</i> | Network pack | | | | | | | | | | | | | | | | | | | | | | |
| NWPP CE <i>b s p n</i> | Network pack port | | | | | | | | | | | | | | | | | | | | | | |

NED commands (Continued)

| Input Command | Description |
|---|---|
| | <p>PELP CE <i>b s p l</i> Peripheral loop (see Notes and 2)</p> <p>TDS CE <i>b s p</i> Tone and Digit Sender pack</p> <p>TDSP CE <i>b s p t</i> TDS pack network port</p> <p>Note 1: Because the SRI links are extensions of PELPs, whenever a PELP is busied, the associated SRLK is busied.</p> <p>Note 2: When a PELP (that is the first one assigned) connected to an SCM-10S, SCM-10U, RSC-S, ESMA, or Star Hub is busied when the associated controller for the remote is in the ACTV state, a Warm Swact occurs, switching the activity of the SCS Control Complexes.</p> <p>IMED causes the system to unconditionally make the device man-made busy.</p> <p>Examples: BUSY IFPK CE 1 4 12 BUSY IFPP CE 1 4 12 9 BUSY NWPK CE 1 4 15</p> |
| DNLD D3A CE <i>b s p</i> (NEW/OLD) | <p>Downloads the flash memory on the DS-30A pack with firmware from the file system. The pack must be in the man-made-busy (MMB) state before downloading can be performed.</p> <p>The software package downloads may be optionally specified as NEW or OLD. Specifying NEW downloads the most recently dated software package. OLD downloads the oldest dated software package. If no option is entered, the currently activated software package is downloaded, without distinguishing by date.</p> |
| DNLD IFPK CE <i>b s p</i> (NEW/OLD) | <p>Downloads the flash memory on the Network Interface pack (NT8T04) with firmware from the file system. The pack must be in the man-made-busy (MMB) state before downloading can be performed.</p> <p>The software package downloads may be optionally specified as NEW or OLD. Specifying NEW downloads the most recently dated software package. OLD downloads the oldest dated software package. If no option is entered, the currently activated software package is downloaded, without distinguishing by date.</p> |
| DNLD MLI (<i>site</i>) CE <i>b s p</i> (NEW/OLD) | <p>Applicable only for AE or later versions of the NT4T05 (MLI) pack. Downloads the flash memory on the MLI pack with firmware from the file system. The pack must be in the man-made-busy (MMB) state before downloading can be performed.</p> <p>The software package downloads may be optionally specified as NEW or OLD. Specifying NEW downloads the most recently dated software package. OLD downloads the oldest dated software package. If no option is entered, the currently activated software package is downloaded, without distinguishing by date.</p> |
| DNLD TDS (<i>site</i>) CE <i>b s p</i> (NEW/OLD) | <p>Applicable only for CC or later versions of the NT4T01 (TDS) pack. Downloads the RAM memory on the TDS pack with firmware from the file system. The pack must be in the man-made-busy (MMB) state before downloading can be performed.</p> |

NED commands (Continued)

| Input Command | Description | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---------------------|-----------------|------------------------|------------------------------|-----------------------------------|--|------------------------|--|----------------------|------------------------|------------------------|---|------------------------|-----------------------|------------------------|-----------------------|----------------------|--------------|------------------------|-------------------|------------------------|------------------------------------|---------------------|----------------------------|------------------------|-----------------------|
| OFFFL <i>device location</i> | <p>The software package downloads may be optionally specified as NEW or OLD. Specifying NEW downloads the most recently dated software package. OLD downloads the oldest dated software package. If no option is entered, the currently activated software package is downloaded, without distinguishing by date.</p> <p>Places the designated device into the man-made-offline state. The device must first be in the MMB state before using the OFFFL command. To bring the device back on-line, busy it, then return it to service.</p> <p><i>device and location</i> can be one of:</p> <table border="0"> <tr> <td>CNF CE <i>b s p</i></td> <td>Conference pack</td> </tr> <tr> <td>CNFP CE <i>b s p t</i></td> <td>Conference pack network port</td> </tr> <tr> <td>D3A CE <i>b s p</i></td> <td>DS-30A Interface pack</td> </tr> <tr> <td>D3AP CE <i>b s p t</i></td> <td>DS-30A Interface pack network port (Classic Network only)</td> </tr> <tr> <td>IFPK CE <i>b s p</i></td> <td>Network Interface pack</td> </tr> <tr> <td>IFPP CE <i>b s p t</i></td> <td>Network Interface pack network port (Expanded Network only)</td> </tr> <tr> <td>MLIP CE <i>b s p t</i></td> <td>MLI pack network port</td> </tr> <tr> <td>MLIP CE <i>b s p t</i></td> <td>MLI pack network port</td> </tr> <tr> <td>NWPK CE <i>b s p</i></td> <td>Network pack</td> </tr> <tr> <td>NWPP CE <i>b s p n</i></td> <td>Network pack port</td> </tr> <tr> <td>PELP CE <i>b s p l</i></td> <td>Peripheral loop (see Note)</td> </tr> <tr> <td>TDS CE <i>b s p</i></td> <td>Tone and Digit Sender pack</td> </tr> <tr> <td>TDSP CE <i>b s p t</i></td> <td>TDS pack network port</td> </tr> </table> <p>Note: Because the SRI links are extensions of PELPs, whenever a PELP is placed in the man-made offline state, the associated SRLK is placed in the man-made offline state.</p> | CNF CE <i>b s p</i> | Conference pack | CNFP CE <i>b s p t</i> | Conference pack network port | D3A CE <i>b s p</i> | DS-30A Interface pack | D3AP CE <i>b s p t</i> | DS-30A Interface pack network port (Classic Network only) | IFPK CE <i>b s p</i> | Network Interface pack | IFPP CE <i>b s p t</i> | Network Interface pack network port (Expanded Network only) | MLIP CE <i>b s p t</i> | MLI pack network port | MLIP CE <i>b s p t</i> | MLI pack network port | NWPK CE <i>b s p</i> | Network pack | NWPP CE <i>b s p n</i> | Network pack port | PELP CE <i>b s p l</i> | Peripheral loop (see Note) | TDS CE <i>b s p</i> | Tone and Digit Sender pack | TDSP CE <i>b s p t</i> | TDS pack network port |
| CNF CE <i>b s p</i> | Conference pack | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CNFP CE <i>b s p t</i> | Conference pack network port | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D3A CE <i>b s p</i> | DS-30A Interface pack | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D3AP CE <i>b s p t</i> | DS-30A Interface pack network port (Classic Network only) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IFPK CE <i>b s p</i> | Network Interface pack | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IFPP CE <i>b s p t</i> | Network Interface pack network port (Expanded Network only) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MLIP CE <i>b s p t</i> | MLI pack network port | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MLIP CE <i>b s p t</i> | MLI pack network port | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NWPK CE <i>b s p</i> | Network pack | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NWPP CE <i>b s p n</i> | Network pack port | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PELP CE <i>b s p l</i> | Peripheral loop (see Note) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TDS CE <i>b s p</i> | Tone and Digit Sender pack | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TDSP CE <i>b s p t</i> | TDS pack network port | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RTS <i>device location</i> (IMED RES/DNLD) | <p>Returns to service any device that is MMB. A device may not be returned to service if it is indirectly disabled (INDR) the device's parent device is out of service. The parent device must be returned to service before the lower-order device is returned to service.</p> <p><i>device and location</i> can be one of:</p> <table border="0"> <tr> <td>CNF CE <i>b s p</i></td> <td>Conference pack</td> </tr> <tr> <td>CNFP CE <i>b s p t</i></td> <td>Conference pack network port</td> </tr> <tr> <td>D3A CE <i>b s p</i> (IMED RES)</td> <td>DS-30A Interface pack DS-30A Interface pack running the resident version of firmware</td> </tr> <tr> <td>(IMED DNLD)</td> <td>or DS-30A Interface pack running the download version of firmware</td> </tr> </table> | CNF CE <i>b s p</i> | Conference pack | CNFP CE <i>b s p t</i> | Conference pack network port | D3A CE <i>b s p</i> (IMED RES) | DS-30A Interface pack DS-30A Interface pack running the resident version of firmware | (IMED DNLD) | or DS-30A Interface pack running the download version of firmware | | | | | | | | | | | | | | | | | | |
| CNF CE <i>b s p</i> | Conference pack | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CNFP CE <i>b s p t</i> | Conference pack network port | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D3A CE <i>b s p</i> (IMED RES) | DS-30A Interface pack DS-30A Interface pack running the resident version of firmware | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (IMED DNLD) | or DS-30A Interface pack running the download version of firmware | | | | | | | | | | | | | | | | | | | | | | | | | | |

NED commands (Continued)

| Input Command | Description |
|---|--|
| D3AP CE <i>b s p t</i> | DS-30A Interface pack network port (Classic Network only) |
| GTSB CE <i>b s p n</i> | GlobalTone Services Bank |
| IFPK CE <i>b s p</i> | Network Interface pack |
| IFPP CE <i>b s p t</i> | Network Interface pack port (Expanded Network only) |
| MLI (<i>site</i>) CE <i>b s p</i> (IMED RES) | Multiplex Loop Interface pack Multiplex Loop Interface pack (BX or later version of the |
| (IMED DNLD) | or NT4T05 pack) running the resident version of firmware Multiplex Loop Interface pack (BX or later version of the NT4T05 pack) running the download version of firmware |
| MLIP CE <i>b s p t</i> | MLI pack network port |
| NWPK CE <i>b s p</i> | Network pack (see Note 3) |
| NWPP CE <i>b s p n</i> | Network pack port |
| PELP CE <i>b s p l</i> | Peripheral loop (see Note 4) |
| TDS CE <i>b s p</i> | Tone and Digit Sender pack |
| TDSP CE <i>b s p t</i> | TDS pack network port |
| STAT <i>device location</i> or STAT <i>device condition</i> or STAT <i>device ALL</i> | <p>Note 1: After RTS of a network pack (NWPK), it is necessary to test all conference packs (TEST CNF <i>all</i>) and all Tone and Digit Sender (TDS) packs (TEST TDS <i>all</i>) to verify that they are in a working condition.</p> <p>Note 2: Because the SRI links are extensions of PELPs, whenever a PELP is returned to service, the associated SRLK is returned to service.</p> <p>Returns the status of a particular device by location, a particular device by condition, or all devices of a particular type. For STAT commands that involve OPM or OPAC bay numbering, see the note in the "Input Commands" section.</p> <p>Note: <i>Not every combination of device and option (condition, ALL) is valid; some commands will be rejected. Descriptions of these and other options (for example, FULL) are included with the device/location only when special clarification concerning the effect of the option on a status request is required.</i></p> |
| device and location can be one of: | BCU <i>site</i> LCE <i>b</i> Battery Control Unit in the OPM/OPAC |
| For a description of the BCU status display, see the STAT BCU command in Overlay RBCD. | CNF CE <i>b s p</i> Conference pack |

NED commands (Continued)

| Input Command | Description |
|--|---|
| CNFP CE <i>b s p t</i> | Conference pack port to Network pack |
| D1LK SCE <i>b s p u</i> | DS-1 link |
| D1PK SCE <i>b s p</i> | DS-1 Interface pack |
| D3A CE <i>b s p</i> | DS-30A Interface pack |
| D3AP CE <i>b s p t</i> | DS-30A Interface pack port to Network pack (Classic Network only) |
| D30L <i>site</i> RSC <i>b s p u</i> | RSC-S P-side DS-30A link |
| DCM PE <i>b s p</i> | Digital Carrier Module |
| DS1L <i>site</i> RSC/HUBE <i>b s p u</i> | RSC-S or Star Hub P-side DS-1 link |
| DSI CE <i>b s p</i> | Digital Signal Interface |
| DSLK CE <i>b s p lk</i> | Digital Signal Interface link |
| ESAC <i>site</i> RSE <i>b s p</i> | Emergency Stand-alone pack |
| ESMA MVIE <i>b s (unit)</i> | Enhanced Subscriber Carrier Module Access |
| ESMC MVIE <i>b s p</i> | Enhanced Subscriber Carrier Module Access Controller |
| GTS CE <i>b s p</i> | Global Tone Services Bank |
| GTSB CE <i>b s p n</i> | Global Tone Services Bank |
| HUB <i>site</i> HUBE <i>b s</i> | Star Hub Remote Controllers |
| HUBC <i>site</i> HUBE <i>b s p</i> | Star Hub Remote Controller |
| IDC <i>site</i> LCE/RCE <i>b s lsg</i> | ISDN Drawer Controller |
| IFPK CE <i>b s p</i> (ALL) (FULL) | Network Interface pack. The ALL option provides the status of all NT8T04 packs. The FULL option reports the status of the specified NT8T04, its two on-board GTSBs, its four DS256 ports and its 32 (or 28) peripheral loops (PELP). When preceded by the ALL option, the FULL option reports the FULL status for all NT8T04 packs. |
| IFPP CE <i>b s p t</i> (ALL) | Network Interface pack port (Expanded Network only). The ALL option provides the status of all NT8T04 packs ports. The status report includes the associated NT8T06 pack and the network plane (PLN) on which the associated NT8T06 pack resides. |

NED commands (Continued)

| Input Command | Description |
|--|---|
| ISHF CE <i>b s</i> (ALL) (FULL) | All network interface packs on a shelf. The ALL option reports the status of all NT8T04 packs. The FULL option reports the status of all NT8T04 packs on a given CNI shelf. When preceded by the ALL option, the FULL option provides the status of all NT8T04 packs, in the same form as the report for the STAT IFPK command. |
| LCM (<i>site</i>) LCE/RSC <i>b s</i> | Line Concentrating Module |
| LCMC <i>site</i> LCE/RSC <i>b s</i> | LCM control unit ("s" may be either shelf of the LCM) - packs NT6X51 and NT6X52 |
| LPK <i>site</i> LCE/RSC /RSE <i>b s lsg l</i> | Line card |
| LRNG <i>site</i> LCE/RSE <i>b u</i> | Ringling Generator pack (see Note) |
| LSG <i>site</i> LCE/RSC /RSE <i>b s lsg</i> | LCM subgroup |
| LSGD <i>site</i> LCE/RSC /RSE <i>b s lsg</i> | Line drawer ("lsg" may be either subgroup of the drawer) |
| LSHF (<i>site</i>) LCE/RSC /RSE <i>b s</i> | LCM shelf (p may be 5 or 7 for an RSLM and 5 or 8 for an RSLE) |
| MLI CE <i>b s p</i> | Multiplex Loop Interface pack |
| MLIP CE <i>b s p t</i> | MLI pack port to Network pack |
| NTWK CE <i>b s</i> (FULL) | Network pack shelf pair; the FULL option reports the status of both NT8T06 packs on the CNI shelf, in the same as that for the STAT NWPk command. |
| NWPk CE <i>b s p</i> (ALL) (FULL) | Network pack. The ALL option reports the status of all NT8T06 packs. The FULL option reports the status of an NT8T06, its receive side interlink and its 20 DS256 network pack ports. When preceded by ALL, the FULL option provides the FULL status for all NT8T06 packs. |
| NWPP CE <i>b s p n</i> | Network pack port to interface pack |
| PELP CE <i>b s p l</i> | Peripheral loop |

NED commands (Continued)

| Input Command | Description |
|------------------------------------|---|
| PEPK <i>(site) PE b s p</i> | PE pack |
| PSHF <i>(site) PE b s</i> | All peripheral packs on a peripheral shelf |
| RCU <i>site UCE b s</i> | Remote Carrier Urban |
| RCUC <i>site UCE b s</i> | All CE cards in a Remote Carrier Urban |
| REM <i>site PE b s p</i> | Remote Equipment Module |
| RLD | Not operational. |
| RMM <i>site LCE/RSC b s</i> | Remote Maintenance Module |
| RMPK <i>site LCE/RSC b s p</i> | Remote Maintenance Module pack |
| RSCC <i>site b s p</i> | Remote Switching Center |
| RSCS <i>site RSC b s CSID/PSID</i> | Remote Switching Center |
| RSCS <i>site RSC b s NODE</i> | Remote Switching Center nodes |
| RSLC <i>site RSE b s p</i> | RSLE/RSLM shelf control unit (p may be 5 or 7 for an RSLM shelf and 5 or 8 for an RSLE Control shelf) |
| RSLE <i>site RSE b (s)</i> | RSLE shelf or shelves |
| RSLM <i>site RSE b s</i> | RSLM shelf |
| SCM <i>PE b s p</i> | Subscriber Carrier Module |
| SCS <i>SCE b s</i> | SCM-10S module |
| SCSC <i>SCE b s</i> | SCS control complex |
| SCU <i>(site) SCE b s</i> | SCM-10U |
| SCUC <i>(site) SCE b s</i> | SCM-10U control complex |
| SLC <i>site SLE b cb</i> | SLC-96 |
| SLIN <i>site SLE b cb cu</i> | SLC-96 subscriber line |
| SLPK <i>site SLE b cb cu</i> | SLC-96 Channel Unit pack (<i>cu</i> is either channel unit on the pack) |
| SLSH <i>site SLE b cb sh</i> | SLC-96 shelf |
| SRI <i>PE b s p</i> | SRI pack |
| SRLK <i>PE b s p u</i> | SRI link |
| TDS <i>CE b s p</i> | Tone and Digit Sender pack |
| TDSP <i>CE b s p t</i> | TDS pack port to Network pack |
| ULIN <i>site UCE b lsg l</i> | Remote Carrier Urban subscriber line |
| ULPK <i>site UCE b lsg l</i> | Remote Carrier Urban line pack |
| ULSG <i>site UCE b lsg</i> | Remote Carrier Urban line subgroup |
| USHF <i>site UCE b s</i> | All CE cards on a specified RCU shelf |

NED commands (Continued)**Input Command****Description**

device ALL All devices of a particular type

Note 1: (The STAT *device* ALL command may not be appropriate for all of the devices listed above. In that event, the system response REJECTED INAPT is displayed.)

Note 2: The STAT LRNG command is not applicable for a Virtual Remote Line Concentrating Module (VLCM).

condition can be one of:

| | |
|------|--|
| INS | in service |
| MMB | man-made-busy |
| MMOF | man-made-offline (applies to SRI, SRLK, or devices on a Network shelf only) |
| OOS | out-of-service |
| SMB | system-made-busy |
| SMOF | system-made-offline (applies to SRI, SRLK, or devices on a Network shelf only) |

Examples: STAT IFPK CE 1 4 12
STAT IFPK ALL
STAT IFPK INS

The system response to the STAT command is different for each device. The output message includes some or all of the following information:

*device mnemonic pack code location direct state indirect state
hardware state activity state protocol (BLCK) (FELP) disposition
interface pack mnemonic call processing state
peripheral pack mnemonic
card type (NT pack code) site UCE b s p status*

Note: *This line of output applies only to the STAT RCUC and STAT USHF commands.*

FLTS = *fault*

BPVO = XXX (NO) TCM

Note: *This line of output applies only to the NT6X71AB/BA Data Line Card.*

device mnemonic is the device type entered in the command

pack code is the Nortel code of the pack

location is the physical address of the device

direct state can be one of:

| | |
|-----|---------------|
| INS | in service |
| MMB | man-made-busy |

NED commands (Continued)

| Input Command | Description |
|---------------|---|
| MMOF | man-made-offline (does not apply to BCU, RMM, or RMPK) |
| SMB | system-made-busy |
| SMOF | system-made-offline (does not apply to BCU, RMM, or RMPK) |
| | <i>indirect state</i> is INDR if a higher-order device is out of service (that is, the higher-order device is MMB, MMOF, SMB, or SMOF). |
| | <i>hardware state</i> can be one of: |
| ENBL | enabled |
| DSBL | disabled |
| | <i>link type</i> can be one of: |
| SIG | signaling link |
| SPCH | speech link |
| | <i>activity state</i> can be one of: |
| ACTV | active |
| DXFR | data transfer |
| INAC | inactive |
| NORM | normal |
| SPRD | spared |
| SPNG | sparing |
| STBY | standby |
| | <i>protocol</i> can be TLNK if T-link protocol is used in a DU to DU connection (see the Datapath Line Card feature description in NTP 297-3601-105, <i>Features and Services Description</i>) |
| | BLCK is output if the primary link (D1LK) cannot be spared by a protection link. |
| | FELP is output if the far-end loop condition is set on the link (D1LK). |
| | <i>disposition</i> can be one of: |
| | SHARED specified port is shared with another device |
| | NOT CONNECTED specified port is not connected to any other device |
| | <i>interface pack mnemonic</i> can be one of: |
| D3A | DS-30A Interface pack (DMS-10 Classic network) |
| MLI | Multiplex Loop Interface pack (DMS-10 Classic network) |
| TDS | Tone and Digit Sender pack (DMS-10 Classic network) |
| CNF | Conference pack (DMS-10 Classic network) |
| IFPK | Network Interface pack (DMS-10EN) |
| | <i>call processing state</i> can be one of: |
| CPBY | call processing busy |
| IDLE | idle |

NED commands (Continued)

| Input Command | Description |
|----------------------|---|
| | <i>peripheral pack mnemonic</i> can be one of: |
| PEPK | PE pack |
| MFPK | Multifrequency Receiver pack |
| DTPK | Digitone Receiver pack |
| DTRK | digital trunk |
| | <i>fault</i> refers to SRLK fault and may be one of: |
| BPVO | Number of bipolar violations exceeded out-of-service threshold (set in Overlay NET or NTWK [SRI]) |
| BTST | Test fault found during background run of Overlay DED |
| FRLO | Frame losses exceeded out-of-service threshold (set in Overlay NET or NTWK [SRI]) |
| RALM | Remote alarm received |
| RBPV | Remote bipolar violations exceeded 10^{-3} violations per bit |
| RCLK | Remote clock fault |
| SLPO | Number of frame slips exceeded out-of-service threshold (set in Overlay NET or NTWK [SRI]) |
| SPWR | SRI shelf power failure. |
| SYNC | Transient synchronization fault (if the SRLK is INS, then SYNC will not be output as a fault) |
| | <i>fault</i> - an LPK fault may be one of: |
| OVLN | Overload |
| HAZD | Hazard (does not display for an NT6X71) |
| | If faults are not present, then the FLT = fault line is omitted. |
| | <i>card type</i> can be one of: |
| CEXT | Control extension |
| SPVR | Supervisory |
| SWCH | Switch |
| DGRP | Digroup |
| RPTR | Office repeater |
| CNTL | Control processor |
| MSGP | Message processor |
| PWRC | Power converter |
| RGEN | Ring generator |
| FLOW | Fault-locate and order-wire |
| LTA | Line test access |
| TIME | Timing |
| MTCE | Maintenance |

NED commands (Continued)

| Input Command | Description |
|---------------|---|
| | <p><i>status</i> can be one or more of:</p> <p>INST installed</p> <p>ACT active</p> <p>FAIL failed</p> <p>TEST card being tested</p> <p>INHB inhibited</p> <p>RALM RCU alarm is set</p> <p>SALM SCU alarm is set</p> <p>NPWR no power</p> <p><i>BPVO</i> is the number of times the Bipolar Violation threshold was exceeded since the last reset; the <i>BPVO</i> condition is cleared after hardware audit or after an <i>RTS</i> command is issued. <i>NO TCM</i> indicates no Time Compression Multiplexing synchronization. This line prints only for NT6X71AB/BA Data Line Cards.</p> <p>Examples:</p> <p>(input) STAT NWPK CE <i>b s p</i></p> <p>(output) NWPK (NT4T06) CE <i>b s p direct state (indirect state) activity state</i></p> <p>NWPP CE <i>b s p n disposition</i></p> <p><i>interface pack mnemonic CE b s p t direct state (indirect state) activity state</i></p> <p>(input) STAT D3AP CE <i>b s p t (Classic Network only) or STAT IFPP CE b s p t (Expanded Network only)</i></p> <p>(output) D3AP CE <i>b s p t disposition NWPK CE b s p n direct state (indirect state) activity state - (Classic Network only) or IFPP CE b s p t disposition NWPK CE b s p n direct state (indirect state) activity state - (Expanded Network only).</i></p> <p>(input) STAT DCM PE <i>b s p</i> or STAT DCM ALL</p> <p>(response) DCM <i>pack code PE b s p direct state (indirect state)</i></p> <p>DTRK <i>pack code PE b s p u direct state (indirect state) call processing state</i></p> <p>(input) STAT SRI PE <i>b s p</i></p> <p>(response) SRI (NT4T09) PE <i>b s p direct state (indirect state) hardware state</i></p> <p>SRLK (NT4T09) PE <i>b s p u direct state (indirect state) hardware state activity state</i></p> <p>FLTS = <i>fault</i></p> <p>PELP (NT4T04) <i>site CE b s p l direct state (indirect state) hardware state activity state</i></p> |

NED commands (Continued)

| Input Command | Description | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---------------------|-----------------|------------------------|--------------------------------------|---------------------|-----------------------|------------------------|--|------------------------|---------------------------|----------------------|--------------------------------|------------------------|--|--------------------|--------------------------------|---------------------|-------------------------------|------------------------|-------------------------------|--------------------|----------------------------------|----------------------|--------------|------------------------|-------------------------------------|------------------------|-----------------|----------------------|---|------------------------|-------------------------------|-------------------|----------------------------------|
| | SRLK (NT4T09) PE <i>b s p u</i> <i>direct state</i> <i>(indirect state) hardware state activity state</i> FLTS = <i>fault</i> PELP (NT4T04) <i>site CE b s p l</i> <i>direct state</i> <i>(indirect state) hardware state activity state</i> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TEST ALL | Tests all network equipment. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TEST <i>device location</i> (REP <i>n</i>) or | Tests the indicated device. Packs must be either INS or MMB before they are tested. Before testing a port, the parent pack and the connecting pack both must be INS. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TEST <i>device</i> ALL | <i>device and location</i> can be one of: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="0"> <tr> <td>CNF CE <i>b s p</i></td> <td>Conference pack</td> </tr> <tr> <td>CNFP CE <i>b s p t</i></td> <td>Conference pack port to Network pack</td> </tr> <tr> <td>D3A CE <i>b s p</i></td> <td>DS-30A Interface pack</td> </tr> <tr> <td>D3AP CE <i>b s p t</i></td> <td>DS-30A Interface pack port to Network pack (Classic Network only).</td> </tr> <tr> <td>GTSB CE <i>b s p n</i></td> <td>Global Tone Services Bank</td> </tr> <tr> <td>IFPK CE <i>b s p</i></td> <td>All interface packs on a shelf</td> </tr> <tr> <td>IFPP CE <i>b s p t</i></td> <td>Network Interface pack port (Expanded Network only).</td> </tr> <tr> <td>ISHF CE <i>b s</i></td> <td>All interface packs on a shelf</td> </tr> <tr> <td>MLI CE <i>b s p</i></td> <td>Multiplex Loop Interface pack</td> </tr> <tr> <td>MLIP CE <i>b s p t</i></td> <td>MLI pack port to Network pack</td> </tr> <tr> <td>NTWK CE <i>b s</i></td> <td>Pair of Network packs on a shelf</td> </tr> <tr> <td>NWPK CE <i>b s p</i></td> <td>Network pack</td> </tr> <tr> <td>NWPP CE <i>b s p n</i></td> <td>Network pack port to interface pack</td> </tr> <tr> <td>PELP CE <i>b s p l</i></td> <td>Peripheral loop</td> </tr> <tr> <td>TDSN CE <i>b s p</i></td> <td>Network portion of Tone and Digit Sender pack</td> </tr> <tr> <td>TDSP CE <i>b s p t</i></td> <td>TDS pack port to Network pack</td> </tr> <tr> <td><i>device</i> ALL</td> <td>All devices of a particular type</td> </tr> </table> | CNF CE <i>b s p</i> | Conference pack | CNFP CE <i>b s p t</i> | Conference pack port to Network pack | D3A CE <i>b s p</i> | DS-30A Interface pack | D3AP CE <i>b s p t</i> | DS-30A Interface pack port to Network pack (Classic Network only). | GTSB CE <i>b s p n</i> | Global Tone Services Bank | IFPK CE <i>b s p</i> | All interface packs on a shelf | IFPP CE <i>b s p t</i> | Network Interface pack port (Expanded Network only). | ISHF CE <i>b s</i> | All interface packs on a shelf | MLI CE <i>b s p</i> | Multiplex Loop Interface pack | MLIP CE <i>b s p t</i> | MLI pack port to Network pack | NTWK CE <i>b s</i> | Pair of Network packs on a shelf | NWPK CE <i>b s p</i> | Network pack | NWPP CE <i>b s p n</i> | Network pack port to interface pack | PELP CE <i>b s p l</i> | Peripheral loop | TDSN CE <i>b s p</i> | Network portion of Tone and Digit Sender pack | TDSP CE <i>b s p t</i> | TDS pack port to Network pack | <i>device</i> ALL | All devices of a particular type |
| CNF CE <i>b s p</i> | Conference pack | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CNFP CE <i>b s p t</i> | Conference pack port to Network pack | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D3A CE <i>b s p</i> | DS-30A Interface pack | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D3AP CE <i>b s p t</i> | DS-30A Interface pack port to Network pack (Classic Network only). | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GTSB CE <i>b s p n</i> | Global Tone Services Bank | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IFPK CE <i>b s p</i> | All interface packs on a shelf | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IFPP CE <i>b s p t</i> | Network Interface pack port (Expanded Network only). | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ISHF CE <i>b s</i> | All interface packs on a shelf | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MLI CE <i>b s p</i> | Multiplex Loop Interface pack | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MLIP CE <i>b s p t</i> | MLI pack port to Network pack | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NTWK CE <i>b s</i> | Pair of Network packs on a shelf | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NWPK CE <i>b s p</i> | Network pack | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NWPP CE <i>b s p n</i> | Network pack port to interface pack | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PELP CE <i>b s p l</i> | Peripheral loop | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TDSN CE <i>b s p</i> | Network portion of Tone and Digit Sender pack | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TDSP CE <i>b s p t</i> | TDS pack port to Network pack | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>device</i> ALL | All devices of a particular type | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Note: *Port tests are not performed with the TEST device ALL command.*

The DET option is applicable to the TEST PELP for CNI only. When used in conjunction with the CNI Loop Detector box, this command causes an LED to flash for 10 seconds for the specified loop. The REP option can be used for DET. If the REP option is used, the REPeated test can be stopped with #####, but the test that is currently running will not be interrupted. For this reason, it may require up to 10 seconds to stop the test.

