



585-223-701
June, 1992

DEFINITY® Manager IV
Terminal Change Management
Operations Manual

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Prepared by
AT&T Technical Publications Department
Lincroft, NJ

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Printed in USA

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ABOUT THIS GUIDE

This chapter explains the purpose and contents of this guide. If you are about to use Terminal Change Management (TCM) for the first time, you should read *Getting Started with DEFINITY® Manager IV* before attempting to perform any of the TCM tasks and procedures described. It provides an overview of DEFINITY Manager IV, explains how to use on-line help, escape sequences, special function keys, and some shortcut features that can facilitate your work. It also describes Service Requests (SRs), which are used with all TCM transactions, and provides step-by-step procedures for using this feature.

Audience

This guide is intended for the TCM user, the person responsible for administering your telecommunications system's facilities. The TCM user should be appropriately qualified and properly trained. AT&T offers a variety of courses on DEFINITY® Manager IV and related topics. (For further information, see the *DEFINITY Manager IV Planning and Implementation Manual* or consult with your Account Team. Training should include AT&T DIMENSION® System, and/or DEFINITY Generic 2/System 85 courses in administering the terminals and extension attributes on the system. This manual assumes that the user has some working knowledge of telecommunications concepts and digital and analog terminals in particular.

WHAT'S IN THIS GUIDE?

Chapter 1

Understanding TCM and DEFINITY Manager IV

Describes the DEFINITY® Manager IV database, command structure, and TCM user classes.

Chapter 2

Administering TCM

Describes the tasks needed to set up the system for the first time. These tasks include administering the dial plan, assigning first dialed-digit and 5-digit dialing, opening number groups, administering Dial Access Codes (DACs), and assigning Listed Directory Numbers (LDNs).

Chapter 3

Extensions And Terminals

Describes procedures that allow you to administer analog and non-analog extensions and terminals, to perform tasks common to both analog and non-analog extensions and terminals, and to administer add-on modules, as well as data modules and circuits.

Chapter 4

Call Distribution

Describes the tasks used to administer Automatic Call Distribution (ACD), Uniform Call Distribution (UCD), and Call Vectoring features in TCM.

Chapter 5
Attendant Consoles

Describes the tasks needed to administer a switch's attendant console or consoles that are used to manage incoming calls for a group of voice terminals. These tasks include BLF/DXS group select key assignments, console features, console messages, ICI indicators, and LDNs.

Chapter 6
ISDN

Describes tasks used to administer the Integrated Services Digital Network (ISDN) feature in TCM. These tasks include assigning an LDN and NPA-NXX indicator to an attendant console, assigning an NPA-NXX-X to an abbreviation, associating the NPA-NXX designator to an extension, and assigning two more requirements, bearer capability and ISDN routing.

Chapter 7
Tenant Services

Describes tasks related to administering Tenant Services in TCM. These tasks include adding an attendant console, assigning attendant consoles to attendant partitions, assigning the attributes of attendant partitions, assigning extension partitions to attendant partitions, assigning LDNs to attendant partitions, and associating console messages with LDNs.

Chapter 8
Switch Equipment

Describes tasks that administer equipment residing in the switch itself or operating in conjunction with the switch. These include switch's names database, unassigned equipment database inventory, Applications Processors and switch adjuncts, remote modules and remote carrier groups, and related switch hardware.

Chapter 9
TCM Reports

Describes the available reports, explains how to produce them, and provides samples of each report.

Chapter 10
Troubleshooting

Explains how to handle errors that you may encounter while performing TCM tasks. This chapter also explains how to detect and correct errors that occur when the DEFINITY Manager IV database and the switch are not synchronized.

Appendices

Provide supplementary material on subjects related to the administration of TCM, including a TCM Command list, Button-Feature tables, Dial-Tone Transactions, TCM Command and Proc Mappings plus DEFINITY Manager IV and other related documents.

Glossary

The glossary defines the major terms and acronyms used in DEFINITY Manager IV documentation for features, procedures, products and services.

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USING THIS GUIDE

The procedures in this manual describe DEFINITY Manager IV tasks. You perform tasks by using commands in the object:verb combinations that are part of the DEFINITY Manager IV user interface. For a complete list of TCM commands, see the "TCM Command List" Appendix A.

TCM tasks are organized into groups. Chapters 3 through 8 cover each of these groups. Each chapter contains a brief overview of the administerable feature, the procedure, and a task table that outlines the tasks covered in the chapter.

Procedures

The procedures are intended to give you the sequence of steps needed to perform a task. You may find that you are familiar with these capabilities in other contexts but that there are important differences within DEFINITY Manager IV. The procedures are labeled for the particular switch release supported by TCM.

The procedures provide detailed, step-by-step directions on how to perform a task. Each step includes the entries you must make, and the system's response to those entries.

Keep in mind that DEFINITY Manager IV's screens are dynamic, and different fields may appear depending on what you enter. Thus, the system's response in some procedures may have several variations. These are indicated in the procedure, and a representative response is used as an example to guide you.

Conventions for TCM Procedures

As much as possible, all the procedures use the same format or conventions. The conventions make the procedures easy to follow, but it is important that you first understand these conventions.

Screens and Fields. These are illustrated in the procedures to allow you to make sure that you are getting the appropriate system response. Your entries in key fields on the dynamic screens cause the display of additional fields. In general, a new screen is illustrated when a new set of fields appears. To conserve space, partial screens are sometimes used. A partial screen within a procedure is indicated by the absence of the DEFINITY Manager IV screen header.

User Entries. The actual values or words you enter at your keyboard are shown in bold, lowercase letters so that you can easily pick them out of a sentence. When the entry you make is variable (that is, dependent on your particular circumstances), the entry is bold and shown in angle brackets. For example, "Enter the <printer id>" directs you to insert the identification number of your printer. Many TCM screens have fields that ask you to select from two or more options; to select a field, you type **x** (or **X**) to the left of the field you wish to choose.

The procedures *do not include every escape sequence or function key* you can use. The procedures assume that you are familiar with entering and manipulating data on the screen. Instead of indicating a

RETURN for every field on the screen, the procedures identify only those times when you must press **RETURN** to cause the dynamic action of the screen. The procedures also indicate when to execute the command.

For a complete list of escape sequences and function key operations, see *Getting Started With DEFINITY® Manager IV*, or the *DEFINITY® Manager IV Quick Reference*.

Conventions Used In This Guide

The following conventions for representing prompts, entries, commands, and keys are used throughout this guide.

Function and Screen-Labeled Keys

Both function and screen-labeled keys are represented in the text as the key label, surrounded by an oval. (Not all terminals have screen-labeled keys.) For example, the return key is indicated as **RETURN**.

User Entries

Any entry you should make is represented in the text in bold print. For example the direction to enter the command "files display" is indicated as **files display**.

Variable Entries

Variable user entries are those entries that you must determine. These entries appear in the text inside of angle brackets in bold characters. For example, in requesting a report, you may see the instruction, "Enter the <**printer id**>," where "printer id" represents the identification number of the printer on which you want the report to be printed.

Screen Messages

A screen message is reproduced in the text with quotes around the words as they appear on the screen. For example, you may see the message "YOU ARE DIRECTLY ACCESSING THE PRODUCT."

Prompts

A prompt is represented in the text as it appears on the screen, preceded or followed by the word "prompt." For example:

Once you successfully log in to DEFINITY Manager IV, the Enter application prompt appears.

Fields

A field is represented in the text as it appears on the screen, followed by the word "field." For example:

When you complete this command path, the Service Request No. field appears.

Switch Release Information

When any command, transaction, or procedure is limited to specific switch release(s), the switch release information is enclosed in brackets []. For example: [System 85 R2V2/V3 only]

1. UNDERSTANDING TCM AND DEFINITY MANAGER IV

This chapter presents an introductory discussion of the Terminal Change Management (TCM) application. By using TCM, you can administer extensions, voice and data terminals, and attendant consoles in your system. You can administer attendant console key assignments, and display their messages and locations. In addition, you can add or remove terminals, their individual feature assignments and attributes.

Once you have added some terminals, you can use two DEFINITY® Manager IV features, Scrapbook and Clipboard, to add like terminals and reduce repetitive typing. Using TCM, you can also add multiple extensions, as well as modules to defined voice terminals, in a single transaction. Furthermore, TCM allows you to administer station number portability, keep track of assigned and unassigned terminals and circuits, produce reports of all current terminal assignments, and associated terminals, extensions, and attendant consoles to physical equipment locations.

You can also administer system-wide terminal features, such as Class-of-Service (COS) definitions, station ringing assignments, dialing plan assignments, abbreviated dialing, automatic dialing, custom intercom, speed calling, call coverage, and Uniform Call Distribution/Direct Department Calling (UCD/DDC), and Automatic Call Distribution (ACD).

TCM also gives you access to a hardware database by allowing you to administer carrier slots and circuit packs, and to generate inventory reports on the available and working equipment. Additionally, TCM provides transactions that allow you to create and update wiring records and an unassigned equipment inventory.

Product Access

TCM can be used to administer AT&T System 85 (release R2V2 through R2V4), AT&T DEFINITY Generic 2, and AT&T DIMENSION System Feature Package 8 (FP8), Issues 1.16, and 3.8. TCM also provides cut-through access to System 75 and adjunct products supported by Manager IV (such as AUDIX or the AP16).

Application Interactions

The applications of Manager IV are designed to interact with one another, and to share an integrated database, which contains a copy of the current information in the switch, user records, and equipment inventory. This database allows Manager IV applications to share information and updates. Once a record has been updated by one application, this new information is centrally available to Facilities Management (FM). Since all applications access a common set of database records, any records that are used by more than one application only have to be updated once, saving time and space.

USING DEFINITY MANAGER IV AND TCM

This chapter contains a brief explanation of the Manager IV command hierarchy and the user interface. For more detailed information, see *Getting Started with DEFINITY Manager IV*.

DEFINITY Manager IV Database

The main Manager IV database contains information about the corporation and the telecommunications network. This database contains a copy of the System 85, DIMENSION FP8, and Generic 2 switch translations. It is initialized by using switch translation data provided by the Translations, Recovery, Additions and Conversion System (TRACS) for each switch administered, using Manager IV processes.

Manager IV allows you to update the Manager IV database and the switch automatically with the same transaction, so that you always have an accurate copy of the information that is currently saved in the switch.

Note: Manager IV has checks built in to minimize the chance that the Manager IV database and the switch would become unsynchronized. However, be aware that this synchronization problem *can* occur. Chapter 10, "Troubleshooting" in this manual, and *Getting Started with DEFINITY Manager IV* explain how to detect and correct this problem.

DEFINITY Manager IV Command Hierarchy

Manager IV commands are organized into a hierarchy that arranges all possible commands into a consistent, easily accessible system. When you log in to Manager IV, you specify a command path that routes you through the hierarchy of Manager IV. The command list can be easily accessed while you are on-line.

