Lucent Technologies
Bell Labs Innovations

DDM-2000 FiberReach Multiplexer

Software Release Description

Release 4.0.3

Notice

Every effort was made to ensure that this information product was complete and accurate at the time of printing. However, information is subject to change.

Mandatory customer information

Interference information: Part 15 of FCC rules

NOTE: This equipment is designed to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions manual, may cause interference to radio communications. Operation of this equipment in a residence is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

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The ordering number for this document is 109-584-805. To order this document, call 1-888-582-3688 (USA), 1-317-322-6619 (Canada), 1-317-322-6416 (Europe, the Middle East, and Africa), or 1-317-322-6411 (Asia, the Pacific Region, China, Caribbean, and Latin America). RBOC/BOC customers should process document orders or standing order requests through their Company Documentation Coordinator. For more ordering information, refer to the "Ordering Information" section in the "About This Information Product" section.

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Technical support

Lucent Technologies Customer Technical Assistance Management (CTAM) center provides a technical assistance telephone number that is monitored 24 hours a day. For technical assistance (continental U.S.), call 1-866-LUCENT8 (1-866-582-3688) and select the appropriate prompt. For international customers, please call +1 630-224-4672.

Developed by Lucent Technologies Technical Support Services (TSS).

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About this information product

Purpose The purpose of this Software Release Description (SRD) is to provide information about DDM-2000 FiberReach Multiplexer Release 4.0.3 This document is intended for individuals who are responsible for the installation, acceptance, operations and maintenance of the DDM-2000 FiberReach.

Reason for reissue This is the first issue of this document.

Safety labels This document may contain a safety label in the form of a CAUTION statement. This admonishment has the following definition:

⚠️ **CAUTION**

Caution indicates the presence of a hazard that will or can cause minor personal injury or property damage if the hazard is not avoided. The Caution Admonishment is also used for equipment damage, loss of software or service interruption.

How to use this information product **Important!** Read all chapters of this document before beginning the DDM-2000 FiberReach Release 4.0.3 software installation or upgrade.

The following is a brief description of the contents of each chapter in this document:

Chapter 1, "Features"

This chapter provides a listing of DDM-2000 FiberReach Multiplexer features for Release 4.0.3.

Chapter 2, "Problems Fixed"

This chapter provides brief descriptions of fixes to problems found in prior releases.

Chapter 3, "Known Problems"

This chapter provides descriptions and workarounds for problems existing in Release 4.0.3.

Chapter 4, "Using the Release 4.0.3 Software CD-ROM"

This chapter provides the procedures to install the NE software.

Chapter 5, "Software Installation"

This chapter provides the procedures to install the DDM-2000 FiberReach Multiplexer Release 4.0.3 software into a new system.

Chapter 6, "DDM-2000 Interworking"

This chapter covers interworking between DDM-2000 FiberReach Multiplexer Release 4.0.3 and other PF-2000 family software.

Chapter 7, "Miscellaneous"

This chapter provides technical support, software ordering information.

Chapter 8, "Reference Commands and Procedures"

This chapter provides the commands and procedures referenced in this SRD.

Conventions used The following conventions are used in this document.

- `This font` indicates a command.

  `Example: ent-crs-sts1`

- *This font* indicates a document reference.

  Example: Document Title, xxx-xxx-xxx (ordering number):*DDM-2000 OC-3 and OC-12 Multiplexers Applications, Planning, and Ordering Guide, 363-206-200R15*.

- **This font** indicates lettering designations on the backplane, shelf, and circuit packs.

  Example: Release the **ACO TEST** push-button on the SYSCTL when the 8. disappears in the IND display.

- This font indicates information output by the system or displayed on the computer.

  Example: The response will be rtrv-eqpt:all COMPLD.

- Underlined phrases indicate hyperlinks to other text in the document or another step in the task.

  Example: <u>**Cross-Reference**</u> (chapter-page number):

- Important messages are displayed as follows:

  Important!   This is important information.

Related information products

For a complete list of all DDM-2000 documentation, contact the Lucent Technologies Customer Information Center at: 1-888-582-3688 or on the internet at http://www.lucentdocs.com

The following documents are referenced in this document:

- *DDM-2000 FiberReach Multiplexer Wideband/Narrowband Shelf TARP Release 3.0 and Later User/Service Manual, 363-206-305*

The following documents are supplied at the end of this document:

- DLP-525, *Install Software Generic Program, New Shelf Installation, Only BBG8/BBG8B SYSCTL and BBG9 OHCTL Installed.*

- DLP-536, *Install Software Generic Program, In-Service System, Local Shelf Download.*

- DLP-537, *Install Software Generic Program, In-Service System, Remote Shelf Download.*

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To comment on this information product, go to the Online Comment Form or email your comments to the Comments Hotline (comments@lucent.com).

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- Additional copies of this document
- Electronic documentation (CD-ROMs)

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ILEC/CLEC customers should process orders through your Company Documentation Coordinator.

Commercial Customers

Commercial customers may order standard documentation or request placement on the standing order list (for reissues of any document) by mail, telephone, fax, email, or the internet.
The postal address for CIC is:
Lucent Technologies
Attention: Order Entry
2855 N. Franklin Road
P.O. Box 19901
Indianapolis, IN 46219

Table 1   Ordering Documentation via Phone, Fax, or Email

From Country/Region	Telephone Numbers	Fax Numbers	Email
USA	1-888-LUCENT-8 (1-888-582-3688)	1-800-566-9568	cicorders@lucent.com
Canada, North American Region (NAR)	+1-317-322-6616	+1-317-322-6699	cicorders@lucent.com
Europe, the Middle East, and Africa (EMEA), Asia, Pacific Region, and China; Caribbean, Latin America (CALA)	+1-317-322-6416	+1-317-322-6699	intlnaorders@lucent.com

Table 2   Ordering Documentation via the Internet

Customer	Web-SIte
Commercial Customers	**http://www.lucentdocs.com**
	http://www.lucent8.com
Lucent Associates	**http://www.cic.lucent.com**

Methods of Payment

Lucent Associates are billed using an organization number/cost center and location code. Commercial customers may use one of the following methods of payment:

- Check (payable to Lucent Technologies)

- Money order (payable to Lucent Technologies)

- Invoice upon receipt of a purchase order.

  (Purchase orders may be faxed or mailed using the information provided above.)

- Credit card:

  – Visa

  – MasterCard

  – American Express

  For orders totaling $1000 or less, either a credit card or prepayment by check/money order is required.

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1   Features

Overview

Purpose   This chapter describes the features of the DDM-2000 FiberReach Multiplexer Release 4.0.3. For a complete listing of features supported in DDM-2000 FiberReach, please refer to the *DDM-2000 FiberReach Multiplexer Applications, Planning, and Ordering Guide, 363-206-300* and the *DDM-2000 FiberReach Multiplexer Wideband/Narrowband Shelf TARP Release 3.0 and Later User/Service Manual, 363-206-305.*

Contents   This chapter contains the following

Release 4.0.3 Feature Descriptions	1-2

Release 4.0.3 Feature Descriptions

Support for OC-12 Optics (29G-U OLIU)

Supports for OC-12 optics through the use of the 29G-U OLIU circuit packs in the Main slots. Use of the 29G-U OLIU allows the following:

- STS-1/STS-3c/VT1.5 Pass-Through cross-connections on the 29G-U equipped FiberReach shelves.
- STS-1 cross-connections between main slots equipped with the 29G-U OLIU and Function Unit slots, providing a fully flexible assignment of STS-1 timeslots. (The function unit slots must be equipped with the BBG4/BBG4B (DS3) or the BBG19 (DS3) circuit packs for STS-1 cross-connections).
- VT1.5 cross-connections between Main slots equipped with 29G-U OLIU circuit packs and Low Speed slots equipped with DS1, HDSL, or T1EXT circuit packs, providing fully flexible VT1.5 timeslot assignment.
- STS-3c 0X1 cross-connections when the shelf is equipped with the 29G-U OLIU circuit packs in Main slots, and 22-type OLIU packs in the Function Unit slots.
- OC-12 Section and Line performance monitoring (PM) data will be collected and reported. Threshold crossing alerts for the PM data will also be provided.
- OC-12 Line level alarms will be monitored and reported.
- In service upgrades from 28G-U (OC-3 OLIU circuit pack) to the new 29G-U OLIU circuit pack.

Support for DS3 services when using 26-type OLIU

Supports the BBG4/BBG4B (DS3) and the BBG19 (DS3) circuit packs in the Function Unit slots of the FiberReach shelf while using the 26-type (OC-1) OLIU circuit pack in the Main slots.

