AnyMedia® Access System: Software Release Description Release 1.2.2.5.3 Issue 1

Contents

1.	Overview	2
2.	Features	3
3.	System Notes	7
4.	Operating Issues Resolved	10
5.	Operating Issues	12
6.	System Configuration	15
7.	Turn-Up Procedure	17
8.	Operational and Maintenance Procedures	27
9.	R1.2.2.X to R1.2.2.5.3 Conversion Procedure	37
10.	Glossary	45



1. Overview

The purpose of this document is to provide information about the *AnyMedia* Access System Software Release 1.2.2.5.3. For more detailed information, see the *AnyMedia* Access System Application, Planning, and Ordering Guide, 363-211-101; the *AnyMedia* Access System Installation Manual, 363-211-102; and the *AnyMedia* Access System Commands and Procedures CD-ROM, 363-211-103. These documents may be purchased by calling 888-LUCENT8. This document includes the following:

- Features of the AnyMedia Access System Software Release 1.2.2.5.3
- Operating Issues Resolved—Operating Issues from the previous release of software that have been resolved.
- Operating Issues—Exceptions in Release 1.2.2.5.3 to the operating procedures described in the customer documentation.
- System Configuration—Identifies the hardware version for Release 1.2.2.5.3.
- Turn-Up Procedure—Recommended steps to turn-up a R1.2.2.5.3 *AnyMedia* Access System for the first time.
- Operational and Maintenance Procedures—Procedures that will be useful during the operation and maintenance of Release 1.2.2.5.3.
- R1.2.2.X to R1.2.2.5.3 System Conversion Procedure—Procedure for converting a R1.2.2.0, or R1.2.2.2, or R1.2.2.5.0, or R1.2.2.5.1, or a R1.2.2.5.2 system to a R1.2.2.5.3 system.
- Glossary—A list of acronyms and their definitions.

2. Features

\blacksquare NOTE:

In this section, items in **bold** are new in this release and, shown in parentheses, the release at which they became available.

The following are the new features delivered in this R1.2.2.5.3 release from R1.2.2.5.2

- None.

(The purpose of this point release is to resolve operational issues found in release R1.2.2.5.2. The issues resolved are listed in Section 4 on page 10 of this document.)

2.1. Services

The following services are available.

- 2-wire loop-start POTS
- 2-wire loop-start business
- 2-wire ground-start
- Dial tone first COIN
- ISDN
- 2-wire Transmission Only (TO)
- 2-wire Foreign Exchange (FXS)
- Locally switched ISDN ANSI U BRI
- DPO Dial Pulse Originating
- DID PBX-CO trunk
- 4-wire Foreign Exchange (FXS)
- 4-wire Duplex (DX)
- 4-wire Transmit Only (TO)
- 4-wire Equalized Transmission Only (ETO)
- 4-wire Foreign Exchange, Office End (FXO)
- 4-wire Tandem (TDM)
- 4-wire E&M (EM)
- 2-wire Foreign Exchange, Office End (FXO)
- Dial Pulse Termination; Used for DID (DPT)
- Dial Pulse Termination from the FAST shelf; Used for DID (DPT)
- Pulse-Link Repeater, 4-wire (PLR)
- Dataport (DP)
- Private Line voice, 2-wire Manual Ringdown
- Private Line Voice, 2-wire PLAR
- Switched 56 kbps, 2-wire, Uses DDS Network, Datapath Ext. (DPX)

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- Switched 56 kbps, 4-wire, Uses DDS Network (OCU)
- DC Alarms
- DC Bypass
- ISDN BRITE

2.2. Network Interfaces

- 1 GR-303 VRT interface
 - 5ESSTM Compatible
 - DMS Compatible
 - Siemens Compatible
 - Dynamic timeslot assignment for locally switched calls
 - Continuous call supervision via ABCD-coded robbed-bit signaling or Voice Frequency Data Enhancement (VFDE) capable with *5ESS* (generic: 5E13)
 - Semipermanent cross-connect for nailed-up DS0x and ISDN D-channels
 - Operational capabilities via an embedded operations channel
 - Automatic path protection for the TMC and EOC
- 20 INA Interfaces
 - SF and ESF Framing
- 20 TR-08 Virtual Banks
- Timing via:
 - External BITS clock
 - External DS1
 - Internal free-running mode
 - DS1 loop-timed mode

2.3. Operations Interfaces

- CIT
 - RS-232 Interface supports TL1 ASCII interface
- Graphical Systems Interface (GSI) GSI Release 2.0.0
 - Access to all TL1 messages both graphically and via command-line input
 - Graphical view of equipage
 - Alarm display
 - Backup/Restore of Database
 - TL1 System Interface (TL1SI) screen for command-line TL1 input

- Progress indicator during System Initialization
- LEDs at GSI synchronized with LEDs on circuit packs
- LAN (10BaseT with TCP/IP stack)
 - TL1
 - Telnet
 - FTP
- Remote Operations Channel (ROC)
 - TL1
 - Telnet
 - FTP
- GR-303 Embedded Operations Channel (EOC)
 - ASN.1 messages

2.4. OAM&P Capabilities

- Alarms
 - Available via GR-303 EOC
 - Available via TR-008 datalink
 - Available via TL1 autonomously and on-demand
 - Closure detectors for environmental alarms
 - Closures for Central Office, visual, audible and telemetry alarms¹
 - Summary LED on the FAST shelf Fuse Control Module²
 - Broadband Data Summary Alarms³
- Testing
 - GR-303 Channel and Drop Testing
 - TR-008 Channel and Drop Testing
 - On-demand local Drop Test of AP drops
 - ISDN Metallic Access
 - GR-834⁴
- Configuration Management
 - Database Backup via FTP
 - Database Restore via FTP
- 1. Requires CTU DTP101
- 2. Requires AnyMedia FAST Shelf (J1C282AB-1 or J1C282AC-1)
- 3. Requires Broadband Data AFM Software Release 1.1.2 or later.
- 4. Access to TAP A on FAST shelf requires CTU DTP101.

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- Software download via FTP
- User-provisionable IP Address
- User-provisionable synchronization source
- User-provisionable alarm severity
- Automatic inventory reporting
- Multiple user security levels (privileged, general, and reports-only)
- Maintenance
 - COMDAC Protection Switching
 - DS1 Pack Protection Switching
 - DS1 Loopbacks
 - ISDN Loopbacks
 - DS1 Performance Monitoring
 - ISDN Performance Monitoring
 - Per-channel Trunk Processing

3. System Notes

This section contains information about the R1.2.2.5.3 system.

1. General

- R1.2.2.5.3 is a Remote Terminal (RT) release.
- The system supports:
 - POTS service via the LPA300, LPA300C, LPA350, LPA380, LPA380C, or LPA404 application pack
 - SPOTS service via the LPA350, LPA380 or LPA380C application pack
 - COIN service via the LPA350 application pack
 - ISDN service via the LPU116 application pack
 - DID service via the LPA356 application pack
 - DID Touch Tone Wink
 - DID Touch Tone Delay
 - DID Touch Tone Immediate
 - DID Dial Pulse Wink
 - DID Dial Pulse Delay
 - Special services via channel units in the MDS2 shelf. (Channel units are listed in Section 6 on page 15 of this document).
- Supports a maximum of 512 lines when system configured with 16 application packs.
- Supports a maximum of 544 lines when system configured with 14 application packs and MDS2 shelf (448 AP drops + 96 MDS2 drops).

2. R2.0.0 GSI

- GSI Release 2.0.0 is compatible with software *AnyMedia* releases: R1.2.2.0, R1.2.2.2, R1.2.2.5.0, R1.2.2.5.1, R1.2.2.5.2, R1.2.2.5.3, R1.7.0, and R1.2.3.0
- GSI Release 2.0.0 provides script files for provisioning COT and RT systems for various configurations.

3. R1.2.2.5.3 *AnyMedia* release compatibility with *AnyMedia* COT releases.

AnyMedia RT release R1.2.2.5.3 is compatible with the AnyMedia COT R1.2.3.x release.

4. Modem settings for modem connected to the CIT

- The GSI supports external modems only.
- When using a modem to connect to the CIT, the US Robotics Sportster modem is recommended for connection to the CTU. In addition to the modem, a null modem and a 25-pin to 9-pin adapter is required.

- The modem connected to the CTU must be set up as follows:
 - Baud=19200
 - Parity=N
 - Wordlen=8
 - DIAL=TONE
 - ON HOOK
 - IGNORE RTS
 - Auto Answer
 - Suppress Results
 (Do not provision the modem to suppress results until all other provisioning is completed.)

5. Virtual Circuit port numbers:

The system's virtual circuits supports RAW TCP/IP and TELNET protocol:

- For TELNET protocol use port numbers: vc-1=11001 vc-2=11003, vc-3=11005, vc-4=11007
- For RAW TCP/IP use port numbers: vc-1=11002, vc-2=11004, vc-3=11006, vc-4=11008

6. LAN Connections time-outs

For security purposes all LAN connections are on a 15-minute inactivity timer that will log the user off if no command is entered for 15 minutes. This only applies to Privileged and General users, not to Report-Only users.