This hierarchy includes the following levels:

- Application
- Target
- Area
- Commands

The levels are briefly explained below.

Application

At this level, you specify the application you want to access. Your user class, which is assigned to your login by the system administrator, controls the applications which you can access. Enter **tcn** to use TCM commands.

Target

The *target* is a unique identifier for the product being administered. Product targets can also be grouped into target groups so that one transaction can be used to make changes to more than one target at a time. Once your system has been initialized, you can get a list of the targets configured in your system by using the escape sequence **(ESC)** **(SHIFT)** ! at the **enter target** prompt.

Area

The *area* allows you to execute a TCM command to update either the Manager IV database, the product, or both. The administration (admin) area updates the Manager IV database and then automatically downloads those changes to the product. Most of the time, this area is where you will be working.

- Transactions performed in the product administration (prod-admin) area affect only the product.
- Transactions performed in the database administration area affect the database only, and do not update the product.

The report-administration area is used to run reports that monitor and document the status of your telecommunications system. Reports can be displayed on the screen or printed, and can be generated immediately or scheduled.

Commands

Commands display the screens in which you enter the information needed to perform a specific TCM task. Commands consist of an *object*, which specifies the hardware, software feature, or report to which you want to apply some action and a *verb*, which specifies the action you want to take on the specified object. For example, the object **pack** is used to administer circuit packs. The object:verb combination **pack add** adds a circuit pack.

TCM User Classes

Manager IV users are assigned a user class when their logins are created by the system administrator. These user classes limit access to various categories of commands in TCM. To help ensure that administrative changes are not made inadvertently and that certain activities and information remain restricted, TCM users can be assigned to four classes.

These user classes include:

- tcm-1
- tcm-2
- precut
- fm-4

These user classes are discussed below.

tcm-1

The *tcm-1* user has access to all TCM administration and report-administration commands. However, this user is denied access to the product-administration and database-administration areas.

tcm-2

The *tcm-2* user has access to all TCM commands in all areas of the application. This user class is appropriate for the administrator who will be responsible for error recovery if there is an out-of-sync condition in the database. These users may also have access to other related Manager IV applications.

precut

The *precut* user requires access to dial tone transactions and reports and must be defined with a user type of "precut." The dial tone transactions omit some features and data checks available in regular TCM transactions. The Manager IV Database and Switch Reports require connection to the switch for longer periods of time than most Manager IV transactions.

fm-4

The *fm-4* user class gives TCM users access to Facilities Management (FM) authorization code transactions.

Command Path Entries

Manager IV prompts you for an entry at each level of the command path; however, you may "type ahead" and enter the command all at once. You can display a list of valid entries for your current position in the command path by pressing ? **RETURN**.

Abbreviated Command Path Entries

Remember, once you enter a command path you need to type only enough letters of each part of the command path to distinguish it from all other valid entries. The only exception is a target entry, that must be entered in its entirety and may not be abbreviated. See *Getting Started with DEFINITY Manager IV* for more information.

Submitting Entries

Once you have entered the full command path and pressed **RETURN**, the system displays a transaction screen. You can now perform a task by entering data on the transaction screen.

After you make all necessary screen entries correctly, you can then carry out a command by pressing **EXECUTE**.

2. ADMINISTERING TCM

There are some tasks that you must do to set up DEFINITY Manager IV at your TCM site. In most cases, you will probably only have to do these once; you may only have to change them if there is a major change in your site or if another product is added. After you have performed these start-up tasks, you can easily add users or move them around using TCM.

This chapter describes tasks that relate to setting up your system and are crucial to administering TCM.

Some of the tasks involved in setting up your system include the following:

- Administering the Dial Plan
- Assigning System Features
- Defining non-AT&T terminals
- Assigning Abbreviated Dial Groups and Abbreviated List Entries
- Administering Station Ringing Parameters

Each of the tasks in the above list will be explained in this chapter.

This chapter also provides a description of five-digit and four-digit dialing set up in a Number Portability (NP) subsystem operating within an Electronic Tandem Network (ETN).

ADMINISTERING THE DIAL PLAN

Administering the dial plan is one of the first tasks you must perform to set up TCM. There are several steps involved in setting it up:

- Assigning First Dialed-Digit and 5-Digit Dialing
- Opening Number Groups
- Administering Dial Access Codes (DACs)
- Assigning Listed Directory Numbers (LDNs)

Procedure: Assigning First Dialed-Digit and 5-Digit Dialing

To create a dial plan, you must assign a list of all first-dialed digits, and for what they will be used. Each first-dialed digit is assigned two characteristics: the number of digits expected when that first digit is dialed, and call type (that is, whether the first digit dialed is the first digit of an extension number, or the first digit of a trunk, or feature dial access code). Use **first-digit change** to administer the dial plan.

For System 85 R2V2 and for DIMENSION System FP8 Issue 3.8, a form of 5-digit extensions can be employed in the following way:

- Use the command **sys-cos change** to define a local prefix digit.
All extensions starting with this digit will occur on the local switch, while other extensions dialed will be automatically routed.
- Use the command **first-digit change** to assign the desired prefix digit(s) with an extension call type and number of digits expected as either four or five.
- Use **five-digit-dialing add** to define the rating calls of a particular prefix digit-second digit combination. Specify whether it is for local access or remote routing.

Opening Number Groups

Before extension numbers can be assigned, an extension number group must be opened. Extension number groups can be added to the switch in any multiple of 10. The first extension number in the group must always be smaller than the last and must end in 0, and the last number must end in 9. For example, the range of a number group could be 4100 to 4199.

To open an extension number group, use the command **number-groups add**. Once you have added the number group, you can also display it (**number-groups display**), and remove it (**number-groups remove**). If you have a System 85 R2V3, R2V4, or Generic 2.1 in a number portability network, you can move a number group from one number portability node to another (**number-group move**).

After a number group has been added, the extension numbers within that group become available either for assignment or reservation. **Extension reserve** allows you to hold one or more extension numbers for future use. It removes a single, specified extension number from the pool of available extension numbers and thus keeps it from being automatically assigned. The reserved extension number can then be assigned only when it is specified explicitly through the **extension add** command.

Administering Dial Access Codes (DACs)

A Dial Access Code (DAC) is a 1-, 2-, or 3-digit code (for System 85 R2V4 or for Generic 2, a 4-digit code) used by the switch to access certain switch features or an outgoing trunk group. Feature DACs are assigned through TCM, while trunk DACs are assigned through Facilities Management (FM). The user can "dial" the DAC by pressing a button that is programmed with the code or by entering the numbers on the dialing pad.

Through TCM, you can change and display DACs associated with a terminal feature or attendant console feature using the command **dial-access-code change**. In Generic 2.2, the **dial-access-codes change** command can be also used to define DACs to map to ACD Agent Skills. For more details on ACD Agent Skills, refer to Chapter 4, "Call Distribution."

You can also associate a specific DAC with an extension making it easier for users of that extension to dial. The **dac-to-extension add** command associates an extension and a Dial Access Code or associates an extension and a node number, and defines the extension's usage. This command is a product-only command; the Manager IV database is not updated with this information.

Procedure: Assigning a DAC to an Extension

- If an extension is to be associated with a *feature* DAC, use the **dial-access-code change** command to define the feature DAC. Remember, when doing a **dial-access-code change** transaction, do not change more than 20 fields on the screen at one time.
 - If FM is used and an extension or steering code is to be associated with a trunk DAC, use the **trk-grp add** command to define the trunk DAC.
 - If an extension number is used, use the **first-digit add** command to define the first digit, then open a block of extension numbers with the **number-group add** command.
 - If an extension is to be associated with a DAC or node number, that extension must not be previously assigned.
 - The number of digits in the DAC must not conflict with what is already defined for the first digit of that DAC.
1. Enter the following to assign a Dial Access Code to an extension: area: **admin** or **product-admin**; object: **dac-to-extension**; verb: **add**.

AT&T Mgr IV 2.2	DEFINITY G2.2	(201)999-2343								
tcm product-admin dac-to-extension add		Page 1 of 1								
<p>THIS INFORMATION IS RETAINED ONLY IN THE PRODUCT</p> <p>THIS TRANSACTION ONLY UPDATES THE PRODUCT</p> <p>Extension No.: _____</p> <p>Extension Usage: _____</p> <p>Dial Access Code: _____</p>										
<table border="1"> <tr> <td>EXECUTE</td> <td>SCHEDULE</td> <td>CANCEL</td> <td>HELP</td> <td>BACKWARD</td> <td>NEXT PG</td> <td>PREV PG</td> <td>LAST IN</td> </tr> </table>			EXECUTE	SCHEDULE	CANCEL	HELP	BACKWARD	NEXT PG	PREV PG	LAST IN
EXECUTE	SCHEDULE	CANCEL	HELP	BACKWARD	NEXT PG	PREV PG	LAST IN			

Note: In this screen the Dial Access Code: field does not appear until you have entered data in the first two fields.

2. In the Extension No.: field, enter a 3-, 4-, or 5-digit extension number.
3. In the Extension Usage: field, enter **dac** if the extension will be used as a dial access code, or **nod** if it will be used as a node number.
4. Now enter a 1- to 4-digit number in the Dial Access Code: field. The first digit may be an asterisk (*) or a pound sign (#) .
5. If you are satisfied with the information you have just entered, press **EXECUTE** to execute the transaction.

Assigning Listed Directory Numbers (LDNs)

Listed Directory Numbers (LDNs) are the 7-digit telephone numbers published in your local office's telephone directory. Through TCM, you can administer LDNs for System 85 R2V2 and DIMENSION System FP8 using the command **listed-directory-number change** and you can display all of the LDNs in the switch using the command **listed-directory-number display**. LDN data is not retained in the Manager IV database, so TCM accesses the switch if you change or display an LDN. System 85 R2V3, R2V4 and Generic 2 LDN tasks are done in conjunction with administering the switch's attendant console. For more information, see Chapter 5, "Attendant Consoles."

NUMBER PORTABILITY WITHIN THE ETN

An Electronic Tandem Network (ETN) is the platform that a Number Portability network is built upon.

In an Electronic Tandem Network (ETN), each system is assigned a set of RNXs (location codes). One RNX is the Home-RNX* and the others are remote. A call using the home-RNX terminates locally. Remote-RNXs must be routed to another node. Each ETN node contains tables that define all the RNXs in the network. These nodes are interconnected with an Alternate Automatic Routing Pattern (AAR) feature that must be administered for each node in the network.

Number Portability

Number Portability (NP) is a network set up within the ETN and is viewed as a single node, or one switch, to the rest of the ETN network.

The first digit table for each node in the NP network must be identical to the first digit table in all of the other NP nodes. Further, each NP node must know of every extension defined in the entire NP network. Because this same knowledge is shared throughout—all nodes understand what is transpiring within the whole NP network and act in concert with each other as a single unit. Therefore, externally the NP Network is viewed as a single subsystem within the ETN.