Example: TEST CE 1 4 12 17 DET REP

NED commands (Continued)

| Input Command | Description |
|--|---|
| | <p>The REP <i>n</i> option specifies the number of times a test is repeated; <i>n</i> may be 1 to 32,767. If <i>n</i> is not specified, the default value is 32,767. Operating company personnel may abort the repeating test by entering #####.</p> <p>Examples: TEST CNF CE 1 2 12 TEST CNF ALL TEST CNF ALL REP TEST NWPK CE 1 4 18 REP 3</p> |
| VERS D3A CE <i>b s p</i> or VERS D3A ALL | Requests the version numbers of the firmware on the specified DS-30A pack or on all DS-30A packs. Example: VERS D3A CE 1 2 15 The system response is in the following format: D3A CE <i>b s p</i> <i>version</i> RES SAE <i>version</i> RES APPL <i>version</i> DNLD SAE <i>version</i> DNLD APPL <i>version</i> GEN SAE <i>version</i> GEN APPL |
| VERS IFPK CE <i>b s p</i> or VERS IFPK ALL | Requests the version numbers of the firmware on the specified Network Interface (NT8T04) pack or on all Network Interface packs. The status report shows the location of the pack, the version of firmware resident in the pack, and the version of firmware required in the current DMS-10 software generic load. The NT8T04 pack must have a direct status of INS or MMB; the pack cannot be indirectly disabled in order to perform this command. Example: VERS IFPK CE 1 2 15 The system response is in the following format for D3A interface: IFPK (NT8T04) D3A CE <i>b s p</i> PACK VERSION: <i>x.yy</i> GENERIC VERSION: <i>x.yy</i> The system response is in the following format for MLI interface: IFPK (NT8T04) MLI CE <i>b s p</i> PACK VERSION: <i>x.yy</i> GENERIC VERSION: <i>x.yy</i> |

NED commands (Continued)

| Input Command | Description |
|--|---|
| VERS MLI CE <i>b s p</i> or VERS MLI ALL | <p>Applicable only to AE or later versions of the NT4T05 (MLI) pack. Requests the version numbers of the firmware on the specified MLI pack or on all MLI packs.</p> <p>Example: VERS MLI CE 1 2 14</p> <p>The system response is in the following format:</p> <pre>MLI CE <i>b s p</i> <i>version</i> RES SAE <i>version</i> RES APPL <i>version</i> DNLD SAE <i>version</i> DNLD APPL <i>version</i> GEN SAE <i>version</i> GEN APPL RESIDENT FIRMWARE EXECUTING VERSION OVERRIDE ACTIVE</pre> |
| VERS TDS (<i>site</i>) CE <i>b s p</i> or VERS TDS ALL | <p>Requests the version numbers of the firmware on the specified TDS pack or on all TDS packs.</p> <p>Example: VERS TDS CE 1 2 11</p> <p>The system response is in the following format:</p> <pre>TDS (NT4T01) CE <i>b s p</i> VERSION = <i>version</i></pre> <p><i>Note:</i> An NED016 message displays for each NT4T01 that is not in service when the VERS TDS command is entered.</p> |
| VERS TDS (<i>site</i>) CE <i>b s p</i> or VERS TDS ALL | <p>Requests the version numbers of the firmware on the specified TDS pack or on all TDS packs.</p> <p>Example: VERS TDS CE 1 2 11</p> <p>The system response is in the following format:</p> <pre>TDS (NT4T01) CE <i>b s p</i> VERSION = <i>version</i></pre> <p><i>Note:</i> An NED016 message displays for each NT4T01 that is not in service when the VERS TDS command is entered.</p> |

Section 18: PED (Peripheral equipment diagnostic)

Description

Overlay PED is free-running when automatically loaded (once every 24 hr, if so scheduled) and interactive when requested by maintenance personnel. The overlay controls the operation of the Line and Trunk Tester (LTT) pack (NT2T19) at the DMS-10 switch or REM site and the Line Test Unit (LTU), which consists of packs NT2X10 and NT2X11, at the RLCM, OPAC, OPM, or RSC-S site. Overlay PED also controls the Peripheral Processor (PEPK) pack (NT2T46) at the DMS-10 switch site when Remote Concentrator Terminal peripheral equipment, such as line packs, is tested. Together, the overlay and the packs test most equipped line and trunk circuit packs. For information on the specific tests performed by the LTT, LTU, or PEPK, refer to the pack descriptions in the NTP entitled *Equipment Identification* (297-3601-150).

Note: Trunks are only partially tested in the free-running mode. For a complete test, use the commands TEST PEPK or TEST UNIT.

Overlay PED interfaces with Outside Plant Modules (OPMs), Outside Plant Access Cabinets (OPACs), Outside Plant Subscriber Modules (OPSMs, through their RSLM shelf), Remote Line Concentrating Modules (RLCMs), Remote Maintenance Modules (RMMs), Remote Subscriber Line Equipment (RSLE), Remote Subscriber Line Modules (RSLM), Remote Carrier Urban (RCU), Remote Switching Center (RSC-S), and SCM-10S and SLC-96 devices.

RLCM, OPAC, OPM, or RSC-S testing is shared by the LTT and the LTU. The LTT performs transmission (gain/loss) and ringing tests, and the LTU performs battery, loop-start, and ground-start tests. If the LTT is out of service (OOS), no tests will be performed. If the LTU is OOS, a subset of the tests will be performed using the LTT. The Metallic Test Access pack (NT3X09) provides a metallic connection between the LTU and LCM lines.

In the free-running mode, this overlay prints out a PED004 maintenance-terminal message, after testing each complete shelf, to indicate the progress of testing. The message includes the shelf's location: *(site) PE b s* or *(site) LCE/RSE/RSC b s*. When a response test failure is detected in the free-running mode, maintenance-terminal output codes are generated, and the faulty line or trunk circuit pack is placed in the system-made-busy state. The line or trunk circuit must be returned to service by operating company personnel. A faulty line circuit is not automatically replaced with a standby line circuit. Line circuit or pack manipulation must be performed in the interactive mode of the overlay.

Input commands

This section lists and describes the commands that can be entered after the PED overlay is successfully loaded for the interactive mode. Because of different hardware configurations, not all commands are valid for all sites or for all generics. The system provides error messages when incorrect commands are input.

Note: The OPM or OPAC bay numbers may be any number from 1 through 32; however, only two bays may be assigned per site identification mnemonic and the numbers must be in consecutive order. For example, 3 and 4 are valid bay numbers, but 3 and 5 are not valid. The left bay contains LCA 1, LCA 0, Host Interface Equipment, and an Environmental Control Unit. The right bay contains the Battery Control Unit, Rectifiers 1 and 0, Frame Supervisory Panel, Remote Maintenance Module, and an Environmental Control Unit.

PED commands

| Input Command | Description |
|---------------|---|
| #### | Interrupts any maintenance-terminal output, stops execution of the current command, and places the maintenance terminal in input mode. Response is the prompt character >. |
| **** | Interrupts any maintenance-terminal output and aborts the overlay program. The maintenance terminal response is PED005 <i>(site) PE b s p u</i> or PED005 <i>(site) LCE/RSE/RSC/LCE b s lsg l</i> , then the prompt character #. |
| ? | Lists all possible inputs for a command or for a command parameter. For example, ? <CR> reports all possible commands in the overlay, <command> ? reports all possible first level parameters for the given command in the overlay, and <command> <parameter1> ?, reports all possible second-level parameters for the given command. |

Note: All possible inputs for a given command or for a command parameter are listed even though all of the inputs displayed may not be valid for the given command/parameter combination. Valid command/parameter combinations can be determined by referring to the input command formats and descriptions in this section.

PED commands (Continued)

| Input Command | Description |
|--|--|
| BUSY <i>device (site) location</i> (IMED) | Places the specified device in the man-made-busy state. The site must be specified for devices at a remote site. The IMED option is used when a pack is call-processing busy. For BUSY commands that involve the OPM or OPAC, see the note in the "Input Commands" section. <i>device and location</i> , and the acceptable options, can be one of: GWL GWE <i>gw# In# Gateway line (GWL)</i> (IMED) |
| IDTL (<i>site</i>) IDE <i>b n</i> (IMED) | Integrated Digital Terminal line |
| LPK (<i>site</i>) LCE/RSC /RSE <i>b s lsg l l</i> (IMED) | Line pack, ISDN NTB27 or, BERT pack |
| <i>Note: Use IMED for ISDN lines configured for Packet Services.</i> | |
| LPK (<i>site</i>) RLDE | Not operational. |
| LTT (<i>site</i>) PE <i>b s p</i> | Line and Trunk Tester pack |
| LTU <i>site</i> LCE/RSC <i>b s p</i> (IMED) | Line Test Unit (<i>p</i> must be the position of the NT2X10 or NT2X11 pack) |
| PEPK (<i>site</i>) PE <i>b s p</i> (IMED) | PE pack in position 1 through 14 on a PE shelf |
| PSHF (<i>site</i>) PE <i>b s</i> | PE shelf |
| RMP <i>site</i> RSE <i>b s p</i> (IMED) | RSLE or RSLM shelf Remote Maintenance pack (<i>p</i> may be 6 for RSLM shelves and 6 or 9 for RSLE Control shelves; the IMED option must be used with RSLM shelves) |
| RMPK <i>site</i> LCE/RSC <i>b s p</i> (IMED) | Any RMM pack, except NT2X10 or NT2X11 |
| SLIN <i>site</i> SLE <i>b cb cu</i> | SLC-96 subscriber line |
| SLPK <i>site</i> SLE <i>b cb cu</i> (IMED) | SLC-96 Channel Unit pack (" <i>cu</i> " may be either channel unit on the pack; all lines on the pack will be busied) |
| SLSH <i>site</i> SLE <i>b cb sh</i> | SLC-96 shelf |
| ULIN <i>site</i> UCE <i>b lsg l</i> (IMED) | a specific RCU line |
| ULPK <i>site</i> UCE <i>b lsg l</i> (IMED) | an RCU line pack (<i>l</i> may be any line on the pack; all lines on the pack will be busied) |
| UMP <i>site</i> HUBE <i>b s p</i> (IMED) | Universal Maintenance Pack |

PED commands (Continued)

| Input Command | Description |
|----------------|---|
| | <p>UNIT (<i>site</i>) PE unit on a PE pack in position 1 <i>b s p u</i> through 14 on a PE shelf (pack must be enabled)</p> |
| | <p>Examples: BUSY LPK LCE 2 2 10 5 BUSY UNIT CAPK PE 1 2 14 3</p> |
| | <p>The system response to the BUSY command can be one of:</p> |
| | <p>REJECTED: <i>reason</i></p> |
| | <p>or</p> |
| | <p>REJECTED: <i>device mnemonic pack code site location status</i></p> |
| | <p>or</p> |
| | <p><i>device mnemonic pack code site location condition</i> (if the execution is successful)</p> |
| | <p><i>reason</i> can be one of:</p> |
| | <p>PARAM wrong parameter</p> |
| | <p>RANGE parameter out of range</p> |
| | <p>SYNTAX faulty command syntax</p> |
| | <p>UNEQUP apparatus not defined in data</p> |
| | <p>NORESP response time-out</p> |
| | <p>INAPT inappropriate command (parameters do not go together)</p> |
| | <p><i>device mnemonic</i> is the device type entered in the command</p> |
| | <p><i>pack code</i> is the NT code of the pack</p> |
| | <p><i>site</i> is the unique office identifier</p> |
| | <p><i>location</i> is the physical address of the device, including the bay mnemonic (for example, IE, LCE, PE, RSE, and SLE)</p> |
| | <p><i>status</i> can be one of:</p> |
| | <p>ENBL enabled</p> |
| | <p>DSBL disabled</p> |
| | <p>CPBY call-processing busy</p> |
| | <p><i>condition</i> can be one of:</p> |
| | <p>INS in service</p> |
| | <p>MMB man-made-busy</p> |
| | <p>SMB system-made-busy</p> |
| <p>CLR MAJ</p> | <p>Clears major system-detected alarms.</p> |
| <p>CLR MIN</p> | <p>Clears minor system-detected alarms.</p> |

PED commands (Continued)

| Input Command | Description |
|--|--|
| CUT OVER LCEB (site) b or CUT OVER LCEB ALL | <p>This command is used only during initial installation. The command activates the cutoff relay on LCE line cards (that is, the command separates the tip and ring terminals of the line circuit from the subscriber loop). After a 128-ms period, a message is sent to the E99 CODEC to deactivate the relay, and the cutoff strap on the back of the shelf supplies current to keep the relay activated. While the cutoff strap supplies current to keep the relay activated, the installer completes the wiring and prepares to bring the LCE into service. When the shelf is ready for cutover, the installer removes the cutoff strap from the back of the shelf.</p> <p>Note 1: Before entering the CUT OVER command, enter the command STAT LPK OOS and ensure that all line cards are in service (INS).</p> <p>Note 2: After the cutoff strap is installed, PED line testing cannot be performed; PED line testing can be resumed when the strap is removed.</p> <p>Note 3: The CUT OVER command is not applicable for Virtual Remote Line Concentrating Modules (VLCM).</p> <p>Example: CUT OVER LCEB 1</p> |
| CUT OVER RSEB site b or CUT OVER RSEB site ALL | <p>This command is used only when cutting the RSLE or RSLM shelf into service. The command activates the cutoff relay on the RSLE or RSLM line cards (that is, the command separates the tip and ring terminals of the line circuit from the subscriber loop). After a 128-ms period, a message is sent to the E99 CODEC to deactivate the relay, and the cutoff strap on the back of the shelf supplies current to keep the relay activated. While the cutoff strap supplies current to keep the relay activated, the installer completes the wiring and prepares to bring the RSLE or RSLM shelf into service. When the shelf is ready for cutover, the installer removes the cutoff strap from the back of the shelf.</p> <p>Note 1: Before entering the CUT OVER command, enter the command STAT LPK OOS and ensure that all line cards are in service (INS).</p> <p>Note 2: World Line cards (NT6X17BA and NT6X18BA) go into the system-made-busy (SMB) state when a cutoff strap is installed. To allow test trunk access, and to prevent the World Line cards from going into SMB state, disable over-voltage reporting for the site before entering the CUT OVER command by using overlay CNFG (SITE), prompt OVDI. After the cutoff strap is removed, re-enable over-voltage reporting.</p> <p>Note 3: After the cutoff strap is installed, PED line testing cannot be performed; PED line testing can be resumed when the strap is removed.</p> <p>Example: CUT OVER RSEB SITE 1</p> |
| DNLD UMP site HUBE b s p (NEW/OLD) | <p>Updates the loadfile in the specified Universal Maintenance Pack (NTMY73).</p> <p>Note: The NTMY73 must be in man-made busy state to be downloaded.</p> |

PED commands (Continued)

| Input Command | Description |
|---|---|
| LIST GWLG (xxxx/ALL/CLR) | <p>The software package downloads may be optionally specified as NEW or OLD. Specifying NEW downloads the most recently dated software package. OLD downloads the oldest dated software package. If no option is entered, the currently activated software package is downloaded, without distinguishing by date.</p> <p>Example: DNL D UMP SHUB HUBE 1 3 11</p> <p>Outputs the Gateway (GW) line registration failure log (LG) for a carriage return, an xxxx option, or the ALL option. For a CLR option, the command clears the GWL registration failure log.</p> <p>Example: LIST GWLG</p> |
| RTS <i>device (site)</i> <i>location</i> | <p>Returns to service the specified <i>device</i>. The device must be man-made-busy before the RTS command is executed. The site must be specified for devices at a remote site. For RTS commands that involve the OPM or OPAC, see the note in the "Input Commands" section. Additional tasks performed during RTS for the Data Line Card (NT6X71AB/BA) include: data unit message loop around testing; enabling TCM sync reporting; setting up BPVO reporting; releasing TA and CO relays; sending soft reset to the Data Unit.</p> <p><i>device</i> and <i>location</i> can be one of:</p> <p>GWL GWE <i>gw# In# Gateway line (GWL)</i></p> <p>IDTL (<i>site</i>) IDE <i>b n</i> Integrated Digital Terminal line</p> <p>LPK (<i>site</i>) LCE/RSC/ RSE <i>b s lsg l</i> Line pack or, ISDN NTB27, or IBERT</p> <p>LPK (<i>site</i>) RLDE Not operational.</p> <p>LTT (<i>site</i>) PE <i>b s p</i> Line and Trunk Tester pack</p> <p>LTU <i>site</i> LCE/RSC <i>b s p</i> Line Test Unit (<i>p</i> must be the position of the NT2X10 or NT2X11 pack) (see Note)</p> <p>PEPK (<i>site</i>) PE <i>b s p</i> PE pack in position 1 through 14 on a PE shelf</p> <p>PSHF (<i>site</i>) PE <i>b s p</i> PE shelf</p> <p>RMP <i>site</i> RSE <i>b s p</i> RSLE or RSLM shelf Remote Maintenance pack (<i>p</i> may be 6 for RSLM shelves and 6 or 9 for RSLE shelves)</p> <p>RMPK <i>site</i> LCE/RSC/ LCE <i>b s p</i> Any RMM pack, except NT2X10 or NT2X11</p> <p>SLIN <i>site</i> SLE <i>b cb cu</i> SLC-96 subscriber line</p> <p>SLPK <i>site</i> SLE <i>b cb cu</i> SLC-96 Channel Unit pack ("<i>cu</i>" may be either channel unit on the pack)</p> <p>SLSH <i>site</i> SLE <i>b cb sh</i> SLC-96 shelf</p> <p>ULIN <i>site</i> UCE <i>b lsg l</i> a specific RCU line</p> |

PED commands (Continued)

| Input Command | Description |
|-------------------------------------|--|
| | <p>ULPK <i>site</i> UCE <i>b lsg l</i> an RCU line pack (<i>l</i> may be any line on the pack; all lines on the pack will be returned to service)</p> |
| | <p>UMP <i>site</i> HUBE <i>b s p</i> Universal Maintenance Pack (IMED)</p> |
| | <p>UNIT (<i>site</i>) PE <i>b s p u</i> unit on a PE pack in position 1 through 14 on a PE shelf</p> |
| | <p><i>Note:</i> After the LTU has been returned to service, the LTU must be tested before it can be used to test RLCM, OPM, OPAC, or RSC-S lines.</p> |
| | <p>Example: RTS PEPK CAPL PE 1 2 4</p> |
| | <p>The system response to the RTS command can be one of:</p> |
| | <p>REJECTED: reason</p> |
| | <p>or</p> |
| | <p>REJECTED: <i>device mnemonic pack code site location status</i></p> |
| | <p>or</p> |
| | <p><i>device mnemonic pack code site location condition</i> (if the execution is successful)</p> |
| | <p>See the BUSY command for an explanation of the following responses:</p> |
| | <p>reason</p> |
| | <p>device mnemonic</p> |
| | <p>pack code</p> |
| | <p>site</p> |
| | <p>location</p> |
| | <p>status</p> |
| | <p><i>condition</i></p> |
| | <p>LSG <i>site</i> RSE <i>b s lsg</i> RSLE or RSLM subgroup</p> |
| <p>STAT <i>device (site)</i></p> | <p>Gives the current status of the specified device. The site must be specified for devices at a remote site. When condition is specified, location is not specified, and vice versa. Not every condition is valid for every device. For STAT commands that involve the OPM or OPAC, see the note in the "Input Commands" section.</p> |
| <p><i>location</i></p> | |
| <p>or</p> | |
| <p>STAT <i>device condition</i></p> | |
| <p>or</p> | <p><i>device and location</i>, and the acceptable options, can be one of:</p> <p>GWDN (xxx) xxx xxxx - Gateway (GW) line directory number (DN)</p> <p>GWL GWE <i>gw# In#</i> (GWDN) - Gateway line (GWL) (The GWDN option lists the state, DN, and registration status of the GWL.)</p> <p><i>/ condition</i></p> |
| <p>STAT <i>device</i> ALL</p> | |

PED commands (Continued)

| Input Command | Description |
|---|--|
| LPK <i>(site)</i> LCE/RSC/ RSE <i>b s lsgl</i> /condition | LCE line or, ISDN NTB27, or IBERT |
| LPK <i>(site)</i> RLDE | Not operational. |
| LSG <i>(site)</i> LCE/RSC/ RSE <i>b s lsg</i> | LCM subgroup |
| LTT <i>(site)</i> PE <i>b s p</i> | Line and Trunk Test pack |
| LTU <i>site</i> LCE/RSC <i>b s p</i> /condition | Line Test Unit (<i>p</i> must be the position of the NT2X10 or NT2X11 pack) |
| PEPK <i>(site)</i> PE <i>b s p</i> | PE pack in position 1 through 14 on a PE shelf |
| PKAL <i>condition</i> | All PE units and all LCE lines at the base site only |
| PSHF <i>(site)</i> PE <i>b s</i> /condition | PE shelf |
| RMM <i>site</i> LCE/RSC <i>b s</i> /condition | Remote Maintenance Module |
| RMP <i>site</i> RSE <i>b s p</i> | RSLE or RSLM shelf Remote Maintenance pack may be 6 for RSLM shelves and 6 or 9 for RSLE Control shelves) |
| RMPK <i>site</i> LCE/RSC <i>b s p/ condition</i> | Any RMM pack (an LTU pack, NT2X10 or NT2X11, cannot be entered as an RMPK location) |
| RNGF | All LCE/RSE lines that have call-processing ringing failures |
| SLIN <i>site</i> SLE <i>b cb cu</i> /condition | SLC-96 subscriber line |
| SLPK <i>site</i> SLE <i>b cb cu</i> | SLC-96 Channel Unit pack ("cu" may be either channel unit on the pack) |
| SLSH <i>site</i> SLE <i>b cb sh</i> | SLC-96 shelf |
| ULIN <i>site</i> UCE <i>b lsg l</i> /condition | a specific RCU line |
| ULPK <i>site</i> UCE <i>b lsg l</i> | an RCU line pack (<i>l</i> may be any line on the pack; all lines on the pack will be included) |
| ULSG <i>site</i> UCE <i>b lsg l</i> | an RCU LSG and all lines in the LSG |
| UNIT <i>(site)</i> PE <i>b s p u</i> /condition | unit on a PE pack in position 1 through 14 on a PE shelf |
| UMP <i>site</i> HUBE <i>b s p</i> | Universal Maintenance Pack |

PED commands (Continued)

| Input Command | Description |
|---------------|--|
| | <i>device</i> ALL All devices of a specific type <i>Note:</i> The STAT LSG is not applicable for Virtual Remote Line Concentrating Modules (VLCM). <i>condition</i> can be one of: INS in service MMB man-made-busy OOS out of service SMB system-made-busy Examples: STAT UNIT PE 1 2 14 3 STAT PKAL MMB The system response may indicate a fault (FLTS), indicated by one or more of the following codes: BDTS NTBX27 line card test failed DATI Data input fault EOC EOC problem FDES ES/DAY FE threshold exceeded FDSS SES/DAY FE threshold exceeded FHES ES/HR FE threshold exceeded FHSS SES/HR FE threshold exceeded HPAR High protocol/TEI abnormality rate threshold exceeded LKOT Lockout line NDCH EDCH is out of service NDES ES/DAY NE threshold exceeded NDSS SES/DAY NE threshold exceeded NHES ES/HR NE threshold exceeded NHSS SES/HR NE threshold exceeded NORP No response NTM NT1 in customer initiated maintenance mode OVFL Received frames buffer overflow threshold exceeded OVLD Overload OVLT Overload voltage PS1 Problem with the primary power source PS2 Problem with the secondary power source PWR Power fault RER Frames received in error/total frames transmitted threshold exceeded REST Data link re-establishment threshold exceeded |

PED commands (Continued)

| Input Command | Description |
|---------------|--|
| RMVD | Line card removed from card slot |
| RT/T | Re-transmitted frames/total frames re-transmitted threshold exceeded |
| SGDG | U-interface signal lost - dying gasp |
| SGNL | U-interface signal lost - normal |
| SPAC | Sparing activated |
| SPNF | Sparing not functional |
| S/T | S/T-interface deactivated |
| STD0 | static data of Unit 0 are not updated |
| STD1 | static data of Unit 1 are not updated |
| SYNC | U-interface synchronization lost |

The system response to the STAT command is different for each device. The output message includes some or all of the following information:

REJECTED: *reason*

or

device mnemonic pack code location direct state hardware state activity state protocol condition indirect state call processing state (if the command is successful) *fault*

FLTS = *fault*

BPVO = *XXX (NO) TCM*

Note: This line of output applies only to the NT6X71AB/BA Data Line Card.