7. Periodic CORE switching

The system performs a periodic core switch every 7 days. The switch interval can be changed with the TL1 command SCHED-EX.

8. AEM R1.5

If the system is being monitored by AEM R1.5, after upgrading to R1.2.2.5.3, modify the AEM configuration file so the AEM will support this release. To do this, perform the following steps (must be AEM system administrator to do this):

- cd to the location of the configuration file, "SwVersions.cfg". The default location is: /opt/lucent/AnyMediaNBEM_R1.5/NEM/cfg/
- edit file (ie:vi) : SwVersions.cfg
- Add the following line to the end of the file: 1.2.2.5.3=EM_1_2_0

Example file:

EVENTSERVER=: AMNEManagement HEARTBEAT=10 assocRetry=3 assocVCtime=60000 neLicenses=ROR8YG0L1Q concurrentSyncs=10 concurrentConns=10 waitToReqThread=10 swVersions=EM_1_2_0 EM_1_2_0=AnyMediaNBEM.Configuration.ConfigUpdate_R1_2 1.0.0=EM_1_2_0 1.2.0=EM_1_2_0 1.2.3=EM_1_2_0 1.2=EM_1_2_0 1.2.2.0=EM_1_2_0 1.2.2.5=EM_1_2_0 1.2.2.5.0=EM_1_2_0 1.2.2.5.1=EM_1_2_0 1.2.2.5.2=EM_1_2_0 1.2.2.5.3=EM_1_2_0 <===== ADD THIS LINE

4. Operating Issues Resolved

4.1. Operating Issues Resolved Since R1.2.2.5.2 to R1.2.2.5.3

This section lists those operating issues resolved between R1.2.2.5.2 and R1.2.2.5.3.

1. SYSTEM STABILITY

- A. The interaction between certain switch features (3-Way Calling, Call Waiting, Modified Calling Line Disconnect for Fraud Protection) and VFDE calls that sometime cause the switch to take lines OOS, SWX has been eliminated.
- B. LAN port stability has been further improved.

2. TEST ACCESS

A. GR-834 Test failures when connected to a DMS switch has been resolved.

3. TL1 COMMANDS

A. On TL1 command input errors, the system's DENY IICM response will now display the input command CTAG parameter. This improves "synchronization" time when R1.2.2.5.3 NE is managed by Lucent's R1.7.x Element Manager.

4.2. Operating Issues Resolved Since R1.2.2.5.1 to R1.2.2.5.2

This section lists those operating issues resolved between R1.2.2.5.1 and R1.2.2.5.2.

1. SYSTEM STABILITY

A. A race condition between the AP and COMDAC communication bus which caused system performance degradation has been removed.

4.3. Operating Issues Resolved from R1.2.2.5.0 to R1.2.2.5.1

This section lists those operating issues resolved between R1.2.2.5.0 and R1.2.2.5.1.

1. TL1 COMMANDS

A. The system's response to RTRV-ALM and RTRV-COND now correctly displays the AIDTYPE parameter.

4.4. Operating Issues Resolved from R1.2.2.0 to R1.2.2.5.0

This section lists those operating issues resolved since the release of 1.2.2.0.

1. SYSTEM STABILITY

- A. LAN port stability has been improved.
- B. System will now recover from a power cycle if system is provisioned with a GR-303 FX nail up.
- C. System will now display the corrected inventory for all packs after recovering from a power cycle.

2. SERVICES

A. ROC now supported over INA or TR08.

3. SOFTWARE DOWNLOAD AND CONVERSION

- A. Conversion from R1.2.2.X to a R1.2.2.5.3 system will not drop AUA200 GSFN=DATA service.
- B. System will now display the corrected COMDAC inventory after a conversion.

4. TL1 COMMANDS

A. SET-ALMCDE now works for power (PWR) and ringing faults (RINGF) alarms.

5. R2.0.0 GSI

A. The R2.0.0 GSI supports external modem connections from COM1 to COM4.

6. TURN-UP

A. Can now turn-up half of an MDS2 shelf without a power alarm being generated.

5. Operating Issues

This section lists information pertaining to recognized operating issues existing in Release 1.2.2.5.3. For operating issues related to ADSL service, see the Software Release Description for Release 1.1.2-020, 363-211-105, Issue 12.

1. R2.0.0 GSI

A. Operating Issue:

The R2.0 GSI may not install completely or run properly on some PCs running Windows NT or Windows 98 as the result of problems with dynamic link library files (.**dll**s). (Possible problem files are "LsSnmp2.dll" and "Msstdfmt.dll".)

Action Needed:.

To correct the .dll file problem, perform a manual registration of the ".DLL" file as follows: Click on the windows "Start" button and then select Run ==> Run....

In the Run window enter the following:

==> regsvr32 "<file name.dll>"

then select the OK button.

If this fails, try again, using the following path:

==> regsvr32 "\Program Files\Lucent Technologies\AnyMedia\Gsi-r2.0.0\<file name.dll>" then select the OK button.

After registering the .dll file, reboot the PC.

B. Operating Issue:

The R2.0.0 GSI does not support AFM software release R1.1.2. **Action Needed:** Use the R2-13 Data GSI with AFM software release R1.1.2.

2. SYSTEM STABILITY

A. Operating Issue:

DTP100 CTU may spontaneously reset. Action Needed: No action needed. This does not affect normal operation of the system.

3. TL1 COMMANDS

A. Operating Issue:

RTRV-PM and INIT-REG are not available with the AID=ALL or XXX-ALL. **Action Needed:** Retrieve the parameters using individual AIDS (e.g., RTRV-PM::ds1-1-2-1:00000::ESP,,,,1::;).

B. Operating Issue:

The commands: OPR-LPBK, RLS-LPBK, ED-T1 and RTRV-T1 are not available by logical DS1 entity (i.e., v3fdr-1-(1-28), v8fdr-(1-20)-(a-d), ina-(1-20)). Action Needed:

Execute the commands using the physical DS1 entity (i.e., DS1-(1-5)-(1-4)).

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C. Operating Issue:

The SW-DX-T0 command is not operational. **Action Needed:** The datalink switch must be performed at the Local Digital Switch (LDS).

4. ALARMS

A. Operating Issue:

Transient fail/clear messages and/or transient T0 out-of-service/in-service messages may occur while a pack is initializing after its insertion.

Action Needed:

No action needed. These will clear after pack initialization is complete.

B. Operating Issue:

MDS2 alarms may take up to 2 minutes to appear and clear.

Action Needed:

Wait 2 minutes before responding to any MDS2 shelf related alarms.

C. Operating Issue:

After inhibiting EOC alarms with INH-MSG, EOC alarms cannot be re-enabled with ALW-MSG.

Action Needed:

If inhibiting EOC alarms is necessary, and this action is taken, retrieve alarms at the switch or through the telnet or VC interfaces to determine the current status. However, inhibiting EOC alarms is not recommended.

D. Operating Issue:

Telcordia NMA cannot parse PWRM and PWRF alarms. Action Needed: None. No trouble ticket will be generated.

E. Operating Issue:

The RTRV-ALM command from NMA will fail. Action Needed: None.

5. TEST ACCESS

A. Operating Issue:

If an AP is removed while it is in the middle of a channel or drop test, channel or drop testing will not work for 5 minutes.

Action Needed:

Wait 5 minutes after AP removal before performing another test

B. Operating Issue:

Bridging (CONN-TACC-DROP) onto drops in the MDS2 shelf is not supported. If performed, service on the drop will be interrupted. Service will be restored once bridging is removed (DISC-TACC-DROP)

Action Needed:

Do not perform bridging on drops in the MDS2 shelf.

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6. ISDN BRITE Channel Unit - TELTREND AUA293I2

A. Operating Issue:

If the TELTREND AUA293I2 channel unit resets, (i.e.,s channel unit removal and re-insertion, mds2 shelf reset) service may not recover. **Action Needed:**

Remove and re-insert channel unit until service recovers.

B. Operating Issue:

TELTREND AUA293I2 inventory is not available. Action Needed: Ignore inventory. GSI displays pack as AUAXX.