The ETN platform consists of a group of individual switches connected to each other via tie trunks. One of the disadvantages of an ETN is that it only allows huge blocks of extension numbers to be routed to another node. An advantage of is that it provides multiple switches acting in concert as a single, massive switch and unlike simple ETN, provides the ability to easily move a single extension or small blocks (groups) of extensions from one node to another within the NP network.

Here's how it works

Five-digit Dialing

1. A call comes into a node in the Number Portability subnetwork.
2. The "exchange" digits (RNXs, the first three location digits in the call) are removed and replaced with a first digit.
3. The Local node (the one that is processing the call) looks up the now 5-digit number extension to see where it resides in the NP network.
4. If the extension is local—call completed. If not, it is routed to the appropriate node in the NP network via an AAR pattern where the first digit is removed and once again replaced with the original "exchange" digits.
5. The call then comes into the next node and Steps 1 through 4 are repeated until the call reaches its destination.

* For a clearer understanding we have described the NP as having a Home-RNX and Remote-RNXs. All RNXs in the NP are actually "Home", because each node in the network has identical information and is aware of all of the extensions in the network.

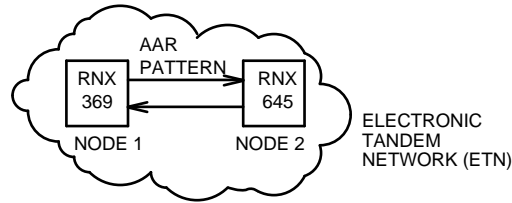


Figure 2-1. Number Portability Two Node System

Four-digit Dialing

Four-digit dialing works very much the same as five-digit dialing. The difference is that the first digit is internal to the switches and transparent to the user. Therefore, normal four-digit dialing administration is still followed by the user.

Number Portability Transaction Areas

Number portability is used for the following:

- Extensions** Extension Number portability enables users in an ETN** to move their voice terminals from node to node (that is, switch to switch) within the NP network without changing extension numbers. Each extension number is globally assigned on all switches within the Number Portability Network. If an extension number is ported to a new node, its voice terminal assignment must be removed at the old node and reassigned to the new node (it is now considered a remote extension number to the old node). Once the extension number is moved it becomes "local" at the new node, and is assigned as a local voice terminal. Because all nodes understand what is occurring at all times within the network, assignment changes must be updated at all nodes.
- Number Groups** When moving groups of extension numbers to another node, the same operations that are used for a single extension move apply to the movement of groups of numbers. The difference is that with a number group move transaction, blocks of extension numbers are moved at one time.

If you run the **number-group move** transaction in Service Request mode, and the Service Request fails, do not remove it. Debug the problem and run it to a successful completion. If you need to put the system back where it was before running the Service Request, then run the **number-group move** a second time through another Service Request.
- Extension-to-node** Extension-to-node is a display transaction that provides information as to which extensions are on the local nodes.
- dac-to-extension** This is a transaction that allows mapping of an extension to a Dial Access Code (DAC) or a node.

** Portability can also be defined in a Distributed Communications System (DCS) and Automatic Voice Network (AUTOVON) arrangement.

Number Portability Administration [admin]

A Number Portability **extension move** and **group move** transaction should be executed through the **admin** mode. This ensures that the entire network is updated when the transaction is initialized.

ASSIGNING SYSTEM FEATURES

The System Class of Service Transaction

The System Class of Service (SYS-COS) defines the features and characteristics of a particular switch in a telecommunications network. Each switch in your network was configured by AT&T with a particular SYS-COS Service when it was initialized. However, new requirements or network reengineering may require changes. The **sys-cos** transaction provides you with the capability of making changes to the SYS-COS. Changes made to a SYS-COS for a particular switch can affect your entire network. Therefore, changes must be carefully planned to ensure that SYS-COS enabled features function across the network. The following verbs are supported in the admin, database-admin, and product-admin areas of the TCM and FM application in Manager IV.

- **display**
- **change**

You can assign features across the entire system using the **sys-cos** command. There is another type of class-of-service command (**class-of-service**) that allows you to easily assign features for each terminal or extension, but not for the entire system as the **sys-cos** command does. The command **sys-cos** allows you to assign the following features:

- Abbreviated dial global access [System 85 R2, Generic 2]
- Abbreviated dial system list size [System 85 R2V3]
- Call Coverage response interval [System 85 and DIMENSION System FP8, Issue 3.8]
- Call Coverage no answer interval [System 85 and DIMENSION System FP8, Issue 3.8]
- Call Management System Active [System 85 R2V3]
- Custom intercom group size mix [DIMENSION System FP8]
- Demand print password [System 85 R2V3]
- Enable Terminal Alarming [Generic 2]
- Local prefix digit [System 85 R2 and DIMENSION System FP8, Issue 3.8]
- Maximum preemption level [System 85 R2, Generic 2] for:
 - All incoming calls
 - The outgoing call attendant
 - Outgoing terminals

- Recent disconnect interval [System 85 R2, Generic 2]
- Speed calling group size mix [DIMENSION System FP8]
- UCD/ACD Answer Supervision [System 85 R2V2/V3]
- UCD/ACD Supervisor Console Number [System 85 R2V2/V3]
- UCD/ACD Warning Tone [System 85 R2V3]
- UCD/ACD Abandoned Call Search Enable [System 85 R2V2/V3]

Through TCM, you can change and display these features. You will find more information on the **sys-cos** command in *DEFINITY Manager IV Facilities Management Operations*.

Extension Class of Service (COS)

The extension class of service defines features and restrictions that determine the calling privileges of a group of extension numbers. Every extension must have a COS although one or more extensions may be assigned to an existing COS using the command **extension add**. COS allows you to customize telephone service for all extensions assigned to a particular COS, providing services and restrictions uniformly. Some of the features you can assign via COS are the following:

- Send all calls
- Automatic Callback
- Touch-tone dialing
- Malicious Call Trace [System 85 R2V4, Generic 2]
- ISDN Routing [System 85 R2V4, Generic 2]

If you make an error while adding or changing a COS, all extensions assigned to it will be affected.

A COS may have a working (w) or an available (a) state. Use the verb **add** to create the COS for the extension and put it in a working state. The **change** verb allows modifications; **display** shows existing COS assignments and **remove** takes the COS from a working state and puts it in an available state for future use. It also removes the activated features and restrictions from the COS.

Once a COS is in a working state, you can assign one or more extensions to the COS using **extension add**. Each working extension must be assigned a COS. To change the COS associated with an extension, use the **extension change** command.

Before removing a COS, find out if the extensions assigned to it will remain in service. If so, use **extension change** to associate the extension with a new class of service *before* removing the COS.

Procedure: Assigning Class of Service for Extensions

1. Enter **class-of-service add** to define a class of service.

AT&T Mgr IV 2.2	DEFINITY G2.2	(201)999-2233
tcm admin class-of-service add		Page 1 of 2
Class of Service: __		
Features:		
Select one or more of the following:		
<input type="checkbox"/> ACD (UCD) Member	<input type="checkbox"/> Leave Word Calling-orig	
<input type="checkbox"/> ACD (UCD) Override	<input type="checkbox"/> Leave Word Calling-term	
<input type="checkbox"/> ACD Queue Status Display	<input type="checkbox"/> Malicious Call Trace Control *	
<input type="checkbox"/> Automatic Callback	<input type="checkbox"/> Override	
<input type="checkbox"/> Call Forward-Busy Don't Answer	<input type="checkbox"/> Priority Calling	
<input type="checkbox"/> Call Forward-Don't Answer	<input type="checkbox"/> Priority Paging/Call Park	
<input type="checkbox"/> Call Forward-Follow Me	<input type="checkbox"/> Ring Ping immediate *	
<input type="checkbox"/> Call Forward-Off Net	<input type="checkbox"/> Send All Calls	
<input type="checkbox"/> Call Hold	<input type="checkbox"/> SMDR Account Code Required	
<input type="checkbox"/> Calling Number Display	<input type="checkbox"/> Stop Hunt	
<input type="checkbox"/> Call Waiting	<input type="checkbox"/> Timed Recall Exempt	
<input type="checkbox"/> Data Protection	<input type="checkbox"/> Touch Tone *	
	<input type="checkbox"/> Transfer/Conf-Three Way	
EXECUTE	SCHEDULE	CANCEL
HELP	BACKWARD	NEXT PG
	PREV PG	LAST IN

In the above screen, the options followed by an asterisk appear for System 85 R2V4 and Generic 2.

2. Select COS features by entering **X** or **x** in the appropriate fields. Press **RETURN** to page through the fields.
 - COS 31 is reserved for special hardware in carriers and the remote access feature.
 - ACD/UCD entries depend on the release of the switch.
 - The Call Forward-Don't Answer feature allows an extension's calls to be routed to another designated terminal, whenever the called terminal does not answer. This feature cannot be assigned if Call Forward-Busy Don't Answer has been assigned to this class of service.
 - The Call Forward-Off Net feature allows an extension's incoming calls to be forwarded to a seven-digit number outside the switch. Note that an incoming call which requires dialing a "1" plus an area code cannot be forwarded. To use this feature, you must also select one of the other three Call Forward features in the same COS.
 - The Call Waiting feature allows an incoming call to be announced on a line which is currently in use. To use this feature, Call Waiting must have been previously enabled with the **sys-cos change** transaction.

- [System 85 R2V4, Generic 2] The Ring Ping Immediate feature provides a quick burst of ringing at the forwarding extension when a call is immediately redirected. This tone is identical to the reminder tone provided when Call Forward-Follow Me is active. Ring Ping is given when calls are redirected due to any of the following features being present: Cover All, Cover Active, Cover Busy, or Send All Calls.
 - [System 85 R2V4, Generic 2] The Malicious Call Trace Control feature allows the user to administer Malicious Call Trace on a voice terminal through the use of two new button types on the terminal, Malicious Call Trace Emergency (MCTE) and Malicious Call Trace Control (MCTC). These buttons can be added to the 12- and 36-button terminal types.
 - The Send All Calls (SAC) feature allows calls to be sent immediately to the coverage point. For System 85 R2V4 and Generic 2, two new button types can be administered via terminal-type transactions. The SAC button redirects calls for **all** extensions which are part of the Send All Calls group for the terminal. The SACE (Send All Calls Extension) button redirects calls for a specific extension on the voice terminal.
 - The SMDR (Station Message Detail Record) Account Code Required feature determines whether the user must dial an account code to access any public network trunk on a toll basis or to access the Automatic Route Selection (ARS) feature. For a given class of service, if the SMDR Account Code Required feature is activated, then the extension assigned to the COS will be required to dial an SMDR Account Code when accessing any public network trunk on a toll basis or when accessing the ARS feature.
 - For extensions equipped with rotary dial terminals, create a COS without any features or restrictions activated. Extensions assigned to this COS will have a Facility Restriction Level (FRL) equal to zero.