Main pack Support for 1+1 DCC interworking

Supports the Main ring (OC-3/OC-12) interfaces DCC provisioning to the values of: distinct (default) or identical. For normal ring connections, the Main interfaces will use the "distinct" DCC mode. The "identical" DCC mode will allow a FiberReach shelf to interconnect through its Main interface to an OC-3/OC-12 1+1 interface on another NE (e.g. Function Unit of the host NE).

Support for TL1 on CIT port

Supports the provisioning of asynchronous CIT port to run TL1. This feature allows the system to accept TL1 message size of up to 3022 characters. A maximum of 50 remote TL1 associations may be initiated from the CIT port.

Support for Remote NE Status

Supports remote NE status using Alarm Gateway NE (AGNE). When an NE is provisioned as an AGNE, this feature provides remote office alarms and summary alarm information of remote Network Elements in the local alarm report. The FiberReach NE may be provisioned as a GNE or an AGNE, however it is recommended that it not be provisioned as both at the same time. The recommended maximum number of Network Elements in an alarm group containing a FiberReach as an AGNE is 15.

> **Important!** In networks where an Alarm Group size is greater than 15 NEs, do not provision FiberReach as an AGNE; provision co-existing OC-3 shelves as AGNEs instead.

Security Enhancements

Supports new Security enhancements to the NE which includes a user provisionable field of about 400 characters to display a proprietary notice after logging in, a password aging feature on all user accounts that would make users change their password when or before it expires, and may be provisioned to have up to 147 non-privileged logins and three priveleged logins.

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2   Problems Fixed

Overview

Purpose   This chapter provides descriptions of problems found in previous releases and fixed in Release 4.0.3.

Contents   This chapter contains the following:

Problems Fixed in Release 4.0.1

Transmission   The following problems corresponding to Transmission functionality have been fixed.

Issue:

When the FiberReach 3.1.2 WBS is equipped with a BBG4 or BBG4B DS3 circuit pack in the FUNCTION UNIT, the CIT command rtrv-pm-stst1 with the AID: m-1 is not accepted. Similarly, the TL1 command sched-pmrept-sts1: is denied for the AID: m-1.

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Problems Fixed in Release 4.0.3

Operations   The following problems corresponding to System Operations functionality have been fixed.

Issue:

DCC can fail in such a way that network elements connected to the failed shelf may be affected, resulting in DCC failures in the attached network elements. The DCC failure may clear and then fail again later.

Issue:

Occasionally on 28-type and 29-type OLIUs the series number is overwritten by software with the result of changing the ":" to some unspecified character. (Example: from showing a S1:1 to S1"1)

Hardware   The following problems corresponding to System Operations functionality have been fixed.

Issue:

The BBG8B Ser 1:3 Controller fails due to excessive writing of the Controller's EEPROM by the software. When the EEPROM's write limit is reached, the software is no longer able to write to that location, and the Controller is tagged as "failed".

3   Known Problems

Overview

Purpose   This chapter provides descriptions of known problems and workarounds for problems that exist in the DDM-2000 FiberReach Multiplexer.

> **Important!**   These Known Problems, as well as others that are discovered after this document is issued, are listed as solutions in the Technical Support Services (TSS) ask Lucent Knowledge database.
>
> In order to access this database the user must have a Remote Technical Support (RTS) contract. To view the entries in the ask Lucent Knowledge database:
>
> 1.   Go to http://www.lucent.com/support
> 2.   Enter and submit **login** information
> 3.   Click *ask Lucent Knowledge Database*
> 4.   Wait until the screen loads
> 5.   Enter **index of srd known problems** in the *Ask question* field
> 6.   Select *DDM-2000*
> 7.   Click *Go*
> 8.   Click on *DDM-2000 FiberReach Release 4.0.3 SRD Known Problems*

Contents This chapter contains the following:

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Known Problems

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Maintenance The following problems corresponding to Maintenance functionality have been observed.

Issue:

In the DS3 services that have been provisioned for "vm" or "vmr" modes, a DS3 AIS signal should be transmitted towards the DSX when an incoming STS-1 unequipped signal is detected on the high speed channel which is cross connected to that DS3 service.

In this release of the product, no DS3 AIS signal will be transmitted towards the DSX under that failure condition.

Workaround:

Be aware.

Issue:

During an upgrade from the 28G-U (OC-3) type OLIU circuit pack to the 29G-U (OC-12) type OLIU circuit pack, the FiberReach system might detect STS-1 LOP alarm conditions on STS-1 numbers four through twelve.

Workaround:

Reset the FiberReach system that initiates/transmits these alarm conditions.

Operations Interworking The following problems corresponding to Operations Interworking functionality have been observed.

Issue:

In the event that the L4TLIF parameter is found to be set to a value of 0, reprovisioning it to a valid value cannot be done via the TL-1 command `ENT-ULSDCC-L4`.

Workaround:

Reprovision the L4TLIF parameter to the correct default value of 100 via the CIT interface using the `ENT-ULSDCC-L4` command.

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4   Using the Release 4.0.3 Software CD-ROM

Overview

Purpose   DDM-2000 Release 4.0.3 software can be ordered on diskettes, or CD-ROM. This section provides procedures to be used when utilizing a CD-ROM as the media to access and distribute Release 4.0.3 software.

> **Important!**   Software Download is not guaranteed on PCs running Windows XP® Operating Systems, because CTERM is a DOS application and Windows XP® no longer guarantees support of DOS applications

The CD-ROM contains a Windows-based InstallShield Wizard that provides step-by-step instruction for extracting software from the CD-ROM. The InstallShield Wizard can be used to:

- Create a set of software distribution disks.
- Copy software files to a directory on the PC hard drive.
- Download software directly from the CD-ROM to a DDM-2000 shelf.
- Download a PDF file of the Software Release Description to the PC hard drive.

If you want to create a set of software disks, proceed to the "Create a Set of Distribution Disks" Section.

If you want to copy software files and a pdf file of the Software Release Description from the CD-ROM to the PC hard drive proceed to the "Extracting Software and Software Release Description to a PC Hard Drive" Section.

If you want to download software directly to a new DDM-2000 shelf, proceed to the "Installing Software to a New DDM-2000 Shelf From the CD-ROM" Section.

If you want to download software directly to an in-service DDM-2000 shelf, proceed to the "Installing Software to an In-Service DDM-2000 Shelf From the CD-ROM" Section.

Contents   This chapter contains the following:

Create a set of Distribution Disks

Description   Perform the following procedure if you want to create a set of software distribution disks.

Labeling Disks

Obtain four 3.5" disks that have been formatted. Label the disks as follows

- Disk1 = DDM-2000 FiberReach Release 4.0.3 Disk 1 of 4

- Disk2 = DDM-2000 FiberReach Release 4.0.3 Disk 2 of 4

- Disk3 = DDM-2000 FiberReach Release 4.0.3 Disk 3 of 4

- Disk4 = DDM-2000 FiberReach Release 4.0.3 Disk 4 of 4

Extracting Software to Disks

1. Insert the CD-ROM into the disk drive. After several seconds, the InstallShield Wizard will appear on the PC display.

2. Select the software extraction component to create a set of floppy disks by following the step-by-step instructions provided by the InstallShield Wizard.

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Extracting Software and Software Release Description to a PC Hard Drive

Description   Perform the following if you want to copy software files and the Software Release Description from the CD-ROM to the PC hard drive.

1. Insert the CD-ROM into the disk drive. After several seconds the InstallShield Wizard will appear on the PC display.

2. Select the component option to install the software onto your hard drive and follow the step-by-step instructions provided by the InstallShield Wizard.

3. The Software Release Description documentation will be installed in a folder in *C:\Program Files\Lucent\DDM-2000\FR_R403\Documentation*.

4. Release 4.0.3 Software will be installed in the *C:\Program Files\Lucent\DDM-2000\FR_R403* folder.

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Create Icon to Download Release 4.0.3 Software from Desktop

Description   Perform the following if you want to Create Icon to Download Release 4.0.3 Software from Desktop:

1. Right mouse click on the desktop, click on `New` > `Shortcut` and the Create Shortcut Window will open.

2. Click on the `Browse` button, then double-click the appropriate drive and the *Program Files, Lucent, DDM-2000* and *FR_R403* Folders. Click on the *Term* then click `OK`, then click `Next`. In the ***Select a name for the shortcut window***. Type in "**FiberReach Release 4.0.3**" in the window and click the `Finsh` Button.