See the BUSY command for an explanation of the following responses:

reason

device mnemonic

pack code

location

Note: The pack code portion of the status report for Integrated Digital Terminal lines (IDTL) includes a pack type, which may be one of the following:

SPL single-party line type

MPL multiparty line type

COIN coin line type

PBX PBX line type

ISDN ISDN line type

direct state or condition can be one of:

INS in-service

MMB man-made-busy

PED commands (Continued)

| Input Command | Description |
|---------------|---|
| | SMB system-made-busy |
| | <i>hardware state</i> can be one of: |
| | DSBL disabled |
| | ENBL enabled |
| | <i>activity state</i> can be one of: |
| | ACTV active |
| | INAC inactive |
| | NORM normal |
| | SPRD spared |
| | SPNG sparing |
| | STBY standby |
| | <i>protocol</i> can be TLNK if T-link protocol is used in a DU to DU connection (see the Datapath Line Card feature description in NTP 297-3601-105, <i>Features and Services Description</i>) |
| | <i>indirect state</i> is INDR if the parent device is out of service |
| | <i>call processing state</i> can be one of: |
| | CPBY call processing busy |
| | IDLE idle |
| | <i>registration state</i> for GWL may be one of: |
| | REG=NO GWL DN not registered |
| | REG=YES GWL DN registered |
| | DN UNAS DN not assigned to GWL |
| | A fault (FLTS) condition will cause one or more of the following codes to be displayed: |
| | OVLN Overload |
| | HAZD Hazard (does not display for the NT6X71) |
| | STDT static data not updated |
| | EOC EOC absent |
| | If faults are not present, then the FLTS = <i>fault</i> line is omitted. |
| | <i>reason</i> can be one of: |
| | PARAM wrong parameter |
| | RANGE parameter out of range |
| | SYNTAX faulty command syntax |
| | UNEQUP device not defined in data |
| | <i>BPVO</i> is the number of times the Bipolar Violation threshold was exceeded since the last reset; the <i>BPVO</i> condition is cleared after hardware audit or after an RTS command is issued. <i>NO TCM</i> indicates no Time Compression Multiplexing synchronization. This line prints only for NT6X71AB/BA Data Line Cards. |

PED commands (Continued)

| Input Command | Description |
|--|--|
| STRT | When repeaters (intermediate line units) are present on an ISDN line, the number of repeaters (between 1 and 6) on the line, the number of the individual repeater (between 1 and 6), and faults associated with each repeater display. Prints the physical address of the last equipment tested by PED in background mode. This command is valid only in the interactive mode. |
| STRT <i>(site) location</i> | Changes the location in the peripheral equipment at which PED will resume testing. This command is valid only in the interactive mode of the program. The site must be specified for devices at a remote site. The location is the physical address of the device, including the bay mnemonic (for example, IE, LCE, PE, RSE, SLE); the location must be specified to the unit or line number. Examples: STRT PE 1 2 12 2 STRT LCE 2 3 3 17 STRT CAPK SLE 1 1 15 STRT CAPL RSE 1 4 4 23 STRT <i>site</i> UCE <i>b lsg l</i> STRT <i>site</i> RSC <i>b s lsg l</i> |
| TEST ALL | Performs one complete cycle of PED Overlay. |
| TEST <i>device (site) location</i> (NORG) (REP <i>n</i>) or TEST FROM <i>(site) location</i> or TEST <i>device</i> ALL or TEST SITE <i>site</i> | Tests the specified device. The site must be specified for devices at a remote site. The NORG option applies to specific devices only. In the interactive mode of PED, the ringing test is performed on LCE lines unless the NORG option is specified. For the Data Line Card (NT6X71AB/BA), on-hook, 0-db, and ring test are not performed; instead, a data unit message loop around test is performed. For TEST commands that involve the OPM or OPAC, see the note in the "Input Commands" section. <i>device and location, and the acceptable options, can be one of:</i> FROM <i>(site)</i> PE <i>b s p u</i> FROM <i>(site)</i> LCE/RSC <i>b s lsg l</i> IDTL <i>(site)</i> IDE <i>b n</i> Integrated Digital Terminal line LPK <i>(site)</i> LCE/RSC/ RSE/HUBE <i>b s lsg l l</i> LCE line or ISDN NTB27, or BERT (NORG) LPK <i>(site)</i> RLDE Not operational. LTT <i>(site)</i> PE <i>b s p</i> Line and Trunk Tester pack LTU <i>site</i> LCE/RSC <i>b s p</i> Line Test Unit (<i>p</i> must be the position of the NT2X10 or NT2X11 pack) PEPK <i>(site)</i> PE <i>b s p</i> PE pack in position 1 through 14 on a PE shelf PSHF <i>(site)</i> PE <i>b s</i> PE shelf |

PED commands (Continued)

| Input Command | Description |
|---|--|
| RMP <i>site</i> RSE <i>b s p</i> (REP <i>n</i>) | RSLE or RSLM Remote Maintenance pack |
| RNGF | performs a ringing test only on LCE/RSE lines that show call-processing ringing failure status. If a line passes the test, it is removed from the list of lines with faulty ringing. |
| SITE <i>site</i> | a specific site |
| SLIN <i>site</i> SLE <i>b cb cu</i> | SLC-96 subscriber line |
| SLPK <i>site</i> SLE <i>b cb cu</i> | SLC-96 Channel Unit pack (<i>cu</i> is either channel unit on the pack) |
| ULIN <i>site</i> UCE <i>b lsg l</i> | a specific RCU line |
| ULPK <i>site</i> UCE <i>b lsg l</i> | an RCU line pack (<i>l</i> may be any line on the pack; all lines on the pack will be tested) |
| UMP <i>site</i> HUBE <i>b s p</i> | Universal Maintenance Pack |
| UNIT (<i>site</i>) PE <i>b s p u</i> <i>device</i> | unit on a PE pack in position 1 through 14 on a PE shelf |
| /ALL | All devices of a specific type |

The REP *n* option specifies the number of times a test is repeated; *n* may be 1 to 32,767. If *n* is not specified, the default value is 32,767. Operating company personnel may abort the repeating test by entering #####.

The TEST FROM command tests all devices with addresses greater than or equal to the specified unit or line number. If the parameter is invalid, the request is rejected without explanation. During execution, the maintenance terminal message PED0004 (*site*) PE *b s* or PED0004 (*site*) LCE/RSE *b s* is printed as a progress mark after each shelf is tested.

The TEST *device* ALL command tests all devices of the specified type.

Examples: TEST LPK LCE 2 3 3 17
TEST PEPK CAPK PE 1 2 12 REP 2
TEST SLPK CAPL SLE 1 1 12

The system response to the TEST command can be one of:

REJECTED: *reason*

or

PED *xxx device mnemonic pack code location*

(where *xxx* is a code indicating the fault [see the Output Message Manual])

or

PASSED

See the BUSY command for an explanation of the following responses:

reason

PED commands (Continued)

| Input Command | Description |
|---|--|
| VERS UMP <i>site</i> HUBE <i>b s p</i> (ALL) | device mnemonic pack code location Reports the version of the loadfile resident in the specified Star Hub Universal Maintenance Pack (NTMY73) or in all UMP packs. Example: VERS UMP SHUB HUBE 1 3 1 The system response is in the following format: UMP (NTMY73) <i>site</i> HUBE <i>b s p</i> RESIDENT FIRMWARE VERSION X.XX[*] <i>Note:</i> An asterisk (*) displaying after the loadfile version number indicates that an updated loadfile must be loaded into the NTMY73 using the DNLD UMP command. |

Section 19: RBCD (Remote battery control diagnostic)

Description

Overlay RBCD provides maintenance functions for the Outside Plant Module (OPM) and Outside Plant Access Cabinet (OPAC) batteries. The overlay may be interactive (requested by maintenance personnel) or free-running (automatically scheduled). In the interactive mode, Overlay RBCD is used to manipulate the Battery Control Unit (BCU), the two Battery Charge Controller (NT8X02) packs that comprise the BCU, and battery string pairs. In the free-running mode, the overlay scans for faults in the BCU or Battery Charge Controllers (BCCs).

For detailed information about the OPM and OPAC batteries that should be consulted before using this overlay, refer to the section entitled “Outside Plant Module and Outside Plant Access Cabinet Battery Operation” in the NTP entitled *General Maintenance Information* (297-3601-500).

Input commands

This section lists and describes the commands that can be entered once Overlay RBCD is successfully loaded for the interactive mode. When the overlay is loaded, all configured Line Test Unit (LTU) packs are tested for each OPM or OPAC. As the LTU for each OPM or OPAC passes the test, the following message is output:

```
BCD300 site LCE b s
```

When all the LTUs have passed the test, the prompt “>” is output.

Note 1: The OPM or OPAC bay numbers may be any number from 1 through 32; however, only two bays may be assigned per site identification mnemonic and the numbers must be in consecutive order. For example, 3 and 4 are valid bay numbers, but 3 and 5 are not valid. The left bay contains LCA 1, LCA 0, Host Interface Equipment, and an Environmental Control Unit. The right bay contains the Battery Control Unit, Rectifiers 1 and 0, Frame Supervisory Panel, Remote Maintenance Module, and an Environmental Control Unit.

Note 2: The listed fault probably exists when a battery string is at the indicated location, under the indicated state, and the measured voltage at the string location is less than the low voltage limit.

RBCD commands

| Input Command | Description |
|--|--|
| #### | Interrupts any maintenance-terminal output, stops execution of the current command, and places the maintenance terminal in input mode. Response is the prompt character >. |
| **** | Interrupts any maintenance-terminal output and aborts the overlay program. The maintenance terminal response is BCD005 <i>site</i> LCE <i>b s</i> , then the prompt character #. |
| ? | Queries the system for valid RBCD commands. |
| BSPR CHRG <i>site</i> LCE <i>b pr</i> | Moves the indicated battery string pair onto the charge bus. The OPM or OPAC is chosen by <i>site</i> LCE <i>b</i> , where <i>b</i> is the bay that contains the Battery Control Unit (BCU) (see the note in the "Input Commands" section). <i>pr</i> is the number of the battery string pair and can be 0, 1, 2, or 3. |

CAUTION: Do not move more than one battery string pair from the load bus at any time.

Note: When a battery string pair is manually placed on the charge bus, it will remain on the charge bus until it is manually removed. Therefore, the MEAS command cannot be used to measure other battery string pairs on the charge bus. The message ALM055 is output every hour to remind operating company personnel to not leave the battery string pair on the charge bus for more than 24 hours.

Example: BSPR CHRG OPM LCE 2 0

The system response to the BSPR CHRG command is:

BCU *site* LCE *b*

BSTR *n* battery string location / state (MAN)

BSTR *n* battery string location / state (MAN)

BSTR *n* is the number of the battery string (0 to 7) in the pair

Note: The battery strings are paired as follows: 0 and 4, 1 and 5, 2 and 6, and 3 and 7.

battery string location / state can be one of:

CHRG on the charge bus

LOAD on the load bus

OPEN in the open circuit condition

UNEQ unequipped

MAN indicates that the battery string pair was manually placed on the charge bus or in the open circuit condition.

If the BCU is not equipped, the following message is output:

REJECTED: UNEQUP

RBCD commands (Continued)

| Input Command | Description |
|--|---|
| BSPR LOAD <i>site</i> LCE <i>b pr</i> | Moves the indicated battery string pair onto the load bus. If that battery string pair had been manually placed on the charge bus or in the open circuit condition, the battery string pair is no longer in the manual (MAN) state. The OPM or OPAC is chosen by <i>site</i> LCE <i>b</i> , where <i>b</i> is the bay that contains the Battery Control Unit (BCU) (see the note in the "Input Commands" section). <i>pr</i> is the number of the battery string pair and can be 0, 1, 2, or 3. |

CAUTION: Do not move more than one battery string pair from the load bus at any time.

Example: BSPR LOAD OPM LCE 2 0

The system response to the BSPR LOAD command is:

BCU *site* LCE *b*

BSTR *n* battery string location / state

BSTR *n* battery string location / state

Refer to the BSPR CHRG command for definitions of the system output variables.

If the BCU is not equipped, REJECTED: UNEQUP is output:

| | |
|--|--|
| BSPR OPEN <i>site</i> LCE <i>b pr</i> | Moves the indicated battery string pair off of the charge or load bus and into the open circuit condition. The OPM or OPAC is chosen by <i>site</i> LCE <i>b</i> , where <i>b</i> is the bay that contains the Battery Control Unit (BCU) (see the note in the "Input Commands" section). <i>pr</i> is the number of the battery string pair and can be 0, 1, 2, or 3. |
|--|--|

CAUTION: Do not move more than one battery string pair from the load bus at any time.

Note: When a battery string pair is manually placed in the open circuit condition, it will remain in the open circuit condition until it is manually removed.

Example: BSPR OPEN ALEX LCE 2 2

The system response to the BSPR OPEN command is:

BCU *site* LCE *b*

BSTR *n* battery string location / state (MAN)

BSTR *n* battery string location / state (MAN)

Refer to the BSPR CHRG command for definitions of the system output variables.

If the BCU is not equipped, the following message is output:

REJECTED: UNEQUP

RBCD commands (Continued)

| Input Command | Description |
|---|--|
| <p>BUSY BCU <i>site</i> LCE <i>b</i></p> <p>MEAS BCU <i>site</i> LCE <i>b</i> or MEAS BCU ALL</p> | <p>Places the Battery Control Unit (BCU) in the man-made-busy (MMB) state. When the BCU is MMB, all of the battery strings will be placed on the load bus. Therefore, any battery string pairs that were manually placed on the charge bus or in the open circuit condition are no longer in the manual (MAN) state. The OPM or OPAC is chosen by <i>site</i> LCE <i>b</i>, where <i>b</i> is the bay that contains the BCU (see the note in the “Input Commands” section).</p> <p>Example: BUSY BCU ALEX LCE 2</p> <p>The system response to the BUSY BCU command is:</p> <p>BCU <i>site</i> LCE <i>b</i> MMB (<i>indirect state</i>) <i>hardware state</i></p> <p>OPM battery state (BCU fault(s))</p> <p>MMB is man-made-busy</p> <p><i>indirect state</i> is INDR, if the parent device is out of service</p> <p><i>hardware state</i> can be one of:</p> <ul style="list-style-type: none"> ENBL enabled DSBL disabled <p><i>OPM battery state</i> can be one of:</p> <ul style="list-style-type: none"> ACFM ac-failure-mode NBRM normal-battery mode PACM post-ac-failure mode <p><i>BCU fault(s)</i> can be one or more of:</p> <ul style="list-style-type: none"> ACF ac failure alarm FALM fan failure alarm FDR front door alarm FSP frame supervisory panel alarm HTMP high temperature alarm LTMP low temperature alarm SDR side door alarm <p>If the BCU is not equipped, the following message is output:</p> <p>REJECTED: UNEQUP</p> <p>Measures the voltage of all the battery strings (BSTR) associated with the indicated Battery Control Unit (BCU) or all the battery strings associated with all the BCUs. The voltage is measured in the open circuit condition and on the load and charge buses. The OPM or OPAC is chosen by <i>site</i> LCE <i>b</i>, where <i>b</i> is the bay that contains the BCU (see the note in the “Input Commands” section).</p> <p>Note 1: The voltages obtained by entering the MEAS command can be used to detect faults in the OPM or OPAC battery backup system hardware. Refer to Table 19-A for battery string low voltage limit guidelines.</p> |

RBCD commands (Continued)

| Input Command | Description |
|---------------|---|
| | <p>Note 2: The voltage is measured by moving each battery string pair to each of the three locations (open circuit, load bus, and charge bus). After the measurements are taken, the battery string pairs are returned to the condition or bus that they were on when the MEAS command was input. Completion of the MEAS BCU command requires 20 to 40 seconds per equipped battery string pair.</p> <p>Note 3: If the BCU is in the ac-failure mode, the measurements on the charge bus and in the open circuit condition cannot be made because the battery strings cannot be removed from the load bus. If the BCU is in the post-ac-failure mode, the measurements on the charge bus cannot be made because the battery strings cannot be moved to the charge bus. Measurements will be made for the load bus or for the open circuit condition and load bus, as appropriate. If the Line Test Unit (LTU) is out of service, measurements cannot be made because the LTU is used to measure the voltage. If a battery string pair has been manually placed on the charge bus, no other battery string pairs can be measured on the charge bus.</p> <p>Example: MEAS BCU OPM LCE 2</p> <p>The system response to the MEAS BCU command is:</p> <p>BCU <i>site</i> LCE <i>b</i></p> <pre>BCC 0 OPEN LOAD CHRG BSTR0 <i>string statestring statestring state</i> BSTR1 <i>string statestring statestring state</i> BSTR2 <i>string statestring statestring state</i> BSTR3 <i>string statestring statestring state</i> BCC 1 OPEN LOAD CHRG BSTR4 <i>string statestring statestring state</i> BSTR5 <i>string statestring statestring state</i> BSTR6 <i>string statestring statestring state</i> BSTR7 <i>string statestring statestring state</i></pre> <p><i>string state</i> can be one of:</p> <pre>UNAV unavailable to place on the bus UNEQ unequipped Voltage voltage of the battery string (rounded to the nearest whole number); See Note 1</pre> <p>The system response indicates the battery string state in the open circuit condition (OPEN) or on the load bus (LOAD) or charge bus (CHRG). When the BCU is not equipped, the following message will be output: REJECTED: UNEQUP</p> |

RBCD commands (Continued)

| Input Command | Description |
|---|---|
| MEAS BSPR <i>site</i> LCE <i>b pr</i> or MEAS BSPR ALL | <p>Measures the voltage of one battery string pair or all the battery string pairs associated with the indicated Battery Control Unit (BCU). The voltage is measured on the bus where the battery string pair is located. The OPM or OPAC is specified by <i>site</i> LCE <i>b</i>, where <i>b</i> is the bay that contains the BCU (see the note in the "Input Commands" section). <i>pr</i> is the number of the battery string pair and can be 0, 1, 2, or 3.</p> <p>Note 1: The voltages obtained by entering the MEAS command can be used to detect faults in the OPM or OPAC battery backup system hardware. Refer to Table 19-A for battery string low voltage limit guidelines.</p> <p>Note 2: If the Line Test Unit (LTU) is out of service, measurements cannot be made because the LTU is used to measure the voltage.</p> <p>Example: MEAS BSPR ALEX LCE 2 3</p> <p>The system response to the MEAS BSPR command is:</p> <p>BCU <i>site</i> LCE <i>b</i></p> <p style="padding-left: 40px;">BSTR <i>n</i> battery string location / state (voltage)</p> <p style="padding-left: 40px;">BSTR <i>n</i> battery string location / state (voltage)</p> <p>BSTR <i>n</i> is the number of the battery string (0 to 7) in the battery string pair</p> <p>Note: The battery strings are paired as follows: 0 and 4, 1 and 5, 2 and 6, and 3 and 7.</p> <p><i>battery string location / state</i> can be one of:</p> <p style="padding-left: 40px;">CHRG on the charge bus</p> <p style="padding-left: 40px;">LOAD on the load bus</p> <p style="padding-left: 40px;">OPEN in the open circuit condition</p> <p style="padding-left: 40px;">UNEQ unequipped</p> <p><i>voltage</i> is the voltage of the battery string (rounded to the nearest whole number); See Note 1.</p> <p>When the BSPR is not equipped, the following message is output:</p> <p>REJECTED: UNEQUP</p> <p>RTS BCU <i>site</i> LCE <i>b</i></p> <p>Returns the man-made-busy (MMB) Battery Control Unit (BCU) back to service. The OPM or OPAC is chosen by <i>site</i> LCE <i>b</i>, where <i>b</i> is the bay that contains the BCU (see the note in the "Input Commands" section).</p> <p>If no faults are associated with the BCU, it is placed in the in-service state. Under normal conditions, after the RTS command is input, the BCU is placed in the normal-battery mode.</p> <p>Example: RTS BCU ALEX LCE 2 3</p> <p>The system response to the RTS BCU command is:</p> <p>BCU <i>site</i> LCE <i>b</i> INS (<i>indirect state</i>) <i>hardware state</i> OPM <i>battery state</i> (BCU <i>fault(s)</i>)</p> <p>INS is in-service</p> |

RBCD commands (Continued)

| Input Command | Description |
|--|--|
| STAT BCC <i>site</i> LCE <i>b</i> <i>bc</i> or STAT BCC ALL | <p><i>indirect state</i> is INDR, if the parent device is out of service</p> <p><i>hardware state</i> can be one of:</p> <p>ENBL enabled</p> <p>DSBL disabled</p> <p>OPM <i>battery state</i> can be one of:</p> <p>ACFM ac-failure-mode</p> <p>NBRM normal-battery mode</p> <p>PACM post-ac-failure mode</p> <p><i>BCU fault(s)</i>, which will prevent to the BCU from being returned to service, can be one or more of:</p> <p>ACF ac failure alarm</p> <p>FALM fan failure alarm</p> <p>FDR front door alarm</p> <p>FSP frame supervisory panel alarm</p> <p>HTMP high temperature alarm</p> <p>LTMP low temperature alarm</p> <p>SDR side door alarm</p> <p>If the BCU cannot be returned to service, an error message is output.</p> <p>If the BCU is not equipped, the following message is output:</p> <p>REJECTED: UNEQUP</p> <p>Gives the status of an individual or all Battery Charge Controller (NT8X02) packs. Provides information on the battery strings (BSTR) associated with the BCC. The OPM or OPAC is chosen by <i>site</i> LCE <i>b</i>, where <i>b</i> is the bay that contains the Battery Control Unit(BCU) (see the note in the "Input Commands" section). <i>bc</i> is the number of the BCC and can be 0 or 1 (BCC 0 is the leftmost pack and BCC 1 is the rightmost pack).</p> <p>Example: STAT BCC OPM LCE 2 0</p> <p>The system response to the STAT BCC command is:</p> <p>BCU <i>site</i> LCE <i>b</i> BCC <i>BCC number</i> <i>BCC state(s)</i></p> <p>BSTR <i>n</i> <i>battery string location / state</i> (MAN)</p> <p><i>BCC number</i> is the number of the BCC (0 or 1)</p> <p><i>BCC state(s)</i> can be one or more of:</p> <p>BCF0 BCC 0 fuse failure</p> <p>BCF1 BCC 1 fuse failure</p> <p>NORM normal (no fault)</p> |

RBCD commands (Continued)

| Input Command | Description |
|---|---|
| | RCF0 rectifier 0 failure |
| | RCF1 rectifier 1 failure |
| | RCL0 current limit reached on rectifier 0 |
| | RCL1 current limit reached on rectifier 1 |
| | BSTR <i>n</i> is the number of the battery string (0 to 7) |
| | <i>Battery string location / state</i> can be one of: |
| | CHRG on the charge bus |
| | LOAD on the load bus |
| | OPEN in the open circuit condition |
| | UNEQ unequipped |
| | MAN indicates that the battery string pair was manually placed on the charge bus or in the open circuit condition. |
| | If the BCC is not equipped, the following message will be output: REJECTED: UNEQUP |
| STAT BCU <i>site</i> LCE <i>b</i> or STAT BCU <i>condition</i> or STAT BCU ALL | <p>Gives the status of the Battery Control Unit (BCU) by location or condition or gives the status of all BCUs. Provides information on the Battery Charge Control (BCC) packs and battery string pairs (BSPR). The OPM or OPAC is chosen by <i>site</i> LCE <i>b</i>, where <i>b</i> is the bay that contains the BCU (see the note in the "Input Commands" section).</p> <p><i>condition</i> can be one of:</p> <p>INS in service MMB man-made-busy OOS out of service SMB system-made-busy</p> <p>Example: STAT BCU OPM LCE 2</p> <p>The system response to the STAT BCU command is:</p> <p>BCU <i>site</i> LCE <i>b</i> <i>direct state</i> (<i>indirect state</i>) <i>hardware state</i> OPM <i>battery state</i> AUTO CHRG ENABLED/DISABLED (<i>BCU fault(s)</i>) BCC 0 BCC <i>state(s)</i> BCC 1 BCC <i>state(s)</i></p> <p>BSPR 0 battery string pair 0 location / state (MAN) BSPR 1 battery string pair 1 location / state (MAN) BSPR 2 battery string pair 2 location / state (MAN) BSPR 3 battery string pair 3 location / state (MAN)</p> <p><i>direct state</i> can be one of:</p> <p>INS in service MMB man-made busy SMB system-made busy</p> <p><i>indirect state</i> is INDR, if the parent device is out of service</p> |

RBCD commands (Continued)

| Input Command | Description |
|---------------|--|
| | <p><i>hardware state</i> can be one of:</p> <p>ENBL enabled</p> <p>DSBL disabled</p> <p><i>OPM battery state</i> can be one of:</p> <p>ACFM ac-failure-mode</p> <p>NBRM normal-battery mode</p> <p>PACM post-ac-failure mode</p> <p>AUTO CHRGR ENABLED/DISABLED automatic daily battery rotation to the charge bus is enabled or disabled</p> <p><i>BCU fault(s)</i> can be one or more of:</p> <p>ACF ac failure alarm</p> <p>FALM fan failure alarm</p> <p>FDR front door alarm</p> <p>FSP frame supervisory panel alarm</p> <p>HTMP high temperature alarm</p> <p>LOWV low voltage alarm</p> <p>LTMP low temperature alarm</p> <p>SDR side door alarm</p> <p><i>BCC state(s)</i> can be one or more of:</p> <p>BCF0 BCC 0 fuse failure</p> <p>BCF1 BCC 1 fuse failure</p> <p>NORM normal (no fault)</p> <p>RCF0 rectifier 0 failure</p> <p>RCF1 rectifier 1 failure</p> <p>RCL0 current limit reached on rectifier 0</p> <p>RCL1 current limit reached on rectifier 1</p> <p><i>Note: If the BCC state is other than normal (NORM), the OPM or OPAC batteries are in the ac-failure mode and all battery string pairs should be on the load bus.</i></p> <p><i>Battery string pair n location / state</i> can be one of:</p> <p>CHRG on the charge bus</p> <p>LOAD on the load bus</p> <p>OPEN in the open circuit condition</p> <p>UNEQ unequipped</p> <p>MAN indicates that the battery string pair was manually placed on the charge bus or in the open circuit condition.</p> |

RBCD commands (Continued)

| Input Command | Description |
|--|---|
| STAT BSPR <i>site</i> LCE <i>b</i> <i>pr</i> or STAT BSPR ALL | <p>If the BCU is not equipped, the following message will be output: REJECTED: UNEQUP</p> <p>Gives the status of an individual or all battery string pairs (BSPR). Indicates which battery strings (BSTR) are associated with the battery string pair. The OPM or OPAC is chosen by <i>site</i> LCE <i>b</i>, where <i>b</i> is the bay that contains the Battery Control Unit (BCU) (see the note in the "Input Commands" section). <i>pr</i> is the number of the battery string pair and can be 0, 1, 2, or 3.</p> <p>Example: STAT BSPR ALEX LCE 2 0</p> <p>The system response to the STAT BSPR command is: BCU <i>site</i> LCE <i>b</i> BSTR <i>n</i> battery string location / state (MAN) BSTR <i>n</i> battery string location / state (MAN)</p> <p>BSTR <i>n</i> is the number of the battery string (0 to 7) in the pair <i>Note:</i> The battery strings are paired as follows: 0 and 4, 1 and 5, 2 and 6, and 3 and 7.</p> <p><i>battery string location / state</i> can be one of: CHRG on the charge bus LOAD on the load bus OPEN in the open circuit condition UNEQ unequipped</p> <p>MAN indicates that the battery string pair was manually placed on the charge bus or in the open circuit condition.</p> |
| TEST BCU <i>site</i> LCE <i>b</i> or TEST BCU ALL | <p>If the BSPR is not equipped, the following message will be output: REJECTED: UNEQUP</p> <p>Tests the indicated Battery Control Unit (BCU) or all BCUs. When this command is input, the associated Battery Charge Controller packs, battery string pairs, and Remote Maintenance Module (RMM) Line Test Unit also are tested. The OPM or OPAC is chosen by <i>site</i> LCE <i>b</i>, where <i>b</i> is the bay that contains the BCU (see the note in the "Input Commands" section).</p> <p><i>Note:</i> When the BCU is in the ac-failure mode, the voltage is included in the system response, to indicate whether a low-voltage condition (less than -48 V) exists. Refer to Table 19-A for battery string low voltage limit guidelines.</p> <p>Example: TEST BCU ALEX LCE 2</p> <p>The system response to the TEST BCU command is: BCDxxx (<i>location</i>) (<i>parameter</i>) (<i>voltage</i>) where xxx is a code indicating the fault (see <i>Output Message Manual</i>). <i>location</i> is <i>site</i> LCE <i>b</i></p> |

RBCD commands (Continued)

| Input Command | Description |
|---------------|---|
| | <i>parameter</i> is the device affected by the test, the device location, or a fault detected by the test (see <i>Output Message Manual</i>) |
| | <i>voltage</i> is the voltage of the battery string (rounded to the nearest whole number); see Note . |
| | If the BCCs on an individual BCU or all BCCs on all the BCUs pass the test, the system response is: |
| | PASS |

**Table 19-A:
OPM battery string low voltage limit guidelines**

| String Location | Battery Backup System State | Low Voltage Limit | Probable Fault |
|------------------------|--|-------------------|--|
| Load bus | Normal battery mode (no recent battery string discharge) | -51 V | Faulty battery string or rectifier |
| Load bus | Battery Charger Controller packs (NT8X02) are not operating (for example, ac power failure has occurred) | -48 V | Battery strings are at least half discharged |
| Charge bus | Battery string pair has been on the charge bus for six or more hours | -56 V | Faulty battery string or Battery Charge Controller pack (NT8X02) |
| Open circuit condition | Battery string pair moved from the load bus to the open condition. | -50.5 V | Faulty battery string |

Section 20: SCM (Subscriber Carrier Module diagnostic)

Description

Overlay SCM tests the Subscriber Carrier Module (SCM) shelf, DS-1 lines, and Remote Concentrator Terminal (RCT) common equipment in a DMS-10 system. The SCM is an interface between the DMS-10 switch and the DMS-1. While the control sequences reside in the DMS-10 switch, the actual test routines used reside in the SCM. SCM hardware is described in the NTP entitled *Equipment Identification* (297-3601-150). For information related to the DMS-1, refer to the *DMS-1 Product Index* (363-2011-100).