6. System Configuration

- A. GSI Version 2.0.0 is required for use with Release 1.2.2.5.3 software.
- B. This following table identifies the version of the *AnyMedia* circuit packs that are compatible with Release 1.2.2.5.3

Туре	Model	Description/Comments
COMDAC	COM101	Controller Pack (Core)
СТU	DTP100 or DTP101	Interface Pack (DTP101 is required for Central Office alarm closures and access to TAP A on the <i>FAST</i> shelf)
СТU	DTP102	Required for Digital Test Access
CTU	DTP103	
IODS1	FAC100	DS1 Feeder Pack Supports 4 DS1 feeders
POTS32	LPA300	POTS only Application Pack Supports 32 POTS lines
POTS32	LPA300C	A version of the LPA300 pack that supports provisionable Network Loss
PROG32	LPA380	General Purpose Application Pack Supports 32 lines All lines support all service types except for COIN & ISDN
PROG32	LPA380C	A version of the LPA380 pack that supports provisionable Network Loss
COIN	LPA350	COIN Application Pack Same as LPA380 except first 16 lines on pack, also supports COIN service
DTP32	LPA356	DID Application Pack Supports 32 lines of DID service
CMB4x4	LPA404	POTS plus ADSL Application pack. Supports 4 POTS lines plus 4 ADSL lines
ISDN	LPU116	ISDN only Application Pack Supports 16 ISDN lines only Uses same 32-Line connector as other application packs, but only first 16 lines are used
MDSU	MSU100	Metallic distribution server unit
MSC	MSC100	Metallic server controller
PTU	BDJ200	Power Test Unit

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Туре	Model	Description/Comments
CU	AUA200 SPQ429 (*) AUA45B AUA75 MCU5205 (**) MCU5405 (**) SPQ442 AUA41B AUA232 SPQ454 SPQ454 SPQ452 SPQ444 TELTREND AUA293I2	Channel Units (*) not UL Recognized. (**) not UL Recognized. Tested by ITS Laboratories. Marked as ETL Recognized.



ISDN turn-up requires software upgrade BWM-0007 to 5E12 generic or later.

7. Turn-Up Procedure

This section describes the steps to turn up a system.

Failure to follow the procedures section may adversely affect or degrade system performance.

When removing or inserting a pack always wait 15 seconds before removing or inserting the same or another pack.

1. Install ACTIVE COMDAC (COM101)

A. Plug a COMDAC pack into slot marked COM-1

- Verify all COMDAC LEDs light momentarily on pack insertion.
- Wait at least 15 minutes for COMDAC to complete its initialization.
 - The COMDAC FAULT LED will blink during initialization.
 - Ignore all other COMDAC LEDs while the COMDAC is initializing.
 - The ACTIVE LED will light when initialization has completed
- After the COMDAC ACTIVE LED comes ON verify its FAULT LED is OFF.
- Disregard all other COMDAC LEDs.

2. Install CTU (DTP100 or DTP101)

- A. Plug the DTP100 or DTP101 pack into the slot marked CTU.
 - Verify all CTU LEDs light momentarily on pack insertion.
 - Verify all CTU LEDs go OFF within 10 seconds.
- B. Perform LED TEST to determine if COMDAC and CTU are communicating properly.
 - Press LED TEST button located on the CTU pack.
 - Verify all LEDs on all packs light for a few seconds.

3. Connecting R2.0.0 GSI to system (assuming R2.0.0 GSI software already loaded onto PC)

A. Turn on PC.

- B. Connect an RS-232 cable between the GSI PC serial port com1 and the CTU serial port CIT.
- C. Start-up GSI software. This will take about 30 seconds.
- D. Log into system:

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- From menu bar select NE OPERATIONS ==> CONNECT/DISCONNECT
- In the COMMUNICATIONS window select the COMDAC tab and verify the following parameter settings; if settings are not correct, change settings:
 - SELECT LINK = COM1
 - SETTINGS = (Maximum Speed=19200, Keep Alive=checked, Use Modem=not checked)
- In the USER ID box enter the following user id: LUCENT01
- In the PASSWORD box enter the following password: UI-PSWD-01
- After parameters have been verified to be correct, select CONNECT.
- You are now logged into the system and ready for command input.

4. Initializing system to default state (Clearing data memory)

- A. Execute INIT-SYS command:
 - From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> INIT ==> SYS
 - In the INIT-SYS window select EXECUTE.
 - GSI will ask you to confirm command twice.
 - The INIT-SYS command will log you out of the GSI and then ask you if you wish to log back-in.
 The FAULT LED will blink while the COMDAC is initializing.
 Wait for the FAULT LED to stop blinking before logging back into the system.

5. Verify System Software Version on COMDAC is R1.2.2.5.3

To retrieve system software version, retrieve inventory of the COMDAC:

- From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> RTRV ==> EQPT
- In the RTRV-EQPT window select:
 - Entity = COMDAC
 - P1 {shelf} =1
 - P2 {slot} =1
- Select the EXECUTE button.
- Observe on the TL1SI VIEW window that the COMDAC inventory has PVRSN = 1.2.2.5.3.
 If not replace COMDAC and start from Step 1 again.

6. Setting system ID (SID) (Optional)

To set the system ID:

- From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> SET ==> SID
- In the SET-SID window enter the site id specified in the Work Order.
- Select the EXECUTE button.
- Select YES when asked to confirm command.
- Observe on the TL1SI VIEW window that the system ID entered is displayed.

7. Setting system date and time (Optional) (Note: If the system is to be connected to a GR-303 switch, switch will set date and time)

To set the system data and time:

- From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> ED ==> DAT
- In the ED-DAT window the enter the date and time wanted. The default display is the PCs date and time setting.
- Select the EXECUTE button.
- Select YES when asked to confirm command.
- Observe on the TL1SI VIEW window that the date and time entered are displayed.

8. Setting system IP address (Optional)

To set the system IP address:

- From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> SET ==> IP
- In the SET-IP window enter the IP address information specified in the Work Order.
- Select the EXECUTE button.
- Select YES when asked to confirm command.
- Observe on the TL1SI VIEW window that the IP address entered is displayed.

9. Setting OS Application Context ID Map (OSACMAP): map logical port to a virtual circuit (Optional) (default: none mapped)

To set the system OS Application Context ID Map:

- From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> ENT ==> OSACMAP
- In the ENT-OSACMAP window select specified in the Work Order:
 - ACID: (logical ports) TL1MAINTENCE, TL1MEMORYADMIN, TL1TEST, TL1OTHER
 - SNPA: (virtual circuits) vc-1,vc-2, vc-3,vc-4
- Select the EXECUTE button.
- Observe on the TL1SI VIEW window that the OSAC MAP entered is displayed.

10. Setting the Message Mapping (MSGMAP): allow/disable which messages to be sent to what ports (Optional)

(default: All MSGTYPEs on all ports are ENABLED except for MSGTYPE=LED is DISABLED on EOC, TL1MAINTENCE, TL1MEMORYADMIN, TL1TEST, TL1OTHER)

- From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> ENT ==> MSGMAP
- In the ENT-MSGMAP window select:
 - INTID:
 - (physical ports) CIT, EOC, TELNET-1, TELNET-2,
 - (logical ports) TL1MAINTENCE, TL1MEMORYADMIN, TL1TEST, TL1OTHER

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- MSGTYPE: ALL, ENV, SESSION, ALM, EVT, SW, DBCHG, LED, TCA
- ACTION: ENABLED, DISABLED
- Select the EXECUTE button.
- Observe on the TL1SI VIEW window that the MSGMAP entered is displayed.

11. Install IODS1 (FAC100) packs

- A. Plug each IODS1 pack in one at a time into the FAC slot specified in Work Order. Do not plug in the IODS1 protection pack at this time.
 - Verify all IODS1 LEDs light momentarily on pack insertion.
 - Wait 10 seconds and verify the pack's ACTIVE LED goes ON.
 - Verify all the other LEDs on the IODS1 pack are OFF.
- B. Repeat Step A until all IODS1 packs specified in the Work Order are plugged in.

12. Configuring system w/ or w/o IODS1 protection as specified in Work Order (default is w/protection)

- A. For operation w/ protection insert a IODS1 pack (FAC100) into slot marked FAC-P.
 - Verify all IODS1 LEDs light momentarily on pack insertion.
 - Wait 10 seconds and verify the protection IODS1 pack's LEDs go OFF, including ACTIVE LED.
- B. For w/o protection operation execute the ED-CONFIG command to re-configure system.
 - From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> ED ==> CONFIG
 - In the ED-CONFIG window select: IODS1p-1 and NR (not required)
 - Select the EXECUTE button.
 - Select YES when asked to confirm command.

13. Setting system sync clock (defaults are PRI=ds1-1-1,SEC=ds1-1-2-1) (Optional)

> NOTE:

If the synchronization clock is set to a feeder that is looped back, the clock MUST be set to FRNG (free-running):

- A. To set the system sync clock to free-running:
 - From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> SET ==> SYNCN
 - In the SET-SYNCN window.
 - FRNG (Free running).
 - Select YES when asked to confirm command.
 - Observe on the TL1SI VIEW window that the sync sources entered are displayed.

- B. To set the system sync clock to loop-timed on a DS1:
 - From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> SET ==> SYNCN
 - In the SET-SYNCN window, select the parameters specified in the Work Order.
 - LPD (looped time).
 - Select a LPPRI (primary) and LPSEC (secondary) sync source.
 - Select YES when asked to confirm command.
 - Observe on the TL1SI VIEW window that the sync sources entered are displayed.
- C. To set the system sync clock to time on an external source:
 - From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> SET ==> SYNCN
 - In the SET-SYNCN window, select the parameters specified in the Work Order.
 - EXT1544 (DS1) or EXT64 (composite clock).
 - If EXT1544 is selected also set the LINECDE and FMT as specified in the Work Order.
 - Select YES when asked to confirm command.
 - Observe on the TL1SI VIEW window that the sync sources entered are displayed.