Extensions equipped with rotary dial terminals may also be assigned to a COS that has the Touch Tone feature activated, but users can only access features that do not have an asterisk (*) or pound sign (#) in their Dial Access Codes (DACs).
3. Press **RETURN** to select restrictions for the class of service and to access the next page of the transaction screen.

AT&T Mgr IV 2.2	SR: 0123456789	DEFINITY G2.2	(000)000-0000
tcm admin class-of-service add			Page 2 of 2
Class of Service: 1			
Restrictions:			
Select one or more of the following:			
<input checked="" type="checkbox"/>	APLT Off Net	<input type="checkbox"/>	Misc Trunk Restriction Group 1
<input checked="" type="checkbox"/>	DID/APLT Restriction	<input type="checkbox"/>	Misc Trunk Restriction Group 2
<input type="checkbox"/>	Inward	<input type="checkbox"/>	Misc Trunk Restriction Group 3
<input checked="" type="checkbox"/>	Manual Line Termination	<input type="checkbox"/>	Misc Trunk Restriction Group 4
<input checked="" type="checkbox"/>	Origination	<input type="checkbox"/>	Misc Trunk Restriction Group 5
<input checked="" type="checkbox"/>	Outward	<input type="checkbox"/>	Misc Trunk Restriction Group 6
<input checked="" type="checkbox"/>	Terminal to Terminal	<input type="checkbox"/>	Misc Trunk Restriction Group 7
<input checked="" type="checkbox"/>	Termination	<input type="checkbox"/>	Misc Trunk Restriction Group 8
<input checked="" type="checkbox"/>	Toll Restricted	<input type="checkbox"/>	All
<input checked="" type="checkbox"/>	WCR Roll Restricted		
	Code Restriction Level:	<input type="checkbox"/>	
	Facility Restriction Level:	<input type="checkbox"/>	
	ISDN Routing:	<input type="checkbox"/>	

EXECUTE	SCHEDULE	CANCEL	HELP	BACKWARD	NEXT PG	PREV PG	LAST IN
---------	----------	--------	------	----------	---------	---------	---------

4. Assign restrictions to the COS by entering an **X** or **x** in the appropriate field. Press **RETURN** to page through the fields.
 - [With FM] If miscellaneous trunk restriction is to be activated for the COS, assign trunk groups to miscellaneous trunk restriction groups using **misc-trk-rst-grp add** in FM. To display miscellaneous trunk restrictions group assignments, use **misc-trk-rst-grp display**.
 - If toll restriction is to be activated for the COS, define 0/1 nonrestricted codes using **free-list change** in FM. To display the 0/1 toll nonrestricted codes, use **free-list display**.
 - If code restriction levels are to be assigned, define code restriction levels. Use **code-rst-level add** in FM. To display code restrictions use **code-rst-level display**. Refer to *DEFINITY Manager IV Facilities Management Operations* for information about the commands listed above.
 - Entry in any of the Miscellaneous Trunk Restriction Group fields restricts the terminal user from dialing the access code to various trunk groups. The DACs for miscellaneous trunk restriction groups are defined using **misc-trk-rst-grp add** in FM. To activate all Miscellaneous Trunk Restriction Groups (1-8) enter **x** in the ALL field.
5. The World Class Routing (WCR) Toll Restricted field appears only for a Generic 2.2 switch. Enter **x** to select the WCR Toll Restriction.
 - In Generic 2.1, the field label is ARS Toll Restricted.

6. The Code Restriction Level prevents terminal users from dialing selected area codes (NPA) and local exchange codes (NXX). Enter the code restriction level (0-3) where zero signifies no restriction, one is the least restrictive, and level three is the most restrictive.
7. Enter an FRL (**0-7**) with zero indicating least restrictive for access to trunks, and seven, the most restrictive. The default is zero.
8. [Generic 2.1, System 85] The Maximum Precedence Level field appears on the screen only if the AUTOVON feature is present. In Generic 2.2, this field is not displayed.

With AUTOVON active, all calls are assigned a precedence level which is used to determine which calls can preempt other calls. Enter the maximum precedence level (**1-6**).
9. To select routes for calls placed over ISDN facilities, enter a value from **1-5**.

Note: Value 4 is the default to be used for a non-ISDN switch. It cannot be specified for an ISDN switch. Value 1 is the default for an ISDN switch. It can be optionally changed to value 2 or 3. Values 1-3 cannot be specified for a non-ISDN switch.
10. When all features and restrictions for the COS have been selected, press **EXECUTE** to process the data and return to the command line.

The Bearer Capability Class of Service Transaction [admin/database-admin/product-admin]

This transaction allows capabilities common to a class of facilities, such as analog lines and trunks, digital lines and trunks and Automatic Route Selection/Automatic Alternate Routing (ARS/AAR) preferences, to be defined for a Generic 2.1 target.

The following verbs are supported in the database-admin, admin, and product-admin areas:

- **add**
- **display**
- **change**
- **remove**

Bearer-Capability-Cos Add. In the database-admin, admin and product-admin areas:

- The transaction allows the addition and administration of a Bearer Capability Class of Service (BCCOS).
- The transaction allows you to add a total of 247 BCCOSs. These BCCOSs can be assigned to an extension, trunk group, or AAR/ARS Preference upon administration of these facilities.
- The transaction blocks the addition of BCCOS 0-8 because their values are predefined in the switch.
- The transaction blocks the addition of an already working BCCOS.

In the admin and database-admin area:

- BCCOS 0-8 will have a state set to "w," that is, working. All other BCCOSs will initially have a state set to "a" (available), until they have been defined using the **bearer-capability-cos add** transaction. The state will then be set to "w."

Bearer-Capability-Cos Display. In the database-admin, admin, and product-admin areas:

- The transaction allows a BCCOS (0-255) to be displayed based on an entered BCCOS number.

Bearer-Capability-Cos Change. In the database-admin, admin, and product-admin areas:

- The transaction allows changes to all the fields in a BCCOS except the following mentioned.
- The transaction blocks any changes to the BCCOS number.
- The transaction blocks any changes to BCCOS 0 because it contains the default information for the voice network.

Bearer-Capability Remove. In the database-admin, admin, and product-admin areas:

- The transaction allows the removal of an existing BCCOS based on an entered BCCOS number.
- The transaction blocks the removal of BCCOSs 0-8.

In the database-admin and admin areas:

- The transaction blocks the removal of a BCCOS if it is assigned to an existing extension, trunk group or AAR/ARS plan.

In the database-admin area:

- The removal of a BCCOS deletes all fields contained in that BCCOS except for the BCCOS number and sets the BCCOS record back to state "a" (available).

In the product-admin area:

- The **remove** transaction is implemented at the switch with a **change** verb rather than a **remove** verb because all 256 BCCOSs are reserved in the switch.

Procedure: Add/Change/Display/Remove a Bearer Capability Class of Service (BCCOS)

1. Enter the following commands: area: **admin**; object: **bearer-capability-cos**; and one of the following verbs: **add**, **display**, **change** or **remove**.

AT&T Mgr IV 2.2	DEFINITY G2.2	(000)000-0000
tcm admin bearer-capability-cos [verb]		Page 1 of 2
Bearer Capability Class of Service: ____		
BEARER CAPABILITY CLASS	ACTIONS	DATA RATES
Voice: _		64000 bps? n
Mode 1: _		56000 bps? n
Mode 2: _		19200 bps? n
Mode 3: _		9600 bps? n
Mode 0: _		4800 bps? n
Voice Grade Data: _		2400 bps? n
Unknown Digital: _		1200 bps? n
Unknown Analog: _		300 bps? n
Mode 3/2: _		low bps? n
X.25: _		
		Transport Mode: _
		Channel Type: _
		Async/Sync: _
		Duplex: _
		Clock: _

EXECUTE	SCHEDULE	CANCEL	HELP	BACKWARD	NEXT PG	PREV PG	LAST IN
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- The Last Service Request Number and Date fields will only appear if you are performing a **change** or **display**.
- Enter the Bearer Capability Class of Service number. This is a numeric value that uniquely represents a specific BCCOS and represents a group of information that is common to a class of facility and routing preference members that is, bearer capability, channel type, and data rates. Valid values for this field are **9-255**.

The following BCCOSs represent the default values for Manager IV functionality:

- BCCOS 0 - the default Class Of Service for analog lines. The user is blocked from modifying BCCOS 0 so that the voice network cannot accidentally be broken.
- BCCOS 1 - the default Class Of Service for Digital Communications Protocol (DCP) Data Modules administered as lines and trunks.
- BCCOS 2 - the suggested default value for extensions administered on a Basic Rate Interface (BRI) terminal; this is provided to serve as a template.
- BCCOS 3 - is predefined. No extensions, trunks or preferences default to this class. This value provides the same action as setting the Alternate Voice/Data flag in R2V4.
- BCCOS 4 - the default for analog trunks and AAR/ARS preferences.
- BCCOS 5 - the suggested default value for modem pools; this is provided to serve as a template. No facilities default to this value.
- BCCOS 6 - the suggested default value and template for Mode 0 Data Modules. No facilities default to this value.

- BCCOS 7 - the suggested default value and template for Mode 1 Data Modules. No facilities default to this value.
 - BCCOS 8 - the suggested default value and template for Mode 3 Data Modules. No facilities default to this value.
4. Enter the appropriate BEARER CAPABILITY CLASS ACTION. For Generic 2 there are four valid entries (**0**, **1**, **2**, **3**). For each Bearer Capability Class of Service, one of these values *must* be selected as follows: **0**=CKT switch, **1**=mode 2/analog modem pool, **2**=block call, **3**=CKT switch & convert. Value **3** applies only to the following call type fields: Voice, Voice Grade Data, Unknown Digital, and Unknown Analog.

Calls from certain sources use an information transfer capability of lower bandwidth than "speech" in their Bearer Capability Information Element. Value **3** allows you to select the BCCOS Audio Conversion Feature (conversion of the information transfer capability field) when generating the BRI or PRI message to the endpoint using the BCCOS. The conversion feature is used to adjust the bandwidth to that of the Voice Grade Data.

5. For fields represented as DATA RATES, enter **y** for a supported data rate, or **n** for an unsupported data rate.

Note: When assigning a BCCOS to an analog extension, analog trunk/AAR/ARS preference, a data rate is not administered.

6. Enter the appropriate FACILITY ATTRIBUTE for each field. These fields are explained below:

- Transport Mode - This field specifies the transport mode of a particular facility and is used to check compatibility between originating and terminating endpoints. Valid values for this field are **c** (circuit), **p** (packet), or **b** (both).
- Channel Type - This field specifies the transmission capability of a 64 kbps bearer channel. Valid values for this field are **c** (clear) or **r** (restricted).

Note: The following three fields are attributes associated with a particular facility and are used for traffic purposes only. Their purpose is to check the compatibility between the originating and terminating endpoints. Additionally, when assigning a BCCOS to an analog extension, analog trunk and/or AAR/ARS preference, these three fields are not administered.