Overlay SCM can be invoked by one of four methods:

- automatically after a software update to download new software
- automatically at any time by the resident fault recognition software (in response to a fault detected in the SCM shelf, DS-1 lines, or RCT common equipment)
- automatically on a periodic basis by routine tests
- manually at any time from the maintenance terminal

The method of invocation determines whether all of the overlay features or a subset of the features are described. When the overlay is automatically invoked by the fault detection software, the status of the faulty device is set to system-made-busy. When the overlay is invoked by an automatic routine test, the overlay also tests parts of the system not exercised by the fault detection software and switches system processor activity (under normal conditions) so that activity alternates on a periodic basis. Manual invocation allows all of the above testing in addition to more specialized commands for installation and fault isolation.

Input commands

This section lists the commands, with descriptions, that can be used once the requested program has been loaded.

SCM commands

| Input Command | Description |
|--|--|
| #### | Interrupts any maintenance-terminal output, aborts execution of the current command, and places the maintenance terminal in input mode. Response is the prompt character >. |
| **** | Interrupts any maintenance-terminal output and aborts the overlay program. Response is the prompt character #. |
| ? | Queries the system for valid input. Can be used with any command. |
| BUSY <i>device</i> PE b s p | <p>Busy the specified device.</p> <p><i>device</i> can be one of:</p> <ul style="list-style-type: none"> SCDG Digroup SCMP Processor Set. PE <i>b s p</i> is the location of the System Processor pack SCPS Protection Switch. The removal of a Time Switch or Digroup from service decreases the traffic-handling capacity of the SCM by about half. SCTS Time Switch |
| BUSY SCM PE b s | <p>Busy the entire SCM. The BUSY command stops all traffic on the SCM.</p> <p>Example: BUSY SCM PE 1 2</p> |
| DNLD SCM PE <i>b s</i> | <p>This command will force the SCM to be downloaded; the SCM must be MMB before attempting to download. If successfully downloaded, PASSED will be output; otherwise, an SCM output message will indicate reason for failure.</p> <p>Example: DNLD SCM PE 1 2</p> |
| LPBK RCT <i>site</i> PE <i>b s</i> or BYPS RCT <i>site</i> PE <i>b s</i> | <p>Activate the loopback or bypass feature on the RCT specified by <i>site</i> PE <i>b s</i>. Loopback is possible only if the given RCT is not the last RCT in the SCM system. Only one of the RCTs can be in the loopback or bypass state at any one time.</p> <p>RCTs on the far side of the bypassed or loopbacked RCT are not taken out of service.</p> <p>Example: LPBK RCT RCTH PE 1 2</p> |
| RSTR RCT <i>site</i> PE <i>b s</i> | <p>Remove the loopback or bypass from the RCT specified by <i>site</i> PE <i>b s</i>.</p> <p>Example: RSTR RCT RCTH PE 1 2</p> |
| RSTR SCDG PE b s p | <p>Unswitch the Protection Line for the Digroup specified by PE <i>b s p</i>.</p> <p>Example: RSTR SCDG PE 1 2 14</p> |
| RTS <i>device</i> PE b s p | <p>Return to service the specified device.</p> <p><i>device</i> can be one of:</p> <ul style="list-style-type: none"> SCDG Digroup |

SCM commands (Continued)

| Input Command | Description |
|------------------------------------|--|
| | <p>SCMP Processor Set. PE <i>b s p</i> is the location of the System Processor pack</p> <p>SCPS Protection Switch. The removal of a Time Switch or Digroup from service decreases the traffic-handling capacity of the SCM by about half.</p> <p>SCTS Time Switch</p> |
| RTS SCM PE <i>b s</i> | <p>Example: RTS SCMP PE 1 2 2</p> <p>Return to service the entire SCM.</p> <p>Example: RTS SCM PE 1 2</p> |
| RTSS SCDG PE <i>b s p</i> | <p>Return the Digroup at location PE <i>b s p</i> to service, but also switch it to use the Protection Line. Digroup must be man-made-busy (MMB).</p> <p>Example: RTSS SCDG PE 1 2 14</p> |
| STAT <i>device</i> PE <i>b s p</i> | <p>Query status of device.</p> <p><i>device</i> can be one of:</p> <p>SCMP Processor set. PE <i>b s p</i> is the location of the System Processor pack</p> <p>SCDG Digroup</p> <p>SCTS Time Switch</p> <p>SCPS Protection Switch.</p> |
| STAT SCM ALL | <p>Example: STAT SCPS PE 1 2 13</p> <p>Lists the status of all SCMs and RCTs in the system. The system response to the STAT command takes the following form:</p> <p><i>apparatus location condition activity</i></p> <p><i>apparatus</i> repeats the second field of the STAT command (e.g., SCM, SCTS).</p> <p><i>location</i> is the physical location of the equipment.</p> <p><i>condition</i> can be one of:</p> <p>INS in-service</p> <p>MMB man-made-busy</p> <p>SMB system-made-busy</p> <p>IND indirect busy; apparatus may be in service but cannot be used because a device on which it depends is out of service</p> <p><i>activity</i> can be one of:</p> <p>Processor sets (in service)</p> <p>ACT active</p> <p>INAC inactive</p> <p>Digroups (in service)</p> <p>NORM Digroup is using its own DS-1 line</p> |

SCM commands (Continued)

| Input Command | Description |
|---|--|
| | <p>SPRD Digroup is using the protection line</p> <p>Protection switch</p> <p>NORM Protection Switch is available</p> <p>SPNG Protection Line is in use, replacing a DS-1 line.</p> <p>RCT</p> <p>LPBK the loopback feature is activated</p> <p>BYPS the bypass feature is activated</p> |
| <p>STAT SCM PE <i>b s</i></p> <p>or</p> <p>STAT RCT <i>site</i> PE <i>b s</i></p> | <p>Query status of specified SCM or RCT.</p> <p>Example: STAT SCM PE 1 2 STAT RCT RCTH PE 2 3</p> |
| <p>SWCH SCM PE <i>b s</i></p> | <p>Switches Processor Set activity on the specified SCM. This command causes an initialization in the newly active Processor Set; calls in the dialing state may be mishandled.</p> <p>Example: SWCH SCM PE 1 2</p> |
| <p>SWCH SCDG PE <i>b s p</i></p> <p>or</p> <p>BUSY SCDG PE <i>b s p</i></p> | <p>Switches in the Protection Line for the Digroup specified by PE <i>b s p</i>. BUSY unswitches the Protection Line when SWCH SCDG was previously used.</p> <p>Examples: SWCH SCDG PE 1 2 14 BUSY SCDG PE 1 2 14</p> |
| <p>TEST <i>device</i> PE <i>b s p</i></p> | <p>Executes tests on specified device.</p> <p><i>device</i> can be one of:</p> <p>SCMP Processor set. PE <i>b s p</i> is the location of the System Processor pack</p> <p>SCDG Digroup</p> <p>SCTS Time Switch</p> <p>SCPS Protection Switch.</p> <p>Example: TEST SCPS PE 1 2 13</p> |
| <p>TEST RCT <i>site</i> PE <i>b s</i></p> | <p>Executes common equipment and line loopback tests at the specified RCT common equipment shelf. Note that RCT common equipment cannot be busied.</p> <p>Example: TEST RCT RCTH CE 1 2</p> |
| <p>TEST SCM PE <i>b s</i></p> | <p>Executes extended tests on both processor sets, Time Switches, Protection Switch, Protection Switch Failsafe, and Digroups of the specified SCM. The SCM must be in the MMB state before this command can be carried out.</p> <p>Example: TEST SCM PE 1 2</p> |

Section 21: SCRP (Script and Trigger Administration)

Description

The DMS-10 supports two types of scripts based on the script's origin. Any script delivered as part of a generic release (or patch bundle) is a **VENDOR** script. This provides Nortel the ability to supply common scripts to all Telco owners as part of the existing software delivery process. All other scripts are **USER** scripts.

Scripts also have two formats based on the type of functionality contained within the script. **STANDARD** format scripts support a limited set of directives and are best described as simple series of DMS-10 commands to execute. **ADVANCED** format scripts use the full functionality of the script interpreters on the DMS-10. Currently the only script interpreter supported is based on the Tool Command Language (TCL).

Once a script resides on the DMS-10, triggers are used to initiate its execution. These triggers can be a specified time or an unsolicited message. When the specified time is reached or message is output, the script associated with the trigger begins execution.

Overlay SCRP provides script and trigger administration functions. While information associated with all scripts may be accessed through this overlay, only **USER** scripts can be modified or deleted. When modifying **USER** scripts only **STANDARD** format directives are supported.

Overlay SCRP can only be accessed from a TTY accessed with a login password of **DEBUG** or **ALL**.

SCRP prompting sequence

The SCRP prompting sequence is used to create, modify, or delete USER scripts. In addition, help information or the contents of all scripts may be queried.

SCRP prompting sequence

| Prompt | Response | Explanation | | | | | | | | | | | | | | | | | | | | | | | | |
|--------|------------|--|------|-------|-------------|------|---------|-----------------------------|------|---------|-------------------------------|----|----------|-------------------------------------|----|----------|---------------------------------------|-----|----------|---|----|----------|-----------------------------------|----|------------|--|
| REQ | | Asks for the operation to be performed. | | | | | | | | | | | | | | | | | | | | | | | | |
| | NEW | Create a new USER script. | | | | | | | | | | | | | | | | | | | | | | | | |
| | CHG | Change an existing USER script. | | | | | | | | | | | | | | | | | | | | | | | | |
| | DEL | Delete an existing USER script. | | | | | | | | | | | | | | | | | | | | | | | | |
| | QUE | Query the contents of an existing script. | | | | | | | | | | | | | | | | | | | | | | | | |
| | HELP | Query help information for an existing script. | | | | | | | | | | | | | | | | | | | | | | | | |
| TYP | | Asks for the type of information to be operated on. | | | | | | | | | | | | | | | | | | | | | | | | |
| | SCRP | Script | | | | | | | | | | | | | | | | | | | | | | | | |
| STYP | | Prompted if REQ = QUE or HELP. Asks for the script type. | | | | | | | | | | | | | | | | | | | | | | | | |
| | USER | Specifies a USER script. | | | | | | | | | | | | | | | | | | | | | | | | |
| | VNDR | Specifies a VENDOR script. | | | | | | | | | | | | | | | | | | | | | | | | |
| | EP | Specifies an Emergency Procedure VENDOR script. | | | | | | | | | | | | | | | | | | | | | | | | |
| | MP | Specifies a Maintenance Procedure VENDOR script. | | | | | | | | | | | | | | | | | | | | | | | | |
| | SOP | Specifies a Service Order Procedure VENDOR script. | | | | | | | | | | | | | | | | | | | | | | | | |
| | TP | Specifies a Trouble Procedure VENDOR script. | | | | | | | | | | | | | | | | | | | | | | | | |
| | IM | Specifies an Installation Method VENDOR script. | | | | | | | | | | | | | | | | | | | | | | | | |
| SNUM | | Asks for the script number. | | | | | | | | | | | | | | | | | | | | | | | | |
| | n(nnnnn) | The valid range for each STYP is listed below. | | | | | | | | | | | | | | | | | | | | | | | | |
| | | <table border="1"> <thead> <tr> <th>Type</th> <th>Range</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>USER</td> <td>[1-250]</td> <td>User script - Miscellaneous</td> </tr> <tr> <td>VNDR</td> <td>[1-250]</td> <td>Vendor script - Miscellaneous</td> </tr> <tr> <td>EP</td> <td>[1-9999]</td> <td>Vendor script - Emergency Procedure</td> </tr> <tr> <td>MP</td> <td>[1-9999]</td> <td>Vendor script - Maintenance Procedure</td> </tr> <tr> <td>SOP</td> <td>[1-9999]</td> <td>Vendor script - Service Order Procedure</td> </tr> <tr> <td>TP</td> <td>[1-9999]</td> <td>Vendor script - Trouble Procedure</td> </tr> <tr> <td>IM</td> <td>[1-999999]</td> <td>Vendor script - Installation Procedure</td> </tr> </tbody> </table> | Type | Range | Description | USER | [1-250] | User script - Miscellaneous | VNDR | [1-250] | Vendor script - Miscellaneous | EP | [1-9999] | Vendor script - Emergency Procedure | MP | [1-9999] | Vendor script - Maintenance Procedure | SOP | [1-9999] | Vendor script - Service Order Procedure | TP | [1-9999] | Vendor script - Trouble Procedure | IM | [1-999999] | Vendor script - Installation Procedure |
| Type | Range | Description | | | | | | | | | | | | | | | | | | | | | | | | |
| USER | [1-250] | User script - Miscellaneous | | | | | | | | | | | | | | | | | | | | | | | | |
| VNDR | [1-250] | Vendor script - Miscellaneous | | | | | | | | | | | | | | | | | | | | | | | | |
| EP | [1-9999] | Vendor script - Emergency Procedure | | | | | | | | | | | | | | | | | | | | | | | | |
| MP | [1-9999] | Vendor script - Maintenance Procedure | | | | | | | | | | | | | | | | | | | | | | | | |
| SOP | [1-9999] | Vendor script - Service Order Procedure | | | | | | | | | | | | | | | | | | | | | | | | |
| TP | [1-9999] | Vendor script - Trouble Procedure | | | | | | | | | | | | | | | | | | | | | | | | |
| IM | [1-999999] | Vendor script - Installation Procedure | | | | | | | | | | | | | | | | | | | | | | | | |
| | ALL | Applicable if REQ = QUE. Specifies that the title information for all scripts of the specified STYP is to be queried. <i>Note: The file contents are NOT output.</i> | | | | | | | | | | | | | | | | | | | | | | | | |
| | <CR> | Applicable if REQ = NEW. An empty response specifies the DMS-10 will select the first unused USER script number. | | | | | | | | | | | | | | | | | | | | | | | | |
| FCTN | | Prompted if REQ = CHG. Asks for the type of change to make. | | | | | | | | | | | | | | | | | | | | | | | | |

SCRP prompting sequence (Continued)

| Prompt | Response | Explanation |
|----------|-----------|--|
| | DEL | Specifies that existing script entries are to be deleted. <i>Note: Script entries are deleted starting at the LIN# specified below.</i> |
| | INS | Specifies that new script entries are to be inserted. <i>Note: Script entries are inserted starting at the LIN# specified below.</i> |
| | REPL | Specifies that existing script entries are to be replaced. <i>Note: Script entries are replaced starting at the LIN# specified below.</i> |
| | APND | Specifies that new script entries are to be added at the end of the script. |
| LIN# | | Prompted if FCTN = DEL, INS, or REPL. Asks for the line number where the function is to begin. |
| | n(nn) | 1 through 500. |
| CNT | | Prompted if FCTN = DEL. Asks for the number of lines to be deleted. |
| | n(nn) | 1 through 500. |
| LINE nnn | | Prompted if REQ = NEW or if REQ = CHG and FCTN = INS, REPL, or APND. Asks for the script directive and associated parameter(s) to enter for line nnn. <i>Note: A maximum of 500 script lines/entries may be accessed.</i> |
| | <CR> | A carriage return indicates script creation/modification is complete and the script is written to disk. |
| | TITL tttt | The TITL directive indicates this is the script title. Response tttt specifies any text to describe the script file, up to 80 characters. <i>Note: Although the TITL directive may be placed anywhere within a script, it must be the first line in the script in order to be recognized.</i> |

SCRP prompting sequence (Continued)

| Prompt | Response | Explanation |
|--------|--|---|
| | CGEN operator generic [patch level] | <p>The CGEN directive verifies that the current generic (and patch level) satisfies the specified condition.</p> <p><i>operator</i> specifies the comparison operation to perform and must be one of the following: ==, !=, <, <=, >, and >=.</p> <p><i>Note: The comparison operator definitions are equals (==), not equal (!=), less than (<), less than or equal to (<=), greater than (>), and greater than or equal to (>=).</i></p> <p><i>generic</i> specifies the comparison generic in the format nnn.nn.</p> <p><i>patch level</i>, an optional parameter in the format n(nnn), specifies the comparison patch level.</p> <p>Example: CGEN>= 504.10 15</p> |
| | CMND cccc | <p>The CMND directive specifies the command to be issued by the script. Response <i>cccc</i> represents any valid DMS-10 command line, up to 80 characters. If no input is provided for <i>cccc</i>, a carriage return is sent to the DMS-10.</p> <p><i>Note: No syntax validation is performed on any input following CMND.</i></p> |
| | CMND 4! | <p>The CMND directive followed by the special mnemonic 4! specifies 4 exclamation points "!!!!" as the command to be issued by the script. The command flushes output messages to all TTYs.</p> |
| | CMND 4# | <p>The CMND directive followed by the special mnemonic 4# specifies 4 octothorps "#####" as the command to be issued by the script. The command aborts execution of the current command and places the TTY in input mode.</p> |
| | CMND4% | <p>The CMND directive followed by the special mnemonic 4% specifies 4 percent characters "%%%" as the command to be issued by the script. The command flushes output messages to the active TTY.</p> |
| | CMND 4& | <p>The CMND directive followed by the special mnemonic 4& specifies 4 ampersands "&&&&" as the command to be issued by the script. The command aborts execution of the current command and immediately places the TTY in input mode.</p> |
| | CMND 4* | <p>The CMND directive followed by the special mnemonic 4* specifies 4 asterisks "****" as the command to be issued by the script. The command aborts the overlay program and places the TTY in input mode.</p> |

SCRP prompting sequence (Continued)

| Prompt | Response | Explanation |
|---------------------|--------------------------------------|---|
| | CMND 4(| The CMND directive followed by the special mnemonic 4(specifies 4 left parentheses “(((“ as the command to be issued by the script. The command places the TTY in emergency I/O mode. |
| | CMND 4) | The CMND directive followed by the special mnemonic 4) specifies 4 right parentheses “)))” as the command to be issued by the script. The command exits the TTY from emergency I/O mode. |
| | CMND 1\$ | The CMND directive followed by the special mnemonic 1\$ specifies 1 dollar sign “\$” as the command to be issued by the script. The command enters debug mode. <i>Note: The special mnemonics 4!, 4#, 4%, 4*, 4(, 4), and 1\$ are only recognized and translated if they immediately follow the CMND directive.</i> |
| | WTXT <i>action n(nnn) ttt</i> | The WTXT directive indicates the script should wait for a maximum of <i>n(nnnn)</i> seconds for the text <i>ttt</i> to be received. The valid range for <i>n(nnnn)</i> is from 1 to 36000 seconds and <i>ttt</i> may be up to 80 characters. If the text is not received in the specified time, the specified <i>action</i> (CONT for continue or STOP) is carried out. |
| | WPRM <i>n(nnn) pppp</i> | The WPRM directive indicates the script should wait for a maximum of <i>n(nnnn)</i> seconds for the prompt <i>pppp</i> to be received. The valid range for <i>n(nnnn)</i> is from 1 to 36000 seconds and <i>pppp</i> may be up to 24 characters. If the prompt is not received in the specified time, script execution terminates. |
| | WAIT <i>n(nnn)</i> | The WAIT directive indicates the script should pause for <i>n(nnnn)</i> seconds. The valid range for <i>n(nnnn)</i> is from 1 to 36000 seconds. |
| | HELP <i>hhh</i> | The HELP directive indicates this is additional information associated with the script that may be displayed using the HELP SCRП prompting sequence. Response <i>hhh</i> specifies help text, up to 80 characters. <i>Note: No syntax validation is performed on hhhh.</i> |
| | CMNT <i>cccc</i> | The CMNT directive indicates this is a comment associated with the script. This comment is placed in the TTY log associated with Script TTY. Response <i>cccc</i> specifies a comment line, up to 80 characters. <i>Note: No syntax validation is performed on cccc.</i> |
| ARE YOU SURE (Y/N)? | | Prompted if REQ = DEL or if REQ = CHG and FCTN = DEL. Requests verification to proceed with the deletion. |
| | Y or YES | The specified deletion is carried out. |
| | Any other response | The command is aborted. |

TRIG prompting sequence

The TRIG prompting sequence is used to create, modify, query, and delete trigger information used to initiate script execution.

TRIG prompting sequence

| Prompt | Response | Explanation |
|--------|----------|--|
| REQ | | Asks for the operation to be performed. |
| | NEW | Create a new trigger. |
| | CHG | Change an existing trigger. |
| | DEL | Delete an existing trigger. |
| TYP | QUE | Query an existing trigger. |
| | | Asks for the type of information to be operated on. |
| TNUM | TRIG | Trigger. |
| | | Asks for the trigger number. |
| | n(n) | 1 through 64. |
| | ALL | Applicable if REQ = QUE. Specifies that all triggers are to be queried. |
| TTYP | <CR> | Applicable if REQ = NEW. A carriage return specifies the DMS-10 will select the first unused trigger number. |
| | | Asks for the trigger type. |
| | MSG | Specifies a message trigger. |
| | SCH | Specifies a schedule trigger. |
| STYP | | Asks for the script type to be executed by this trigger. |
| | USER | Specifies a USER script. |
| | VNDR | Specifies a VENDOR script. |
| | EP | Specifies an Emergency Procedure VENDOR script. |
| | MP | Specifies a Maintenance Procedure VENDOR script. |
| | SOP | Specifies a Service Order Procedure VENDOR script. |
| | TP | Specifies a Trouble Procedure VENDOR script. |
| | IM | Specifies an Installation Method VENDOR script. |
| SNUM | | Asks for the script number to be executed by this trigger. |

TRIG prompting sequence (Continued)

| Prompt | Response | Explanation | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------|--------------------|--|------|-------|-------------|------|---------|-----------------------------|------|---------|-------------------------------|----|----------|-------------------------------------|----|----------|---------------------------------------|-----|----------|---|----|----------|-----------------------------------|----|------------|--|
| | n(nnnnn) | The valid range for each STYP is listed below. | | | | | | | | | | | | | | | | | | | | | | | | |
| | | <table border="1"> <thead> <tr> <th>Type</th> <th>Range</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>USER</td> <td>[1-250]</td> <td>User script - Miscellaneous</td> </tr> <tr> <td>VNDR</td> <td>[1-250]</td> <td>Vendor script - Miscellaneous</td> </tr> <tr> <td>EP</td> <td>[1-9999]</td> <td>Vendor script - Emergency Procedure</td> </tr> <tr> <td>MP</td> <td>[1-9999]</td> <td>Vendor script - Maintenance Procedure</td> </tr> <tr> <td>SOP</td> <td>[1-9999]</td> <td>Vendor script - Service Order Procedure</td> </tr> <tr> <td>TP</td> <td>[1-9999]</td> <td>Vendor script - Trouble Procedure</td> </tr> <tr> <td>IM</td> <td>[1-999999]</td> <td>Vendor script - Installation Procedure</td> </tr> </tbody> </table> | Type | Range | Description | USER | [1-250] | User script - Miscellaneous | VNDR | [1-250] | Vendor script - Miscellaneous | EP | [1-9999] | Vendor script - Emergency Procedure | MP | [1-9999] | Vendor script - Maintenance Procedure | SOP | [1-9999] | Vendor script - Service Order Procedure | TP | [1-9999] | Vendor script - Trouble Procedure | IM | [1-999999] | Vendor script - Installation Procedure |
| Type | Range | Description | | | | | | | | | | | | | | | | | | | | | | | | |
| USER | [1-250] | User script - Miscellaneous | | | | | | | | | | | | | | | | | | | | | | | | |
| VNDR | [1-250] | Vendor script - Miscellaneous | | | | | | | | | | | | | | | | | | | | | | | | |
| EP | [1-9999] | Vendor script - Emergency Procedure | | | | | | | | | | | | | | | | | | | | | | | | |
| MP | [1-9999] | Vendor script - Maintenance Procedure | | | | | | | | | | | | | | | | | | | | | | | | |
| SOP | [1-9999] | Vendor script - Service Order Procedure | | | | | | | | | | | | | | | | | | | | | | | | |
| TP | [1-9999] | Vendor script - Trouble Procedure | | | | | | | | | | | | | | | | | | | | | | | | |
| IM | [1-999999] | Vendor script - Installation Procedure | | | | | | | | | | | | | | | | | | | | | | | | |
| MTXT | | Prompted if TTYP = MSG. Asks for the output message text used to trigger script execution. | | | | | | | | | | | | | | | | | | | | | | | | |
| | tttt | Up to 80 characters can be entered for tttt. | | | | | | | | | | | | | | | | | | | | | | | | |
| SCH | | Prompted if TTYP = SCH. Asks for the type of schedule used to trigger script execution. | | | | | | | | | | | | | | | | | | | | | | | | |
| | DALY | Specifies the trigger is to initiate script execution on a daily basis. | | | | | | | | | | | | | | | | | | | | | | | | |
| | WKLY | Specifies the trigger is to initiate script execution on a weekly basis. | | | | | | | | | | | | | | | | | | | | | | | | |
| | DATE | Specifies the trigger is to initiate script execution on a specified date. | | | | | | | | | | | | | | | | | | | | | | | | |
| DAY | | Prompted if SCH = WKLY. Asks for the day of the week script execution should begin. | | | | | | | | | | | | | | | | | | | | | | | | |
| | DDD | MON, TUE, WED, THU, FRI, SAT, or SUN. | | | | | | | | | | | | | | | | | | | | | | | | |
| | DD MM YYYY | DD = date (1 through 31) MM = month (1 through 12) YYYY = year (4 digits) | | | | | | | | | | | | | | | | | | | | | | | | |
| TIME | | Prompted if TTYP = SCH. Asks for the time script execution should begin. | | | | | | | | | | | | | | | | | | | | | | | | |
| | HH MM | HH = hour (0 through 23) MM = minute (0 through 59) | | | | | | | | | | | | | | | | | | | | | | | | |
| ARE YOU SURE (Y/N)? | | Prompted if REQ = DEL. Requests verification to proceed with the deletion. | | | | | | | | | | | | | | | | | | | | | | | | |
| | Y or YES | The specified deletion is carried out. | | | | | | | | | | | | | | | | | | | | | | | | |
| | Any other response | The command is aborted. | | | | | | | | | | | | | | | | | | | | | | | | |

Section 22: SED (Service equipment diagnostic)

Description

On a scheduled basis (recommended every 24 hr), Overlay SED tests all Digitone, Multi-frequency, Universal Tone Receiver (UTR) packs, and Tone and Digit Sender (TDS) packs in a DMS-10 Classic network configuration. SED tests the GTS functions on the Network Interface pack (NT8T04) in a DMS-10EN configuration. If a Remote Line Concentrating Module (RLCM) is configured in the office, Overlay SED should be scheduled to run once every 24 hr. Detection of a failure causes the faulty equipment to be disabled, appropriate alarms to be raised, and an output message to be generated at the maintenance terminal. The equipment remains disabled and unavailable for call processing until it has been repaired.