Create Icon to Download Release 4.0.3 Software from Desktop for PCs Arranged to use COM2

Description   Perform the following if you want to Create Icon to Download Release 4.0.3 Software from Desktop using COM2:

1. Right mouse click on the desktop, click on `New > Shortcut` and the Create Shortcut Window will open.

2. Click on the `Browse` button, then double-click the appropriate drive and the "*Program Files, Lucent, Ddm-2000* and *FR_R403*" Folders. Click on the *Term* click `OK` then click `Next.` In the **Select a name for the shortcut** window. Type in **FiberReach Release 4.0.3** in the window and click the `Finish` Button.

3. Right mouse click on the icon created above and select Properties from the drop down list.

4. The **OC3 Release 4.0.3 Properties** window will open.

5. On the Shortcut tab in the **Target** text box type in **COM2** following the \term.bat".

    Example:

    ```
    "C:\ProgramFiles\Lucent\Ddm-
       2000\FR_R403\term.bat" com2
    ```

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Installing Software to a New DDM-2000 FiberReach Shelf From the CD-ROM

Description

Important!   If your PC is configured to download DDM-2000 software using COM2, Release 4.0.3 software cannot be downloaded to a shelf directly from a CD-ROM.

1. Perform the following if you want to install software from the CD-ROM directly to a DDM-2000 FiberReach shelf that is not equipped with software.

2. Connect the PC to the CIT port on the DDM-2000 FiberReach shelf User Panel.

3. Insert the CD-ROM into the disk drive. After several seconds, the InstallShield Wizard should appear on the PC display. If the InstallShield Wizard does not appear, double-click on the "My Computer" icon on your desktop. Then double-click on the CD-ROM drive icon.

4. Select the component option for running Cterm from the CD-ROM and follow the step-by-step instructions provided by the InstallShield Wizard.

5. Refer to DLP 525 for new shelf software installation.

□

Installing Software to an In-Service DDM-2000 FiberReach Shelf From the CD-ROM

Description   Perform the following if you want to install software from the CD-ROM directly to a DDM-2000 FiberReach local or remote shelf that is currently running a compatible version of software.

1. Connect the PC to the CIT port on the DDM-2000 FiberReach shelf User Panel.

2. Insert the CD-ROM into the disk drive. After several seconds, the InstallShield Wizard should appear on the PC display. If the InstallShield Wizard does not appear, double-click on the "My Computer" icon on your desktop. Then double-click on the CD-ROM drive icon.

3. Select the component option for running Cterm from the CD-ROM and follow the step-by-step instructions provided by the InstallShield Wizard.

4. Refer to DLP 536 for Local or DLP 567 for remote download.

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5   Software Installation

Overview

Purpose   This chapter covers the Implementation of Release 4.0.3 on the DDM-2000 FiberReach Multiplexer.

Contents   This chapter contains the following

In Service Upgrades

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Description   Table 5-1 lists the current software releases of the DDM-2000 FiberReach Multiplexer that can be directly upgraded while in service. Specific procedures for upgrades are provided in 363-206-305, *DDM-2000 FiberReach Multiplexer Wideband/Narrowband Shelf TARP Release 3.0 and Later, User/Service Manual (TOP) - Volume II*.

Table 5-1   DDM-2000 FiberReach In-Service Software Upgrade Compatibility

Current Release	Upgrade to*
	4.0
1.0.n (OC-1)	$C^{\dagger,\ddagger}$
2.0.n (OC-1)	$C^{\dagger,\ddagger}$
2.1.n (OC-1)	$C^{\dagger,\ddagger}$
2.2.n (OC-1, OC-3)	$C^{\dagger}$
3.0.n (OC-1, OC-3)	U^{**}
3.1.n (OC-1, OC-3)	U
4.0.n (OC-1, OC-3, OC-12)	U

Notes:

*   When doing an upgrade, it is recommended that the latest point release of software be used, if possible.

†   Incompatible OSI stack requires special upgrade procedure. See 363-206-285, *DDM-2000 OC-3 Multiplexer, TARP Release 13 and Later, User/Service Manual (TOP) - Volume II* and 842-102-144, *Lucent Technologies 2000 Product Family, Operations Interworking Guide For TARP Releases* for subnetwork upgrade procedures.

C   Requires local software download only to upgrade the system.

U   Requires local or remote software download only to upgrade the system.

‡   Requires upgrade to R2.2 prior to upgrading to R4.0

**   Requires upgrade to R3.1 prior to upgrading to R4.0

Implementation Procedure

Description

> **Important!**   Software Download is not guaranteed on PCs running Windows XP® Operating Systems, because CTERM is a DOS application and Windows XP® no longer guarantees support of DOS applications
>
> **Important!**   After Release 4.0.3 or any other DDM-2000 FiberReach TARP software release has been installed and is the operating generic for the shelf, use the "RTRV-ULSDCC-L4" command to verify that the L4TLIF parameter is correctly provisioned with a default value of 100. If instead, the L4TLIF parameter is set to 0, set it to 100 using the "ENT-ULSDCC-L4" command.
>
> Verify that the L4ETDC parameter is set to enable. If it is set to disable, set it to enable using the "ENT-ULSDCC-L4" command.

The following is a brief description of scenarios that may be encountered while upgrading to DDM-2000 FiberReach Release 4.0.3 software:

DDM-2000 FiberReach Release 1.0.1 through 1.0.5, 2.0.1, 2.1.1 and 2.1.2 shelves using the **BBG8** System Controller (SYSCTL) circuit pack manufactured in June 1997 or earlier are susceptible to developing corrupted memory locations in the controller's boot flash devices that can result in the loss of controller functionality in the event of a software reboot. When upgrading from any of the above releases, run the `test-sysctl;` command on the DDM-2000 to be upgraded. Refer to Engineering Change Procedure ECP-N81076MV for more information.

> **Important!**   Performance of the `test-sysctl` command will not affect shelf operation. However, if the controller fails the test, the shelf will indicate a Major Alarm (SYSCTL FAIL) until the defective controller is replaced. A controller failing this test will continue to function properly as long as a shelf software reboot does not occur. A software reboot will result in the failed controller becoming inoperative.

DLP-536 and DLP-537 contain the latest information and procedures needed for upgrading a DDM-2000 FiberReach System running any upgradable version of DDM-2000 FiberReach software.

DLP-525 contains the latest information and procedures needed to installing software in new shelf installations where the SYSCTL is new and contains no software.

This release of software takes approximately 15 to 25 minutes to download to a local shelf using a newer PC with the autobaud feature.

This release of software takes approximately 45 minutes to download to a local shelf using an older PC set to 9600 baud.

This release of software copying software from one shelf to another takes about 15 to 20 minutes. The download time will be longer (even without excessive DCC traffic) when there are additional spans between the source and target network elements.

To install the new software use the attached copies of:

- *DLP-525 - Install Software Generic Program Network Element SoftwareNew Shelf Installation Only BBG8/BBG8B SYSCTL Installed*

- *DLP-532, Install Software Generic Program, In-Service System, Local Shelf Download.*

- *DLP-562, Install Software Generic Program, In-Service System, Remote Shelf Download.*

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Description   **Important!**   Software upgrades from DDM-2000 FiberReach Release 1.0 to DDM-2000 FiberReach Release 4.0.3 should first be upgraded to an intermediate release of Release 2.2

Important!   Software upgrades from DDM-2000 FiberReach Release 1.0 to DDM-2000 FiberReach Release 2.2 cannot be done remotely.

If a NE running DDM-2000 FiberReach Release 1.0 is upgraded to DDM-2000 FiberReach Release 2.2 through a Forced Software Download, the following scenarios will take place:

- Software of Release 2.2 is downloaded and installed as the EXECUTING generic.

- Proceed to Upgrading DDM-2000 FiberReach Release 2.2 to Release 4.0.3 to complete the upgrade.

If the "ins-prog" command was initiated to install Release 2.2 to a NE running Release 1.0, the following scenarios will take place:

- Software of Release 2.2 is downloaded and installed as the EXECUTING generic.

- Proceed to Upgrading DDM-2000 FiberReach Release 2.2 to Release 4.0.3 to complete the upgrade.

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Description   **Important!**   Software upgrades from DDM-2000 FiberReach Release 2.0 to DDM-2000 FiberReach Release 4.0.3 should first be upgraded to an intermediate release of Release 2.2

Important!   Software upgrades from DDM-2000 FiberReach Release 2.0 to DDM-2000 FiberReach Release 2.2 cannot be done remotely.

If a NE running DDM-2000 FiberReach Release 2.0 is upgraded to DDM-2000 FiberReach Release 2.2 through a Forced Software Download, the following scenarios will take place:

- Software of Release 2.2 is downloaded and installed as the EXECUTING generic.
- Proceed to Upgrading DDM-2000 FiberReach Release 2.2 to Release 4.0.3 to complete the upgrade.