- Async/Sync - The valid values for this field are **a** (asynchronous) or **s** (synchronous).
- Duplex - The valid values for this field are **f** (full duplex) or **h** (half duplex).
- Clock - The valid values for this field are **e** (external/slaved clock) or **i** (internal clock).

Press **◁NEXT~PG▷** to view Page 2 of 2.

AT&T Mgr IV 2.2	DEFINITY G2.2	(000)000-0000
tcm admin bearer-capability-cos [verb]		Page 2 of 2
<p>Bearer Capability Class of Service: ___</p> <p>DEFAULT ATTRIBUTES</p> <p>Default Bearer Capability Class: __ Default Transport Mode: _</p> <p>Default Data Rate (bps): _____ Default Channel Type: _</p>		

EXECUTE	SCHEDULE	CANCEL	HELP	BACKWARD	NEXT PG	PREV PG	LAST IN
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7. The Bearer Capability Class of Service field is populated with the data entered on Page 1 of 1.
8. The Default Bearer Capability Class field may be populated with a value of **0-9**.
9. Enter the Default Data Rate (bps).
10. The Default Transport Mode may be populated with either **c** (circuit) or **p** (packet).
11. The Default Channel Type field may be populated with either **c** (clear) or **r** (restricted).
12. Press **EXECUTE** to execute the transaction.

DEFINING NON-AT&T TERMINALS [GENERIC 2 ONLY]

The Set-Type Transaction

This transaction allows you to define voice terminal and data modules made by other vendors. The transaction defines the terminal's characteristics and button template.

The characteristics of existing AT&T terminals and Data Modules are predefined in Manager IV, and need not be administered with the **set-type** transaction.

Object to be entered: **set-type**

The following verbs are supported in the admin, product-admin, and database-admin areas:

- **add**
- **change**
- **display**
- **remove**
- **list** (admin and product-admin area only)
- **report** (report-admin area only)

Procedure: Adding a Set-Type [admin/database-admin]

The addition of a set type is provided by using the **set-type** transaction which can be administered in the admin, database-admin, or product-admin areas.

1. Enter the following commands to add a set type: area: **admin**, or **database-admin**; object: **set-type**; and the verb: **add**.

AT&T Mgr IV 2.2	DEFINITY G2.2	(000)000-0000										
tcm admin set-type add		Page 1 of 7										
<p>Set Type: _____</p> <p>Set Type Encode: ____</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">SET TYPE PARAMETERS</td> <td style="width: 50%;">NUMBER OF BUTTONS</td> </tr> <tr> <td>Equipment Type: __</td> <td>Basic Set: __</td> </tr> <tr> <td>Data Capability: _</td> <td>Display Module: __</td> </tr> <tr> <td>Display Capability: _</td> <td>Feature Module: __</td> </tr> <tr> <td>ISDN MIM Capability: _</td> <td>Coverage Module: __</td> </tr> </table>			SET TYPE PARAMETERS	NUMBER OF BUTTONS	Equipment Type: __	Basic Set: __	Data Capability: _	Display Module: __	Display Capability: _	Feature Module: __	ISDN MIM Capability: _	Coverage Module: __
SET TYPE PARAMETERS	NUMBER OF BUTTONS											
Equipment Type: __	Basic Set: __											
Data Capability: _	Display Module: __											
Display Capability: _	Feature Module: __											
ISDN MIM Capability: _	Coverage Module: __											

EXECUTE	SCHEDULE	CANCEL	HELP	BACKWARD	NEXT PG	PREV PG	LAST IN
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2. Enter the Set Type to be associated with the terminal you are defining.
3. Enter the Set Type Encode. Valid range is from **100-200**. Encodes 1-99 are reserved for AT&T predefined terminals.
4. Enter the Equipment Type.

Equipment Type Encode	Equipment Type	Usage
1	sn228/sn229 or tn742/tn746	Analog/SLS
2	sn224	MFET 7200 Series
3	ann17/tn762	MFAT 7300 Series
4	sn2701/tn7541	MFDT 7400 Series
5	tn556	BRI 7500 Series
6	sn2701/tn7541	DCP Data Only
7	sn261	ADFTC Board
8	sn2381/tn7261	EIA Board
9	sn224/tn735	MET Only
10	tn771	MTCP-ATMS Board
11	tn771	MTCP-DCP Board

Note: Although values range from **1-11**, Equipment Types 7 and 8 will not be recognized by the "add" verb. These two Equipment Types are reserved for ADFTC and EIA, respectively, and do not support either voice terminal or Data Modules. In addition, Equipment Types 10 and 11 will not be recognized by the "add" verb. These two types are reserved for MTCP-ATMS and MTCP-DCP, respectively.

5. Enter the Data Capability of the set type. Valid values range from **0-7**.
6. Enter the Display Capability of the set type. Valid values range from **0-6**.
7. Enter the ISDN MIM Capability of the set type. Valid values range from **0-5**.
8. If you are defining the number of buttons for a Basic Set, then enter a value from **0-62** for the Basic Set field. If you enter a value *other than 0* for this field, you will be required to enter the Basic Set Button Template information later in this transaction.
9. If you are defining the number of buttons for a Display Module, then enter a value from **0-7**. If you enter a number *other than 0* for this field, you will be required to enter the Display Module Button Template information later in this transaction.
10. If you are defining the number of buttons for a Feature Module, then enter a value from **0-24**. If you enter a value *other than 0* for the Feature Module field, you will be required to enter the Feature Module Button Template information later in this transaction.
11. If you are defining the number of buttons for a Coverage Module, then enter a value from **0-20**. If you enter a value *other than 0* for the Coverage Module field, you will be required to enter the Coverage Module Button Template information later in this transaction.
12. Press **NEXT PG** and Page 2 of 7 appears. (The Set Type and Set Type Encode fields will be populated with the information entered on Page 1 of 7. These fields may not be changed at this point.)

13. If you enter a value in the range **1 - 62** for the number of buttons for a Basic Set, then the following screen appears: (The Set Type and Set Type Encode fields will be populated with the information entered on Page 1 of 7.)

AT&T Mgr IV 2.2	DEFINITY G2.2	(000)000-0000
tcm [admin/database-admin] set-type add		Page 3 of 7
Set Type: ____ Set Type Encode: ____		
BASIC SET BUTTON TEMPLATE		
Type	Lamps	Type Lamps
1:	__ __	11: __ __
2:	__ __	12: __ __
3:	__ __	13: __ __
4:	__ __	14: __ __
5:	__ __	15: __ __
6:	__ __	16: __ __
7:	__ __	17: __ __
8:	__ __	18: __ __
9:	__ __	19: __ __
10:	__ __	20: __ __
		21: __ __
		22: __ __
		23: __ __
		24: __ __
		25: __ __
		26: __ __
		27: __ __
		28: __ __
		29: __ __
		30: __ __

EXECUTE	SCHEDULE	CANCEL	HELP	BACKWARD	NEXT PG	PREV PG	LAST IN
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14. The screen shown above (Page 3 of 7) is for defining the button type and the number of lamps on each button. Valid entries for the number of lamps range from **0-2**. Valid entries for button type are as follows:
- **u** - button is unusable
 - **n** - button does not have a pad
 - **p** - button has a pad
15. After completing Page 3 of 7, press **(NEXT PG)**. If the number of buttons is greater than 30, then Page 4 of 7 will appear. Complete the remaining entries for the Basic Set Button Template.

17. If you entered a value *other than 0* for the Feature Module field on Page 1 of 7, then the following screen appears: (The Set Type and Set Type Encode fields will be populated with the information entered on Page 1 of 7, and may not be changed.)

AT&T Mgr IV 2.2	DEFINITY G2.2	(000)000-0000																																																				
tcm admin set-type add		Page 6 of 7																																																				
<p>Set Type: ____ Set Type Encode: ____</p> <p>FEATURE MODULE BUTTON TEMPLATE</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 25%;">Type</th> <th style="width: 25%;">Lamps</th> <th style="width: 25%;">Type</th> <th style="width: 25%;">Lamps</th> </tr> </thead> <tbody> <tr><td>1: -</td><td>-</td><td>13: -</td><td>-</td></tr> <tr><td>2: -</td><td>-</td><td>14: -</td><td>-</td></tr> <tr><td>3: -</td><td>-</td><td>15: -</td><td>-</td></tr> <tr><td>4: -</td><td>-</td><td>16: -</td><td>-</td></tr> <tr><td>5: -</td><td>-</td><td>17: -</td><td>-</td></tr> <tr><td>6: -</td><td>-</td><td>18: -</td><td>-</td></tr> <tr><td>7: -</td><td>-</td><td>19: -</td><td>-</td></tr> <tr><td>8: -</td><td>-</td><td>20: -</td><td>-</td></tr> <tr><td>9: -</td><td>-</td><td>21: -</td><td>-</td></tr> <tr><td>10: -</td><td>-</td><td>22: -</td><td>-</td></tr> <tr><td>11: -</td><td>-</td><td>23: -</td><td>-</td></tr> <tr><td>12: -</td><td>-</td><td>24: -</td><td>-</td></tr> </tbody> </table>			Type	Lamps	Type	Lamps	1: -	-	13: -	-	2: -	-	14: -	-	3: -	-	15: -	-	4: -	-	16: -	-	5: -	-	17: -	-	6: -	-	18: -	-	7: -	-	19: -	-	8: -	-	20: -	-	9: -	-	21: -	-	10: -	-	22: -	-	11: -	-	23: -	-	12: -	-	24: -	-
Type	Lamps	Type	Lamps																																																			
1: -	-	13: -	-																																																			
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EXECUTE	SCHEDULE	CANCEL	HELP		BACKWARD	NEXT PG	PREV PG	LAST IN
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18. If you entered a value *other than 0* for the Coverage Module field on Page 1 of 7, then the following screen appears: (The Set Type and Set Type Encode fields will be populated with the information entered on Page 1 of 7, and may not be changed.)