14. Installation of AP packs

(LPA300 / LPA300C / LPA380 / LPA380C / LPA350 / LPA356 / LPA404 / LPU116)

- A. Locate the AP slot specified in Work Order. Do not plug in the MDSU pack at this time.
- B. Remove the tip/ring cable from cable holder panel and remove the cable holder panel.
- C. Plug in the appropriate AP pack type into the AP slot.
 - Verify on pack insertion all AP LEDs light momentarily
 - Wait at least 1 min and verify all AP LEDs go OFF
- D. Connect tip/ring cable to the AP pack.
- E. Repeat Steps A–D until all AP packs specified in the Work Order are plugged in.

15. Check FAST shelf packs for faults

- A. Verify no FAULT LEDs are lit.
 - The COMDAC CR and NE alarm LEDs will be lit because system is 'free running'.
- B. Perform LED TEST to determine if COMDAC, CTU, AP and IODS1 packs are communicating properly.
 - Press LED TEST button located on the CTU pack.
 - Observe all LEDs on all pack light for 10 seconds.

C. For packs that fail Step A or B:

- Remove them, wait 15 seconds before re-inserting them
- Repeat Step A and B
- If they still fail, replace pack
- 16. If system is NOT to be configured with MDS2 shelf skip to Step 22, else continue.

17. Installation of MDSU server packs (MSU100)

- A. Locate AP slot specified in Work Order. If the MDSUs are to be placed in slots other than the default slots of AP-14 and AP-15, the SET-MDS2 command must be executed.
 - From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> SET ==> MDS2
 - In the SET-MDS2 window, select the leftmost MDSU AP slot specified in the Work Order.
 - Select the EXECUTE button.

> NOTE:

If at any time it becomes necessary to perform an INIT-SYS on the system and the MDSUs are NOT in the default slots of AP-14 and AP-15, remove the MDSUs from the *FAST* shelf before using the SET-MDS2 command.

- B. Plug the MDSU AP pack into the AP slot.
 - Verify the MDSU FAULT LEDs light momentarily on pack insertion
 - Wait 10 seconds and verify that the MDSU FAULT LED goes OFF
 - The MDSU LINK LED will be ON because communication with the MDS2 shelf has not been established yet
- C. Connect the appropriate MDS2 cable to the MDSU pack.
 - The cable marked MDSU-1 should be connected to the MDSU in the AP slot specified in the SET-MDS2 command
- D. Repeat Steps B–C if the two MDSU packs are specified in the Work Order. The second MDSU circuit pack must be installed in the slot immediately to the right of the first MDSU.
 - Connect the cable marked MDSU-2 to the second MDSU.

18. Installation of MSC packs into MDS2 shelf (MSC100)

- A. On the Work Order, determine the slot (MSC-1 or MSC-2) for the MSC100.
- B. Plug the MSC pack into the MSC slot (MSC-1 controls CU slots 1-12. MSC-2 controls slots 13-24).
 - No LED will light.
- C. Repeat Steps A–B if a second MSC pack is specified in the Work Order.

19. Installation of PTU packs into MDS2 shelf (BDJ200)

- A. On the Work Order, determine the slot (PTU-1 or PTU-2) for the PTU BDJ200.
- B. Plug the PTU pack into the PTU slot (PTU-1 supports CU slots 1-12. PTU-2 supports slots 13-24).
 - Verify on pack insertion the PTU FAULT LED and both MSC LEDs light momentarily
 - Wait at least 20 seconds and verify all LEDs on both the PTU and MSC are OFF
 - Verify the MDSU LINK LED goes OFF
- C. Repeat Steps A–B if a second PTU pack is specified in the Work Order.

20. Check FAST and MDS2 packs for faults

- A. Verify all packs have their FAULT LEDs OFF.
 - The COMDAC CR and NE alarm LEDs may be lit if the system is "free running", e.g., if DS1 signals are not available for timing input.
- B. Perform LED TEST to determine if COMDAC, CTU, AP, IODS1, MDSU, MSC and PTU packs are communicating properly.
 - Press LED TEST button located on the CTU pack
 - Observe all LEDs on all pack on the FAST and MDS2 shelf light for 10 seconds
 - Press LED TEST button located on the MDS2 shelf
 - Verify all LEDs on all packs on the FAST and MDS2 shelf light for 10 seconds
- C. For packs that fail Step A or B:
 - Remove them; wait 15 seconds before re-inserting them
 - Repeat Steps A and B
 - If they still fail, replace pack

21. Installation of CU packs into MDS2 shelf

- A. Locate the CU slot specified in Work Order.
- B. Plug the appropriate CU pack type into the CU slot.
 - Ignore LED status.
- C. Repeat Steps A–B if more CU packs are specified in the Work Order.

22. Provisioning the system for service (method defined in Work Order)

- A. If the Work Order specifies using one of the GSI default provisioning script files:
 - From menu bar select PROVISIONING ==> SYSTEM TURNUP ==>TELEPHONY ==> DEFAULT CONFIGURATION SCRIPTS
 - In the OPEN RT DEFAULT PROVISIONING FILE window select the file specified in Work Order then select the OPEN button.
 - Select YES when asked to confirm.

LUCENT TECHNOLOGIES — PROPRIETARY

- In the SCRIPT COMMAND window, select the RUN button to start execution of script.
- Each command will be highlighted as they are executed.
- B. If the Work Order specifies provisioning from a file using the GSI script mode capability:
 - From menu bar select FILE ==> SCRIPTING ==> RUN
 - In the FILE window select the file specified in Work Order then select OPEN.
 - In the SCRIPT COMMAND window, select RUN to start execution of script.
 - Each command will be highlighted as they are executed.
- C. If the Work Order specifies use of individual provisioning commands:
 - If the Work Order specifies to create a T1 cross-connect use the command ENT-CRS-T1:
 - From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> ENT ==> CRS-T1
 - In the ENT-CRS-T1 window select the parameters specified in the Work Order.
 - For PHYSICAL AID parameters are:
 - ENTITY (IODS1 pack): DS1
 - P1 (shelf number): 1
 - P2 (IODS1 pack number): 1-5
 - P3 (IODS1 pack feeder number): 1-4
 - For LOGICAL AID parameters are:
 - ENTITY (feeder type: INA, GR-303, TR-08): ina, v3fdr, v8fdr
 - P1 (VRT or Virtual Bank number): 1-20 (ina), 1 (v3fdr), 1-20 (v8fdr)
 - P2 (applies for ENTITY=v3fdr or v8fdr: feeder number): 1-28 (v3fdr), 1-4 (v8fdr)
 - Select the EXECUTE button.
 - Repeat for all ENT-CRS-T1s specified in Work Order.
 - If the Work Order specifies to create a T0 use the command ENT-T0:
 - From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> ENT ==> T0
 - In the ENT-T0 window select the parameters specified in the Work Order.
 - For LOGICAL AID parameters are:
 - ENTITY (line type: INA, GR-303, TR-08): inads0, v3dp, v8dp
 - P1 (VRT or Virtual Bank number): 1-20 (inads0), 1 (v3dp), 1-20 (v8dp)
 - P2 (CRV number):1-24 (inads0), 1-2048 (v3dp), 1-96 (v8dp)
 - Select the EXECUTE button.
 - Repeat for all ENT-T0s specified in Work Order.

- If the Work Order specifies to create a T0 cross-connect using the command ENT-CRS-T0:
 - From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> ENT ==> CRS-T0 In the ENT-CRS-T0 window select the parameters specified in the Work Order.
 - For LOGICAL AID parameters are:
 - ENTITY (line type: INA, GR-303, TR-08): inads0, v3dp, v8dp
 - P1 (VRT or Virtual Bank number): 1-20 (inads0), 1 (v3dp), 1-20 (v8dp)
 - P2 (CRV number):1-24 (inads0), 1-2048 (v3dp), 1-96 (v8dp)
 - For PHYSICAL AID parameters are:
 - ENTITY: drop,m2drop,roc
 - P1 (shelf number): 1
 - For ENTITY=drop
 - P2 (AP slot number): 1-16
 - P3 (AP drop number): 1-32
 - For ENTITY=m2drop
 - P2 (CU slot number): 1-24
 - P3 (CU drop number): 1-4
 - Select the EXECUTE button.
 - Repeat for all ENT-CRS-T0s specified in Work Order.
- If the Work Order specifies using one of the system's default VRT configurations:
 - From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> ED ==> VEQPT
 - In the ED-VEQPT window select the VCFG parameters specified in the Work Order
 - VCFG (VRT configuration):
 - vcfg-1: one (1) GR-303 VRT
 - vcfg-2: five (5) TR-08 VRTs
 - vcfg-3: one (1) GR-303 VRT and one (1) TR-08 VRT
 - vcfg-4: one (1) GR-303 VRT, one (1) TR-08 VRT and four (4) INA VBs
 - Select the EXECUTE button
 - This command takes approximately 10 minutes to complete.
 Wait for COMPLD message to appear in TL1SI VIEW window.

\implies NOTE:

If more than 96 ISDN lines are to be re-provisioned after using the ED-VEQPT command to provision the system, the unused POTS T0s (drops 17-32 of each AP) must be deleted at the system prior to provisioning the ISDN lines.