If the "ins-prog" command was initiated to install Release 2.2 to a NE running Release 2.0, the following scenarios will take place:

- Software of Release 2.2 is downloaded and installed as the EXECUTING generic.
- Proceed to Upgrading DDM-2000 FiberReach Release 2.2 to Release 4.0.3 to complete the upgrade.

Description   **Important!**   Software upgrades from DDM-2000 FiberReach Release 2.1 to DDM-2000 FiberReach Release 4.0.3 should first be upgraded to an intermediate release of Release 2.2

        Important!   Software upgrades from DDM-2000 FiberReach Release 2.1 to DDM-2000 FiberReach Release 2.2 cannot be done remotely.

If a NE running DDM-2000 FiberReach Release 2.1is upgraded to DDM-2000 FiberReach Release 2.2 through a Forced Software Download, the following scenarios will take place:

- Software of Release 2.2 is downloaded and installed as the EXECUTING generic.

- Proceed to Upgrading DDM-2000 FiberReach Release 2.2 to Release 4.0.3 to complete the upgrade.

If the "ins-prog" command was initiated to install Release 2.2 to a NE running Release 2.1, the following scenarios will take place:

- Software of Release 2.2 is downloaded and installed as the EXECUTING generic.

- Proceed to Upgrading DDM-2000 FiberReach Release 2.2 to Release 4.0.3 to complete the upgrade.

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Description   **Important!**   Software upgrades from DDM-2000 FiberReach Release 2.2 to DDM-2000 FiberReach Release 4.0.3 cannot be done remotely.

If a NE running DDM-2000 FiberReach Release 2.2 is upgraded to DDM-2000 FiberReach Release 4.0.3 through a Forced Software Download, the following scenarios will take place:

•   Software of Release 4.0.3 is downloaded and installed as the EXECUTING generic.

If the "ins-prog" command was initiated to install Release 2.2 to a NE running Release 4.0.3, the following scenarios will take place:

•   Software of Release 4.0.3 is downloaded and installed as the EXECUTING generic.

Refer to DLP 536 for Local download.

Description
Important! Software upgrades from DDM-2000 FiberReach Release 3.0 to DDM-2000 FiberReach Release 4.0.3 should first be upgraded to an intermediate release of Release 3.1

If a NE running DDM-2000 FiberReach Release 3.0 is upgraded to DDM-2000 FiberReach Release 3.1 through a Forced Software Download, the following scenarios will take place:

- Software of Release 3.1 is downloaded and installed as the EXECUTING generic.

- Proceed to Upgrading DDM-2000 FiberReach Release 3.1 to Release 4.0.3 to complete the upgrade.

If the "ins-prog" command was initiated to install Release 3.1 in a NE running Release 3.0 software, the following scenarios will take place:

- Software of Release 3.1 is downloaded and installed as the EXECUTING generic.

- Proceed to Upgrading DDM-2000 FiberReach Release 3.1 to Release 4.0.3 to complete the upgrade.

If the "cpy-prog" command was initiated to copy Release 3.1 into a remote NE running Release 3.0 software, the following scenarios will take place:

- Software of Release 3.1 is downloaded and installed as the EXECUTING generic of the NE receiving the software.

- Proceed to Upgrading DDM-2000 FiberReach Release 3.1 to Release 4.0.3 to complete the upgrade.

□

Upgrading DDM-2000 FiberReach Release 3.1 to Release 4.0.3

Description   If a NE running DDM-2000 FiberReach Release 3.1 is upgraded to DDM-2000 FiberReach Release 4.0.3 through a Forced Software Download, the following scenarios will take place:

- Software of Release 4.0.3 is downloaded and installed as the EXECUTING generic.

If the "`ins-prog`" command was initiated to install Release 4.0.3 in a NE running Release 3.1 software, the following scenarios will take place:

- Software of Release 4.0.3 is downloaded and installed as the EXECUTING generic.

If the "`cpy-prog`" command was initiated to copy Release 4.0.3 into a remote NE running Release 3.1 software, the following scenarios will take place:

- Software of Release 4.0.3 is downloaded and installed as the EXECUTING generic of the NE receiving the software.

Refer to DLP 536 for Local or DLP 567 for remote download.

Upgrading DDM-2000 FiberReach Release 4.0 to Release 4.0.3

Description   If a NE running DDM-2000 FiberReach Release 4.0 is upgraded to DDM-2000 FiberReach Release 4.0.3 through a Forced Software Download, the following scenarios will take place:

- Software of Release 4.0.3 is downloaded and installed as the EXECUTING generic.

If the "ins-prog" command was initiated to install Release 4.0.3 in a NE running Release 4.0 software, the following scenarios will take place:

- Software of Release 4.0.3 is downloaded and installed as the EXECUTING generic.

If the "cpy-prog" command was initiated to copy Release 4.0.3 into a remote NE running Release 4.0 software, the following scenarios will take place:

- Software of Release 4.0.3 is downloaded and installed as the EXECUTING generic of the NE receiving the software.

Refer to DLP 536 for Local or DLP 567 for remote download.

6   DDM-2000 Interworking

Overview

Purpose   This chapter covers interworking between DDM-2000 FiberReach
Multiplexer Release 4.0.3 and other PF-2000 family software.

Contents   This chapter contains the following:

DDM-2000 Interworking	6-2

Introduction   Interworking between products is evolving to include both transmission interworking (with EC-1, OC-1, OC-3, IS-3, and DS3 interfaces) and operations interworking (OI). Multi-vendor transmission interworking was supported in previous releases. DDM-2000 FiberReach Release 4.0.3, supports multi-vendor OI compatibility. Care must be taken to check correct software releases and to check interface provisioning. For OLIU interfaces, care must be taken to ensure that both ends of a span are provisioned/equipped for the same protection mode (1+1 or dual 0x1, for example).

The following tables list the software compatibility within a subnetwork for the DDM-2000 FiberReach Multiplexer with Release 4.0.3 software. All configurations listed support OI. The tables list all possible Lucent Technologies software combinations. Software combinations not listed are not supported. The tables reflect that DDM-2000 OC-3 Release 4.0.3 is not expected to be deployed in the same networks as earlier non-TARP DDM-2000 OC-12, FiberReach, FT-2000, or DDM-2000 FiberReach software releases. DDM-2000 FiberReach Release 4.0.3 is targeted specifically for large subnetworks and multi-vendor applications.

See *824-102-144, Lucent Technologies 2000 Product Family, Operations Interworking Guide For TARP Releases*, for more information on operations interworking.

DDM-2000 OC-3 Software Compatibility   Table 6-1 lists the DDM-2000 FiberReach WBS software compatibility and interconnections with the DDM-2000 OC-3 Multiplexers. All configurations listed support operations interworking (OI). The table lists all possible software combinations. Combinations not listed are not supported.

Table 6-1   DDM-2000 OC-3 and DDM-2000 FiberReach WBS

Software Release		Interconnecting Circuit Pack	
DDM-2000 FiberReach	**DDM-2000 OC-3**	**DDM-2000 FiberReach**	**DDM-2000 OC-3**
4.0 (Ring)	15.0, 15.1, 15.3 (Ring)	**28G-U OLIU** in Main	**22-Type OLIU** in Main
		26G2-U OLIU in Main	**26G2-U/27G2-U OLIU** in Fn
		29G-U OLIU in Main	**24G-U/29G-U OLIU** in Main
	13.0 (Ring)	**28G-U OLIU** in Main	**22-Type OLIU** in Main
		26G2-U OLIU in Main	**26G2-U/27G2-U OLIU** in Fn

DDM-2000OC-12 Software Compatibility

Table 6-2 lists the DDM-2000 FiberReach WBS software compatibility and interconnections with the DDM-2000 OC-12 Multiplexers. All configurations listed support operations interworking (OI). The table lists all possible software combinations. Combinations not listed are not supported.

Table 6-2   DDM-2000 OC-12 and DDM-2000 FiberReach WBS

Software Release		Interconnecting Circuit Pack	
DDM-2000 FiberReach	**DDM-2000 OC-12**	**DDM-2000 FiberReach**	**DDM-2000 OC-12**
4.0 (Ring)	7.0, 7.1 (Ring)	**28G-U OLIU** in Main	**21G-U OLIU** in Fn
		29G-U OLIU in Main	**23G-U OLIU** in Main

7   Miscellaneous

Overview

Purpose   This chapter contains various miscellaneous information concerning the DDM-2000 FiberReach Release 4.0.3 software.