Input commands

This section lists the commands, with descriptions, that can be used once the requested program has been loaded (that is, the maintenance terminal has output SED000). Because of different hardware configurations, not all commands are valid for all sites or for all generics. The system provides error messages when incorrect commands are input.

SED commands

| Input Command | Description |
|---|---|
| #### | Interrupts any maintenance-terminal output, stops execution of the current command, and places the maintenance terminal in the input mode. Response is the prompt character >. |
| **** | Interrupts any maintenance-terminal output, aborts the overlay program, and places the maintenance terminal in the input mode for overlays or other functions. Response is the prompt character #. |
| ? | Queries the system for valid input. Can be used with any command. |
| BUSY <i>device (site) location</i> (IMED) | <p>Busies the device specified.</p> <p><i>device and location</i> can be one of:</p> <p>DTPK (<i>site</i>) PE <i>b s p</i> Digitone Receiver pack</p> <p>DTR (<i>site</i>) PE <i>b s p u</i> Digitone Receiver unit</p> |

SED commands (Continued)

| Input Command | Description |
|-----------------------|---------------------------------|
| MFPK (site) PE b s p | Multifrequency Receiver pack |
| MFR (site) PE b s p u | Multifrequency Receiver unit |
| RDPK site LCE b s p | RLCM Digitone Receiver pack |
| RDTR site LCE b s p u | RLCM Digitone Receiver unit |
| TDS CE b s p | Tone and Digit Sender pack |
| TDSP CE b s p t | Tone and Digit Sender pack port |
| UTPK CE b s p | Universal Tone Receiver pack |
| UTRC CE b s p u | Universal Tone Receiver unit |

IMED causes the system to unconditionally make the device man-made-busy. This option is required when the device is the last device of its type in service or the device is call-processing-busy.

Example:

```
(input)      BUSY MFR PE 1 2 7 1
(output)     MFR (NT2T10) CAPH PE 1 2 7 1 MMB
              DSBL IDLE
```

The system response is in the following format:

device mnemonic (pack code) location direct state (indirect state) hardware state call processing state

device mnemonic is the device type entered in the command

pack code is the Nortel code of the pack

location is the physical address of the device

direct state can be one of:

- INS in service
- MMB man-made-busy
- MMOF man-made-offline
- SMB system-made-busy
- SMOF system-made-offline

indirect state is INDR if a higher-order device is out of service (that is, the higher-order device is MMB, MMOF, SMB, or SMOF).

call processing state can be one of:

- CPBY call processing busy
- IDLE idle

DNLD TDS (site) CE b s p (NEW/OLD) Applicable only for CC or later versions of the NT4T01 (TDS) pack. Downloads the RAM memory on the TDS pack with firmware from the file system. The software package downloads may be optionally specified as NEW or OLD. Specifying NEW downloads the most recently dated software package. OLD downloads the oldest dated software package. If no option is entered, the currently activated software package is downloaded, without distinguishing by date.

SED commands (Continued)

| Input Command | Description |
|---|---|
| GIVE <i>tone</i> CE <i>b s p</i> DN/PEPK | <p>If the DMS-10 Classic Network is configured in the switch, connects the specified tone from the Tone and Digit Sender at location CE <i>b s p</i> to the line at directory number DN where:</p> <p>DN is a local (intraoffice) seven-digit number (three digits, space, four digits). PEPK is the physical location of the Multiple Access Directory Number (MADN):</p> <p style="padding-left: 40px;">PE <i>b s p u</i> LCE <i>b s lsg l</i></p> <p><i>tone</i> is one of:</p> <p>BUSY busy tone CAS CPE alerting signal (call waiting ID tone) COSH class-of-service high tone COSL class-of-service low tone CRGB continuous ringback tone DT dial tone HIGH high tone LOW low tone OVFL overflow tone PCRG P-phone continuous ringing PRNG P-phone normal ringing PDRG P-phone distinctive ringing PD1 P-phone DTMF digit 1 PD2 P-phone DTMF digit 2 PD3 P-phone DTMF digit 3 PD4 P-phone DTMF digit 4 PD5 P-phone DTMF digit 5 PD6 P-phone DTMF digit 6 PD7 P-phone DTMF digit 7 PD8 P-phone DTMF digit 8 PD9 P-phone DTMF digit 9 PD* P-phone DTMF digit * PD0 P-phone DTMF digit 0 PD# P-phone DTMF digit # RGBK ringback tone ROH receiver off-hook tone</p> <p>Example: GIVE ROH CE 1 4 9 549 5123</p> |

SED commands (Continued)

| Input Command | Description | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------------|--|--------------------------------------|------------------------|---------------------------------------|----------------------------|--------------------------------------|------------------------------|---------------------------------------|------------------------------|-----------------------------------|-----------------------------|-------------------------------------|-----------------------------|---------------------|----------------------------|------------------------|---------------------------------|----------------------|------------------------------|------------------------|------------------------------|---------|--------------------|----------|---|
| | <p>The specified tone is applied to the specified line for 25 s and, if there are no errors in sending the tone, the maintenance terminal displays a message in the following form:</p> <p><i>tone</i> TONE SENT TO DN: <i>directory number</i></p> <p>Do not go off-hook on the specified line until the maintenance-terminal message has been generated. After the tone has been applied for 20 s, the tone is removed and the maintenance terminal prompts for more input. If there is an error, the maintenance terminal will display an error message; refer to the <i>Output Message Manual</i> for the meaning of any error message.</p> | | | | | | | | | | | | | | | | | | | | | | | | |
| OFFL <i>device location</i> (IMED) | <p>Places the specified device in the man-made offline state.</p> <p><i>device</i> and <i>location</i> can be one of:</p> <table border="0" style="margin-left: 40px;"> <tr> <td>TDS CE <i>b s p</i></td> <td>Tone and Digit Sender</td> </tr> <tr> <td>TDSP CE <i>b s p t</i></td> <td>Tone and Digit Sender port</td> </tr> <tr> <td>UTPK CE <i>b s p</i></td> <td>Universal Tone Receiver pack</td> </tr> </table> <p>IMED causes the system to unconditionally make the TDS or UTR man-made offline.</p> <p>Examples: OFFL TDS CE 1 2 11 OFFL TDS CE 1 2 11 IMED OFFL TDSP CE 1 2 11 1</p> | TDS CE <i>b s p</i> | Tone and Digit Sender | TDSP CE <i>b s p t</i> | Tone and Digit Sender port | UTPK CE <i>b s p</i> | Universal Tone Receiver pack | | | | | | | | | | | | | | | | | | |
| TDS CE <i>b s p</i> | Tone and Digit Sender | | | | | | | | | | | | | | | | | | | | | | | | |
| TDSP CE <i>b s p t</i> | Tone and Digit Sender port | | | | | | | | | | | | | | | | | | | | | | | | |
| UTPK CE <i>b s p</i> | Universal Tone Receiver pack | | | | | | | | | | | | | | | | | | | | | | | | |
| RTS <i>device (site) location</i> | <p>Returns to service the device specified. The device must be man-made-busy before the RTS command is executed.</p> <p><i>device</i> and <i>location</i> can be one of:</p> <table border="0" style="margin-left: 40px;"> <tr> <td>DTPK (<i>site</i>) PE <i>b s p</i></td> <td>Digitone Receiver pack</td> </tr> <tr> <td>DTR (<i>site</i>) PE <i>b s p u</i></td> <td>Digitone Receiver unit</td> </tr> <tr> <td>MFPK (<i>site</i>) PE <i>b s p</i></td> <td>Multifrequency Receiver pack</td> </tr> <tr> <td>MFR (<i>site</i>) PE <i>b s p u</i></td> <td>Multifrequency Receiver unit</td> </tr> <tr> <td>RDPK <i>site</i> LCE <i>b s p</i></td> <td>RLCM Digitone Receiver pack</td> </tr> <tr> <td>RDTR <i>site</i> LCE <i>b s p u</i></td> <td>RLCM Digitone Receiver unit</td> </tr> <tr> <td>TDS CE <i>b s p</i></td> <td>Tone and Digit Sender pack</td> </tr> <tr> <td>TDSP CE <i>b s p t</i></td> <td>Tone and Digit Sender pack port</td> </tr> <tr> <td>UTPK CE <i>b s p</i></td> <td>Universal Tone Receiver pack</td> </tr> <tr> <td>UTRC CE <i>b s p u</i></td> <td>Universal Tone Receiver unit</td> </tr> </table> <p>Examples:</p> <table border="0" style="margin-left: 40px;"> <tr> <td>(input)</td> <td>RTS MFR PE 1 2 7 1</td> </tr> <tr> <td>(output)</td> <td>MFR (NT2T10) CAPH PE 1 2 7 1 INS ENBL IDLE</td> </tr> </table> <p>The system response is in the following format:</p> | DTPK (<i>site</i>) PE <i>b s p</i> | Digitone Receiver pack | DTR (<i>site</i>) PE <i>b s p u</i> | Digitone Receiver unit | MFPK (<i>site</i>) PE <i>b s p</i> | Multifrequency Receiver pack | MFR (<i>site</i>) PE <i>b s p u</i> | Multifrequency Receiver unit | RDPK <i>site</i> LCE <i>b s p</i> | RLCM Digitone Receiver pack | RDTR <i>site</i> LCE <i>b s p u</i> | RLCM Digitone Receiver unit | TDS CE <i>b s p</i> | Tone and Digit Sender pack | TDSP CE <i>b s p t</i> | Tone and Digit Sender pack port | UTPK CE <i>b s p</i> | Universal Tone Receiver pack | UTRC CE <i>b s p u</i> | Universal Tone Receiver unit | (input) | RTS MFR PE 1 2 7 1 | (output) | MFR (NT2T10) CAPH PE 1 2 7 1 INS ENBL IDLE |
| DTPK (<i>site</i>) PE <i>b s p</i> | Digitone Receiver pack | | | | | | | | | | | | | | | | | | | | | | | | |
| DTR (<i>site</i>) PE <i>b s p u</i> | Digitone Receiver unit | | | | | | | | | | | | | | | | | | | | | | | | |
| MFPK (<i>site</i>) PE <i>b s p</i> | Multifrequency Receiver pack | | | | | | | | | | | | | | | | | | | | | | | | |
| MFR (<i>site</i>) PE <i>b s p u</i> | Multifrequency Receiver unit | | | | | | | | | | | | | | | | | | | | | | | | |
| RDPK <i>site</i> LCE <i>b s p</i> | RLCM Digitone Receiver pack | | | | | | | | | | | | | | | | | | | | | | | | |
| RDTR <i>site</i> LCE <i>b s p u</i> | RLCM Digitone Receiver unit | | | | | | | | | | | | | | | | | | | | | | | | |
| TDS CE <i>b s p</i> | Tone and Digit Sender pack | | | | | | | | | | | | | | | | | | | | | | | | |
| TDSP CE <i>b s p t</i> | Tone and Digit Sender pack port | | | | | | | | | | | | | | | | | | | | | | | | |
| UTPK CE <i>b s p</i> | Universal Tone Receiver pack | | | | | | | | | | | | | | | | | | | | | | | | |
| UTRC CE <i>b s p u</i> | Universal Tone Receiver unit | | | | | | | | | | | | | | | | | | | | | | | | |
| (input) | RTS MFR PE 1 2 7 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| (output) | MFR (NT2T10) CAPH PE 1 2 7 1 INS ENBL IDLE | | | | | | | | | | | | | | | | | | | | | | | | |

SED commands (Continued)

| Input Command | Description |
|---|---|
| | <p>device mnemonic (pack code) location direct state (indirect state) hardware state call processing state</p> <p><i>device mnemonic</i> is the device type entered in the command <i>pack code</i> is the Northern Telecom code of the pack <i>location</i> is the physical address of the device <i>direct state</i> can be one of:</p> <ul style="list-style-type: none"> INS in service MMB man-made-busy MMOF man-made-offline OOS out-of-service SMB system-made-busy SMOF system-made-offline <p><i>indirect state</i> is INDR if a higher-order device is out of service (that is, the higher-order device is MMB, MMOF, SMB, or SMOF). <i>call processing state</i> can be one of:</p> <ul style="list-style-type: none"> CPBY call processing busy IDLE idle |
| <p>STAT <i>device (site)</i> <i>location</i></p> | <p>Gives the status of a particular device by location, a particular device type in a particular condition, or all devices of a particular type.</p> |
| <p>or STAT <i>device</i> <i>condition</i></p> | <p><i>device</i> and <i>location</i> can be one of:</p> |
| <p>or STAT <i>device</i> ALL</p> | <ul style="list-style-type: none"> DTPK (<i>site</i>) PE <i>b s p</i> Digitone Receiver pack DTR (<i>site</i>) PE <i>b s p u</i> Digitone Receiver circuit MFPK (<i>site</i>) PE <i>b s p</i> Multifrequency Receiver pack MFR (<i>site</i>) PE <i>b s p u</i> Multifrequency Receiver circuit MLI CE <i>b s p</i> MLI pack NWPK CE <i>b s p</i> Network pack PSHF (<i>site</i>) PE <i>b s</i> Peripheral shelf RDPK <i>site</i> LCE <i>b s p</i> Digitone Receiver pack on an RMM shelf RDTR <i>site</i> LCE <i>b s p u</i> Digitone Receiver circuit on an RMM shelf TDS CE <i>b s p</i> Tone and Digit Sender pack TDSP CE <i>b s p t</i> Tone and Digit Sender pack port UTPK CE <i>b s p</i> Universal Tone Receiver pack UTRC CE <i>b s p u</i> Universal Tone Receiver unit <p><i>condition</i> can be one of:</p> <ul style="list-style-type: none"> INS in service |

SED commands (Continued)

| Input Command | Description |
|---------------|--------------------------|
| | MMB man-made-busy |
| | MMOF man-made-offline |
| | OOS out-of-service |
| | SMB system-made-busy |
| | SMOF system-made-offline |

Note: No conditions are valid for device TDSP. Conditions MMOF and SMOF are not valid for the receiver packs and units (that is, devices DTPK, DTR, MFR, MFPK, RDPK, RDTR, UTRC).

Examples: STAT TDS INS (device by condition)
 STAT DTPK PE 1 4 12 (device by location)
 STAT DTPK ALL (all DTPK devices)

The system response to the STAT command is different for each device. The output message includes some or all of the following information:

device mnemonic pack code location direct state (indirect state)
 hardware state activity state disposition call processing state
device mnemonic is the device type entered in the command
pack code is the Northern Telecom code of the pack location is the physical address of the device

direct state can be one of:

- INS in service
- MMB man-made-busy
- MMOF man-made-offline
- SMB system-made-busy
- SMOF system-made-offline

indirect state is INDR if a higher-order device is out of service (that is, the higher-order device is MMB, MMOF, SMB, or SMOF).

hardware state can be one of:

- ENBL enabled
- DSBL disabled

activity state can be one of:

- ACTV active
- INAC inactive
- NORM normal
- SPRD spared
- SPNG sparing
- STBY standby

disposition can be one of:

SED commands (Continued)

| Input Command | Description |
|--|---|
| | <p>NOT SHARED specified port is shared with another device</p> <p>SHARED specified port is not connected to any another device</p> <p><i>call processing state</i> can be one of:</p> <p>CPBY call processing busy</p> <p>IDLE idle</p> |
| TEST <i>device (site) location</i> (REP <i>n</i>) | <p>Tests the indicated device.</p> <p><i>device</i> and <i>location</i> can be one of:</p> <p>DTPK (<i>site</i>) PE <i>b s p</i> Digitone Receiver pack</p> <p>DTR (<i>site</i>) PE <i>b s p u</i> Digitone Receiver circuit</p> <p>MFPK (<i>site</i>) PE <i>b s p</i> Multifrequency Receiver pack</p> <p>MFR (<i>site</i>) PE <i>b s p u</i> Multifrequency Receiver circuit</p> <p>RDPK <i>site</i> LCE <i>b s p</i> RLCM Digitone Receiver pack</p> <p>RDTR <i>site</i> LCE <i>b s p u</i> RLCM Digitone Receiver circuit</p> <p>TDS CE <i>b s p</i> Tone and Digit Sender pack</p> <p>TDSP CE <i>b s p t</i> Tone and Digit Sender pack port</p> <p>UTPK CE <i>b s p</i> Universal Tone Receiver pack</p> <p>UTRC CE <i>b s p u</i> Universal Tone Receiver unit</p> <p><i>device</i> ALL all of the specified devices (not valid for TDSP)</p> <p>The REP <i>n</i> option specifies the number of times a test is repeated; <i>n</i> may be any number. If <i>n</i> is not specified, the test will repeat until the command or overlay is aborted by entering ##### or *****, respectively.</p> <p>Examples: TEST MFPK PE 1 2 14</p> <p> TEST DTPK PE 1 3 12 REP 2</p> |
| TEST ALL | <p>Tests all available (non-call-processing busy) Tone and Digit Senders and receivers in the system.</p> <p>The output format for the TEST ALL command is an error message or one of the following:</p> <p>SEDxxx <i>location</i> PASSED [for each device that passed]</p> <p> or</p> <p>SEDxxx <i>location</i> NOT TESTED [for each device that could not be tested or could be only partially tested]</p> |

SED commands (Continued)

| Input Command | Description |
|---|---|
| VERS TDS (site) CE b s p or VERS TDS ALL | Requests the version numbers of the firmware on the specified TDS pack or on all TDS packs. Example: VERS TDS CE 1 2 11 The system response is in the following format: TDS (NT4T01) CE b s p VERSION = version <i>Note: An NED016 message displays for each NT4T01 that is not in service when the VERS TDS command is entered.</i> |

Section 23: SHEL (UNIX Shell)

Description

Overlay SHEL is interactive only and provides the capability to obtain additional data and status information that cannot be obtained from other overlays.

Input commands

This section lists the commands, with descriptions, that can be used once the interactive program is loaded (that is, the maintenance terminal has displayed the message SHEL000).

SHEL commands

| Command | Result |
|---------------------|---|
| #### | Interrupts any maintenance-terminal output, stops execution of the current command, and places the maintenance terminal into input mode. Response is the prompt character >. |
| **** | Interrupts any maintenance-terminal output and aborts the overlay program. Response is the prompt character #. |
| ? | Queries the system for valid input. |
| ARP LIST | Displays the translation tables used by the Address Resolution Protocol (ARP) to convert an IP address to a physical address. |
| ARP DEL <i>addr</i> | Modifies the ARP translation tables by deleting the entry associated with IP address <i>addr</i> . |
| MON <i>actor</i> | Monitor messages generated by the specified DMS-10 system <i>actor</i> (program/application). The <i>actor</i> parameter is required and may be one of the following: AUTH (Authentication), DEVM (ethernet device manager), FTPD (FTP server), IBSR (IBSR AMA record server), INET (local DNS server), LOGD (system logging server), NOAP (all applications), PCHS (system patching server), RFSD (redundant file system server), SIP (Session Initiation Protocol), SPXY (SIP Proxy), STUD (Study server), TELD (telnet server), TELS (telephony supervisor), or TELU (telephony user). |
| NTST | Displays information about currently active IP network connections, including protocol, local address (IP and port), remote address (IP and port), connection state, messages queued for reception, and messages queued for transmission. |

SHEL commands (Continued)

| Command | Result |
|--|---|
| NTST MEM | Displays statistics on system memory currently in use by the IP networking subsystem. |
| NTST <i>protocol</i> | Displays statistical information relevant to the specified IP networking <i>protocol</i> , which may be one of TCP, UDP, IP, or ICMP. |
| PING (<i>n</i>) <i>addr</i> | Determines whether specific IP address <i>addr</i> is accessible by sending <i>n</i> (greater than zero) Internet Control Message Protocol (ICMP) Echo Request packets to the network host once per second. Information about each packet that is echoed back via an ICMP Echo Response packet is output, including round-trip time. If <i>n</i> is unspecified, packets are sent until ping is interrupted with ##### or ****. |
| PUSH <i>filetype1</i> (<i>filetype2</i>) (<i>destination</i>) | <i>This command is only valid if the Integrated Billing Storage and Retrieval (IBSR) feature is configured.</i> Initiates a manual IBSR AMADNS/TGMU data file push of the specified <i>filetype</i> to the specified <i>destination</i> . |

The *filetype1* parameter is required and may be one of STD, TEST, TGMU, *SecStdFileName* or *SecStdSeqNumber*. STD refers to all primary AMADNS files. TEST refers to all primary test AMADNS files. TGMU refers to all primary TGMU data files. *SecStdFileName* is the name of an existing secondary standard AMADNS file (for example, 020024.030002.00032.01.2). *SecStdSeqNumber* is the sequence number of an existing secondary standard AMADNS file (for example, 32).

When the *filetype1* parameter is TGMU it may be followed by a *filetype2* parameter. The *filetype2* parameter may be one of *SecTGMUFileName* or *SecTGMUSEqNumber*. *SecTGMUFileName* is the name of an existing secondary TGMU file (for example, 020024.03002.00032.31.2). *SecTGMUSEqNumber* is the sequence number of an existing secondary TGMU file (for example, 32).

The *destination* parameter is optional, and may be either PRIP, indicating the primary AMA collector (DPMS)/TGMU data collector, ALIP, indicating the alternate AMA collector/TGMU collector. If *destination* is not specified, behavior of the manual push mirrors that of a scheduled automatic push, which is to say, the files will be pushed to the primary AMA collector/TGMU collector unless it cannot be reached, in which case the files will be pushed to the alternate AMA collector/TGMU collector.

| | |
|--------------------------------|---|
| REPL <i>actor</i> (<i>n</i>) | Replays messages generated by the specified DMS-10 system <i>actor</i> that are still present in the in-core log buffer. The optional parameter <i>n</i> limits the replay to at most the last <i>n</i> message lines found in the log buffer. See the section on the MON command above for valid values of the <i>actor</i> parameter. |
|--------------------------------|---|

SHEL commands (Continued)

| Command | Result |
|------------------|--|
| STAT IBSR | <i>This command is only valid if the Integrated Billing Storage and Retrieval (IBSR) feature is configured.</i> Displays status information about the IBSR subsystem, including critical IBSR actors, IBSR AMADNS files on disk, and percentages of Redundant File System (RFS) buffers, IBSR buffers, and billing registers that currently contain AMA/TGMU data. Indicates one of three IBSR subsystem statuses - SYSTEM OKAY, AMA OUTAGE IMMINENT, or AMA OUTAGE IN PROGRESS. |
| STAT TGMU | <i>This command is only valid if the Trunk Group Member Usage (TGMU) feature is configured.</i> Displays status information about the TGMU subsystem, including critical TGMU actors, TGMU data files on disk, and percentages of Redundant File System (RFS) buffers, TGMU buffers, and billing registers that currently contain AMA/TGMU data. Indicates one of three TGMU subsystem statuses - SYSTEM OKAY, TGMU OUTAGE IMMINENT, or TGMU OUTAGE IN PROGRESS. |
| TELN | Establishes a telnet connection to the telnet server on the DMS-10. |
| TELN <i>addr</i> | Establishes a telnet connection to the remote host with IP address <i>addr</i> . |
| TRCR <i>addr</i> | Traces the route an IP packet would follow to internet host <i>addr</i> by launching User Datagram Protocol (UDP) probe packets, then listening for an ICMP "time exceeded" reply from a gateway. The address of each responding system will be printed, and if there is no response within a three second timeout interval, an (*) is printed. |

IBSR Debug Tools

This section lists the commands only valid if the Integrated Billing Storage and Retrieval (IBSR) feature is configured. The commands are described with the appropriate syntax, the function of the command, and the output as printed to the terminal.

In order to use these tools, overlay SHEL must be loaded with the IOI ENBL and at least one available NT8T90 hard disk. The overlay is loaded by entering OVLY SHEL and !ibsrTools at the SHEL prompt as shown below.

```
#ovly shel
SHEL000
```

```
>!ibsrTools
```

```
ibsr cmd>
```

IBSR commands

| Command | Result |
|---------------------------------|---|
| <code>audit filename</code> | Audits the IBSR billing file specified by <filename> Output: Not applicable. |
| <code>auditA</code> | Audits all IBSR billing files except for the currently open file. Output: Not applicable. |
| <code>check filename y/n</code> | Displays header information for the IBSR billing file specified by <filename>. If the command is executed with the y option, additional information about the call types contained within the file is also output. Output: file name: file header length: source component id num: source component type: dest component id num: dest component type: data format type: file format type: rec src info type: pri/sec status: restart status: file priority level: field suppression type: file sequence number: file creation time: file creation date (mm/dd/yy): file last modification time: file last modification date: file length: number of records: record source type: record source id num: Additional Output: Audit Results: # Valid Records Found # Errored Records Found Size of Error Recs. Found Call Type: # Recs |
| <code>debug</code> | Toggles verbose debug mode, which prints additional information about the results of each command. Output: verbose debug now <on/off>. |
| <code>flush</code> | Flushes any BAF records from the IBSR buffer into the currently open IBSR billing file. Output: ibsr flush <succeeded/failed>. |

IBSR commands (Continued)

| Command | Result | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|--|-----------|---------|---------|---------|---------|---------------------|-------|---------|--------|--|-----------------------|-------|---------|--------|--|----------------------|-------|---------|--------|--|--------------------|-------|---------|--------|--|-------------------------|-------|---------|--------|--|-------------------------|-------|---------|--------|--|---------------------------|-------|---------|--------|--|---------------------------|-------|---------|--------|--|----------------------|-------|---------|--------|--|----------------------|-------|---------|--------|--|------------------|-------|---------|--------|--|-------------------|-------|---------|--------|--|-------------------|-------|---------|--------|--|--------------------|-------|---------|--------|--|--------------|-------|---------|--------|--|-------------|-------|---------|--------|--|
| getP | Displays IBSR parameters defined in OVLY CNFG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Output: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>parameter</th> <th>min</th> <th>max</th> <th>default</th> <th>current</th> </tr> </thead> <tbody> <tr> <td>sessionCompldCodeDS</td> <td>00000</td> <td>0004095</td> <td>000001</td> <td></td> </tr> <tr> <td>sessionCompldCodeDPMS</td> <td>00000</td> <td>0004095</td> <td>000001</td> <td></td> </tr> <tr> <td>amaLimitFileBytesOut</td> <td>00100</td> <td>0100000</td> <td>001000</td> <td></td> </tr> <tr> <td>amaLimitFileRecOut</td> <td>02000</td> <td>2000000</td> <td>020000</td> <td></td> </tr> <tr> <td>amaOldAgeMinAlarmThresh</td> <td>00001</td> <td>0000365</td> <td>000002</td> <td></td> </tr> <tr> <td>amaOldAgeMajAlarmThresh</td> <td>00001</td> <td>0000365</td> <td>000004</td> <td></td> </tr> <tr> <td>ftpAuthFailMinAlarmThresh</td> <td>00001</td> <td>0000030</td> <td>000003</td> <td></td> </tr> <tr> <td>ftpAuthFailMajAlarmThresh</td> <td>00001</td> <td>0000060</td> <td>000010</td> <td></td> </tr> <tr> <td>errRecMinAlarmThresh</td> <td>00000</td> <td>0065535</td> <td>000001</td> <td></td> </tr> <tr> <td>errRecMajAlarmThresh</td> <td>00000</td> <td>0065535</td> <td>000010</td> <td></td> </tr> <tr> <td>fieldSuppression</td> <td>00000</td> <td>0000002</td> <td>000000</td> <td></td> </tr> <tr> <td>pushFtpRetryCount</td> <td>00000</td> <td>0000010</td> <td>000001</td> <td></td> </tr> <tr> <td>pushFtpRetryDelay</td> <td>00000</td> <td>0000060</td> <td>000010</td> <td></td> </tr> <tr> <td>pushFailAlarmLevel</td> <td>00000</td> <td>0000003</td> <td>000001</td> <td></td> </tr> <tr> <td>portPrimDPMS</td> <td>00001</td> <td>0065535</td> <td>000021</td> <td></td> </tr> <tr> <td>portSecDPMS</td> <td>00001</td> <td>0065535</td> <td>000021</td> <td></td> </tr> </tbody> </table> | parameter | min | max | default | current | sessionCompldCodeDS | 00000 | 0004095 | 000001 | | sessionCompldCodeDPMS | 00000 | 0004095 | 000001 | | amaLimitFileBytesOut | 00100 | 0100000 | 001000 | | amaLimitFileRecOut | 02000 | 2000000 | 020000 | | amaOldAgeMinAlarmThresh | 00001 | 0000365 | 000002 | | amaOldAgeMajAlarmThresh | 00001 | 0000365 | 000004 | | ftpAuthFailMinAlarmThresh | 00001 | 0000030 | 000003 | | ftpAuthFailMajAlarmThresh | 00001 | 0000060 | 000010 | | errRecMinAlarmThresh | 00000 | 0065535 | 000001 | | errRecMajAlarmThresh | 00000 | 0065535 | 000010 | | fieldSuppression | 00000 | 0000002 | 000000 | | pushFtpRetryCount | 00000 | 0000010 | 000001 | | pushFtpRetryDelay | 00000 | 0000060 | 000010 | | pushFailAlarmLevel | 00000 | 0000003 | 000001 | | portPrimDPMS | 00001 | 0065535 | 000021 | | portSecDPMS | 00001 | 0065535 | 000021 | |
| parameter | min | max | default | current | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| sessionCompldCodeDS | 00000 | 0004095 | 000001 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| sessionCompldCodeDPMS | 00000 | 0004095 | 000001 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| amaLimitFileBytesOut | 00100 | 0100000 | 001000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| amaLimitFileRecOut | 02000 | 2000000 | 020000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| amaOldAgeMinAlarmThresh | 00001 | 0000365 | 000002 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| amaOldAgeMajAlarmThresh | 00001 | 0000365 | 000004 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ftpAuthFailMinAlarmThresh | 00001 | 0000030 | 000003 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ftpAuthFailMajAlarmThresh | 00001 | 0000060 | 000010 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| errRecMinAlarmThresh | 00000 | 0065535 | 000001 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| errRecMajAlarmThresh | 00000 | 0065535 | 000010 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| fieldSuppression | 00000 | 0000002 | 000000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| pushFtpRetryCount | 00000 | 0000010 | 000001 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| pushFtpRetryDelay | 00000 | 0000060 | 000010 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| pushFailAlarmLevel | 00000 | 0000003 | 000001 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| portPrimDPMS | 00001 | 0065535 | 000021 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| portSecDPMS | 00001 | 0065535 | 000021 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | pushON | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | pullON | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | push schedule: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Sched00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Sched01 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Sched02 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Sched03 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Sched04 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Sched05 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