AT&T Mgr IV 2.2	DEFINITY G2.2	(000)000-0000																																												
tcm [admin/database-admin] set-type add		Page 7 of 7																																												
<p>Set Type: ____ Set Type Encode: ____</p> <p>COVERAGE MODULE BUTTON TEMPLATE</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 25%;">Type</th> <th style="width: 25%;">Lamps</th> <th style="width: 25%;">Type</th> <th style="width: 25%;">Lamps</th> </tr> </thead> <tbody> <tr><td>1: ____</td><td>____</td><td>11: ____</td><td>____</td></tr> <tr><td>2: ____</td><td>____</td><td>12: ____</td><td>____</td></tr> <tr><td>3: ____</td><td>____</td><td>13: ____</td><td>____</td></tr> <tr><td>4: ____</td><td>____</td><td>14: ____</td><td>____</td></tr> <tr><td>5: ____</td><td>____</td><td>15: ____</td><td>____</td></tr> <tr><td>6: ____</td><td>____</td><td>16: ____</td><td>____</td></tr> <tr><td>7: ____</td><td>____</td><td>17: ____</td><td>____</td></tr> <tr><td>8: ____</td><td>____</td><td>18: ____</td><td>____</td></tr> <tr><td>9: ____</td><td>____</td><td>19: ____</td><td>____</td></tr> <tr><td>10: ____</td><td>____</td><td>20: ____</td><td>____</td></tr> </tbody> </table>			Type	Lamps	Type	Lamps	1: ____	____	11: ____	____	2: ____	____	12: ____	____	3: ____	____	13: ____	____	4: ____	____	14: ____	____	5: ____	____	15: ____	____	6: ____	____	16: ____	____	7: ____	____	17: ____	____	8: ____	____	18: ____	____	9: ____	____	19: ____	____	10: ____	____	20: ____	____
Type	Lamps	Type	Lamps																																											
1: ____	____	11: ____	____																																											
2: ____	____	12: ____	____																																											
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9: ____	____	19: ____	____																																											
10: ____	____	20: ____	____																																											
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 2px 10px;">EXECUTE</td> <td style="border: 1px solid black; padding: 2px 10px;">SCHEDULE</td> <td style="border: 1px solid black; padding: 2px 10px;">CANCEL</td> <td style="border: 1px solid black; padding: 2px 10px;">HELP</td> <td style="width: 20px;"></td> <td style="border: 1px solid black; padding: 2px 10px;">BACKWARD</td> <td style="border: 1px solid black; padding: 2px 10px;">NEXT PG</td> <td style="border: 1px solid black; padding: 2px 10px;">PREV PG</td> <td style="border: 1px solid black; padding: 2px 10px;">LAST IN</td> </tr> </table>			EXECUTE	SCHEDULE	CANCEL	HELP		BACKWARD	NEXT PG	PREV PG	LAST IN																																			
EXECUTE	SCHEDULE	CANCEL	HELP		BACKWARD	NEXT PG	PREV PG	LAST IN																																						

Procedure: Change/Display/Remove a Set-Type [admin/database-admin]

1. Enter the following command to change, display or remove a set type: area: **admin**, or **database-admin**; object: **set-type**; and one of the following verbs: **change**, **display**, or **remove**.

AT&T Mgr IV 2.2	DEFINITY G2.2	(000)000-0000
tcm admin set-type [verb]		Page 1 of 1

Enter one of the following:

Set Type: _____

Set Type Encode: ____

EXECUTE	SCHEDULE	CANCEL	HELP	BACKWARD	NEXT PG	PREV PG	LAST IN
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2. Enter the Set Type or Set Type Encode you want to change, display, or remove.
3. When you press **EXECUTE** to execute this transaction, you will then see Page 1 of 1 of the **set-type** transaction enabling you to make the desired change or to redisplay the information on the set type you selected. The only exception to this involves the **remove** operation. Removing a set type will not cause the first screen of this transaction to reappear.

If you are performing a **change** on a set type, the following restrictions apply to the entry fields:

- The transaction allows the characteristics of a user-defined set type to be changed if no voice terminals or Data Modules with that set type are assigned.
- The transaction allows additional Terminal Options to be added to a user-defined set type.
- The transaction blocks changes to the characteristics of AT&T predefined Set Types.
- The transaction blocks changes to the characteristics of a terminal definition if any terminals are assigned with that terminal definition.
- The transaction blocks the removal of a Terminal Option from a Set Type if any terminals are assigned with that set type and Terminal Option.

If you want to **display** the set type you entered, the following applies:

- The transaction allows the display of a set type definition based on either set type or set type encode.
- In addition to the data administered for the displayed set type, the last service request number and the date of the last service request are displayed.

If you are removing a set type with the **remove** verb, the following applies:

- The transaction allows the removal of a user-defined set type and all of its Terminal Options. Individual Terminal Options may be removed from a user-defined set type without removing the set type through the **change** verb.
- The transaction blocks the removal of an AT&T predefined set type.
- The transaction blocks the removal of a user-defined set type if any terminals with that set type are assigned.

Procedure: Adding a Set-Type [product-admin]

This transaction allows you to add a Set Type Encode and a single Terminal Option. The command directly accesses the product.

1. Enter the area **product-admin**; object: **set-type**; and the verb: **add**.

AT&T Mgr IV 2.2	DEFINITY G2.2	(000)000-0000
tcm product-admin set-type add		Page 1 of 1
YOU ARE DIRECTLY ACCESSING THE PRODUCT		
Set Type Encode: ____		
Terminal Option: ____		
SET TYPE PARAMETERS	NUMBER OF BUTTONS	
Equipment Type: ____	Basic Set: ____	
Data Capability: _	Display Module: ____	
Display Capability: _	Feature Module: ____	
ISDN MIM Capability: _	Coverage Module: ____	
EXECUTE	SCHEDULE	CANCEL
HELP	BACKWARD	NEXT PG
	PREV PG	LAST IN

2. Enter the Set Type Encode. Valid entries range from **100 - 200**. Encodes 1-99 are reserved for AT&T predefined terminals and will not be recognized by the "add" verb.

3. Enter the Terminal Option. All Terminal Options of a given Set Type must share the same values for Equipment Type, ISDN, MIM capability, and Number of Buttons.
4. Enter the Equipment Type.

Equipment Type Encode	Equipment Type	Usage
1	sn228/sn229 or tn742/tn746	Analog/SLS
2	sn224	MFET 7200 Series
3	ann17/tn762	MFAT 7300 Series
4	sn2701/tn7541	MFDT 7400 Series
5	tn556	BRI 7500 Series
6	sn2701/tn7541	DCP Data Only
7	sn261	ADFTEC Board
8	sn2381/tn7261	EIA Board
9	sn224/tn735	MET Only
10	tn771	MTCP-ATMS Board
11	tn771	MTCP-DCP Board

Note: Although values for this field range from **1-11**, Equipment Types 7 and 8 will not be recognized by the "add" verb. These two Equipment Types are reserved for ADFTEC and EIA, respectively, and do not support either voice terminal or data modules. In addition, Equipment Types 10 and 11 will not be recognized by the "add" verb. These two types are reserved for MTCP-ATMS, and MTCP-DCP, respectively.

5. Enter the Data Capability for the set type. Valid values range from **0-7**.
6. Enter the Display Capability for the set type. Valid values range from **0-6**.
7. Enter the ISDN MIM Capability for the set type. Valid values range from **0-5**.
8. If you are defining the number of buttons for a Basic Set, then enter a value from **0 - 62** for the Basic Set field.
9. If you are defining the number of buttons for a Display Module (DM), then enter a value from **0 - 7**.
10. If you are defining the number of buttons for a Feature Module (FM), then enter a value from **0 - 24**.
11. If you are defining the number of buttons for a Coverage Module (CM), then enter a value from **0 - 20**.
12. When you have completed entering the appropriate information press **RETURN**.

Procedure: Listing Administered Set Type Information

To list each administered Set Type, Encode/Terminal Option pair, the number of terminals assigned with that Set Type Encode and Terminal Option, and the characteristics administered for the Set Type Encode, use the **list** command in the product-admin area.

The screen below is a *sample* output when the **list** verb is entered in the product-admin area.

AT&T Mgr IV 2.2		DEFINITY G2.2		(000)000-0000			
tcm product-admin set-type list						Page 1 of 1	
YOU ARE DIRECTLY ACCESSING THE PRODUCT							
Set Type	Terminal	Terminals	Equip	Data	Disp	MIM	Buttons
Encode	Option	Assigned	Type	Cap	Cap	Cap	BS DM FM CM
-----	-----	-----	-----	----	----	----	-----
1	-	2	6	3	-	-	2 - - -
2	-	8	6	3	-	-	2 - - -
3	-	5	6	4	-	-	2 - - -
5	-	3	7	6	-	-	2 - - -
7	-	-	8	3	3	-	2 - - -
10	1	234	1	-	-	-	1 - - -
15	1	-	9	-	-	-	7 - - -
16	1	-	9	-	-	-	17 - - -
17	1	-	9	-	-	-	27 - - -
23	1	-	2	-	-	-	12 - - -
25	1	123	2	-	-	-	36 - 24 20
25	2	10	2	-	-	-	36 - 24 20
25	3	28	2	-	-	-	36 - 24 20
25	4	7	2	-	-	-	36 - 24 20

EXECUTE	SCHEDULE	CANCEL	HELP	BACKWARD	NEXT PG	PREV PG	LAST IN
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Press **RETURN** to continue.

- The transaction will block changes to the values of the Set Type Encode and Terminal Option fields.
- The transaction will block changes to the characteristics of AT&T predefined Set Types (valid Set Type Encodes will be limited to the range 100-200).
- The transaction will not allow the administration of the Button Template associated with the Set Type. This functionality is provided through the **btn-template** transaction.
- Equipment Types 7 and 8 will not be recognized by the change verb. These two Equipment Types are reserved for ADFTC and EIA, respectively, and do not support either voice terminals or data modules.

If you want to **display** the information relating to the Set Type Encode and Terminal Option you entered, the following applies:

- The transaction will allow the display of a terminal definition based on the Set Type Encode and Terminal Option.
- In addition to the data administered for the entered Set Type Encode and Terminal Option, the number of terminals currently administered with the entered Set Type Encode and Terminal Option will be displayed.

If you are removing a Set Type Encode and Terminal Option with the **remove** verb, the following applies:

- The transaction will allow the removal of a Terminal Option from a Set Type. Removal of the last Terminal Option assigned to a Set Type Encode effectively removes the Set Type.
- The transaction will block the removal of an AT&T predefined Set Type (valid Set Type Encodes will be limited to the range 100-200).

The Set-Type Name Transaction

This transaction allows the mnemonic Set Type Name associated with a user-defined Set Type to be changed and is administered in the database-admin area of Manager IV. After the transaction has been executed, the mnemonic Set Type Name in the Manager IV database will be updated for the Set Type definition and for each terminal assigned that Set Type.

The following verb is supported in the database-admin area of TCM: **create**

The Button-Template Transaction

This transaction is available through product-admin only, and allows you to administer the characteristics of each button defined using the **set type** transaction. Additionally, this transaction provides the capability to display the characteristics of each button defined for an AT&T predefined Set Type.

New object to be entered: **btn-template**

The following verbs are supported in the product-admin area of TCM.

- **add**
- **change**
- **display**
- **remove**
- **list**

3. Enter a Device Type. Valid values range from **0-3**.
4. Enter a Button Number. Valid values range from **1-62**.
5. Enter the Button Type **u**, **n**, or **p** (unusable, no pad, or pad).
6. Enter the Number of Lamps: **0-2**.