Contents   This chapter contains the following:

Information on Technical Assistance	7-2
Software Ordering Information	7-3

Information on Technical Assistance

Technical Assistance
Many of our customers have established their own support procedures. These procedures usually involve escalation within their own companies. However, some issues may require additional assistance from Lucent Technologies.

Lucent Technologies has been and continues to be committed to providing excellence in technical customer support for its products and services. Therefore, we provide a hierarchical support structure ready and available to solve any DDM-2000 FiberReach Multiplexer technical issue.

When additional technical assistance is needed, the Lucent Technologies Customer Technical Assistance Management (CTAM) is your first point of contact. Technical assistance is available 24 hours a day, 7 days a week.

> **Lucent Technologies Customer Technical Assistance Management (CTAM)**
> **+1-866-LUCENT-8 (1-866-582-3688)**
> (24 hours a day, 7 days a week)

Outside the continental US, customers should call 1-630-224-4672 or contact the Local Customer Support (LCS) or the support organization designated by their Customer Team.

By using CTAM as the entry point for Lucent Technologies support, you will be assured of timely and effective technical support services.

☐

Software Ordering Information

Description The following table refers to the Software ordering information:

Comcode	Description
109-584-821	DDM-2000 FiberReach Multiplexer R4.0.3 CD-ROM with software program.
109-584-839	DDM-2000 FiberReach Multiplexer R4.0.3 Initial Application.
109-584-847	DDM-2000 FiberReach Multiplexer R4.0.3 Software Upgrade Application.
109-584-805	DDM-2000 FiberReach Multiplexer R4.0.3 Software Release Description Paper.
109-584-813	DDM-2000 FiberReach Multiplexer R4.0.3 Software Release Description CD-ROM.

□

8 Reference Commands and Procedures

Overview

Purpose This chapter provides the commands and procedures referenced in this SRD.

Contents This chapter contains the following:

DLP-525 - Install Software Generic Program Network Element Software New Shelf Installation Only BBG8/BBG8B SYSCTL Installed

Outline   Use the following procedure to download FiberReach software to a **BBG8/BBG8B SYSCTL** for a new shelf installation.

Procedure

1

> **Important!**   This procedure is used to install a software program in a new DDM-2000 FiberReach shelf equipped only with the **BBG8/BBG8B SYSCTL** circuit pack. The circuit pack may be new from the factory or a circuit pack used previously that may already be loaded with software. For procedures to download software locally to a fully equipped in-service shelf, see **DLP-536**. For procedures to download software remotely to a fully equipped in-service shelf, see **DLP-537**.
>
> **Important!**   It is assumed that the **BBG8/BBG8B SYSCTL** circuit pack has been installed per **DLP-539**.
>
> **Important!**   If you are using a PC operating in a *Windows* environment, you must **exit** *Windows* and restart your PC in MS-DOS mode before performing these download procedures. For example, if your PC is running *Windows* 95 you must exit *Windows* by clicking on the **Start** button, then **Shut Down**, then **Restart the computer in** MS-DOS **mode**.

Obtain equipment, check software, and connect PC for download. Refer to **DLP-541** in the *DDM-2000 FiberReach Multiplexer Wideband/Narrowband Shelf TARP Release 3.0 and Later User/Service Manual, 363-206-305*.

2   Observe one of the following indications on the FE ID display. Note the indication and follow the suggested procedure.

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If...	Then...
Letter "**P**" in FE ID Display	Indicates no software installed in SYSCTL. Software must be downloaded locally using these procedures. Continue with Step 3.
Letter "**P.**" in FE ID Display	Letter "P" followed by a period (.) indicates a previous download attempt has failed. New software must be downloaded locally using these procedures. Proceed to Step 6.
Letter "**U**" in FE ID Display	Indicates SYSCTL switches S1 and S2 are not set properly for type of shelf being equipped. Remove SYSCTL. Repeat procedures of DLP-539 to correct switch settings and to install SYSCTL.
Letter "**E**" in FE ID Display	Indicates SYSCTL must be replaced. Get replacement SYSCTL and repeat procedures of DLP-539.
Letter "**F**" in FE ID Display	Indicates SYSCTL faceplate latch is not fully latched. Unplug SYSCTL and repeat procedures of DLP-539. Ensure you properly latch the faceplate when installing SYSCTL.
Flashing Letter "**L**" in FE ID Display	Indicates a low voltage condition (brownout) on the shelf. Clear trouble using Trouble Clearing: TAP-119.

3   Ensure the PC is connected to the front **CIT** (CIT-1) connector of shelf receiving software. If floppies are being used, ensure the first (number 1) diskette is installed in floppy drive. If hard drive is being used, ensure you are in the correct directory.

4

> **Important!**   After the terminal emulator (**term**) is started, the software download automatically begins. The download may take up to 45 minutes.

Enter `term` or `term COMn` command, where *n* = 1 or 2. If `term` is entered without the `COMn` option, then **COM1** will be selected by default. Disregard message `"Can't find script <init>"` if you see it after starting the terminal emulator.

> **Result:** Two brief messages are printed and you are instructed to `Press any key to continue . . .` after the second message. After you press any key, the terminal emulator is loaded and the terminal responds as follows within 2 minutes:
>
> ```
> CTRM ready. (Type Alt-h for help.)
> Communications established.
>
> Searching for optimal transfer rate. Handshake
> established at <baudrate> baud.
>
> In progress . . . .
> ```
>
> The dots continue to print until program installation is complete. If using floppies, insert each diskette when prompted. After installation is completed, the PC prints the following completion message:
>
> ```
> ins-prog:TID COMPLD
> /* Generic a.b.c is installed */
> ```
>
> The **SYSCTL** resets and the terminal is logged off the system.

5   Was response correct?

If...	Then...
Yes,	STOP! END OF TASK.
No,	Proceed to Step 10.

6   Ensure PC is connected to the front CIT (CIT-1) connector of shelf
         receiving software. If floppies are being used, ensure the first (number
         1) diskette is installed in floppy drive. If hard drive is being used,
         ensure you are in the correct directory.

7   Enter `term` or `term COM`*n* command, where *n* = 1 or 2. If `term` is
         entered without the `COM`*n* option, then **COM1** will be selected by
         default. If after starting the terminal emulator you see the message
         `"Can't find script <init>"`, disregard it.

> **Result:** Two brief messages are printed and you are instructed to
> `Press any key to continue . . .` after the second message.
> After you press any key, the terminal emulator is loaded and the
> terminal responds as follows:
>
> ```
> CTRM ready. (Type Alt-h for help.)
> Communications established.
> ```

8   Unplug and reseat the **SYSCTL** and immediately push and hold the **FE
         SEL** and **UPD/INIT** buttons at the same time until a **P** appears in the
         FE ID display (approximately 15 seconds). Software download may
         take up to 45 minutes.

> **Result:** PC starts download and prints the following message:
>
> ```
> Searching for optimal transfer rate. Handshake
> established at <baudrate> baud.
>
> In progress . . . .
> ```
>
> The dots continue to print until program installation is
> complete. If using the floppy disks, insert each diskette when
> prompted. After installation is completed, the PC prints the
> following completion message:
>
> ```
> ins-prog:TID COMPLD
> /* Generic a.b.c is installed */
> ```

The **SYSCTL** resets and the terminal is logged off the system. After approximately three minutes, you can log into the system.

....

9   Was response correct?

If...	Then...
Yes,	STOP! END OF TASK.
No,	Proceed to Step 10.

....

10   Did the download start as indicated by the `In Progress` message and rows of dots?

If...	Then...
Yes,	Proceed to Step 18.
No,	Continue with Step 11.

....

11   Check that the DDM-2000 is connected to the PC through the **COM** port. If it is not, reconnect the PC to DDM-2000 using the **COM** port and repeat the procedure.

If the download still does not start, as indicated by the `In Progress` message and rows of dots, within 2 minutes after the **P** appears in the **FE ID** display, change the CTRM baud rate as follows and repeat this procedure. If the baud rate is currently set to 9600, change it to 4800 or if the baud rate is currently set to 4800, change it to 9600. The baud rate is changed by:

   a.   Momentarily depress the "Alt C" keys.

   b.   Using the RETURN key to move to the "Speed" field.

   c.   Pressing the "Space" bar until the desired rate appears.

   d.   Momentarily depressing the "Escape/Esc" key to activate the new baud rate.

....

12   Ensure first (number 1) disk of program being installed is inserted, if using floppies.

....

13   Ensure diskette is inserted in correct drive.

....

....

14   Ensure the proper command was used to go to the drive with the diskette or to the proper directory containing the software.

....