— To delete a T0 line: DLT-T0

 $LUCENT \ TECHNOLOGIES - PROPRIETARY$

- From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> DLT ==> T0
- In the DLT-T0 window select the used T0s
- Select the EXECUTE button

23. Configuring system for SIMPLEX or DUPLEX as specified in Work Order (system default is DUPLEX)

A. For DUPLEX operation insert another COM101 COMDAC into slot marked COM-2.

- Verify all LEDs light momentarily on pack insertion
- Wait at least 15 minutes and verify that all COMDAC LEDs go OFF.
 During this time the system is copying data memory from the active side to the standby side.
 The standby COMDAC Fault LED will blink during the copy. Do not enter any commands or remove and replace packs until blinking has stopped.

B. For SIMPLEX operation execute the ED-CONFIG command to re-configure system

- From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> ED ==> CONFIG
- In the ED-CONFIG window select: COMDAC-1-2 and NR (not required)
- Select the EXECUTE button
- Select YES when asked to confirm command

8. Operational and Maintenance Procedures

This section contains procedures to perform normal operational or maintenance actions.

WARNING:

When removing or inserting a pack always wait 15 seconds before removing or inserting the same or another pack.

A WARNING:

Executing the opr-lpbk command via the ROC for DS1 lines is not recommended.

► NOTE:

On removal and re-insertion of the LPA356, the switch may take up to 15 minutes to recover service. If faster recovery is required, each LPA356 line must be removed and then restored at the switch.

1. Simple pack diagnostic procedure:

- A. Remove pack and wait 15 seconds before re-inserting pack.
- B. If pack still fails, remove and replace with another pack.

2. Replacement of a COMDAC:

- A. Check whether the COMDAC to be replaced is active or standby.
- B. If the COMDAC is active use this procedure to make the COMDAC standby.
 - From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> SW ==> TOPROTN
 - In the SW-TOPROTN window select: CORE-1
 - Select the FRCD button to force the standby side active.
 - Select YES when asked to confirm command.
 - From the menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> SW ==> TOWKG
 - In the SW-TOWKG window select: CORE-1
 - Select YES when asked to confirm command.
- C. Remove the COMDAC to be replaced.
- D. Insert the new COMDAC.
 - Wait until COMDAC has completed all initialization.
- E. Press the LED test button. Verify the LEDs on the replacement COMDAC light.

3. Growth of an IODS1 pack [non-protection pack]

Plug an IODS1 pack into the FAC slot specified in Work Order.

- Verify all LEDs light momentarily on pack insertion

LUCENT TECHNOLOGIES - PROPRIETARY

- Wait at least 1 minute and verify ACTIVE LED goes ON
- Verify all other pack LEDs are OFF

4. Degrowth of an IODS1 pack [non-protection pack]

- A. Locate the IODS1 pack specified in Work Order.
- B. Prevent the IODS1 pack from switching to protection before removing pack:
 - From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> SW ==> TOPROTN
 - In the SW-TOPROTN-EQPT window select: IODS1-1-{slot # of pack to be removed} and LOCKOUT.
 - Select YES when asked to confirm command.
- C. Remove IODS1 pack specified in Work Order.
- D. Clear the pack missing alarm using ED-CONFIG command:
 - From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> ED ==> CONFIG
 - In the ED-CONFIG window select: IODS1-1-{slot # pack removed from} and NR (not required)
 - Select YES when asked to confirm command.

5. Growth of an IODS1 protection pack

A. Insert an IODS1 pack (FAC100) into slot marked FAC-P.

- Verify all LEDs light momentarily on pack insertion
- Wait at least 1 minute and verify the ACTIVE LED goes ON
- Verify all other LEDs on the pack are OFF

6. Degrowth of an IODS1 protection pack

- A. Remove IODS1 protection pack.
- B. Clear pack missing alarm using ED-CONFIG command:
 - From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> ED ==> CONFIG
 - In the ED-CONFIG window select: IODS1p-1 and NR (not required)
 - Select YES when asked to confirm command.

7. Replacement of an Active IODS1 pack

A. To prevent possible dropped calls, place the IODS1 on protection.

- From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> SW ==> TOPROTN
- In the SW-TOPROTN window select: IODS1-1-{slot IODS1 is being removed from} and FRCD
- Select YES when asked to confirm command.
- B. Remove the IODS1 pack.
- C. Insert the replacement IODS1 pack. Wait until pack initialization is complete.

- D. Press the LEDTest button. Verify the LEDs on the replacement IODS1 light.
- E. Release the protection switch by executing the following procedure.
 - From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> SW ==> TOWKG
 - In the SW-WKG window select: IODS1-1-{slot IODS1 replaced} and RESET
 - Select YES when asked to confirm command.

8. Growth of an AP pack

- A. Locate the AP slot specified in Work Order.
- B. Remove the tip/ring cable from cable holder panel and remove the cable holder panel.
- C. Plug the appropriate AP pack type into the AP slot.
 - Verify the FAULT LED lights momentarily on pack insertion.
 - Wait at least 1 minute and verify all pack LEDs go OFF.
- D. Connect tip/ring cable to the AP pack.

9. Degrowth of an AP pack

- A. Disconnect tip/ring cable from AP specified in Work Order.
- B. Remove AP pack specified in Work Order.
- C. Insert cable holder panel into AP slot and insert tip/ring cable into panel.
- D. Clear pack missing alarm using ED-CONFIG command:
 - From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> ED ==> CONFIG
 - In the ED-CONFIG window select: AP-1-{slot # pack removed from} and NR (not required)
 - Select YES when asked to confirm command.

10. Growth of the MDS2 shelf

1. Installation of MDSU AP packs (MSU100)

- A. Locate AP slot specified in Work Order. If the MDSUs are to be placed in slots other than the default slots of AP-14 and AP-15, the SET-MDS2 command must be executed prior to their insertion and provisioning m2drop cross connects.
 - From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> SET ==> MDS2
 - In the SET-MDS2 window, select the AP slot specified in the Work Order.
 - Select the EXECUTE button.

\implies NOTE:

If at any time is becomes necessary to perform an INIT-SYS on the system and the MDSUs are NOT in the default slots of AP-14 and AP-15, remove the MDSUs from the *FAST* shelf before using the SET-MDS2 command.

B. Determine if any T0 cross connects exists for the AP slot to be used by the MDSU.

- To retrieve T0 cross-connects use the command RTRV-CRS-T0:
 - From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> RTRV ==> CRS-T0
 - In the RTRV-CRS-T0 window select: Entity=All
 - Select the EXECUTE button.
- C. Delete any T0 cross-connect assigned to the AP slot to be used by the MDSU.
 - To delete a T0 cross-connect use the command DLT-CRS-T0
 - From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> DLT ==> CRS-T0
 - In the DLT-CRS-T0 window select the parameters based on the results of Step B
 - Select the EXECUTE button
- D. Plug the MDSU AP pack into the AP slot.
 - Verify the MDSU FAULT LEDs light momentarily on pack insertion
 - Wait 10 seconds and verify the MDSU FAULT LED goes OFF
 - The MDSU LINK LED will be ON because communication with the MDS2 shelf has not been established yet
- E. Connect the appropriate MDS2 cable to the MDSU pack.
 - Connect the cable marked MDSU-1 to the MDSU in the left slot
- F. Repeat Steps B-E if the two MDSU packs are specified in the Work Order. The second MDSU circuit pack must be installed in the slot immediately to the right of the first MDSU.
 - Connect the cable marked MDSU-2 to the MDSU in right slot

2. Installation of MSC packs into MDS2 shelf (MSC100)

- A. On the Work Order, determine the slot (MSC-1 or MSC-2) for the MSC100.
- B. Plug the MSC pack into the MSC slot (MSC-1 controls CU slots 1-12. MSC-2 controls slots 13-24).
- C. No LED will light.
- D. Repeat Steps A–B if a second MSC pack is specified in the Work Order.

3. Installation of PTU packs into MDS2 shelf (BDJ200)

- A. On the Work Order, determine the slot (PTU-1 or PTU-2) for the PTU BDJ200
- B. Plug the PTU pack into the PTU slot (PTU-1 supports CU slots 1-12. PTU-2 supports slots 13-24).
- C. Verify on pack insertion the PTU FAULT LED and both MSC LEDs light momentarily.
- D. Wait at least 20 seconds and verify all LEDs on both the PTU and MSC are OFF.

- E. Verify the MDSU LINK LED goes OFF.
- F. Repeat Steps A-E if a second PTU pack is specified in the Work Order.

4. Check FAST and MDS2 packs for faults

- A. Verify all packs have their FAULT LEDs OFF.
 - The COMDAC CR and NE alarm LEDs may be lit if the system is "free running", e.g., if DS1 signals are not available for timing input
- B. Perform LED TEST to determine if COMDAC, CTU, AP, IODS1, MDSU, MSC and PTU packs are communicating properly.
 - Press LED TEST button located on the CTU pack
 - Observe all LEDs on all pack on the FAST and MDS2 shelf light for 10 seconds
 - Press LED TEST button located on the MDS2 shelf
 - Verify all LEDs on all packs on the FAST and MDS2 shelf light for 10 seconds
 - For packs that fail Step A or B:
 - Remove them; wait 15 seconds before re-inserting them.
 - Repeat Steps A and B
 - If they still fail, replace pack.