IBSR commands (Continued)

| Command | Result |
|---------|--|
| | Sched06 |
| | Sched07 |
| | Sched08 |
| | Sched09 |
| | Sched10 |
| | Sched11 |
| | Sched12 |
| | Sched13 |
| | Sched14 |
| | Sched15 |
| | Sched16 |
| | Sched17 |
| | Sched18 |
| | Sched19 |
| | Sched20 |
| | Sched21 |
| | Sched22 |
| | Sched23 |
| | addrPrimDPMS |
| | addrSecDPMS |
| | dirPrimDPMS |
| | dirSecDPMS |
| | userPrimDPMS |
| | userSecDPMS |
| | pswdPrimDPMS |
| | pswdSecDPMS |
| | <i>Note: The current values for each parameter, as well as those for push are not included above since they will vary by site.</i> |
| help | Displays a list of available commands and a short description of each. Output: |
| | audit audit single file |
| | auditA audit all files |
| | check display file contents |
| | debug toggle verbose debug mode |
| | flush flush ibsr buffer |
| | getP get IBSR parameter values |
| | help display help menu |
| | list list all primary billing files |
| | opmQ display OPMs |
| | printRec display range of BAF records |
| | searchRec date search across all BAF records |
| | stat display ibsr stat |
| | quit exit ibsrTools |

IBSR commands (Continued)

| Command | Result |
|--|--|
| list | Lists all primary IBSR billing files with their creation date and time. Output: <filename_1> <date (mm/dd/yy)><time (hh:mm)> <filename_2> <date (mm/dd/yy)><time (hh:mm)> <filename_n> <date (mm/dd/yy)><time (hh:mm)> |
| opmQ | Displays IBSR-related OPM information Output: amaInPriAMAFiles: amaOutPriAMAFiles: amaInPriAMARec: amaOutPriAMARec: amaStorageAMARecords: sessionFtpAuthenFailRem: sessionFtpSessions: sessionFtpSessionFail: |
| printRec <i>filename</i> start_index end_index | Lists all the records in file <i>filename</i> from record <i>start_index</i> to record <i>end_index</i> . Output: For each record: record: bytes in record: module indicator: structure code: call type code: date (mm/dd/yy): time (hh:mm:ss.s): elapsed time (hh:mm:ss.s): originating NPA/number: terminating NPA/number: <hex_dump_of_record> Following the record printouts: Audit results: # Valid Records Found Call Type : # Recs |
| quit | Exits the command mode and returns to overlay SHEL prompt. Output: quitting SHEL001 |

IBSR commands (Continued)

| Command | Result |
|--|---|
| searchRec (date1 (time1) (date2) (time2)) (carrier_code) (ORIG npa1) (DEST npa2) | <p>Searches all IBSR files for records within the specified dates, times, carrier codes and NPAs. If no search parameters are given, a prompting sequence will follow. Dates must be specified in mm/dd/yy format and times in hh:mm:ss. Carrier codes are input as nnnn. Origination and destination numbers are specified as nnn-xxx-xxxx and must be preceded by "ORIG" or "DEST" only when the entire command is input on a single line.</p> <p>Output:</p> <p>For each record:</p> <p>record:</p> <p>bytes in record:</p> <p>module indicator:</p> <p>structure code:</p> <p>call type code:</p> <p>date (mm/dd/yy):</p> <p>time (hh:mm:ss.s):</p> <p>elapsed time (hh:mm:ss.s):</p> <p>originating NPA/number:</p> <p>terminating NPA/number:</p> <p><hex_dump_of_record></p> <p>Following the record printouts:</p> <p>Audit results:</p> <p># Valid Records Found</p> <p>Call Type : # Recs</p> |
| stat | <p>Outputs IBSR status information, including number of files, buffer space, and memory allocation.</p> <p>Output:</p> <p>fileCnt</p> <p>spaceUsedPri</p> <p>spaceUsedSys</p> <p>memAlloc</p> <p>memUsed</p> <p>fileCntPriStd</p> <p>spaceUsedPriStd</p> <p>fileCntPriErr</p> <p>spaceUsedPriErr</p> <p>fileCntPriTest</p> <p>spaceUsedPriTest</p> |

Section 24: SND (Signaling network diagnostic)

Description

Overlay SND is an interactive program used to test and manage the signaling network configuration for Common Channel Signaling System No. 7 (CCS7). In interactive mode, this diagnostic tests signaling links and manipulates signaling links and signaling network routes.

Input commands

This section lists the commands that are accepted once the program has been loaded.

SND commands

| Command | Result |
|---------------------------|--|
| #### | Interrupts any maintenance-terminal output, places the maintenance terminal in input mode, and stops execution of the current command. Response is the prompt character >. |
| **** | Interrupts any maintenance-terminal output, stops execution of the current command, aborts the overlay program, and places the terminal in input mode and aborts the overlay program. Response is the prompt character #. |
| ? | Queries the system for valid input. Can be used with any command. |
| BLK SNR <i>n x</i> (IMED) | Blocks signaling network route <i>x</i> of route set <i>n</i> from handling non-maintenance message traffic. <i>x</i> can be one of: PRI1 first primary route in route set <i>n</i> PRI2 second primary route in route set <i>n</i> ALT1 first alternate route in route set <i>n</i> ALT2 second alternate route in route set <i>n</i> <i>n</i> is of the form <i>n(nn) c(cc) m(mm)</i> , where: <i>n(nn)</i> network code, from 1 through 255, of the route set <i>c(cc)</i> cluster code, from 0 through 255, of the route set <i>m(mm)</i> member code, from 0 through 255, of the route set |

SND commands (Continued)

| Command | Result | | | | | | | | | | | | |
|--|--|-----|--|------|--|-----|--|-----|--|-----|--|----------------|--|
| | <p>The IMED (Immediately) option makes the network route unconditionally unavailable to the system.</p> <p style="text-align: center;">CAUTION: Executing the IMED option may cause a destination point code (DPC) to become unavailable.</p> <p>A status report is displayed.</p> | | | | | | | | | | | | |
| <p>BUSY SNL <i>n x</i> (IMED) or BUSY SNLS <i>n</i> (IMED)</p> | <p>Disables signaling link <i>x</i> in signaling link set <i>n</i> or disables signaling link set <i>n</i>.</p> <p>The IMED (Immediately) option makes the signaling link or signaling link set unconditionally unavailable.</p> <p style="text-align: center;">CAUTION: Executing the IMED option may cause a destination point code (DPC) to become unavailable.</p> | | | | | | | | | | | | |
| <p>INH SNL <i>n x</i> or INH SNLS <i>n</i></p> | <p>Inhibits signaling link set <i>n</i> or signaling link <i>x</i> in signaling link set <i>n</i> from handling non-maintenance message traffic.</p> | | | | | | | | | | | | |
| <p>LIST E800/CNAM/AIN NSCT table indicator (digit option) (translation type)</p> | <p>A Service Control Point (SCP) may request that network management controls be placed on Number Services calls. For E800, the controls may be placed on a particular Number Services code (800-NXX-XXXX) or on a group of Number Services codes (800-NXX). For CNAM, the controls are placed on a group of Number Services codes (NPA-NXX). The LIST command queries a number service control table (NSCT) which contains all Number Services codes that have network management restrictions.</p> <p><i>table indicator</i> can be one of:</p> <table style="margin-left: 40px;"> <tr> <td>6DG</td> <td>6-digit number service control table (applies only to E800 and CNAM)</td> </tr> <tr> <td>10DG</td> <td>10-digit number service control table (applies only to E800)</td> </tr> <tr> <td>SCP</td> <td>6-digit SCP overload control (applies only to AIN)</td> </tr> <tr> <td>SMS</td> <td>service management system originated code control for 3, 6, 7-10 digit codes (applies only to AIN)</td> </tr> <tr> <td>ALL</td> <td>all number service control tables for the specified number service</td> </tr> </table> <p><i>digit option</i> can be any 6-digit (for CNAM), 10-digit (for E800), or 3, 6 through 10-digit (for AIN) combination; only the number service control corresponding to the digits entered will be decoded and displayed to the TTY.</p> <p><i>translation type</i> (a numeric token, 0 through 255) is valid only if the service type is AIN.</p> <p>The following information is displayed for each entry:</p> <table style="margin-left: 40px;"> <tr> <td>total duration</td> <td>the total length of time, in minutes and seconds, the SCP requested that network management controls should be in effect for this entry.</td> </tr> </table> | 6DG | 6-digit number service control table (applies only to E800 and CNAM) | 10DG | 10-digit number service control table (applies only to E800) | SCP | 6-digit SCP overload control (applies only to AIN) | SMS | service management system originated code control for 3, 6, 7-10 digit codes (applies only to AIN) | ALL | all number service control tables for the specified number service | total duration | the total length of time, in minutes and seconds, the SCP requested that network management controls should be in effect for this entry. |
| 6DG | 6-digit number service control table (applies only to E800 and CNAM) | | | | | | | | | | | | |
| 10DG | 10-digit number service control table (applies only to E800) | | | | | | | | | | | | |
| SCP | 6-digit SCP overload control (applies only to AIN) | | | | | | | | | | | | |
| SMS | service management system originated code control for 3, 6, 7-10 digit codes (applies only to AIN) | | | | | | | | | | | | |
| ALL | all number service control tables for the specified number service | | | | | | | | | | | | |
| total duration | the total length of time, in minutes and seconds, the SCP requested that network management controls should be in effect for this entry. | | | | | | | | | | | | |

SND commands (Continued)

| Command | Result |
|---|--|
| | remaining duration the remaining time, in minutes and seconds, that network management controls will be in effect. |
| | total gap time the gap interval, in minutes and seconds, specified by the SCP when the network management control went into effect. After the entry has been under network management control for this length of time, a single query for that entry will be allowed. At this point the gap timer is reset. No more queries will be allowed until either the gap timer expires again or the total duration of the control has been reached. |
| | remaining gap time the remaining amount of time, in minutes and seconds, until the gap interval will have been reached. |
| | control reason is the reason for the management controls: <ul style="list-style-type: none"> VACANT CODE excessive calling to a vacant code NON VLD NPA excessive calling from a non-purchased NPA SCP OVLD SCP application is overloaded MASS CLNG mass calling detected SMS INIT manually initiated network management control |
| | translation type Valid for AIN only. The translation type, a numeric value (0 through 255) is used for network addressing of AIN queries. |
| RTS SNL <i>n x</i> or RTS SNLS <i>n</i> SEND AIN | Enables signaling link <i>x</i> in signaling link set <i>n</i> or enables signaling link set <i>n</i> . Sends a query to the Service Control Point (SCP) AIN data base so that returned routing information can be verified. The query is constructed using the "SET AIN" commands in this overlay. <i>Note: This is not a simulated query but, instead, an actual query placed to the SCP AIN database.</i> The system response includes a text string indicating the SCP response message type, a text string of each parameter received and the data associated with each parameter, and the response time in milliseconds if a valid message was received. If a Send Notification message was received, the test string, Send Notification and a text string of the echo data parameter will follow the call-related response message type and parameters. |

SND commands (Continued)

| Command | Result |
|---|---|
| SEND CNAM SCPQ <i>calling digits DN privacy database (ACG)</i> | <p>Sends a query to the Service Control Point (SCP) calling name data base so that returned routing information can be verified.</p> <p><i>Note: This is not a simulated query but, instead, an actual query placed to the SCP calling name database.</i></p> <p><i>calling digits</i> is a 10-digit DN (NPANXXXXXX)</p> <p><i>DN privacy</i> is the calling number privacy status and can be one of:</p> <ul style="list-style-type: none"> PRIV Presentation restricted PUB Presentation allowed <p><i>database</i>, a required parameter if the CLASS on Centrex feature is installed in the switch, specifies the calling name database to be queried; database can be one of:</p> <ul style="list-style-type: none"> LOCL Sends message to the DPC associated with the LOCL database defined in Overlay CNFG (DISP) CENT Sends message to the DPC associated with the CENT database defined in Overlay CNFG (DISP) RES Sends message to the DPC associated with the residential IN/1 database defined in Overlay CNFG (DISP) <p>ACG is an optional parameter which indicates that the ACG control tables will be updated when an ACG parameter is returned in the TCAP response.</p> <p>The system response includes the Service Feature name, name characters, and the name privacy status.</p> <p>Example: SEND CNAM SCPQ 9199923400 PUB RES</p> |
| SEND E800 SCPQ <i>nnn ID calling digits called digits</i> | <p>Simulates sending a query to the Service Control Point (SCP) data base so that returned routing information can be verified.</p> <p><i>nnn</i> is a 3-digit LATA number</p> <p><i>ID</i> is the originating station type (identification digits)</p> <p><i>calling digits</i> is a 10-digit DN (NPANXXXXXX)</p> <p><i>called digits</i> is a 10-digit DN (800NXXXXXX)</p> <p>The system response includes the Service Feature ID, AMA Call Type, Carrier ID Code, Routing Number, Alternate Billing Number, and Nature of Number.</p> <p>Example: SEND E800 SCPQ 001 00 9199923400 8007584827</p> |
| SET AIN <i>parameter value</i> | <p>Assigns values to TCAP parameters for an AIN test query. The <i>parameter</i> is a mnemonic representing a TCAP parameter; the <i>value</i> is the data that populates the parameter.</p> <p><i>parameter</i> and corresponding <i>value</i> can be one of:</p> <ul style="list-style-type: none"> ACCD (access code) 1 through 5 digits BC (bearer capability) 0 (speech) 1 (3.1 kHz audio) |

SND commands (Continued)

| Command | Result |
|------------------------------------|--|
| | 3 (56kbps) |
| | 4 (64kbps) |
| CLED (called party ID) | 0 through 15 digits |
| CLNG (calling party ID) | 3, 6, 10 digits |
| CHNU (charge number) | 3, 6, 10 digits |
| CLAI (collected address info) | 0 through 15 digits |
| CLDG (collected digits) | 0 through 32 digits |
| LATA (Local Access Transport Area) | 3 digits |
| CIC (primary carrier) | 4 digits |
| SLHR (service logic host route) | numbers 1 through 15 |
| TRIG (trigger criteria type) | 1 (vertical service code) |
| | 2 (customized access) |
| | 3 (shared intercom) |
| | 4 (NPA) |
| | 5 (NPANXX) |
| | 8 (NPANXXXXXX) |
| | 12 (N11) |
| | 14 (shared IO trunk) |
| | 15 (termination attempt) |
| | 16 (off-hook immediate) |
| | 17 (off-hook delay) |
| | 19 (NPAN) |
| | 20 (NPANX) |
| | 21 (NPANXXX) |
| | 22 (NPANXXXX) |
| | 23 (NPANXXXXX) |
| USID (user ID) | 10 digits for DN |
| | 4 digits for MF or ISUP trunk |
| | 10 digits + 3 through 20 |
| | characters for SPID |
| VSCD (vertical service code) | maximum 5 characters (first character is * or digit, the remaining characters are digits) |
| SET AIN USID <i>facility value</i> | Assigns originating facility type for an AIN test query. The <i>facility</i> is the identity of the originating facility type; <i>value</i> is the ID of the facility. <i>facility</i> and corresponding <i>value</i> can be one of: |

SND commands (Continued)

| Command | Result |
|---|---|
| | DN 10-digit directory number |
| | MF 1 through 4-digit trunk group number |
| | ISUP 1 through 4-digit trunk group number |
| | TSP 10-digit number succeeded by an SPID consisting of 3 through 20 characters |
| SET AIN <i>parameter</i> NONE | Removes a designated parameter from an AIN test query. The <i>parameter</i> is a mnemonic representing a TCAP parameter. <i>parameter</i> can be one of: ACCD (access code) CLEDD (called party ID) CLNG (calling party ID) CHNU (charge number) CLAI (collected address info) CLDG (collected digits) LATA (Local Access Transport Area) CIC (primary carrier) VSCD (vertical service code) |
| SET SUBP <i>parameter</i> <i>sub-parameter value</i> | Assigns a sub-parameter to an AIN test query TCAP parameter. <i>parameter</i> and associated <i>sub-parameter</i> mnemonics can be: CLEDD (called party ID) NON (nature of number) CLNG (calling party ID) PRI (presentation restriction indicator) SCRI (screening indicator) CHNU (charge number) NON (nature of number) CLAI (collected address info) NON (nature of number) CIC (primary carrier) CARS (carrier selection) <i>value</i> for the <i>sub-parameter</i> can be one of: NON 0 (not applicable) 1 (subscriber number) 3 (national number) 4 (international number) 113 (subscriber number, operator requested) 114 (national number, operator requested) 115 (international number, operator requested) 116 (no address present, operator requested) 117 (no address present, cut-through call to carrier) 118 (900+ call from local exchange carrier) |

SND commands (Continued)

| Command | Result |
|--|---|
| | PRI 0 (presentation allowed) 1 (presentation restricted) 2 (number unavailable) |
| | SCRI 0 (reserved for user provided, not screened) 1 (user provided, passed network screening) 2 (reserved for user provided, failed network screening) 3 (network provided) |
| | CARS 0 (no indication) 1 (carrier presubscribed and not input by calling party) 2 (carrier presubscribed and input by calling party) 3 (carrier presubscribed, no indication of input by calling party) 4 (carrier not presubscribed and input by calling party) |
| STAT <i>device</i> (ALL / <i>condition</i> / L3) | Reports the status of specified device. <i>device</i> can be one of: SNL <i>n x</i> signaling link <i>x</i> in signaling link set <i>n</i> SNLS <i>n</i> signaling link set <i>n</i> SNR <i>y z</i> signaling network route <i>z</i> in route set <i>y</i> SNRS <i>y</i> signaling network route set <i>y</i> . Signaling network route <i>z</i> can be one of: PRI1 first primary route in the route set PRI2 second primary route in the route set ALT1 first alternate route in the route set ALT2 second alternate route in the route set. <i>y</i> is of the form <i>n(nn) c(cc) m(mm)</i> where: <i>n(nn)</i> is network code, from 1 through 255, of the route set <i>c(cc)</i> is cluster code, from 0 through 255, of the route set <i>m(mm)</i> is member code, from 0 through 255, of the route set ALL specifies all devices, in state indicated by <i>condition</i> , if specified, of type indicated by <i>device</i> . <i>condition</i> may be one of: INS in service (SNL only) MMB man-made busy (SNL only) SMB system-made busy (SNL only) OOS out of service (SNL only) MBLK manually blocked (SNR only) SBLK system blocked (SNR only) UBLK unblocked (SNR only) |

SND commands (Continued)

| Command | Result |
|---------|---------------------------------|
| AVAL | available (SNL, SNRS only) |
| UNAV | unavailable (SNL, SNRS only) |
| LINH | locally inhibited (SNL only) |
| RINH | remotely inhibited (SNL only) |
| LPO | local processor out (SNL only) |
| RPO | remote processor out (SNL only) |
| CONG | congested (SNRS only) |

L3 specifies that the Level 3 status is output instead of Level 4 status. This option, which is only valid when a single SNRS is specified, invokes a query to the active SNC and displays the information received, including the transfer status of each SNR, which is not maintained at Level 4. If there is a discrepancy between the Level 3 and Level 4 access or congestion status, the Level 4 status will be updated to match that of Level 3 and an error message will display. If there is a discrepancy between the Level 3 and Level 4 block status for any SNR belonging to the SNRS, the Level 3 status will be updated to match that of Level 4 and an error message will display.

The system response is in the following format for SNL status:

SNL *n x direct* (INDR) *alignment* (RINH) (LINH) (RPO)

where:

n is the signaling link set number.

x is the signaling link code (SLC) of the signaling link.

direct is one of:

| | |
|-----|-------------------|
| INS | in service |
| MMB | man-made busy |
| SMB | system-made busy. |

INDR indicates the parent device is busied.

alignment status is one of:

| | |
|------|-------------|
| ACTV | activated |
| DACT | deactivated |
| RSTR | restoring. |

RINH is remotely inhibited

LINH is locally inhibited

RPO is remote processor outage

The system response is in the following format for SNRS status:

SNRS *n(nn) c(cc) m(mm) access congestion*

SNR *n(nn) c(cc) m(mm) PRI1 SNLS y (block status)*

SNR *n(nn) c(cc) m(mm) PRI2 SNLS y (block status)*

SNR *n(nn) c(cc) m(mm) ALT1 SNLS y (block status)*

SND commands (Continued)

| Command | Result |
|---------|--|
| | SNR <i>n(nn) c(cc) m(mm) ALT2 SNLS y (block status)</i> |
| | where: |
| | <i>n(nn)</i> is network code, from 1 through 255, of the signaling network route set |
| | <i>c(cc)</i> is cluster code, from 0 through 255, of the signaling network route set |
| | <i>m(mm)</i> is member code, from 0 through 255, of the signaling network route set |
| | <i>access</i> is one of: |
| | AVAL available for signaling |
| | UNAV unavailable for signaling. |
| | <i>congestion</i> is the level of traffic in the following units: |
| | 0 no congestion |
| | 1 low congestion |
| | 2 moderate congestion |
| | 3 high congestion |
| | PRI1 is first primary route in the route set. |
| | PRI2 is second primary route in the route set. |
| | ALT1 is first alternate route in the route set. |
| | ALT2 is second alternate route in the route set. |
| | <i>y</i> is the signaling link set number. |
| | <i>block status</i> is one of: |
| | MBLK (man-made blocked) |
| | SBLK (system-made blocked) |
| | The system response is in the following format for the Level 3 (L3) SNRS status: |
| | SNRS <i>n(nn) c(cc) m(mm) access congestion</i> |
| | SNR <i>n(nn) c(cc) m(mm) PRI1 SNLS y (snls status) (block status) (cluster transfer status) (member transfer status)</i> |
| | SNR <i>n(nn) c(cc) m(mm) PRI2 SNLS y (snls status) (block status) (cluster transfer status) (member transfer status)</i> |
| | SNR <i>n(nn) c(cc) m(mm) ALT1 SNLS y (snls status) (block status) (cluster transfer status) (member transfer status)</i> |
| | SNR <i>n(nn) c(cc) m(mm) ALT2 SNLS y (snls status) (block status) (cluster transfer status) (member transfer status)</i> |
| | where: |
| | <i>n(nn)</i> is network code, from 1 through 255, of the signaling network route set |

SND commands (Continued)

| Command | Result |
|-------------------------------|--|
| | <p><i>c(cc)</i> is cluster code, from 0 through 255, of the signaling network route set</p> <p><i>m(mm)</i> is member code, from 0 through 255, of the signaling network route set</p> <p><i>snls (signaling linkset) status</i> is one of:</p> <p>INS at least one link in the linkset is in-service</p> <p>OOS all links in the linkset are out of service</p> <p><i>block status</i> is one of:</p> <p>UBLK (unblocked)</p> <p>BLK (blocked; same as MBLK for Level 4 status)</p> <p><i>cluster/member transfer status</i> is one of:</p> <p>ALWD (allowed)</p> <p>REST (restricted)</p> <p>PROH (prohibited; this status causes the SNR to be unavailable for use)</p> |
| STAT AIN | Displays TCAP parameter names, values, and status required for an AIN test query. |
| TEST SNL <i>n x</i> <CR> | <p>Test signaling link <i>x</i> of signaling link set <i>n</i>. To enable this loopback mode testing to occur, the level-2 LAC pack (NT4T20) and level-3 LAC pack that interface with the SNL link being tested must be downloaded and made active (see Overlay LED for applicable commands).</p> <p>The report for each signaling link is displayed in the form:</p> <p>PASSED [the signaling link successfully completed the test sequence]</p> <p>or</p> <p>SND<i>nnn</i> [the signaling link failed the test sequence]</p> <p>where:</p> <p>SND<i>nnn</i> is a code that indicates a specific fault in the device specified in this line of output. (See the <i>Output Message Manual</i> for the meaning of these codes.)</p> |
| UBLK SNR <i>n x</i> (IMED) | <p>Causes the signaling network route <i>x</i> of route set <i>n</i> to become available to handle non-maintenance message traffic.</p> <p>Signaling network route <i>x</i> is one of:</p> <p>PRI1 first primary route of route set <i>n</i></p> <p>PRI2 first primary route of route set <i>n</i></p> <p>ALT1 first alternative route of route set <i>n</i></p> <p>ALT2 first alternative route of route set <i>n</i></p> <p>Signaling network route set <i>n</i> is of the form <i>n(nn) c(cc) m(mm)</i>, where:</p> <p><i>n(nn)</i> is network code, from 1 through 255, of the route set</p> <p><i>c(cc)</i> is cluster code, from 0 through 255, of the route set</p> |

SND commands (Continued)

| Command | Result |
|---|---|
| | <i>m(mm)</i> is member code, from 0 through 255, of the route set |
| | The IMED (Immediately) option makes the signaling route unconditionally unavailable. |
| | A status report is displayed. |
| UINH SNL <i>n x</i> or UINH SNLS <i>n</i> | Allows the signaling link set <i>n</i> or signaling link <i>x</i> in signaling link set <i>n</i> to handle non-maintenance message traffic. |

Section 25: STBL (Standby and 0-dB line overlay)

Description

Overlay STBL is interactive only and is used for switching and restoring non-LCE standby lines. In addition, list commands are included for standby lines and 0-dB lines.

Input commands

When the program has been successfully loaded, the prompt > is printed and the list of commands in this section may be input.