Procedure: Change/Display/List/Remove a Button-Template [product-admin]

1. Enter the following commands: area: **product-admin**; object: **btn-template**; and one of the following verbs: **change**, **display**, **remove**, or **list**.

AT&T Mgr IV 2.2	DEFINITY G2.2	(000)000-0000								
tcm product-admin btn-template [verb]		Page 1 of 1								
YOU ARE DIRECTLY ACCESSING THE PRODUCT										
<p>Set Type Encode: ____</p> <p>Device Type: _</p> <p>Button Number: __</p>										
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 12.5%;">EXECUTE</td> <td style="width: 12.5%;">SCHEDULE</td> <td style="width: 12.5%;">CANCEL</td> <td style="width: 12.5%;">HELP</td> <td style="width: 12.5%;">BACKWARD</td> <td style="width: 12.5%;">NEXT PG</td> <td style="width: 12.5%;">PREV PG</td> <td style="width: 12.5%;">LAST IN</td> </tr> </table>			EXECUTE	SCHEDULE	CANCEL	HELP	BACKWARD	NEXT PG	PREV PG	LAST IN
EXECUTE	SCHEDULE	CANCEL	HELP	BACKWARD	NEXT PG	PREV PG	LAST IN			

2. Enter the Set Type Encode. Valid entries range from **100-200** for the **change** verb. For the **display** and **list** verbs the range can be **1-200**.

Note: Set Type Encodes 1-99 are reserved for predefined AT&T Set Types.

3. Enter the Device Type. The valid values range from **0-3**.
4. Enter the Button Number (not necessary for list).
5. When you press **EXECUTE** to execute this transaction, you will then see Page 1 of 1 of the **btn-template** transaction. When this screen appears, you can change or display the information regarding the Set Type Encode, Device Type, and Button Number you selected. The only exception to this procedure involves the **remove** transaction. Removing a Set Type Encode, Device Type and Button Number will not cause the first screen of this transaction to appear.

If you are performing a **change** for this transaction, the following applies:

- The transaction will allow the Number of Lamps and Button Usage of an existing button template to be changed for a user-defined Set Type (Set Type Encodes 100-200).
- The transaction will block changes to the values of the Set Type Encode, Device Type, and Button Number fields.
- The transaction will block changes to the characteristics of a button template for an AT&T predefined Set Type (Set Type Encodes 1-99). Both AT&T predefined terminals (Set Type Encodes 1-99) and user-defined set types (100-200) can be displayed.

If you are performing a **display** operation, the following applies:

- The transaction will allow a button template to be displayed based on an entered Set Type Encode, Device Type, and Button Number.

If you are performing a **remove** operation, the following applies:

- The transaction will allow the removal of an existing button template for a user-defined Set Type (Set Type Encodes 100-200).
- The transaction will block the removal of a button template for an AT&T predefined Set Type (Set Type Encodes 1-99).

ASSIGNING ABBREVIATED DIAL GROUPS AND ABBREVIATED LIST ENTRIES

The ability of a terminal user to store frequently called telephone numbers or Dial Access Codes (DACs) in the switch's memory and to use a shortened dialing procedure to access these numbers is known as abbreviated dialing. To use the abbreviated dialing feature, voice terminal users who do not have access to feature buttons dial an access code and then an index number, while multifunction voice terminal users press a button, and dial a list index number. Abbreviated dialing capabilities can be assigned only when terminals are added or changed on Generic 2 and System 85 switches. A list of extension numbers on which abbreviated dialing can be used is created for each terminal user or group of terminal users. The size of the list is determined when the list is administered.

Administering Abbreviated Dialing

System 85 R2V2/R2V3

To administer Abbreviated Dialing in the administration and database administration areas, use the **extension add** or **extension change** transaction for analog sets. Use the **terminal add** or **terminal change** transaction for multifunction terminals.

To assign an abbreviated dialing list to a voice terminal and its associated DTDM, it is necessary to assign two separate lists, one for the voice terminal and one for the DTDM.

Abbreviated dialing assignments are made on a per extension basis. Consequently, removal of the extension without removal of abbreviated dialing assignments will result in unowned abbreviated dialing lists.

System 85 R2V4 and DEFINITY Generic 2

In Manager IV, the abbreviated dialing lists are assigned to the ELL using the **extension add** or **extension change** command for analog terminals, while non-analog terminals' abbreviated dial lists are assigned with the **terminal add** or **terminal change** commands.

For voice terminals associated with Data Modules, both the voice terminal and associated Data Module can share the same list. In addition, it is not necessary to assign separate lists to support abbreviated dialing on the voice terminal and default terminal dialing on the Data Module.

An extension's call appearance on a terminal can be removed without affecting these assignments because they are associated with the terminal's ELL. Abbreviated dialing and default terminal dialing capabilities are not removed unless the terminal is removed or they are removed from the terminal.

In the product-administration area, one transaction (**abbreviated-dial-lists add, change, display** or **remove**) is used to administer both the abbreviated dialing and default terminal dialing features. If you want to remove a terminal or Data Module in the product administration area, you must remove the abbreviated dialing list and default terminal dialing prior to removing the terminal from use.

Call Vectoring

If Call Vectoring is present on Generic 2 or System 85 R2V4 switches, use **vector-abbr-list** to add list entries for that vector. Use **abbr-list-entries change** to change entries on the vector abbreviated dial list (see below).

Administering Abbreviated Dialing List Entries

Abbreviated dialing list entries can be administered in two different ways:

- Through Manager IV's TCM application, using the command **abbr-list-entries change**. Note that system lists can only be administered through TCM.
- Through a voice terminal itself, either the controlling terminal in a group of terminals or through individual users' terminals. The controlling terminal can administer group lists while individual users can administer their personal lists through their own terminals.

Because individual users and controlling terminal administrators are able to add, change, and remove numbers from their own lists, abbreviated dialing list entries are not retained in the Manager IV database. However, TCM provides you with access to the switch to administer abbreviated dialing list entries.

Abbreviated Dialing on Generic 2 and System 85 R2V4

Since in Generic 2 and System 85 R2V4 switches abbreviated dialing capabilities are assigned to the Equipment Line Location (ELL) associated with the terminal (voice or data module) instead of the extension, these switches have specific capabilities which differ from earlier switches.

- The same abbreviated dial list is assigned to both the voice terminal and the Data Module.
- Two terminals that share the same extension can each have their own dialing lists.
- Each terminal can now have access to up to two Abbreviated Dialing Personal and Group lists. These lists are known as List A and List B, either of which can be assigned as Personal lists or Group lists.
 - Access to List A or List B is assigned explicitly to the terminal (voice and/or data) associated with a given ELL. Any extension assigned to a given terminal, may access the List A or List B assigned to that particular terminal.

2. Choose the Automatic Dialing field.

Note: If Default Terminal Dialing is chosen, the Device Type is set to 0 and may not be changed.

3. Enter the appropriate information in the Equip. Loc. field (Equipment Location).
4. Next enter the Device type: **0-3**.
5. Enter the appropriate Button Number.
6. Enter the telephone number (a maximum of 20 entries) to be associated with a feature button. An entry consists of a digit (0-9, "*" and "#"), or a special function encode.

The special function encode **f** must be followed by one of the other encodes: **p, w, m, d, t, s, or e**.

7. Press **EXECUTE** to execute the transaction.

ADMINISTERING STATION RINGING PARAMETERS

Using these TCM commands, you can change or display assignments of two System 85 or three DIMENSION System FP8 issue 3.8 station ringing parameters. The first is intercom alert rate. The Dial Intercom feature allows multi appearance voice terminal users to gain rapid access to other voice terminal users in the same intercom group. A voice terminal receiving an Intercom-Dial call has a unique alerting signal, which you can change through TCM.

The second is abbreviated/delayed dial alert cycles for transfer. Abbreviated/delayed dial alert provides multi appearance terminal users with manual transfer or delayed automatic transfer for all bridged appearances of an extension number on different terminals. With automatic delayed transfer of alerting, the primary extension number appearance alerts for a predetermined number of alerting cycles (from 2 to 16 cycles). TCM allows you to specify the number of cycles that are heard before the signal transfers to a secondary extension.

[DIMENSION System FP8 issue 3.8] The third parameter is Manual Signal Tone, of which either high or low tone may be selected.

7103a Terminal Features

The 7103a voice terminal is a single-line analog set that provides button access to voice features. The features assigned to these eight buttons must be the same for all 7103a terminals within a particular switch. Thus, the features of *all* 7103a terminals for a particular switch are added, changed, or removed by a single execution of the command **7103-terminal change**. Any change to the features will affect all of the 7103a terminals. The command **7103-terminal display** presents the feature buttons that appear on all 7103a terminals for a particular switch.

However, each 7103a terminal and associated extension is added using **extension add** and removed using **extension remove** once the features are set using the **7103-terminal change** command. For information on adding and removing the 7103a, see Chapter 3 on "Extensions and Terminals."

3. EXTENSIONS AND TERMINALS

Once you have administered the dial plan and performed the other time tasks needed to set up the system, there are several tasks that you will most likely be doing frequently, such as adding, changing or moving terminals and extensions.

The ever changing environments of companies, such as expansions, new hires, promotions etc., require moving old, or providing additional terminal equipment. TCM enables you to add or move extensions and equipment quickly and easily using one or two transactions.

At the same time that you assign extensions to people, you can also set up their call coverage path and assign them to an abbreviated dialing list.

Extensions and terminals are two important terms that are used often in TCM, and they are defined here in the way that they are used in this application. An *extension* is a number that logically connects an analog terminal to an Equipment Line Location (ELL); an *ELL* is the actual physical location of a line or trunk circuit in a port carrier within a switch. An extension also denotes a non-analog line picked up on a non-analog voice terminal. A *terminal* is any voice or data user interface equipment, such as a telephone set (or voice terminal) or a computer.

Using TCM, you can administer analog and non-analog extensions and terminals.

Remember that the procedures in this group can be used only after your system has been set up as described in "Administering TCM," in Chapter 2.

Terminal Types

Terminals are designed to provide access to system capabilities and to address a wide variety of user needs. There are four different types with which you should be familiar:

- Analog terminals offer basic voice service and access to many system voice features. See Figure 3-1 below for examples of analog terminals.