11. Degrowth of the MDS2 Shelf.

> NOTE:

The following steps must be followed in the specified order to clear all alarms.

- A. Remove the MSC specified in the Work Order
- B. Remove the PTU specified in the Work Order
- C. Remove the cable from the front faceplate of the MDSU specified in the Work Order
- D. Remove the MDSU from the slot specified in the Work Order
- E. Clear the MSC alarm using the ED-CONFIG command
 - From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> ED ==> CONFIG
 - In the ED-CONFIG window select: MSC-1-{slot # pack removed from} and NR (not required)
 - Select YES when asked to confirm command
- F. Clear the PTU alarm using the ED-CONFIG command
 - From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> ED ==> CONFIG
 - In the ED-CONFIG window select: PTU-1-{slot # pack removed from} and NR (not required)
 - Select YES when asked to confirm command

G. Clear the AP (MSDU) alarm using the ED-CONFIG command

- From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> ED ==> CONFIG
- In the ED-CONFIG window select: AP-1-{slot # pack removed from} and NR (not required)
- Select YES when asked to confirm command.

12. Growth of an Channel Unit

- A. Locate the CU slot in the MDS2 shelf specified in Work Order.
- B. Plug the appropriate CU type into the CU slot.
 - Upon pack insertion, the LEDs may light momentarily
 - Wait at least 1 minute and verify all pack LEDs go OFF

13. Degrowth of an Channel Unit

- A. Remove CU pack specified in Work Order.
- B. Clear the pack missing alarm using ED-CONFIG command:
 - From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> ED ==> CONFIG
 - In the ED-CONFIG window select: CU-1-{slot # pack removed from} and NR (not required)
 - Select YES when asked to confirm command

14. Creation of a T1 cross-connect

To create a a T1 cross-connect use the command ENT-CRS-T1:

- From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> ENT ==> CRS-T1
- In the ENT-CRS-T1 window select the parameters specified in the Work Order.
- Select the EXECUTE button.

15. Deletion of a T1 cross-connect

To delete a T1 cross-connect: DLT-CRS-T1

- From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> DLT ==> CRS-T1
- In the DLT-CRS-T1 window select the parameters specified in the Work Order.
- Select the EXECUTE button.

16. Creation of a T0 cross-connect

To create a a T0 cross-connect use the command ENT-CRS-T0:

- From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> ENT ==> CRS-T0
- In the ENT-CRS-T0 window select the parameters specified in the Work Order.
- Select the EXECUTE button.

17. Deletion of a T0 cross-connect

To delete a T0 cross-connect use the command DLT-CRS-T0:

- From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> DLT ==> CRS-T0
- In the DLT-CRS-T0 window select the parameters specified in the Work Order.
- Select the EXECUTE button.

18. Creation of a T0

To create a T0 use the command ENT-T0:

- From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> ENT ==> T0
- In the ENT-T0 window select the parameters specified in the Work Order.
- Select the EXECUTE button.

19. Deletion of a T0

To delete a T0: DLT-T0

- From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> DLT ==> T0
- In the DLT-T0 window select the parameters specified in the Work Order.
- Select the EXECUTE button.

20. Editing a T0

To edit a T0 use the command ED-T0:

- From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> ED ==> T0
- In the ED-T0 window select the parameters specified in the Work Order.
- Select the EXECUTE button.

21. Initializing an IN-SERVICE system to default state (Clearing data memory).

Performing the INIT-SYS command on an in-service system will take it out of service.

- A. Execute INIT-SYS command:
 - From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> INIT ==> SYS
 - In the INIT-SYS window select EXECUTE.
 - The GSI will ask you to confirm command twice.
- B. The INIT-SYS command will log you out of the GSI and then ask you if you wish to log back in.
 - If in SIMPLEX: wait for COMDAC ACTIVE LED to light and wait another 5 minutes, for system to stabilize, before logging back in.
 - If in DUPLEX: wait for one of the COMDAC ACTIVE LEDs to light and then wait for the other COMDAC FAULT LED to stop blinking, before logging back in.
- C. To turn-up a system from this point go to Turn-Up Procedure, Setting system ID (SID) (Optional) on page 18.

22. Configuring AnyMedia Access System and GSI/PC for LOCAL LAN access

- Required assets:
- PC loaded with R2.0.0 GSI
- PC with Ethernet card, RJ-45 connector, with TCP/IP protocol installed
- Cross-over LAN cable (Manufacture: Example, Black Box, P/N: EYN737M-0010)
- A. Configuring the AnyMedia Access System for LOCAL LAN connection
 - Connecting GSI to system serial CIT port.
 - Turn on PC
 - Connect a RS-232 cable between the GSI PC serial port com1 and the CTU serial port CIT.
 - Start-up GSI software. This will take about 30 seconds.
 - Log into system:
 - From menu bar select NE OPERATIONS ==> CONNECT/DISCONNECT
 - In the COMMUNICATIONS window select the COMDAC tab and verify the following parameter settings; if settings are not correct, change settings:
 - SELECT LINK = COM1
 - SETTINGS = (Maximum Speed=19200, Keep Alive=checked, Use Modem=not checked)
 - In the USER ID box enter the following user id: LUCENT01
 - In the PASSWORD box enter the following password: UI-PSWD-01
 - After parameters have been verified to be correct, select CONNECT
 - You are now logged into the system and ready for command inputs.
 - Retrieve system IP address from CIT serial port.
 - From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> RTRV ==> IP
 - In the RTRV-IP window select EXECUTE.
 - Observe the system IP address on the TL1SI VIEW window.
 - Record this IP address for later use if system needs to be restored to its original IP address.
 - Change system IP address for LOCAL LAN use.
 - From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> SET ==> IP
 - In the SET-IP window enter the address numbers as follows:
 - SHELF = 135.5.78.100
 - BKROUTER = {blank}
 - DEFROUTER = 135.5.78.150
 - -- SUBMASK = 255.255.255.0

LUCENT TECHNOLOGIES - PROPRIETARY

- Select the EXECUTE button.
- Select YES when ask to confirm command.
- Observe on the TL1SI VIEW window that the IP address entered is displayed.
- The AnyMedia System is now configured for LOCAL LAN
- B. Configuring the PC (running Windows 95) for LOCAL LAN connection:
 - Record existing information before making these changes. You may need to re-enter this information to return PC to its original configuration
 - Click on the Windows 95 Network Neighborhood icon with the RIGHT mouse button
 - From the pop-up list, select Properties
 - In the Network window select TCP/IP->{Ethernet adapter} then select Properties button
 - In the TCP/IP Properties window select IP Address tab
 - In the TCP/IP Properties with IP Address tab window:
 - select Specify an IP address
 - Set IP address to: 135.5.78.1
 - Set Subnet Mask to: 255.255.255.0
 - In the TCP/IP Properties window select WINS Configuration tab
 - In the TCP/IP Properties with WINS Configuration tab window:
 - Select Disable WINS Resolution
 - In the TCP/IP Properties window select DNS Configuration tab
 - In the TCP/IP Properties with DNS Configuration tab window:
 - Select Disable DNS
 - In the TCP/IP Properties window select OK. This returns you to Network window
 - In the Network window select OK
 - Windows 95 will now ask you wish to reboot to enable setting. Select Yes.
 - After the PC has finished rebooting the PC is now configured for LOCAL LAN
- C. Establish connected between GSI and System via LOCAL LAN connection
 - Locate the system LAN port (marked as LAN on top of the FAST shelf)
 - If a cable is connected to that LAN port, disconnect cable. (Notify any network manager before disconnecting cable.)
 - Connect the GSI PC LAN port to the system LAN port with the cross-over LAN cable.
 - Start-up GSI software. This will take about 30 seconds.
 - Log into system via LAN:
 - From menu bar select NE OPERATIONS ==> CONNECT/DISCONNECT

- In the COMMUNICATIONS window select the COMDAC tab and verify the following parameter settings; if settings are not correct, change settings:
 - SELECT LINK = LAN
 - HOST = 135.5.78.100

> NOTE:

This address is for local LAN access only

- In the USER ID box enter the following user id: LUCENT01
- In the PASSWORD box enter the following password: UI-PSWD-01
- After parameters have been verified to be correct, select CONNECT
- You are now logged into the system via the LAN and ready for command input.

\blacksquare NOTE:

LAN connections are on a 15-minute inactivity timer that will log the user off if no command is entered for 15 minutes. This only applies to Privileged and General users, not to Report-Only users.

\implies NOTE:

After disconnecting from the LOCAL LAN and if the *AnyMedia* Access System was originally setup for REMOTE LAN use: restore the systems to its original IP address and reconnect the original cable connected to the LAN port.

> NOTE:

After disconnecting from the LOCAL LAN and if the PC is to be used for network use, restore the PC to its original settings.