STBL commands

| Input Command | Description |
|-----------------------|--|
| #### | Interrupts any maintenance-terminal output, stops execution of the current command, and places the maintenance terminal in the input mode. Response is the prompt character >. |
| **** | Interrupts any maintenance-terminal output, aborts the overlay program, and places the maintenance terminal in the input mode for overlays or other functions. Response is the prompt character #. |
| ? | Queries the system for valid input. Can be used with any command. |
| LIST LPK <i>ld dB</i> | Lists all LCE-based lines that have a particular combination of type of service and balance network setting. <i>ld</i> can be one of: LD loaded NOLD nonloaded <i>dB</i> can be one of: 0 DB 0-dB service 2 DB 2-dB service ALL either type of service |

STBL commands (Continued)

| Input Command | Description |
|---|--|
| LIST LPK ZDBX (<i>site</i>) LCE <i>b s p u</i> or LIST LPK ZDBX ALL | Lists the characteristics of the specified 0-dB LCE-based line(s). System response is of the form: 6Xxx <i>site</i> LCE <i>b s p u</i> <i>type of service</i> <i>bal. network</i> <i>uneq</i> where: 6Xxx is the pack code <i>site</i> LCE <i>b s p u</i> is the physical address of the line <i>type of service</i> is the type of service offered (0 dB/2 dB) <i>bal. network</i> is the balance network setting (loaded/nonloaded) <i>uneq</i> means unequipped |
| LIST PEPK ZDBX (<i>site</i>) PE <i>b s p</i> or LIST PEPK ZDBX ALL | Lists the characteristics of the specified 0-dB pack(s). System response is of the form: 2Txx <i>site</i> PE <i>b s p u</i> <i>type of service</i> <i>bal. network</i> <i>uneq</i> where: 2Txx is the pack code <i>site</i> PE <i>b s p u</i> is the physical address of the pack <i>type of service</i> is the type of service offered (0 dB/2 dB); this parameter displays for each individual unit <i>bal. network</i> is the balance network setting (loaded/nonloaded); this parameter displays for each individual unit <i>uneq</i> means unequipped |
| LIST SBLN <i>status</i> | Lists equipped standby lines. <i>status</i> can be one of: ACTV active in a sparing connection ALL all equipped lines INAC not active in sparing connection PRE active in sparing connection but currently preempted. System response is of the form: SBLN <i>site</i> PE <i>b s p u</i> 2Txx ACTV/INAC/PRE SPLN <i>site</i> PE <i>b s p u</i> 2Txx |
| LIST SPLN <i>status</i> | Lists equipped spared lines. <i>status</i> can be one of: ALL active in a sparing connection PRE active in sparing connection but currently preempted. System response is of the form: |

STBL commands (Continued)

| Input Command | Description |
|---|--|
| LIST UNIT <i>ld dB</i> | <p>SPLN <i>site PE b s p u 2Txx</i> ACTV/PRE SBLN <i>site PE b s p u 2Txx</i></p> <p>Lists all PE-based lines that have a particular combination of type of service and balance network setting.</p> <p><i>ld</i> can be one of:</p> <p>LD loaded</p> <p>NOLD nonloaded</p> <p><i>dB</i> can be one of:</p> <p>0 DB 0-dB service</p> <p>2 DB 2-dB service</p> <p>ALL either type of service</p> |
| LIST UNIT ZDBX (<i>site</i>) PE <i>b s p u</i> | <p>Lists the characteristics of the specified 0-dB PE-based line.</p> <p>System response is of the form:</p> <p><i>2Txx site PE b s p u type of service bal. network</i></p> <p>where:</p> <p><i>2Txx</i> is the pack code.</p> <p><i>site PE b s p u</i> is the physical address of the line.</p> <p><i>type of service</i> is the type of service offered (0 dB/2 dB)</p> <p><i>bal. network</i> is the balance network setting (loaded/nonloaded)</p> |
| RSTR LINE (<i>site</i>) PE <i>b s p u</i> | Restore the specified line circuit to active service. Response is SBL001. |
| SWCH LINE (<i>site</i>) PE <i>b s p u</i> | Switch in a standby line circuit to replace the specified circuit. The response is SBL001 if switching is successful. |

25-4 STBL (Standby and 0-dB line overlay)

Section 26: TLT (Trunk and loop tester)

Description

Overlay TLT provides interactive outside plant testing capability to the DMS-10 switch. The overlay tests only actual trunks and loops and does not test the circuit packs associated with the trunks and loops. Overlay TLT tests tip/ground and ring/ground ac voltages and dc voltages and tip/ground, ring/ground, and tip/ring resistances and capacitances. In addition to performing these tests, the tester can connect the subscriber loop under test to the test access telephone in the DMS-10 switch to listen for noise and ring the subscriber's line (this test does not apply to RLCM, OPAC, OPM, or RSC-S).

Overlay TLT uses the ac Tester (ACT) to provide transmission tests. Voltage, resistance, and capacitance measurements are provided either by the Peripheral Maintenance System (PMS), for the DMS-10 switch, the SLC-96 loops, the DMS-1U loops, and TR-303 equipment, by the Line Test Unit (LTU), for Remote Line Concentrating Module (RLCM), Outside Plant Access Cabinet (OPAC), Outside Plant Module (OPM), and Remote Switching Center (RSC-S) loops, by the Remote Line Test (RLT) pack for Subscriber Carrier Module (SCM) loops, by the Remote Maintenance pack (RMP), for Remote Subscriber Line Equipment (RSLE) and Remote Subscriber Line Module (RSLM) loops, or by the Universal Maintenance Pack (UMP), for Star Hub equipment. The RLT pack is located in the common equipment shelf of the Remote Concentrator Terminal on which lines are to be tested. This pack is more fully described in NTP 363-2011-102. The loop to be tested should be in the man-made busy state when the test begins.

Note: Unless otherwise indicated, all Overlay TLT commands that are valid for DMS-10 switch LCM lines are also valid for LCE-based remote lines.

Functions provided by TLT emulate the operations performed at conventional test desks or controllers. The principal difference is the use of the DMS-10 switch maintenance terminal to enter commands and display results.

Once a device is selected (using the SEL command) as the device under test (DUT), all subsequent commands are applied to the DUT.

Note: If the DUT is a Music on Hold (MOH) trunk, some TLT commands may not be applicable. Refer to the command descriptions to determine command applicability to MOH trunks.

Input commands

This section lists the commands, with descriptions, that can be used once the requested program has been loaded. Table 26-A lists valid responses to the prompt “BUSY MODE:,” which is prompted if the user tries to select or connect a device that is call-processing busy.

Remote voice access line (VAXS)

This feature allows the user to set up any phone in the direct distance dialing network as the TLT VAXS phone by dialing a special VAXS route intercept DN. The VAXS phone is needed for TLT commands MON, CONN, RING, and TALK. The DN is set up by defining a route as VAXS, then placing this route on intercept for the given DN. Refer to the NTP entitled *Data Modification Manual (297-3601-311)* for instructions on setting up the VAXS route and intercept DN. The remote VAXS phone, used alongside a remote maintenance terminal, provides an ideal remote outside-plant testing site.

To set up the remote VAXS, the user ensures that Overlay TLT is loaded, then dials the DN. Upon successful call termination, confirmation tone is returned to the user. TLT will then drop any previously defined VAXS, set up the new call as the remote VAXS, and print a maintenance terminal message (that is, REMOTE VAXS ESTABLISHED).

To drop the remote VAXS, the user can do one of the following:

- Disconnect the remote VAXS phone
- Enter the VAXS DROP command
- Abort Overlay TLT.

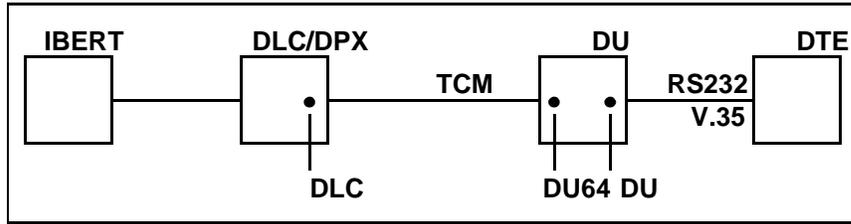
If the remote VAXS is disconnected while in a TLT test setup such as RING or MON, the test will automatically be dropped before dropping the remote VAXS call.

TLT commands

| Input Command and Abbreviation | Command Options | Description |
|--------------------------------|-----------------|--|
| #### | | Interrupts any maintenance-terminal output, stops execution of the current command, and places the maintenance terminal in input mode. Response is the prompt character >. |
| **** | | Interrupts any maintenance-terminal output, drops any device under test (DUT), and aborts the overlay program. Response is the prompt character #. |

TLT commands (Continued)

| Input Command and Abbreviation | Command Options | Description |
|--------------------------------|--|--|
| ? | | Queries the system for valid input. Can be used with any command. |
| ANI A | xxx abc defg | <p>Queries or enters an Automatic Number Identification (ANI) directory number. Typing ANI without parameters queries the ANI number. If an ANI number has not been set through Overlay TLT, the number configured through Overlay CNFG (CROT prompting sequence) will be displayed. If an ANI number has not been set through Overlay TLT or CNFG, NONE will be displayed.</p> <p>When a 1- to 10-digit directory number is input, that number will be used as the ANI number for the outpulsing (OPLS) command until Overlay TLT is aborted. Once the overlay is aborted, the number is not retained. When Overlay TLT is reloaded, the ANI value will default to the number set through Overlay CNFG, unless another number is configured through Overlay TLT.</p> <p>Examples: ANI A 5490738</p> |
| BERT | DLC/DU64/ DU/L/LU/T (B1/B2) (n) DUT UPLD STOP | <p>Bit Error Rate Tester. Measures the transmission quality of a loop. In this test, a known pattern of data is generated by the NT6X99 and sent over a designated loop. By echoing back the data at different points on the loop and measuring the quality of the transmission at these points, faults on the loop can be isolated. After a loopback point is selected, choosing either the UPLD or STOP commands produces a BERT output.</p> <p><i>Note: The BERT command is not applicable to Music on Hold (MOH) trunks.</i></p> <p>Three loopback options can be selected: DLC, DU64, and DU. These three loopback options are illustrated in the figure below. The DLC option selects a Data Line Card (DLC/DPX) as the loopback point. The DU64 option selects the TCM - Data Unit (DU) interface as the loopback point. The DU option selects the Data Unit (DU) - RS232/V.35 interface as the loopback point.</p> <p><i>Note: The DU command is not supported by the NT6X71 Data Line Card. The command works only with the DPX (channel bank) Data Path Loop Extension card.</i></p> |



TLT commands (Continued)

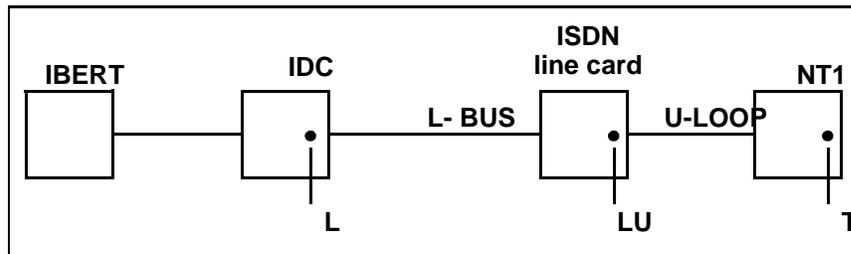
| Input Command and Abbreviation | Command Options | Description |
|--------------------------------|-----------------|---|
| | | <p>After selecting the loopback point for the BERT test, the system outputs the "BERT RUNS:" prompt. The following two options are available at this prompt:</p> <p>The UPLD option provides statistics from the BERT test in the following format:</p> |

TLT commands

| Input Command and Abbreviation | Command Options | Description |
|--------------------------------|-----------------|--|
| | | <p>REP <i>n</i> BLOCKS <i>nnnnnn</i> BIT ERRORS <i>nnnnnn</i> SYNC LOSSES <i>nnnn</i> RATE <i>nnnnnn</i> BPS ASNC/SYNC</p> <p>The STOP option provides BERT statistics in the same format at the UPLD command, then stops the BERT, and resets loopback and IBERT test counters.</p> <p>Three B-channel loopback points apply exclusively to the ISDN line card. For the line under test, D-channel packet traffic and ISDN Layer 3 operations are suspended during BERT testing. B-channel packet traffic, if applicable is interrupted during testing. Loopback points are L (B1/B2), LU (B1/B2), and T (B1/B2). Each test point must be designated to run for either the B1 or B2 channel. For example, BERT LU B1, BERT LU B2. These three loopback options are illustrated in the figure below. The L option selects the IDC at the L-bus loopback point. The LU option selects the ISDN line card at the local U-loop loopback point. The T option selects the NT1 as the loopback point and the <i>n</i> option, when entered after the channel number (B1 or B2), selects an optional repeater number (1 - 6).</p> |

TLT commands (Continued)

| Input Command and Abbreviation | Command Options | Description |
|--------------------------------|-----------------|--|
| | | Two B-channel loopback points apply to the TR-303 ISDN line card: LU (B1/B2) and T (B1/B2). |
| | | <i>Note: If the TTY goes into the output mode during BERT testing, entering %%%% returns the TTY to input mode without affecting the test.</i> |



TLT commands

| Input Command and Abbreviation | Command Options | Description |
|--------------------------------|-----------------|---|
| | | The BERT DUT command provides for Bit Error Testing on a previously selected digital interface. The interface can be a DCM, DSLK, or PRI. The selected channel is input with the SElect command. Then the device is primed with the Outpulse XXX command (XXX represents the dialed digits for a digital loop-back, 108 test line). Then, the BERT DUT will commence the BERT testing from end to end. The UPLD command will provide current statistics for the in-progress BERT test, while the STOP command will end the BERT test and provide the summation statistics for the BERT testing. |

TLT commands (Continued)

| Input Command and Abbreviation | Command Options | Description |
|---------------------------------------|--|---|
| BUSY (B) | (IMED) <i>(site)</i> PE/CE <i>b s p u</i> (IMED) DN <i>abc defg</i> (IMED) <i>(site)</i> LCE/RSC/ RSE/HUBE <i>b s lsg l</i> (IMED) <i>site</i> SLE <i>b cb cu</i> (IMED) <i>site</i> UCE <i>b lsg l</i> (IMED) <i>(site)</i> IDE <i>n l</i> | <p>Changes the status of the given trunk or loop from in-service (INS) or system-made-busy (SMB) to man-made-busy (MMB). BUSY without a device defaults to the DUT. If the device is call-processing-busy or system-made-busy, the option IMED may be used. This will reserve the device for testing when the current call is completed. In Overlay TLT, the IMED option cannot be used for either an NT6X21 or an ISDN line card. From a call-processing-busy condition, the BUSY (IMED) command in Overlay PED must be used to place either device in an MMB condition.</p> <p>Examples: BUSY DN 221 1511 B IMED PE 1 2 5 2 B CAPK LCE 1 2 10 18 B SITE RSE 1 1 4 27</p> <p>Note 1: An ISDN line card cannot be selected by DN.</p> <p>Note 2: This command is not applicable to Music on Hold (MOH) trunks.</p> |
| CAN | | Disconnects any circuit connected to the DUT; that is, cancels any CONN or TALK command. |
| COIN | COL RET (default) | Checks to see if a coin is present at the DUT. If a coin is present, +130 V (collect) or -130 V (return) will be applied to the coin loop. TLT reports if the coin is present, collected, returned, or stuck. Dial-tone-first telephones must be off-hook for this test. This test is not applicable to semi-postpay telephones, since any coins deposited are unconditionally collected. |

TLT commands (Continued)

| Input Command and Abbreviation | Command Options | Description |
|--------------------------------|--|--|
| COL | DP DGT (site) CE/PE/RSC b s p u MF (site) PE/RSC b s p u | <p>Prints all digits generated by a loop or received by an incoming or two-way trunk. This command can only be used for loops and incoming or two-way trunks. Typing ##### will terminate the collection. A specific DGT or MF receiver or UTR channel may be selected to collect digits for the DUT. If no receiver is specified, TLT will use the receiver given in the device's office data. For incoming trunks, TLT will respond with proper start dial signals when needed.</p> <p>When the COL command is used for an ISUP trunk, no receiver is required; <u>a</u>ll digits are displayed in the first ISUP message.</p> <p><i>Note: This command is not applicable to Music on Hold (MOH) trunks.</i></p> <p>Examples: COL DGT PE 1 6 5 1 COL MF CE 1 2 10 1</p> |
| COND | -2 (default) 0 L (default) NL | <p>Allows the user to temporarily set the gain pad and balance network settings on a 0-dB line pack. The COND command options may be specified in any order. Gain is given as -2 dB or 0 dB, and balance can be loaded (L) or nonloaded (NL). These settings are automatically returned to their normal values the next time the line changes switchhook states.</p> <p>The COND 0 command is not valid for Virtual RLCMs (VLCM).</p> <p><i>Note: This command is not applicable to Music on Hold (MOH) trunks.</i></p> <p>Examples: COND NL (sets the 0-dB line pack to -2 dB, nonloaded) COND 0 (sets the 0-dB line pack to 0 dB, loaded) COND -2 L (sets the 0-dB line pack to -2 dB, loaded)</p> |

TLT commands (Continued)

| Input Command and Abbreviation | Command Options | Description |
|--------------------------------|---|--|
| CONN | <p>(site) PE/CE <i>b s p u</i></p> <p>(site) LCE/RSC/RSE/HUBE <i>b s lsg l</i></p> <p>site SLE <i>b cb cu</i></p> <p>site UCE <i>b lsg l</i></p> <p>(site) IDE <i>n l</i></p> <p>DN <i>abc defg</i></p> | <p>Allows the user to connect a digital speech path between the DUT and a specified device. Any previous connection will be automatically cancelled before a new connection is established. Two-wire test trunks and four-wire test trunks can be selected as the DUT. The FREQ option supplies from the ac measurement head a tone with the given frequency and gain. The ac measurement head is part of the ac Tester (ACT). The LPBK option connects a digital loopback path to the DUT. If a trunk or loop to be connected is call-processing-busy, the user will be prompted for a busy-mode command (see Table 26-A for busy-mode commands).</p> <p><i>Note: This command is not applicable to Music on Hold (MOH) trunks.</i></p> <p><i>freq</i> (in Hz) can be: 404 1004 (default) 2804</p> <p><i>gain</i> (in dB) can be: -18 -16 -2 0 (default) 3</p> <p><i>tone</i> can be: BUSY busy (60 ipm) CAS customer alert signal COSH class-of-service high COSL class-of-service low CRBK continuous ringback CTN1 not operational . . CTN5 not operational DT dial tone HIGH high tone LOW low tone OVFL overflow or fast busy (120 ipm) PCRG P-phone continuous ringing PRNG P-phone normal ringing PDRG P-phone distinctive ringing PD1 P-phone DTMF digit 1</p> |

TLT commands (Continued)

| Input Command and Abbreviation | Command Options | Description |
|--------------------------------|------------------|---|
| | | PD2 P-phone DTMF digit 2 |
| | | PD3 P-phone DTMF digit 3 |
| | | PD4 P-phone DTMF digit 4 |
| | | PD5 P-phone DTMF digit 5 |
| | | PD6 P-phone DTMF digit 6 |
| | | PD7 P-phone DTMF digit 7 |
| | | PD8 P-phone DTMF digit 8 |
| | | PD9 P-phone DTMF digit 9 |
| | | PD* P-phone DTMF digit * |
| | | PD0 P-phone DTMF digit 0 |
| | | PD# P-phone DTMF digit # |
| | | QT quiet termination |
| | | RGBK ringback |
| | | ROH receiver off-hook (howler) |
| | | TEST 1020 Hz test (default) |
| | Examples: | CONN 4WTT REM2 |
| | | C TONE RGBK |
| | | C PE 1 4 10 1 |
| | | CONN FREQ 2804 -2 |
| | | C LPBK |
| | | C FREQ |
| CVT | | Selects the specified ISUP trunk as the DUT and transmits an ISUP Circuit Validation Test (CVT) message over the associated signaling link to the Destination Point Code (DPC). This test is used to verify whether an ISUP trunk connecting the local and far-end offices has been set up correctly. |
| | | The test returns either a 'pass' or 'fail' message. A 'fail' message indicates the cause for the failure as one of: |
| | | TYPE wrong type of trunk (digital or analog) |
| | | GLAR glare resolution inconsistent between the two offices |
| | | CONT frequency of continuity tests inconsistent between the two offices. |
| | | <i>Note: This command is not applicable to Music on Hold (MOH) trunks.</i> |

TLT commands (Continued)

| Input Command and Abbreviation | Command Options | Description |
|--------------------------------|---|--|
| DAXS | (site) LCE/RSC/ RSE/HUBE b s lsg l DROP QUE (default) (site) IDE n l | DAXS <location> specifies the ISDN line card used as a digital test access (DTA) port used for the next ISDN B- or D-channel monitoring process (DMON). A line card must have the DTA option set to YES in Overlay CPK (LPK) before successfully executing this command. DAXS QUE or DAXS without a specified location prints the DTA line card location. DAXS DROP releases the specified ISDN line card from DTA status. Digitally monitoring an ISDN channel through a protocol analyzer requires two ISDN cards; one card serves as a DTA port connected to an analyzer while the other card contains the channel being analyzed. The DAXS command specifies the DTA-assigned card for digital monitoring and the DMON command begins the digital monitoring process for the card being analyzed. A DTA assigned line card is restricted from providing ISDN subscriber services. A new DAXS location must be declared before monitoring another line. Examples: DAXS DAXS LCE 1 3 8 1 |
| DISC | | Signals on-hook to the outgoing trunk causing the far-end trunk to be released and the seized condition to be dropped. <i>Note:</i> This command is not applicable to Music on Hold (MOH) trunks. |
| DMON D/B1/B2 | (site) LCE/RSC /RSE/HUBE b s lsg l time (time = 1 to 480 min) FRVR (site) IDE n l | Begins digital monitoring of a defined channel (B ₁ -, B ₂ - or D-channel) on a specified ISDN line card location. The digital equipment, such as a protocol analyzer, used to monitor channel activity, is connected to a DTA line card specified for that drawer. On the DTA, channel B ₁ monitors <i>receive</i> and channel B ₂ monitors <i>transmit</i> . When monitoring the D-channel, the first bit in the datastream contains the receive or transmit data. DMON does not require a location when the line card is defined as a device under test (DUT) through the SEL command. The MEAS, JACK, BERT, DROP and HOLD commands may be executed on the selected device. Specifying <i>time</i> or FRVR through the DMON command automatically initiates HOLD <time>, as described for the HOLD command. After a test setup is placed on HOLD, a new DAXS must be selected before running the next DMON. The DMON command is also a valid response to the "BUSY MODE:" command. |

TLT commands (Continued)

| Input Command and Abbreviation | Command Options | Description |
|--------------------------------|---|--|
| | | <p>The following are examples of using the DAXS and DMON commands to perform ISDN line card digital monitoring. In all examples, the digital access port (DAXS) is initially defined. In Example 1, an ISDN line card is selected as a DUT and the monitoring (DMON) is performed by the LTTS indefinitely, through the HOLD command, until a DROP command is issued. In Example 2 a DMON B1 command is issued against a BUSY MODE: prompt, caused by selecting a call processing busy DUT. In Example 3, a DMON command is issued against a location for 30 minutes, where the hold status is automatically initiated by entering the time with the location.</p> <p>Example 1: DAXS LCE 1 3 8 1 SEL LCE 1 3 6 1 DMON B1 H FRVR or H DROP 1</p> <p>Example 2: DAXS LCE 1 3 8 1 SEL LCE 1 3 6 1 BUSY MODE:DMON B1</p> <p>Example 3: DAXS LCE 1 3 8 1 DMON B1 LCE 1 3 8 1 30</p> |
| DROPD | | Cancels any connection or jack and releases the DUT so a new one may be selected. |
| DTRT | (site) CE/ PE b s p u DROP QUE (default) | <p>Sets up test that prints digits detected by the given DGT receiver or UTR channel. The 4WTT is selected automatically as the DUT; then the 2WTT is connected automatically to the given receiver. The user should ensure that a patch cord is connected to the TR jack of the 2WTT and the RECV jack of the 4WTT. The user then outpulses DGT digits using the OPLS command, which will send the digits from the selected 4WTT. All digits detected by the receiver will be printed at the maintenance terminal.</p> <p><i>Note: This command is not applicable to Music on Hold (MOH) trunks.</i></p> <p>Examples: DTRT QUE DTRT DROP DTRT PE 1 3 9 1 DTRT CE 1 3 12 2</p> |

TLT commands (Continued)

| Input Command and Abbreviation | Command Options | Description |
|--------------------------------|--|---|
| HOLDH | <p><i>time</i> (<i>time</i> = 1 to 480 min)</p> <p>ONHK</p> <p>OFHK</p> <p>DROP <i>n</i> (<i>n</i> = setup number = 1, 2, 3, 4)</p> <p>QUE</p> <p>FRVR</p> | <p>Turns control of the DUT over to the long-term test supervisor (LTTS) as a test setup so the user can select a new DUT. Up to four test setups may be held simultaneously. The system responds with a message that lists the four test setups. A test setup is manually dropped by entering the DROP <i>n</i> command. The user can query the LTTS by entering the HOLD QUE command. The user may hold the test setup for a given time, up to a maximum of 8 hours, or until an off-hook or on-hook occurs on the DUT. For ISDN line card monitoring only, the FRVR option allows monitoring to continue indefinitely (forever), until a HOLD DROP <i>n</i> command is issued. See the DMON command for more information. If no time or event is specified, the test setup will be held for 20 min.</p> <p>Note 1: After a test setup is placed on hold, a new VAXS must be selected prior to selecting a new DUT. See the VAXS command in this section.</p> <p>Note 2: The ONHK and OFHK options are not valid for an ISDN line card.</p> <p>Note 3: This command is not applicable to Music on Hold (MOH) trunks.</p> |
| Examples: | <p>H 1</p> <p>H QUE</p> <p>H DROP 1</p> <p>H OFHK</p> <p>H FRVR</p> | |
| JACKJ | <p>BRI</p> <p>DROP</p> <p>QUE</p> <p>SIG</p> <p>TX</p> <p><none></p> | <p>Makes a metallic connection through the metallic bus from the maintenance jack panel to the analog side of the device under test and to any connected device. The connection is broken when Overlay TLT is aborted. The command options are used in the following ways: the BRI command option is used for bridged access to LCM lines; the SIG (signaling) command option is used only with trunks; the TX (transmission) command option is used only for four-wire E&M trunks; the DROP option cancels an existing connection; the QUE (query) option provides the current JACK command status indicating whether there is currently a connection. If no command option is entered with the JACK command when there is no current connection, the TX command option is the default option issued with the command. If no command option is entered when a current connection exists, the DROP option is the default command option.</p> |

TLT commands (Continued)

| Input Command and Abbreviation | Command Options | Description |
|--------------------------------|-----------------|---|
| | | <p><i>Note 1:</i> The JACK command does not apply to the OPM, OPSM, OPAC, RLCM, RSLE, RSLM, RSC-S, or Star Hub. The command can also not be used for SCM and DCM devices.</p> <p><i>Note 2:</i> SLC-96s use the same metallic access jacks as LCMs (jacks 7 through 10).</p> <p><i>Note 3:</i> The jack numbers displayed after a metallic connection is made represent the actual metallic-access jack numbers (jacks 6 through 10) on the maintenance panel at the device site.</p> <p><i>Note 4:</i> This command is not applicable to Music on Hold (MOH) trunks.</p> |
| LIST ? | | Prints all command names that can be used in TLT, including any abbreviations. |

TLT commands (Continued)

| Input Command and Abbreviation | Command Options | Description |
|--------------------------------|--|---|
| MEASM | ACV DCV RES CAP ALL (default) SEND (default) RECV ¹ SIG ² OUT (default) IN ³ E M BRI (REP <i>n</i>) | <p>Connects the DUT to the testing device. The Peripheral Maintenance System (PMS) is the testing device for most applications. When the DUT is a Subscriber Carrier Module (SCM) loop, the Remote Line Test (RLT) pack at the Remote Concentrator Terminal (RCT) is used. When the DUT is Remote Line Concentrating Module (RLCM), Outside Plant Module (OPM), Outside Plant Access Cabinet (OPAC), or Remote Switching Center (RSC-S) equipment, the Line Test Unit (LTU) pack at the Remote Maintenance Module (RMM) is used. When the DUT is an RSLE loop or an RSLM loop, the Remote Maintenance pack (RMP) at the remote site is used, but it does not support the BRI command. When the DUT is Star Hub equipment, the Universal Maintenance Pack (UMP) is used. When the DUT is an ISDN line card, only OUT measurements are supported.</p> <p>MEAS command options may be specified in any order. Measurements can be specified in the IN or OUT direction, or bridged on the SEND or RECV leads. If SIG is given, the E (default) or M lead is measured. The LTU, PMS, RLT, or RMP makes ac- and dc-voltage measurements (Vrms and V, respectively) as well as resistance (kΩ) and capacitance (μF) measurements.</p> <p>The REP <i>n</i> option may be given to repeat the MEAS measurement every 4 s for a given number of times. The letter <i>n</i> must be an integer between 1 and 32,000; if <i>n</i> is not specified, the default value is 32,000. Operating company personnel may abort the repeating operation by entering #####. Each measurement requires about 3 s upon receipt of the MEAS command. Therefore, the REP command will result in measurements occurring approximately every 7 s, except for RSLE and RSLM packs, which take approximately 20 s.</p> |

Note: The tip-to-ring measurements on an NT6X21 loop can be affected by the active components in the M5000-Series business set; therefore, in order to obtain an accurate tip-to-ring measurement of an NT6X21 loop, the M5000-Series business set must be disconnected from the loop.