15   Check for invalid COM port. Exit TERM (Alt-F2); then restart TERM using **term COM1** or **term COM2**.

....

16   If the download still does not start, refer to **Trouble Clearing: TAP-116**.

....

17   **Stop! END OF TASK.**

....

18   If the download *starts and fails* during its progress, exit `term` (Alt-F2) and repeat this procedure from **STEP 6**.

          If the download still does not start, refer to **Trouble Clearing: TAP-116**.

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....

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DLP-536 Install New Software Generic Program Network Element Software In-Service System Local Shelf Download

Outline Use the following procedure to locally download FiberReach software to a **BBG8/BBG8B SYSCTL** for an in-service system.

Procedure

....

1 Before beginning the software installation, refer to the Software Installation and Upgrade Procedure section of the Software Release Description. This section contains a description of any special considerations required when installing this version of software.

....

2

> **Important!** This procedure is used to install a new software program in a local in-service DDM-2000 FiberReach shelf. For procedures to download software in a new shelf (initial installation), see **DLP-525**. For procedures to download software to a remote shelf (using **ins-prog:** or **cpy-prog:** command), see **DLP-537**.
>
> **Important!** If upgrading from earlier non-TARP software releases to TARP Release 3.0 and later, after the first shelf is upgraded, single ended operations will not be available and major alarms (section DCC channel failed) will exist until all shelves are upgraded. The node farthest away should be upgraded first, working back to the local node.

Verify that no DCC failures or transmission failures (OC-1 LOS, OC-3 LOS, OC-12 LOS, flashing **OLIU FAULT** LEDs, etc.) are present on the network element or system receiving the program.

....

3 For software upgrade compatibility, see Table 8-1.

Table 8-1   DDM-2000 FiberReach In-service Software Upgrade Compatibility.

	Upgrade to*
Current Release	**4.0.3**
1.0.n (OC-1)	C†
2.0.n (OC-1)	C†
2.1.n (OC-1)	C†
2.2.n (OC-1, OC-3)	C†
3.0.n (OC-1, OC-3)	U
3.1.n (OC-1, OC-3)	U
4.0.n (OC-1. OC-3, OC-12)	U

Note: All DDM-2000 FiberReach shelves in a subnetwork should be using TARP Release 3.0 or 4.0 software.

C   Requires local software download only to upgrade the system.

U   Requires local or remote software download only to upgrade the system.

†   Incompatible OSI stack requires special considerations. See LTP 824-102-144, *Lucent Technologies 2000 Product Family, Operations Interworking Guide* for TARP Releases, for special considerations.

* When doing an upgrade, it is recommended that the latest point release of software be used, if possible.

....

4

> **Important!**   If you are using a PC operating in a *Windows**
> environment, you must **exit** *Windows* and restart your PC in *MS-DOS* mode before performing these download procedures. For example, if your PC is running *Windows 95* you must exit *Windows* by clicking on the **Start** button, then **Shut Down**, then **Restart the computer in** *MS-DOS* **mode**.

Obtain equipment, check software, and connect PC for download.

Refer to DLP-541

　　*   Registered trademark of Microsoft Corporation.

....

5 Observe one of the following indications on the FE ID display. Note the indication and follow the suggested procedure.

If...	Then...
Letter "**P**" in FE ID Display	Indicates no software installed in **SYSCTL**. Software must be downloaded locally using these procedures. Continue with Step 6.
Letter "**P.**" in FE ID Display	Letter "**P**" followed by a period (.) indicates a previous download attempt has failed. New software must be downloaded locally using these procedures. Proceed to Step 21.
FE ID Display Blank	Indicates compatible software is installed on the **SYSCTL**. This procedure assumes the installed software version is not the correct version. (Depress **ACO** button for longer than 2 seconds to display software version on the **FE ID** display.) Proceed to Step 9.
Letter "**C**" in FE ID Display	Indicates software is installed in **SYSCTL**, but it will not support the current shelf provisioning. Proceed to Step 25.
Letter "**U**" in FE ID Display	Indicates **SYSCTL** switches S1 and S2 are not set properly for type of shelf being equipped. Remove **SYSCTL**. Repeat procedures of **DLP-501** to correct switch settings and to install **SYSCTL**.
Letter "**E**" in FE ID Display	Indicates **SYSCTL** must be replaced. Get replacement **SYSCTL** and repeat procedures of **DLP-501**.

If...	Then...
Letter "**F**" in FE ID Display	Indicates **SYSCTL** faceplate latch is not fully latched. If **SYSCTL** has just been replaced, unplug **SYSCTL** and repeat procedures of **DLP-501**. If original **SYSCTL** has just been unplugged and reseated, properly seat the faceplate latch. (A reset occurs after the faceplate is latched.)
Flashing Letter "**L**" in FE ID Display	Indicates a low voltage condition (brownout) on the shelf. Clear trouble using **Trouble Clearing: TAP-119**.

6

> **Important!** If PC hard drive is being used, ensure you are in the correct directory. If floppies are being used, ensure the first (number 1) diskette is installed in floppy drive. Ensure PC is connected to the front CIT (CIT-1) connector.

> **Important!** After the terminal emulator (**term**) is started, the software download automatically begins. The download may take 20 to 45 minutes.

Enter **term** or **term COM**n command, where $n = 1$ or 2. If **term** is entered without the **COM**n option, then **COM1** will be selected by default. Disregard message `Can't find script <init>` if you see it after starting the terminal emulator.

> **Result:** Two brief messages are printed and you are instructed to `Press any key to continue . . .` after the second message. After you press any key, the terminal emulator is loaded and the terminal responds as follows within 2 minutes:
> ```
> CTRM ready. (Type Alt-h for help.)
> Communications established.
>
> Searching for optimal transfer rate.
> Handshake established at <baudrate> baud.
>
> In progress . . . .
> ```

> The dots continue to print until program installation is complete. If using floppies, insert each diskette when prompted. After installation is completed, the PC prints the following completion message:

> ```
> ins-prog:TID COMPLD
> /* Generic a.b.c is installed */
> ```

> The **SYSCTL** resets and the terminal is logged off the system.

7 Was response correct?

If...	Then...
Yes,	Continue with Step 8.
No,	Proceed to Step 30.

8 Did the letter "**C**" appear in the **FE ID** display?

If...	Then...
No,	STOP! END OF TASK.
Yes,	Proceed to Step 25.

9

> **Important!**   If PC hard drive is being used, ensure you are in the correct directory. If floppies are being used, ensure the first (number 1) diskette is installed in floppy drive.

Enter **term** or **term COM**n command, where n = 1 or 2. If **term** is entered without the **COM**n option, then **COM1** will be selected by default. Disregard message `Can't find script <init>` if you see it after starting the terminal emulator.

> **Result:** Two brief messages are printed and you are instructed to `Press any key to continue . . .` after the second message. After you press any key, the terminal emulator is loaded and the terminal responds as follows:

```
CTRM ready. (Type Alt-h for help.)
Communications established.
```

10

....

> **Important!** The default shelf is the shelf physically connected to the PC. To set baud rate automatically, enter two carriage returns (**<cr>**), two lower case "a"s (**aa**), or two upper case "A"s (**AA**). All other characters are ignored.

Enter two carriage returns.

> **Result:** PC prompts with:
>
> ```
> /* Enter a shelf number from 1 to 8 */
> shelf [default] =
> ```

....

11 Was response correct?

If...	Then...
Yes,	Continue with Step 12.
No,	Proceed to Step 31.

....

12 Enter the shelf number for the shelf being used for new program download.

> **Result:** PC prompts with:
>
> ```
> Login:
> ```

....

13 Enter the privileged user login (default LUC01).

> **Result:** PC prompts with:
>
> ```
> Password:
> ```

---

14   Enter the privileged user password (default: DDM-2000).

       Result: PC responds with:

```
/***********************************
*                                 *
*        Lucent Technologies      *
*        DDM-2000 FiberReach       *
*                                 *
*             Release a.b.c        *
*                                 *
***********************************/

                  .

                  .

                  .

   TID date time
M  rtrv-alm:all COMPLD
   /* Active Alarms and Status Report
```

15

       Important!   After the system prompt (<), the system will respond normally to commands entered. The "Commands and Reports" section of Volume 1 of *DDM-2000 FiberReach Multiplexer Wideband/Narrowband Shelf TARP Release 3.0 and Later User/Service Manual, 363-206-305* gives a description of the commands.

Use `rtrv-ne:` command to retrieve the name (tid) of the shelf having new program installed or see `TID` in response above.

....