9. R1.2.2.X to R1.2.2.5.3 Conversion Procedure

\implies NOTE:

R1.2.2.5.3 does not support conversion from releases R1.0.X and R1.2.1. To convert a R1.0.X and R1.2.1 system to R1.2.2.5.3, first convert the COMDAC to a R1.2.2.0 system and then follow this R1.2.2.X to R1.2.2.5.3 conversion procedure.

There are two procedures to convert a R1.2.2.0, R1.2.2.2, R1.2.2.5.0, R1.2.2.5.1, or R1.2.2.5.1 system to a R1.2.2.5.3 system.

- **OPTION 1:** This conversion procedure is performed via COMDAC replacement and takes approximately 90 minutes to complete.
- **OPTION 2:** This conversion procedure is performed via S/W Download and takes approximately 120 minutes to complete. This procedure can only be used if the LAN is operational.

Both procedures will minimize service interruption to less then 10 minutes. It is recommended the conversion be done in off-peak hours.

OPTION 1:

This procedure is for converting a R1.2.2.0, R1.2.2.2, R1.2.2.5.0, R1.2.2.5.1 or R1.2.2.5.2 system to a R1.2.2.5.3 system via COMDAC replacement. This procedure if followed will minimize service interruption to less then 10 minutes. The entire procedure should take approximately 90 minutes. The conversion is done in three stages:

- The first stage is to replace the standby R1.2.2.X COMDAC with a R1.2.2.5.3 COMDAC. The R1.2.2.5.3 COMDAC will copy the provisioning data from the active R1.2.2.X COMDAC. This stage takes about 15 minutes and has no impact on service.
- The second stage is to have the system switch from the COMDAC running R1.2.2.X to the COMDAC running R1.2.2.5.3. This is done by performing a core switch via TL1. This stage will maintain existing calls but block new calls for 2-10 minutes. Therefore it is recommended that this procedure be done in off-peak hours.
- The third and last stage is to copy the R1.2.2.5.3 software from the active COMDAC to the standby R1.2.2.X COMDAC. This is done by performing the TL1 command CPY-MEM. This stage takes about 60 minutes and has no impact on service.
- Optional stage: This optional stage is to be used if the original COMDAC, from stage 1, is to be re-installed back into the system. This will add an additional 75 minutes.

Required Assets:

- One (1) R1.2.2.5.3 COM101 COMDAC
- PC loaded with AnyMedia Access System R2.0 GSI (GSI-NB).

1. Replace the standby R1.2.2.X COM101 COMDAC with a R1.2.2.5.3 COM101 COMDAC

- A. Connect the GSI to system:
 - Turn on PC.
 - Connect a RS-232 cable between the GSI PC serial port com1 and the CTU serial port CIT.
 - Start-up GSI software. This will take about 30 seconds.
 - Log into system:
 - From menu bar select OPERATIONS ==> CONNECT
 - In the COMMUNICATION window verify the following parameters settings; if settings are not correct, change settings:
 - SELECT LINK = COM1
 - SETTINGS = (Baud Rate=19200, Modem=not checked, Keep Alive=checked)
 - In the USER ID box enter the following user id: LUCENT01
 - In the PASSWORD box enter the following password: UI-PSWD-01
 - After parameters have been verified to be correct, select CONNECT
 - You are now logged into the system and ready for command inputs
- B. Remove the standby R1.2.2.X COM101 COMDAC.
- C. Insert the new R1.2.2.5.3 COMDAC.
 - Verify all LEDs light momentarily on pack insertion
 - Wait at least 15 minutes and verify that all COMDAC LEDs go OFF.
 During this time the system is copying data memory from the active R1.2.2.X COMDAC to the standby R1.2.2.5.3 COMDAC. The standby COMDAC Fault LED will blink during the copy. Do not enter any commands or remove or replace packs until blinking has stopped.
- D. Press LED TEST and verify the new standby COMDAC LEDs light. If they do not light, replace the COMDAC, and repeat Step C.
- E. The GSI will now have a System Software Version Mismatch alarm, this is expected.
- F. Verify System Software Version on the standby COMDAC is R1.2.2.5.3 by retrieving system software version:
 - From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> RTRV ==> EQPT
 - In the RTRV-EQPT window select:
 - Entity = COMDAC
 - P1 {shelf} = 1
 - P2 {slot} = {standby COMDAC slot number: 1 or 2}
 - Select the EXECUTE button.
 - Observe on the TL1SI VIEW window that the standby COMDACs inventory has PVRSN = 1.2.2.5.3.

2. Switch from running the R1.2.2.X COMDAC to the R1.2.2.5.3 COMDAC

- A. Execute TL1 command to perform a forced core switch.
 - From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> SW ==> TOPROTN
 - In the SW-TOPROTN window select: CORE-1
 - Select the FRCD button to force the standby side active.
 - Select YES when asked to confirm command.
 - The system will disconnect at this point. You will not see the COMPLD response to the command.
- B. Verify that the R1.2.2.5.3 COM101 COMDAC active LED lights.
- C. Wait 10 minutes.

During this time the newly active COMDAC is initializing. The active COMDAC Fault LED will NOT be blinking during this time so wait 10 minutes. Do not enter any commands or remove and replace packs during this time. Existing calls will not be dropped but any new call will be blocked from 2-10 minutes, therefore it is recommended that this procedure be done in off-peak hours.

D. After the active COMDAC has finished initializing the standby COMDAC will start blinking. Wait at least 15 minutes until the standby COMDAC stops blinking. During this time the system is copying data memory from the active COMDAC to the standby COM-DAC. The standby COMDAC Fault LED will blink during the copy. Do not enter any commands or remove and replace packs until blinking has stopped.

3. Upgrading the new standby R1.2.2.X COMDAC to R1.2.2.5.3

- A. Re-log back into the system.
- B. The GSI will have a System Software Version Mismatch alarm, this is expected.
- C. Release the core switching forced:
 - From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> SW ==> TOWKG
 - In the SW-WKG window select: CORE-1 and RESET
 - Select YES when asked to confirm command.
- D. Verify LAN/ROC connectivity is restored (optional step)
- E. Execute the TL1 command, CPY-MEM, to copy the active COMDAC image to the standby COM-DAC:
 - From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> CPY ==> MEM
 - In the CPY-MEM window select EXECUTE.
 - GSI will ask you to confirm command.

LUCENT TECHNOLOGIES - PROPRIETARY

- The standby COMDAC Fault LED will start blinking now.
 During this time the system is copying the R1.2.2.5.3 software from the active COMDAC to the standby COMDAC. The standby COMDAC Fault LED will blink during the copy. This operation will take about 60 minutes. Do not enter any commands or remove and replace packs until blinking has stopped.
- F. After the standby COMDAC Fault LED has stopped blinking verify System Software Version on the standby COMDAC is R1.2.2.5.3 by retrieving system software version:
 - From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> RTRV ==> EQPT
 - In the RTRV-EQPT window select:
 - Entity = COMDAC
 - P1 {shelf} = 1
 - P2 {slot} = {standby COMDAC slot number: 1 or 2}
 - Select the EXECUTE button.
 - Observe on the TL1SI VIEW window that the standby COMDAC inventory has PVRSN = 1.2.2.5.3.

4. If original COMDAC is to be re-installed back into the system (OPTIONAL)

- A. Make the original COMDAC the active COMDAC. Perform a forced core switch.
 - From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> SW ==> TOPROTN
 - In the SW-TOPROTN window select: CORE-1
 - Select the FRCD button to force the standby side active.
 - Select YES when asked to confirm command.
- B. The standby COMDAC will start blinking.

Wait at least 10 minutes until the standby COMDAC stops blinking. During this time the system is performing a RAM update.

- C. Release the core switching forced:
 - From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> SW ==> TOWKG
 - In the SW-WKG window select: CORE-1 and RESET
 - Select YES when asked to confirm command
- D. Remove the standby R1.2.2.5.3 COM101 COMDAC.
- E. Re-insert the original R1.2.2.X COMDAC back into the system into the standby slot.
 - Verify all LEDs light momentarily on pack insertion
 - Wait at least 15 minutes and verify that all COMDAC LEDs go OFF.
 During this time the system is copying data memory from the active COMDAC to the standby COMDAC. The standby COMDAC Fault LED will blink during the copy. Do not enter any commands or remove or replace packs until blinking has stopped.

- F. Press LED TEST and verify the new standby COMDAC LEDs light. If they do not, do not continue.
- G. The GSI will now have a System Software Version Mismatch alarm, this is expected.
- H. Execute the TL1 command, CPY-MEM, to copy the active COMDAC image to the standby COMDAC:
 - From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> CPY ==> MEM
 - In the CPY-MEM window select EXECUTE
 - GSI will ask you to confirm command
 - The standby COMDAC Fault LED will start blinking now.
 During this time the system is copying the R1.2.2.5.3 software from the active COMDAC to the standby COMDAC. The standby COMDAC Fault LED will blink during the copy. This operation will take about 60 minutes. Do not enter any commands or remove and replace packs until blinking has stopped.
- I. After the standby COMDAC Fault LED has stopped blinking verify System Software Version on the standby COMDAC is R1.2.2.5.3 by retrieving system software version:
 - From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> RTRV ==> EQPT
 - In the RTRV-EQPT window select:
 - Entity = COMDAC
 - P1 {shelf} = 1
 - P2 {slot} = {standby COMDAC slot number: 1 or 2}
 - Select the EXECUTE button.
 - Observe on the TL1SI VIEW window that the standby COMDAC inventory has PVRSN = 1.2.2.5.3.