Examples:

```
(input)      MEAS SEND OUT ALL
(output)     TR      TG      RG
              AC (Vrms)  nnn  nnn  nnn
```

TLT commands (Continued)

| Input Command and Abbreviation | Command Options | Description |
|--------------------------------|---|---|
| | | DC (V) <i>nnn nnn nnn</i> |
| | | RES (kΩ) <i>nnn nnn nnn</i> |
| | | CAP (μF) <i>nnn nnn nnn</i> |
| | | <i>Note: For LTUs, the TR field may contain a default TG value if the TR value cannot be ascertained.</i> |
| | | If the resistance measurement is less than 100 kΩ, the capacitance results will not be reported. |
| | | (inputs) M IN |
| | | M CAP |
| | | M IN RECV |
| | | M SIG M |
| | | M SIG RES REP 3 |
| | | ¹ RECV is valid for four-wire E&M trunks only. |
| | | ² Only the SIG lead of E&M trunks can be accessed. |
| | | ³ Because of maintenance access bus limitations, MEAS IN is not a valid command for LCM, OPM, OPAC, OPSM, RLCM, RSLE, RSLM, Star Hub, RDTs, or SCM-10S. |
| MFRT | <i>(site)</i> CE/PE <i>b s p u</i> DROP QUE (default) | Sets up test that prints digits detected by the given MF receiver or UTR channel. The four-wire test trunk (4WTT) is selected automatically as the DUT; then the two-wire test trunk (2WTT) is connected automatically to the given receiver. The user should ensure that a patch cord is connected to the TR jack of the 2WTT and the RECV jack of the 4WTT. The user then outpulses MF digits using the OPLS command, which will send the digits from the selected 4WTT. All digits detected by the receiver will be printed at the maintenance terminal. |
| | | Examples: MFRT DROP MFRT PE 1 3 9 1 |
| OPLSO | MF (=) <i>digits</i> ANI DP <i>digits</i> (ANI) DGT <i>digits</i> (ANI) ISUP <i>digits</i> (ANI) (COT) PRI <i>digits</i> (ANI) | Outpulses the given digits (that represent the called number) over the DUT. The maximum number of digits can be 32. If outpulsing type is not specified, TLT will outpulse the type specified in the trunk's data block. If a NODG trunk is the DUT, TLT defaults to IDT = 700 ms. For MF outpulsing, TLT automatically inserts KP and ST at the beginning and the end of the digit string unless the option "=" is used. Valid MF dialing digits are 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, KP, KPP, KP2P, KP3P, ST, STP, ST2P, ST3P. For DGT outpulsing, valid digits are 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, *, #. Type a space between digits. |

TLT commands (Continued)

| Input Command and Abbreviation | Command Options | Description |
|--------------------------------|---|--|
| POWRP | FLAT (default) CMSG CNCH (REP <i>n</i>) | <p>If Automatic Number Identification (ANI) outpulsing is required (for example, for CAMA or TSPS trunks), enter ANI following the digits. Overlay TLT outpulses the digits, receives a start signal, and outpulses the ANI number which is configured through Overlay TLT or Overlay CNFG (CROT prompting sequence). The number configured through Overlay TLT is not retained after the overlay is aborted (see ANI command).</p> <p><i>Note: If the ANI digits need to be outpulsed before the called number, the digits should be the calling number and the ANI number should be the called number.</i></p> <p>The continuity test (COT) option is also available for ISUP trunks.</p> <p><i>Note: This command is not applicable to Music on Hold (MOH) trunks.</i></p> <p>Examples: OPLS MF 3 1 2 9 3 6 3 6 O = KP2 1 2 ST2P KP 3 4 5 ST O DGT 5 4 9 0 7 3 8 ANI O ISUP 9 1 9 9 2 1 3 0 1 ANI COT O PRI 9 2 1 2 0 0 1</p> <p>Connects the DUT to the ac Tester (ACT). A flat, C-message or C-notch filter may be placed ahead of the ACM while making power measurements. Units of loss are dBm0 for flat filter, and dBmC for CMSG and CNCH.</p> <p>The REP <i>n</i> command may be given to repeat the POWR test every 2 s for a given number of times. The letter <i>n</i> must be an integer between 1 and 32,000; if <i>n</i> is not specified, the default value is 32,000. Operating company personnel may abort the repeating operation by entering #####.</p> |

TLT commands (Continued)

| Input Command and Abbreviation | Command Options | Description |
|---------------------------------------|------------------------|--|
| REC | QUE (default) | Operates the Digital Recorded Announcement (DRA) pack. This command is valid only when the device under test is a DRA pack. REC QUE gives the status of the DRA pack that is the device under test. REC SET records a desired message onto the DRA pack. The REC SET command is only valid on Unit 1 of the DRA pack. REC PLAY places the selected DRA into the playback mode until the command is terminated. REC DROP drops all connections on the DRA pack, drops the DRA pack as the device under test, and drops the VAXS. Switching between the SET and PLAY modes is not allowed because playback is automatic following the completion of the SET command. Output messages will prompt operating company personnel if steps are omitted during the set-up prior to this command. Refer to the <i>Maintenance and Test Manual (297-3601-511)</i> for procedures to record and playback a message. |
| | SET | |
| | PLAY | |
| | DROP | |
| | | |
| RINGR | TR | Applies ringing to the DUT, which must be a loop, and gives ringback tone to operating company phone specified by the VAXS command. Typing ##### will stop ringing and prompt for the next command. DUT must be on-hook before RING will be allowed. If DUT goes off-hook during ringing, ringing will be stopped and a talk path will be set up to any VAXS. |
| | T | |
| | R | |
| | T1 | |
| | R1 | |

TLT commands (Continued)

| Input Command and Abbreviation | Command Options | Description |
|--------------------------------|---|--|
| | T2 | |
| | R2 | |
| | T3 | |
| | R3 | |
| | T4 | |
| | R4 | |
| | T5 | |
| | R5 | |
| RTS | <i>(site)</i> PE/ CE <i>b s p u</i> | Changes the status of the given trunk or loop from MMB to INS. RTS without a device defaults to the DUT. Additional tasks performed during RTS for the Data Line Card (NT6X71AB/BA) include: enable TCM sync reporting; set up BPVO reporting; release TA and CO relays; send soft reset to the Data Unit. |
| | <i>(site)</i> LCE/RSC/ RSE/HUBE <i>b s lsg l</i> | |
| | DN <i>abc defg</i> | Examples: RTS PE 1 3 9 3 RTS DN 543 4083 RTS LCE 1 4 17 12 RTS SITE RSE 1 2 09 27 |
| | <i>site</i> SLE <i>b cb cu</i> | |
| | <i>(site)</i> IDE <i>n l</i> | Note 1: An ISDN line card cannot be selected by DN. |
| | <i>site</i> UCE <i>b lsg l</i> | Note 2: This command is not applicable to Music on Hold (MOH) trunks. |
| SEIZ | | Signals offhook in the out direction on the DUT, which must be an outgoing or two-way trunk. |
| | | Note 1: This command can be used only for an in-service device. |
| | | Note 2: This command is not applicable to Music on Hold (MOH) trunks. |

TLT commands (Continued)

| Input Command and Abbreviation | Command Options | Description |
|--------------------------------|--|---|
| SEL S | (site) PE/ CE <i>b s p u</i> (site) LCE/RSC/ RSE/HUBE <i>b s lsg l</i> site SLE <i>b cb cu</i> (site) IDE <i>n l</i> site UCE <i>b lsg l</i> DN <i>abc defg</i> 2WTT (site) 4WTT (site) SHOE | <p>Specifies the device that will be the DUT. All subsequent commands apply to this device. Only trunks or loops in the idle, lockout, or man-made-busy (MMB) state may be selected. If the device is call-processing-busy, the system outputs the "BUSY MODE:" prompt. The user responds by entering a command from Table 26-A.</p> <p>The SHOE option allows the user to manually connect a loop or trunk not equipped in the DMS-10 switch to the four-wire MDF shoe of the PMS. This PMS shoe consists of two wire pairs marked "OUT" and "IN."</p> <p>Devices under test are placed in the call-processing- busy maintenance state so that no other testers such as PED or ROTL can access them.</p> <p>Note 1: An ISDN line card cannot be selected by DN.</p> <p>Note 2: To select a Multiple Appearance Directory Number (MADN) as the DUT, the physical address of the line must be entered rather than the line number.</p> <p>Note 3: The TTY display, "DUT MSG RCVD <i>nn</i>," where <i>nn</i> is a hex code, indicates that an uninterpreted message has been received. This message can be ignored.</p> <p>Note 4: While a Music on Hold (MOH) trunk is selected, no music (or other audio treatment) can be provided over that trunk to callers placed on hold.</p> |
| OUT (default) (site) | | Examples: SEL PE 1 3 9 3 SEL DN 232 1522 SEL 2WTT SEL SITE RSE 1 2 09 27 |
| IN | | |
| BOTH | | |
| QUE (default) | | |

TLT commands (Continued)

| Input Command and Abbreviation | Command Options | Description |
|--------------------------------|---|---|
| SELF | | <p>Performs a complete self test on the DPX, DLC, and DU facilities. The results of the test appear in one of the following messages:</p> <p>DPX and DU OK</p> <p>DPX FAILED</p> <p>DU FAILED</p> <p>BOTH FAILED (which indicates that both the DPX and DU failed the self test)</p> <p>PASSED (which indicates that both the DLC and DU passed the self test)</p> <p>TLT120 (which indicates that either the DLC or DU failed the self test and shows the number of messages sent and the number received)</p> |
| STAT | <p>(site) PE <i>b s p u</i></p> <p>(site) LCE/RSC/ HUBE <i>b s lsg l</i></p> <p>DN <i>abc defg</i></p> <p>site SLE <i>b cb cu</i></p> <p>site UCE <i>b lsg l</i></p> <p>(site) IDE <i>n l</i></p> | <p>Gives maintenance status of the given trunk or loop. STAT without a device defaults to the DUT.</p> <p>Examples: STAT PE 1 3 9 3 STAT STAT DN 549 1234 STAT LCE 3 3 2 12 STAT SHUB HUBE 1 3 11</p> <p>Note 1: To obtain the status of a Multiple Appearance Directory Number (MADN), the physical address of the line must be entered rather than the line number.</p> <p>Note 2: An ISDN line card cannot be selected by DN.</p> |
| TALKT | | <p>Sets up a digital speech path between the operating company's phone (VAXS connection) and the DUT. The VAXS command must be issued first to establish the VAXS connection before the TALK command is issued. Once established, the talk path is cancelled like a regular connection.</p> <p>Note: If a Music on Hold (MOH) trunk is selected as the DUT, the TALK command can be used to listen to the music (or other audio treatment) provided over that trunk.</p> |
| TMBS <# of messages> | | <p>Tests an M5000-Series business set (associated with the Meridian Business Sets (MBS) feature).</p> |

TLT commands (Continued)

| Input Command and Abbreviation | Command Options | Description |
|--------------------------------|---|---|
| VAXSV | <p><i>(site)</i> PE <i>b s p u</i></p> <p><i>(site)</i> LCE/RSC/RSE/HUBE <i>b s lsg l</i></p> <p><i>site</i> SLE <i>b cb cu</i></p> <p><i>(site)</i> IDE <i>n l</i></p> <p><i>site</i> UCE <i>b lsg l</i></p> <p>DN <i>abc defg</i></p> <p>DN <i>npa abc defg</i></p> <p>DROP</p> <p>QUE (default)</p> | <p>The following tests are performed when the TMBS command is entered:</p> <ul style="list-style-type: none"> <li>- MBS loop around test: places the M5000-Series business set in loop around mode, sends a set of W78 messages to the pack, and verifies that each message is transmitted. The number of messages to send can be entered with the command (1 through 50) or a default value can be determined in the MTCE prompting sequence of Overlay CNFG (NTP 297-3601-311, <i>Data Modification Manual</i>). <li>- Display test (applicable only for M5000-Series business sets with display): sends a message to the M5000-Series business set to determine the status of the display and to verify that a response from the set is received. <p>Specifies a DMS-10 switch line or SLC-96 line as the operating company's phone. Typing VAXS with no parameters gives the location of the phone presently assigned as the operating company's phone. A VAXS may also be set up remotely (see "Remote Voice Access Line [VAXS]" in this section).</p> <p>Examples: VAXS DN 221 1511 V DROP V LCE 1 3 5 1 9 V SITE RSE 1 2 09 27</p> <p>The VAXS command is used in conjunction with the TALK command and with the MON command (see SEL command and Table 26-A).</p> <p>Note 1: The VAXS command is not valid for Virtual RLCM (VLCM) lines.</p> <p>Note 2: The ten-digit DN option (DN <i>npa abc defg</i>) must be used when the Duplicate NXX feature is configured, and if the <i>abc d</i> digits of the number have more than one associated HNPA.</p> |
| WAITW | | <p>Immediately places the maintenance terminal in the output mode so messages will print.</p> <p>Note: <i>This command is not applicable to Music on Hold (MOH) trunks.</i></p> |

**Table 26-A:
TLT busy-mode commands**

| Input Command and Abbreviation | Description |
|--------------------------------|---|
| DMON [D/B1/B2] | Instructs TLT to ignore this device and allows the user to select or connect a new one. Instructs TLT to activate the DMON command, described in this chapter, to monitor an ISDN channel using an external device. |
| IMEDI | Instructs TLT to drop the call in which the given device is involved, then select or connect the device for the user. |
| MON M | Instructs TLT to tap the operating company's phone, through a conference circuit, to the call on the DUT, so that operating company personnel may monitor the call. Another busy mode prompt is then given. The conference call is held either until the next command, until a party of the original call disconnects or flashes, or until a Meridian Business Set (MBS) is involved in end-to-end signaling. The VAXS command must be issued first to establish the VAXS connection before the MON command is issued. <i>Note: If a Music on Hold (MOH) trunk is selected as the DUT, the VAXS command can be used to listen to the music (or other audio treatment) provided over that trunk.</i> |
| WAITW | Instructs the TLT to keep polling the busy device until it becomes idle, at which time TLT will select or connect the device. The user may cancel the WAIT command by typing #####. |

Section 27: UPDT (Update)

Description

Overlay UPDT is used for four functions:

- transferring equipment data from system memory to a specified IOI device or IP location and to manage software packages
- updating the active IOI device or IP location after equipment data is changed using the DMO programs
- assigning NT8T04 Network Interface packs
- relocating the peripheral loops on the NT4T04/NT4T05 packs in the DMS-10 Classic Network to peripheral loops on the NT8T04 packs in the DMS-10EN network

In Generic 502 and later 500-Series releases, the UPDT overlay will also be used for administration purposes. When these commands are introduced, the associated command descriptions will appear in NTP 297-3601-311 (*Data Modification Manual*).

In Generic 503 and later 500-Series releases, the database will be inaccessible during office data backups to the DMS-10 file system by the UPDT overlay. Any pending database changes will be made after the office data backup has completed.

UPDT commands

| Prompt | Response | Description |
|--------|-----------------------------------|--|
| REQ | | Asks for the operation to be performed. REQ is prompted when the UPDT Overlay is activated. The possible <u>maintenance</u> command responses appear below. |
| | ? | Queries the system for valid input. Can be used with any command. |
| | ACTV <i>file#</i> HD0/ HD1/MO0 | In Generic 601.10 and later. Makes the set of office data and configuration record files specified by <i>file#</i> the active office data and configuration record files on the target IOI device. <i>file#</i> is obtained from the "QUE <i>device</i> DATA" command. |

UPDT commands (Continued)

| Prompt | Response | Description |
|--------|---------------------------------|--|
| | AP <i>pnum</i> (<i>pnum2</i>) | <p>Activates a patch or group of patches. <i>pnum</i> is the patch number. <i>pnum2</i> is an optional parameter that defines the upper limit of a range of patch numbers, starting at <i>pnum</i>.</p> <p>Note 1: Any patches that have been activated for less than 45 seconds will be automatically deactivated if a system initialization occurs.</p> <p>Note 2: Any test patches (indicated by TEST PATCH in the output of the QP command) will be automatically deactivated if a system initialization occurs.</p> |
| | BP <i>pnum</i> (<i>pnum2</i>) | <p>Deactivates a patch or group of patches. <i>pnum</i> is the patch number. <i>pnum2</i> is an optional parameter that defines the upper limit of a range of patch numbers, starting at <i>pnum</i>.</p> |
| | DUMP HD0 / HD1 / MO0 / ALL | <p>Transfers equipment data from system memory to a specific IOI device or to all devices. The device can be a hard disk (HD0 or HD1) or a magneto-optical device (MO0).</p> <p>Note: In 601.10 generics and beyond, when ALL is specified and an IP address of a collection point in the DMS-10 network has been configured via overlay CNFG(AODB) sequence, the latest version of the equipment data will also be transferred to the IP location.</p> <p>A DUMP creates two data copies when dumping to HD0/HD1/MO0: the data copied to the specified device and a backup copy. The backup copy contains the office data as it appeared prior to the DUMP command execution.</p> <p>Note: In 601.10 generics and beyond, the backup data files created are the office data files appended with a site name, date, time stamp, and generic that the backup file was created. Multiple backup files are created at the IP location by retaining the previously transferred files. For example an office data backup file created for site SYS1 would have the following name: "SYS1.2005.06.22.13.30.601.10.office.dat".</p> |

UPDT commands (Continued)

| Prompt | Response | Description | | | | | | | | |
|--------|---|---|-----|-------------|-----|-------------|-----|------------------------|-----|-----------------|
| | | <p>Note 1: In 503.10 generics and beyond, the DUMP command will perform a patch synchronization so that all devices will contain the same level of patch information. Also if the Automatic Patch Application feature is turned on by the CNFG (OVLY) sequence, any patches that have not yet been applied will be applied after the dump. In generics 601.10 and beyond dumping to the IP location will NOT update the IP location with any patch information. The IP location is used solely to backup office data files.</p> <p>Note 2: In Generic 601.10 and beyond in order for equipment data to be dumped to the IP location an IP address must first be defined in the CNFG(AODB) sequence.</p> | | | | | | | | |
| | EP <i>numb</i> (<i>pnum2</i>) | Erases a software patch or group of patches from memory. <i>pnum2</i> is an optional parameter that defines the upper limit of a range of patch numbers, starting at <i>numb</i> . | | | | | | | | |
| | GETF <i>file#</i> HD0/ HD1/MO0 | In Generic 601.10 and later. Copies the specified set of office data and configuration record data files from the IP location into the DMS-10 officeData directory on the specified target IOI device. <i>file#</i> is obtained from the "QUE AODB DATA" command. | | | | | | | | |
| | LP <i>pnum</i> (<i>pnum2</i>) | Loads a patch, or group of patches, into memory from disk. <i>pnum</i> is the patch number. <i>pnum2</i> is an optional parameter that defines the upper limit of a range of patch numbers, starting at <i>pnum</i> . | | | | | | | | |
| | LUP | Prints the set of unloaded patches found on all enabled disks for the currently active generic. | | | | | | | | |
| | MON ON/OFF/ <CR> | In Generic 601.10 and later. Turns the FTP trace for the AODB feature on or off. When no parameter is entered the status of the monitor function is output. | | | | | | | | |
| | PKG ACT <i>device</i> <i>package</i> | <p>Activates an installed software package on a specified device. A default device does not exist for this command, therefore a device must be specified. Software packages must be installed, using PKG INST, before they can be activated.</p> <p><i>device</i> may be one of:</p> <table border="0"> <tr> <td>HD0</td> <td>hard disk 0</td> </tr> <tr> <td>HD1</td> <td>hard disk 1</td> </tr> <tr> <td>MO0</td> <td>magneto-optical device</td> </tr> <tr> <td>ALL</td> <td>all IOI devices</td> </tr> </table> <p><i>package</i> is the name assigned to the software package, which must be enclosed within quotation marks.</p> | HD0 | hard disk 0 | HD1 | hard disk 1 | MO0 | magneto-optical device | ALL | all IOI devices |
| HD0 | hard disk 0 | | | | | | | | | |
| HD1 | hard disk 1 | | | | | | | | | |
| MO0 | magneto-optical device | | | | | | | | | |
| ALL | all IOI devices | | | | | | | | | |

UPDT commands (Continued)

| Prompt | Response | Description | | | | | | | | | | | | | | |
|--------|---|--|-----|-------------|-----|-------------|-----|------------------------|-----|-----------------|-----|-------------|-----|------------------------|-----|-----------------|
| | PKG DACT <i>device package</i> | <p>Deactivates a previously activated software package on a specified device. A default device does not exist for this command, therefore a device must be specified.</p> <p><i>device</i> may be one of:</p> <table border="0"> <tr> <td>HD0</td> <td>hard disk 0</td> </tr> <tr> <td>HD1</td> <td>hard disk 1</td> </tr> <tr> <td>MO0</td> <td>magneto-optical device</td> </tr> <tr> <td>ALL</td> <td>all IOI devices</td> </tr> </table> <p><i>package</i> is the name assigned to the software package.</p> | HD0 | hard disk 0 | HD1 | hard disk 1 | MO0 | magneto-optical device | ALL | all IOI devices | | | | | | |
| HD0 | hard disk 0 | | | | | | | | | | | | | | | |
| HD1 | hard disk 1 | | | | | | | | | | | | | | | |
| MO0 | magneto-optical device | | | | | | | | | | | | | | | |
| ALL | all IOI devices | | | | | | | | | | | | | | | |
| | PKG DEL <i>device package</i> | <p>Deletes a compressed software package on a specified device. A default device does not exist for this command, therefore a device must be specified. The software package is totally removed from the "packages/" directory, however any installed packages are not affected. Those files must be removed using the PKG UINS command.</p> <p><i>device</i> may be one of:</p> <table border="0"> <tr> <td>HD0</td> <td>hard disk 0</td> </tr> <tr> <td>HD1</td> <td>hard disk 1</td> </tr> <tr> <td>MO0</td> <td>magneto-optical device</td> </tr> <tr> <td>ALL</td> <td>all IOI devices</td> </tr> </table> <p><i>package</i> is the name assigned to the software package.</p> | HD0 | hard disk 0 | HD1 | hard disk 1 | MO0 | magneto-optical device | ALL | all IOI devices | | | | | | |
| HD0 | hard disk 0 | | | | | | | | | | | | | | | |
| HD1 | hard disk 1 | | | | | | | | | | | | | | | |
| MO0 | magneto-optical device | | | | | | | | | | | | | | | |
| ALL | all IOI devices | | | | | | | | | | | | | | | |
| | PKG INST <i>from-device package (to-device)</i> | <p>Installs a compressed software package, located on a specified device (<i>from-device</i>), onto a specified device (<i>to-device</i>). A default device does not exist for this command, therefore a device must be specified. If the destination device (<i>to-device</i>) is omitted, the source device (<i>from-device</i>) is also used as the destination.</p> <p><i>from-device</i> may be one of:</p> <table border="0"> <tr> <td>HD0</td> <td>hard disk 0</td> </tr> <tr> <td>HD1</td> <td>hard disk 1</td> </tr> <tr> <td>MO0</td> <td>magneto-optical device</td> </tr> </table> <p><i>to-device</i> may be one of:</p> <table border="0"> <tr> <td>HD0</td> <td>hard disk 0</td> </tr> <tr> <td>HD1</td> <td>hard disk 1</td> </tr> <tr> <td>MO0</td> <td>magneto-optical device</td> </tr> <tr> <td>ALL</td> <td>all IOI devices</td> </tr> </table> <p><i>package</i> is the name assigned to the software package, which must be enclosed within quotation marks.</p> <p>Example: PKG INST HD0 "501_50100_0002" HD1</p> | HD0 | hard disk 0 | HD1 | hard disk 1 | MO0 | magneto-optical device | HD0 | hard disk 0 | HD1 | hard disk 1 | MO0 | magneto-optical device | ALL | all IOI devices |
| HD0 | hard disk 0 | | | | | | | | | | | | | | | |
| HD1 | hard disk 1 | | | | | | | | | | | | | | | |
| MO0 | magneto-optical device | | | | | | | | | | | | | | | |
| HD0 | hard disk 0 | | | | | | | | | | | | | | | |
| HD1 | hard disk 1 | | | | | | | | | | | | | | | |
| MO0 | magneto-optical device | | | | | | | | | | | | | | | |
| ALL | all IOI devices | | | | | | | | | | | | | | | |

UPDT commands (Continued)

| Prompt | Response | Description |
|--------|------------------------------------|---|
| | PKG LIST <i>device</i> | Lists all software packages stored on the specified device. <i>device</i> may be one of: HD0 hard disk 0 HD1 hard disk 1 MO0 magneto-optical device ALL all IOI devices |
| | PKG UINS <i>device package</i> | Un-installs a previously installed software package on a specified device. A default device does not exist for this command, therefore a device must be specified. PKG UINS removes an expanded software package from the file system. The process reverses the expansion, installation and activation of the installed software package. The expanded software package is removed completely; however, any compressed packages in the "packages/" directory are not affected. Those files must be removed using the PKG DEL command. <i>device</i> may be one of: HD0 hard disk 0 HD1 hard disk 1 MO0 magneto-optical device ALL all IOI devices <i>package</i> is the name assigned to the software package. Example: PKG UINS HD0 "501_50100_0002" |
| | PUTF<CR> | In Generic 601.10 and later. Copies the active set of office data and configuration record data files from the officeData directory on the primary IOI device to the IP location. |
| | PUTF <i>file#</i> HD0/ HD1/MO0 | In Generic 601.10 and later. Copies the specified set of office data and configuration record data files from the officeData directory on the specified target IOI device to the IP location. <i>file#</i> is obtained from the "QUE <i>device</i> DATA" command. |
| | QP <i>pnum</i> (<i>pnum2</i>) | Provides header fields for a specific patch, or group of patches, which must either be loaded (see QPL) or present on an enabled disk (see LUP). <i>pnum</i> is the patch number. <i>pnum2</i> is an optional parameter that defines the upper limit of a range of patch numbers, starting at <i>pnum</i> . |
| | QPL | Provides the current patch level and brief status information for all patches which have been loaded into memory. |
| | QUE <i>device</i> DATA | Displays the file creation information for all sets of office and configuration record files on the specified device. The device can be HD0 or HD1 - hard disks, MO0 - magneto-optical device, AODB - IP collection point in the DMS-10 network ALL - all IOI devices and IP location. |

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Maintenance Diagnostic Input Manual

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