16   Enter the command `ins-prog:tid.`

> Where tid = the target identifier (shelf name) for the DDM-2000 shelf having the new program installed.
>
> **Result:** `/*\ Testing For Program Installation...\ */`
>
> After several seconds, the PC prints a Caution! message followed by the prompt:
>
> `Execute? y/n =`

....

17   Was response correct?

If...	Then...
Yes,	Continue with Step 18.
No,	Do Trouble Clearing: **TAP-116**.

....

18   Enter a `y` or `yes` and a carriage return to execute the program. Software download may take 20 to 45 minutes.

> **Result: ABN** LED lights on User Panel and a "**P**" is displayed in **SYSCTL FE ID** display in the shelf receiving the program. PC starts download and prints the following message:
>
> `Searching for optimal transfer rate. Handshake established at <baudrate> baud.`
>
> `In progress . . . .`
>
> The dots continue to print until program installation is complete. If floppy disks are being used, insert each diskette when prompted. After installation is completed, the PC prints the following completion message:
>
> `ins-prog:TID COMPLD`
> `/* Generic a.b.c is installed */`

....

19 Was response correct?

If...	Then...
Yes,	Continue with Step 20.
No,	Do Trouble Clearing: **TAP-116**.

20 Did the letter "**C**" appear in the **FE ID** display?

If...	Then...
Yes,	Proceed to Step 25.
No,	STOP! END OF TASK.

21

> **Important!**   If PC hard drive is being used, ensure you are in the correct directory. If floppies are being used, ensure the first (number 1) diskette is installed in floppy drive. Ensure PC is connected to the front CIT (CIT-1) connector.

Enter `term` or `term COM`n command, where $n = 1$ or 2. If `term` is entered without the `COM`n option, then `COM1` will be selected by default. Disregard message `Can't find script <init>` if you see it after starting the terminal emulator.

> **Important!**   Two brief messages are printed and you are instructed to `Press any key to continue . . .` after the second message. After you press any key, the terminal emulator is loaded and the terminal responds as follows:

```
CTRM ready. (Type Alt-h for help.)
Communications established.
```

....

22 Unplug and reseat the **SYSCTL** and immediately push and hold the **FE SEL** and **UPD/INIT** buttons at the same time until a **P** appears in the **FE ID** display (takes approximately 15 seconds). The software download automatically begins and may take 20 to 45 minutes.

> **Result:** PC starts download and prints the following message:

```
Searching for optimal transfer rate.
Handshake established at <baudrate> baud.

In progress . . . .
```

> The dots continue to print until program installation is complete. If using the floppy disks, insert each diskette when prompted. After installation is completed, the PC prints the following completion message:

```
ins-prog:TID COMPLD
/* Generic a.b.c is installed */
```

> The **SYSCTL** resets and the terminal is logged off the system.

....

23 Was response correct?

If...	Then...
Yes,	Continue with Step 24.
No,	Proceed to Step 30.

....

24 Did the letter "**C**" appear in the **FE ID** display?

If...	Then...
Yes,	Continue with Step 25.
No,	STOP! END OF TASK.

....

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⚠ **WARNING**

If the system is in service and is forced to run the current software that is displaying a "C", service interruption may result.

Important!   Indications are that there may be a problem with the version of software you are installing or you are trying to install a version of software that will not support the current shelf provisioning. If you are downloading an older version of software or upgrading to a new version of software which has major changes or is incompatible with the version that you have, this indication will occur (See Table 8-1). You can *force* the system to run the current software or back out of this procedure by loading another version of software.

You must decide if you want the system to run this current version of software that has been loaded or if you want to download another version (original version or new version) of software.

Do you want to run the current version of software in the **SYSCTL**?

If...	Then...
No,	Continue with Step 26.
Yes,	Proceed to Step 27.

26   Exit TERM (Alt-F2). Find new version of software and repeat this procedure from **Step 21**.

....

27

⚠️ **WARNING**

Removing the main-1 OLIU with a C displayed on the SYSCTL may result in a service outage.

To *force* the system to run the current software, remove the **OLIU** in slot main-1 then, reset (unplug and reseat) the **SYSCTL** to force it to run the current software.

....

28   Once the new software is running on the **SYSCTL** reseat the main-1 **OLIU.**

....

29   **Stop! END OF TASK.**

....

30   Did the download start as indicated by the `In progress` message and rows of dots?

If...	Then...
No,	Continue with Step 31.
Yes,	Proceed to Step 33.

....

31   Perform the following:

1.   Check that the DDM-2000 is connected to the PC through the **COM** port. If it is not, reconnect the PC to DDM-2000 using the **COM** port and repeat this procedure.

2.   Ensure first (number 1) disk of program being installed is inserted, if using floppies.

3.   Ensure diskette is inserted in correct drive.

4.   Ensure the proper command was used to go to the drive with the diskette or to the proper directory containing the software.

5.   Check for invalid COM port. Exit TERM (**Alt F2**), then restart TERM using `term COM1` or `term COM2`.

....

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6. If the download still does not start, as indicated by the `In progress` message and rows of dots, within 2 minutes after the **P** appears in the **FE ID** display, change the baud rate as follows and repeat this procedure: if the baud rate is currently set to 9600, change it to 4800 or if the baud rate is currently set to 4800, change it to 9600. The baud rate is changed by:

   a. Momentarily depress the **Alt C** keys.

   b. Use the RETURN key to move to the "Speed" field.

   c. Press the "Space" bar until the desired rate appears.

   d. Momentarily depress the **Esc** (Escape) key to activate the new baud rate.

7. If the download still does not start, refer to **Trouble Clearing: TAP-116**.

....

32 **Stop! END OF TASK**.

....

33 If the download *starts and fails* during its progress, exit term (Alt-F2) and then restart a new term session.

....

34 Unplug and reseat the **SYSCTL** and immediately push and hold the **FE SEL** and **UPD/INIT** buttons at the same time until a **P** appears in the **FE ID** display (takes approximately 15 seconds).

If the download still does not complete, refer to **Trouble Clearing: TAP-116**.

E N D   O F   S T E P S ....

□

Outline   Use the following procedure to remotely download FiberReach
software to a **BBG8/BBG8B SYSCTL** for an in-service system.

Procedure

1   Before beginning the software installation, refer to the Software
Installation and Upgrade Procedure section of the Software Release
Description. This section contains a description of any special
considerations required when installing this version of software.

2

Important!   This procedure uses the **cpy-prog:** or **ins-prog:** commands to install a new software program in a remote in-service DDM-2000 FiberReach shelf. It is assumed that the local shelf has already been upgraded and the software is running normally. For procedures to download software in a new shelf (initial installation), see **DLP-525**. For procedures to download software locally to a shelf, see **DLP-536**.

Important!   If upgrading from earlier software releases to TARP Release 3.0 and later, after the first shelf is upgraded, single-ended operations will not be available and major alarms (`section DCC channel failed`) will exist until all shelves are upgraded. The node farthest away should be upgraded first, working back to the local node. See 824-102-144, *Lucent Technologies 2000 Product Family, Operations Interworking Guide For TARP Releases*, for guidelines in subnetwork upgrade procedures.

Verify that no DCC failures or transmission failures (OC-1 LOS, OC-3 LOS, OC-12 LOS flashing **OLIU FAULT** LEDs, etc.) are present on the network element or system receiving the program.

....

3 For software upgrade compatibility, see Table 8-2

Table 8-2 .**DDM-2000 FiberReach In-service Software Upgrade Compatibility.**

	Upgrade to[*]
Current Release	**4.0.3**
1.0.n (OC-1)	C†
2.0.n (OC-1)	C†
2.1.n (OC-1)	C†
2.2.n (OC-1, OC-3)	C†
3.0.n (OC-1, OC-3)	U
3.1.n (OC-1, OC-3)	U
4.0.n (OC-1, OC-3, OC-12)	U

Note: All DDM-2000 FiberReach shelves in a subnetwork should be using TARP Release 3.0 or 4.0 software.
C Requires local software download only to upgrade the system.
U Requires local or remote software download only to upgrade the system.
† Incompatible OSI stack requires special considerations. See LTP 824-102-144, *Lucent Technologies 2000 Product Family, Operations Interworking Guide* for TARP Releases, for special considerations.
* When doing an upgrade, it is recommended that the latest point release of software be used, if possible.

....

4 Use **rtrv-fecom**/**set-fecom** command to verify/enable far-end communications (fecom).

....