5. Update AEM configuration file

A. If the system is being monitored by AEM R1.5 see System Note **AEM R1.5** on page 8 for AEM upgrade procedure.

6. Procedure done.

OPTION 2:

This procedure is for converting a R1.2.2.0, R1.2.2.2, R1.2.2.5.0, R1.2.2.5.1 or R1.2.2.5.2 system to a R1.2.2.5.3 system via software download. This procedure will minimize service interruption to less then 10 minutes. The entire procedure should take approximately 120 minutes. The conversion is done in two stages:

- The first stage is to software download the R1.2.2.5.3 image on to the standby R1.2.2.X COMDAC which will cause the system to automatically switch. This stage will take about 60 minutes. Established calls will be maintained but new service will be blocked for between 2 and 10 minutes. Therefore it is recommended that this procedure be done during off-peak hours.
- The second stage will be done automatically by the system. The system will copy the image of the active R1.2.2.5.3 COMDAC into the standby R1.2.2.X COMDAC. This stage takes about 60 minutes and has no impact on service.

Required assets:

- PC loaded with AnyMedia Access System R2.0 GSI (GSI-NB)
- CD ROM containing R1.2.2.5.3 AOS-NB software

1. GSI login via LAN

A. Determine if system is connected to a LAN network.

- If system connected to a LAN network, connect a cable between the PC LAN port and the network port
- If system not connected to a LAN network the system and PC must be configured for LOCAL LAN access. Perform the Configuring AnyMedia Access System and GSI/PC for LOCAL LAN access on page 34 before continuing with this conversion option.
- B. Start up GSI software. This will take about 30 seconds.
- C. Log into system via LAN:
 - From menu bar select NE OPERATIONS ==> CONNECT/DISCONNECT
 - In the COMMUNICATIONS window select the COMDAC tab and verify the following parameter settings; if settings are not correct, change settings:
 - SELECT LINK = LAN
 - HOST = {IP address} (FAST shelf IP address)
 - In the USER ID box enter the following user id: LUCENT01
 - In the PASSWORD box enter the following password: UI-PSWD-01
 - After parameters have been verified to be correct, select CONNECT
 - You are now logged into the system and ready for command inputs

2. Pre-conditions before start of software download

- A. Check system for alarms and conditions.
- B. Clear all alarms and condition.

LUCENT TECHNOLOGIES — PROPRIETARY

- C. Check whether the active COMDAC is COMDAC-1-1.
 - From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> RTRV ==> STATE-EQPT
 - In the RTRV-STATE-EQPT window select:
 - Entity = COMDAC
 - P1 {shelf} = 1
 - P2 {slot} = all
 - Select the EXECUTE button
 - From the TL1SI VIEW window determine the if the active COMDAC is COMDAC-1-1
- D. If the COMDAC is active is COMDAC-1-2 perform a COMDAC switch to make COMDAC-1-1 the active COMDAC.
 - From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> SW ==> TOPROTN
 - In the SW-TOPROTN window select: CORE-1
 - Select the FRCD button to force the standby side active
 - Select YES when asked to confirm command
 - From the menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> SW ==> TOWKG
 - In the SW-TOWKG window select: CORE-1
 - Select YES when asked to confirm command
 - A few seconds after the COMDAC switch the GSI will display "RAM Update in progress" message. This message should clear within 10 minutes. During this time the standby COM-DAC Fault LED will also blink. Do not continue, enter any commands or remove and replace packs until blinking has stopped and the message has cleared.

3. Software download new image to standby COMDAC and switch from running the R1.2.2.X COMDAC to the R1.2.2.5.3 COMDAC

- A. Execute software download command.
 - From menu bar select NE OPERATIONS ==> SOFTWARE ==> DOWNLOAD...
 - The SOFTWARE DOWNLOAD window will now open
 - In the SOFTWARE DOWNLOAD window select the COMDAC tab
 - Select the BROWSE button
 - In the UPDATE SYSTEM SOFTWARE FROM... browse window locate the file
 "aos_nb_r12253.bin" stored on the CD ROM and then select the OPEN button
 - You will now return to the SOFTWARE DOWNLOAD window
 - In the SOFTWARE DOWNLOAD window select the OK button to confirm
 - A SOFTWARE DOWNLOAD question window will now pop-up asking 'Do you want the Active COMDAC to be updated automatically?'
 - Select the YES button.
 - The FTP TRANSFER FACILITY window will now open.

LUCENT TECHNOLOGIES — PROPRIETARY

- Enter the following for the USERNAME: LUCENT01
- Enter the following for the PASSWORD: UI-PSWD-01
- Select the CONNECT button to start the download.
- B. Once the download has started the following will happen:
 - The FTP TRANSFER FACILITY window will display the progress of the download.
 - The download will take about 45 minutes to complete.
 - After the progress indicator reaches 100% the FTP TRANSFER FACILITY window will close.
 - The SYSTEM STATUS window will now appear.
 - About 2 minutes after the FTP TRANSFER FACILITY window closes, the system will switch from the COMDAC running the old load to the COMDAC running the new load.
 - While the COMDACs switch, all new outgoing or incoming calls to the system will be blocked for 2-8 minutes, calls already established before the switch will be maintained.
 - The GSI telnet/LAN link will be dropped and the link will also be unavailable for the same 2-8 minutes.
- C. After the switch, the active COMDAC Fault LED will blink. Wait at least 15 minutes for the Fault LED to stop blinking and extinguish. During this time, the active R1.2.2.5.3 COMDAC is initializing. Do not enter any commands or remove and reinsert packs until blinking has stopped.Do not continue until the active COMDAC Fault LED stops blinking.

4. Verify system is automatically upgrading the standby R1.2.2.X COMDAC to R1.2.2.5.3

- A. Re-log back into the system.
- B. The GSI will display a *Copy Program Memory In Progress* message. If is does not appear, wait 5-10 minutes for it to appear. This message indicates the system is copying the R1.2.2.5.3 software from the active COMDAC to the standby COMDAC. The standby COMDAC Fault LED will also blink during the copy. This operation will take about 60 minutes. Do not enter any commands or remove or replace packs until blinking has stopped.
- C. After the standby COMDAC Fault LED has stopped blinking verify System Software Version on the standby COMDAC is R1.2.2.5.3 by retrieving system software version as follows:
 - From menu bar select TL1 COMMANDS ==> ALL COMMANDS ==> RTRV ==> EQPT
 - In the RTRV-EQPT window select:
 - Entity = COMDAC
 - P1 {shelf} = 1
 - P2 {slot} = all
 - Select the EXECUTE button.
 - Observe on the TL1SI VIEW window that both COMDACs inventory have PVRSN = 1.2.2.5.3.

5. Update AEM configuration file

A. If the system is being monitor by AEM R1.5 see System Note **AEM R1.5** on page 8 for AEM upgrade procedure.

6. Procedure done.

10. Glossary

ADSL	Asymmetric Digital Subscriber Line
AEM	AnyMedia Element Manager
AFM	Access Feeder Multiplexer
AOS	AnyMedia Operating System
AP	Application Pack
CIT	Craft Interface Terminal
COMDAC	Common Data And Control Pack
COT	Central Office Terminal
CRV	Call Reference Value
CTU	Craft / Test Unit or Channel Test Unit
CU	Channel Unit
DS0	Digital Signal Level Zero
DS1	Digital Signal Level One
EOC	Embedded Operations Channel
ESF	Extended Super Frame
FSA	First Service Activation
FTP	File Transfer Protocol
GA	General Availability
GSI	Graphical System Interface
GUI	Graphical User Interface
IP	Internet Protocol
ISDN	Integrated Services Digital Network
MDS2	Metallic Distribution Shelf 2
MDSU	Metallic Distribution Server Unit
MSC	Metallic Server Controller
NB	Narrowband
NMA	Network Management and Administration; Telcordia standard for T1 network operations
NT	Network Termination
NVDS	Non-Volatile Data Storage
PC	Personal Computer
POTS	Publicly Offered Telephone Service (Plain Old Telephone Service)
ROC	Remote Operations Channel
RT	Remote Terminal
S/W	Software
SF	Super Frame
TCA	Threshold Crossing Alert
TCP	Transmission Control Protocol

 $LUCENT \ TECHNOLOGIES - PROPRIETARY$

TCP/IP	Transmission Control Protocol/Internet Protocol
TL1	Transaction Language/1
TL1SI	TL1 System Interface
TMC	Time-Slot Management Channel
VFDE	Voice Frequency Data Enhancement
VRT	Virtual Remote Terminal