5

Important! If you want to load new software to a remote shelf (if allowed) directly from a PC, use the `ins-prog:tid` command where the tid entered is that of the remote shelf where you want to install the new software and the pgmtype is the type of software you want to install. After using the `ins-prog:tid` command to

....

download software to one shelf, you must exit `term` (**Alt F2**) and re-execute `term` before starting a second `ins-prog:` command. If `term` is not exited, it will stop running if a second `ins-prog:` is started within the same `term` session. The PC will not respond or return any message and the `ins-prog:` will not progress.

Important! If remote software downloading is allowed and you want to load new software to a remote site via the DCC from a local shelf which already contains the new software, log in (either locally or remotely) to the shelf containing the new software, and then enter the `cpy-prog:tid` command (where `tid` = the tid of the shelf in which you want to install the software and the pgmtype is the type of software you want to install). [The tid is the name given to a shelf (network element) using the `set-ne:` command.] The `cpy-prog:` command will only copy software from a local controller to a remote controller; it is not used to download software from a PC.

Important! The download time will be longer (even without excessive DCC traffic) when there are additional spans between the source and target network elements. To minimize the download time and reduce DCC traffic, it is recommended that multi-span software downloading be avoided by remotely logging into the nearest shelf of the same type and remotely downloading the new program from that shelf.

Important! If you are using a PC operating in a *Windows*[*] environment, you must **exit** *Windows* and restart your PC in *MS-DOS*[*] mode before performing these download procedures. For example, if your PC is running *Windows 95* you must exit *Windows* by clicking on the **Start** button, then **Shut Down**, then **Restart the computer in** *MS-DOS* **mode**.

Obtain equipment, check software, and connect PC for download.

Refer to **DLP-566**

....

6   Are you using `ins-prog:` or `cpy-prog:` command to download software to far-end shelf?

If...	Then...
`CPY-PROG`,	Continue with Step 7.
`INS-PROG`,	Proceed to Step 14.

    *   Registered trademark of Microsoft Corporation.

....

7

> **Important!** Only one c p y - p r o g : procedure at a time should be performed in the same maintenance subnetwork. Simultaneous c p y - p r o g : procedures in the same network may fail.

Connect and establish session with local shelf being used as a source for the new remote program download.

Refer to DLP-521

....

8 Enter the command **cpy-prog:**tid.

> Where tid = the target identifier (shelf name) for the remote DDM-2000 shelf receiving the new program.

Result: /* Testing For Program Installation... */

After several seconds, the PC prints a Caution! message followed by the prompt:

Execute? y/n =

....

9 Was response correct?

If...	Then...
Yes,	Continue with Step 10.
No,	Do Trouble Clearing: **TAP-116**.

....

10   Enter a *y* or *yes* and a carriage return to execute the program. Software download may take up to 20 minutes.

> **Result: ABN** LED lights on User Panel. A "**P.**" is displayed in **SYSCTL FE ID** display in the far-end shelf receiving the program. At DDM-2000 shelves connected directly to the shelf receiving the program, **MJ** and **NE ACTY** LEDs light on User Panel. At other shelves in the same control system, **MJ** and **FE ACTY** LEDs light on User Panel. Download begins and the following message is displayed:

> ```
> In progress . . . .
> ```

> The dots continue to print until program installation is complete. After installation is completed, the PC prints the following completion message:

> ```
> ins-prog:TID COMPLD
> /* Generic a.b.c is installed */
> ```

> The LEDs go off on the User Panel and **SYSCTL**.

....

11   Was response correct?

If...	Then...
Yes,	Proceed with Step 29.
No,	Continue with Step 12.

....

12   Wait approximately 5 minutes for network to stabilize then repeat this procedure from **Step 7**. If the second attempt to download software fails, then do **Trouble Clearing: TAP-116**. You may have to go to the remote site.

....

13   **Stop! END OF TASK.**

....

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> **Important!** The **FE ID** display on the remote **SYSCTL** must show one of the following preceding software installation. Other conditions represent failure conditions or conditions that will not allow a remote software download.
>
> a. The letter "**P.**" displayed in the **FE ID** display indicates corrupted application software and you may be able to download software from another shelf, or locally. Try again to download software from same shelf. If there is no period after the "**P**", the software can only be downloaded locally using the procedures of **DLP-536**.
>
> b. Nothing displayed in the **FE ID** display indicates that compatible software is installed in the **SYSCTL** and you may download software remotely if remote software downloading is permitted for this release.

Ensure PC is connected to the front CIT (CIT-1). If floppies are being used, ensure the first (number 1) diskette is installed in floppy drive. If hard drive is being used, ensure you are in the correct directory.

15 Enter **term** or **term COM***n* command, where $n = 1$ or 2. If **term** is entered without the **COM***n* option, then **COM1** will be selected by default. If after starting the terminal emulator you see the message `Can't find script <init>`, disregard it.

> **Result:** Two brief messages are printed and you are instructed to `Press any key to continue . . .` after the second message. After you press any key, the terminal emulator is loaded and the terminal responds as follows:
>
> `CTRM ready. (Type Alt-h for help.) Communications established.`

16

....

> **Important!** The default shelf is the shelf physically connected to the PC. To set baud rate automatically, enter two carriage returns (**<cr>**), two lower case "a"s (**aa**), or two upper case "A"s (**AA**). All other characters are ignored.

Enter two carriage returns.

> **Result:** PC prompts with:
> ```
> /* Enter a shelf number from 1 to 8 */
> shelf [default] =
> ```

....

17 Was response correct?

If...	Then...
Yes,	Proceed with Step 19.
No,	Continue with Step 18.

....

18 Check PC to **CIT** port connections. Make sure the cable is connected between the PC **COM( )** port and the **CIT** connector on the DDM-2000. Check term setup and make sure the **com** port selected matches the port (**COM( )**) on the PC that is connected to the **CIT** port on the shelf.

Exit term (Alt-F2) and repeat this procedure from **Step 14**.

....

19 Enter the shelf number for the local shelf being used for new program download.

> **Result:** PC prompts with:
>
> ```
> Login:
> ```

....

20 Enter the privileged user login (default LUC01).

> **Result:** PC prompts with:
>
> ```
> Password:
> ```

....

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21   Enter the privileged user password (default: DDM-2000).

Result: PC responds with:

```
/************************************
*                                  *
*                                  *
*          Lucent Technologies     *
*          DDM-2000 FiberReach      *
*                                  *
*             Release a.b.c         *
*                                  *
************************************/


                      .


                      .


                      .


      TID date time
   M  rtrv-alm: all COMPLD
      /* Active Alarms and Status Report
```

22

Important!   After the system prompt (<), the system will respond normally to commands entered. The Commands and Reports section of this manual gives a description of the commands.

Use `rtrv-map-network:` command to retrieve the name (`tid`) of the remote shelf having new program installed.

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....

23   Enter the command **ins-prog:**tid.

> Where tid = the target identifier (shelf name) for the far-end
> DDM-2000 shelf having the new program installed.

Result: /* Testing For Program Installation... */

After several seconds, the PC prints a Caution! message followed
by the prompt:

Execute? y/n =

....

24   Was response correct?

If...	Then...
Yes,	Continue with Step 25.
No,	Do Trouble Clearing: **TAP-116**.

....

25   Enter a y or yes and a carriage return to execute the program.
Software download may take up to 45 minutes.

> **Result: ABN** LED lights on User Panel. A "**P.**" is displayed in
> **SYSCTL FE ID** display in the far-end shelf receiving the program.
> PC starts download and prints the following message:

Searching for optimal transfer rate. Handshake
established at <baudrate> baud.

In progress . . . .

> The dots continue to print until program installation is complete. If
> floppy disks are being used, insert each diskette when prompted.
> After installation is completed, the PC prints the following
> completion message:

ins-prog:TID COMPLD
/* Generic a.b.c is installed */

> The **SYSCTL** resets, and the terminal is logged off the system. The
> LEDs go off on the User Panel and **SYSCTL**.

....

26   Was response correct?

If...	Then...
Yes,	Proceed with Step 29.
No,	Continue with Step 27.

27   Wait approximately 5 minutes for the network to stabilize, exit **term**, then repeat this procedure from **Step 14**. If the second attempt to download software fails, do **Trouble Clearing: TAP-116**. You may have to go to the remote site.

28   **Stop! END OF TASK**.

29   Wait approximately 5 minutes then verify communications can be reestablished with far-end shelf using **rtrv-map-network:** command. Verify that *Comm. Status* is good (not *FAILED*) as indicated by a blank in the report.

30   Is communication status good between local and remote shelf?

If...	Then...
Yes,	Proceed with Step 32.
No,	Continue with Step 31.

31   Dispatch technician to remote site and perform local software download procedures.

Refer to **DLP-532**

32   **Stop! END OF TASK**.

E N D   O F   S T E P S