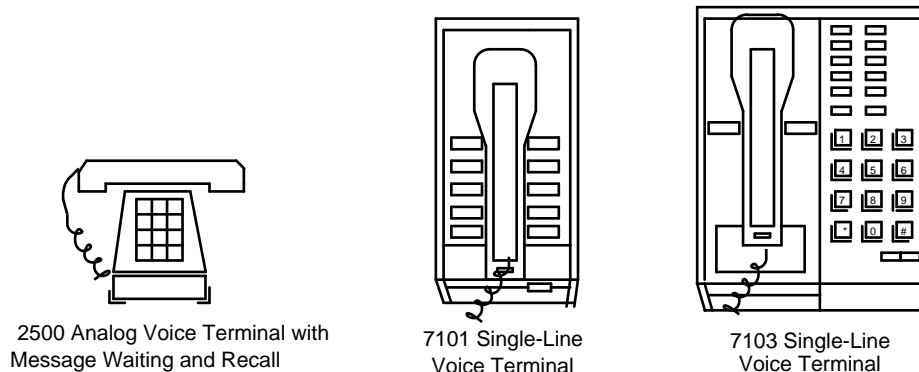
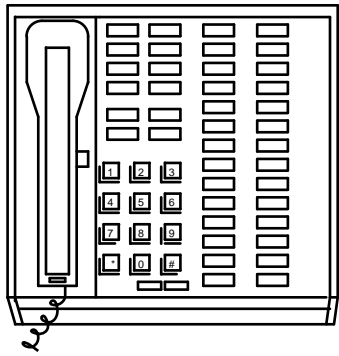


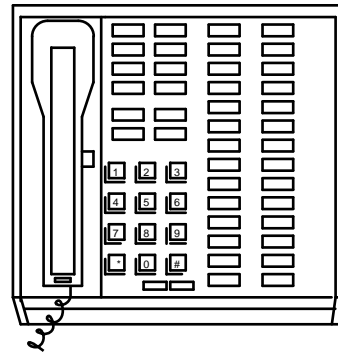
Figure 3-1. Analog Voice Terminals

- Hybrid voice terminals support features that permit the handling of simultaneous calls. Designed for frequent to heavy use, these voice-featured terminals are administered as non-analog sets in TCM.
- Digital voice terminals are designed to ease the interface to system features: they may be easily adapted to your company's particular needs for voice *and* data communications through the addition of one or more adjuncts. These sets are appropriate for users who require a wide range of system digital voice and data services. In TCM, they are administered as non-analog sets.

Figure 3-2 provides an example of both the Hybrid and the Digital Voice Terminal.



7405 40-Button Hybrid Voice Terminal



7305 40-Button Digital Voice Terminal

Figure 3-2. The 40-Button Hybrid & 40-Button Digital Voice Terminal

Please refer to *Electronic Custom Telephone Service (ECTS)* in this chapter for additional information on assigning and administering ECTS terminals, ECTS terminals on System 85 switches, and a screen display.

In addition to voice terminals, there are terminals that serve a variety of voice and data needs, such as Personal Terminals (PTs), Personal Computer Digital Communications Protocols (PC-DCPs), and Business Communications Terminals (BCTs).

Figure 3-4 is an illustration of the 515 BCT (Business Communications Terminal) Integrated Voice/Data Terminal. Some of the benefits of the 515 BCT include, convenient message retrieval and calling/called party information services, as well as AP-based services such as Message Center and Electronic Document Communication (EDC). Multiple call appearances and one-button access to many system voice features are also provided.

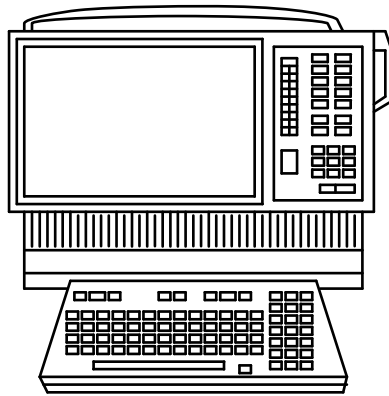


Figure 3-4. 515 BCT (Business Communications Terminal)

LOW COST DIGITAL TERMINALS

There are two types of Low Cost Digital Terminals supported for System 85 R2V4: the 7406db LCDT and the 7406dc with an integrated Display Module. The DEFINITY Manager IV enhancements enable the 7406db and the 7406dc to be administered as one terminal type in a single transaction.

The 7406db LCDT

This model is a lower cost version of the 7405d terminal and provides the same optional display capabilities. It can be administered, then connected in System 85 R1V3, R2V2/R2V3 as a 7405d with the optional Display Module that provides seven additional feature buttons. It can also be assigned an optional Digital Terminal Data Module (DTDM).

The 7406dc LCDT

The 7406dc LCDT is also a lower cost version of the 7405d equipped with an integrated Display Module and has the same voice and data functionality. The display functionality is the only difference between these two low cost digital terminals. As with the 7406db, the 7406dc can be retrofitted onto System 85 R1V3, R2V2/R2V3 as a 7405d. It can also be assigned an optional DTDM.

For information on administering the LCDTs and an example of a display screen, please refer to *Administering LCDT Terminals* in this chapter.

The 7406 PLUS

The 7406 PLUS (7406D07A/7406D08A) are lower cost modified versions of the 7406d terminal type that provide the following enhanced features:

- Are equipped with a built-in speakerphone.
- Provide six 1 LED flexible feature buttons as opposed to two in the earlier version.
- Are administered through the General Terminal Administration as AT&T native terminal types.

The 7406 PLUS terminals are supported by Generic 2 and System 85 R2V2—R2V4. The valid versions of the 7406 PLUS terminal type are:

- 7406bn - Model 7406d BIS Voice Terminal without integrated Display Module
- 7406bi - Model 7406d BIS Voice Terminal with integrated Display Module
- 7406pn - Model 7406d BIS Voice Terminal without integrated Display Module
- 7406pi - Model 7406d BIS Voice Terminal with integrated Display Module

For information on administering the 7406 PLUS terminals, please refer to *Administering LCDT Terminals* later in this chapter.

DCP Compatible PLUS Terminals

The 7400 series terminals (7407 PLUS, 7410 PLUS, and 7444d) are Digital Communication Protocol (DCP) compatible lower cost versions of the current terminals. The PLUS terminals offer a different number of buttons for administration as call appearances and features, though their physical layout is no different from their current versions. The 7407 PLUS, 7410 PLUS, and 7444d are administered through the General Terminal Administration as AT&T native terminal types.

The 7407 PLUS

The 7407 PLUS (7407D03A) is a lower cost modified version of the 7407d terminal type that provides the following telephony functions:

- 10 call appearance/programmable feature buttons with 2 lamps per button
- 4 fixed feature buttons with no lamps (CONFERENCE/PERSONALIZED RING, TRANSFER, DROP/SELF-TEST, and HOLD)
- 3 fixed feature buttons with 1 lamp per button (SELECT, SPEAKERPHONE/CALIBRATE, and MUTE)
- 9 programmable feature buttons with 1 lamp per button
- 22 programmable feature buttons with no lamps
- Message Waiting Indicator
- Local Volume Control (RINGER and SPEAKER)
- Speakerphone/Headset

The 7407 PLUS terminal is equipped with an integrated two-line Display Module. Neither integrated data capability, nor an adjunct Data Module are supported by this terminal. The data capability may only be provided through a 7400d.

The valid version of the 7407 PLUS terminal type is **7407p**. The 7407p terminals are supported by System 85 R2V2-R2V4 and Generic 2 switches (released after Generic 2.1, Issue 3.0). When retrofitted to an earlier release of a System 85 (before R2V2) or of a Generic 2 switch (before Generic 2.1, Issue 3.0) that does not support the 7407d as a unique type, the 7407p should be administered as a 7405d.

The 7410 PLUS

The 7410 PLUS (7410D02A) is a lower cost modified version of the 7410d terminal type that provides the following telephony functions:

- 10 call appearance/programmable feature buttons with 2 lamps per button
- 5 fixed feature buttons with no lamps (CONFERENCE/PERSONALIZED RING, TRANSFER, DROP/SELF-TEST, HOLD, and MONITOR)
- 1 fixed feature button with 1 lamp per button (SELECT)
- Message Waiting Indicator
- Local Volume Control (RINGER and SPEAKER)
- Speakerphone/Headset Adapter Interface

The 7410 PLUS terminals do not support integrated data/display capability, nor an adjunct Data/Display Modules. The data capability may only be provided through a 7400d.

The valid version of the 7410 PLUS terminal type is **7410p**. The 7410p terminals are supported by System 85 R2V2-R2V4 and Generic 2 switches (released after Generic 2.1, Issue 3.0). When retrofitted to an earlier release of a System 85 (before R2V2) or of a Generic 2 switch (before Generic 2.1, Issue 3.0) that does not support the 7410d as a unique type, the 7410p should be administered as a 7403d.

The 7444d

The 7444d (7444D01A) is a lower cost modified version of the 7434d terminal type that provides the following telephony functions:

- 34 call appearance/programmable feature buttons with 2 lamps per button
- 5 fixed feature buttons with no lamps (CONFERENCE/PERSONALIZED RING, TRANSFER, DROP/SELF-TEST, HOLD, and VOLUME)
- 3 fixed feature button with 1 lamp per button (SELECT, SPEAKER, and MUTE)
- 7 fixed feature button with 1 lamp (Display Controls)
- Message Waiting Indicator
- Local Volume Control (RINGER and SPEAKER)
- Built-in Speakerphone

The 7444D terminal is equipped with an integrated two-line Display Module. Integrated data capability is not supported by this terminal. Data capability may only be provided through a 7400d Linked Data Module (LDM).

The 7444d terminals are supported by System 85 R2V2-R2V4 and Generic 2 switches (released after Generic 2.1, Issue 3.0). When retrofitted to an earlier release of a System 85 (before R2V2) or of a Generic 2 switch (before Generic 2.1, Issue 3.0) that does not support the 7444d as a unique type, the 7444d should be administered as a 7405d (R2V2, R2V3, R2V4 with only 10 Call Appearance buttons able to be administered), or a 7434d (DEFINITY G2.0).

Compact Digital Telephone (CDT)

The Compact Digital Telephone (CDT) is a reduced functionality version of the 7403d terminal. It is supported by System 85 R2V4 as a 7401d terminal type. The CDT can be retrofitted on earlier System 85 switches by administering them as 7403d voice terminals with appropriate adjunct modules.

Please refer to *Administering the Compact Digital Telephone* in this chapter for further information on how to assign, administer and retrofit the CDT.

The 7401 PLUS

The 7401 PLUS (7401D02A) is a lower cost modified version of the 7401d terminal type that provides the following enhanced features:

- Is administered through the General Terminal Administration as an AT&T native terminal type.
- Is equipped with an additional adjunct jack for connection to either the speakerphone or headset adaptor.
- Supports an "Automatic Line Management" feature to monitor two "virtual" call appearances: there are no physical call appearances on this set.
- Provides a feature button to transform the 12 button dialpad into 12 feature buttons.

The valid version of the 7401 PLUS terminal type is **7401p**. For information on administering the 7401p terminal, please refer to *Administering the Compact Digital Telephone* later in this chapter.

Terminal Types and Manager IV Commands

Table 3-1 (on the following page) lists AT&T predefined terminal types, indicates to which class (analog or non-analog) the terminal belongs, and gives the **Object in the Administration Area** to which the terminal corresponds. The **Objects** supported are for System 85, DIMENSION, and Generic 2.

Table 3-1. Terminal Types and Administration Area Objects

Terminal Set Type	Type	Administered As	Object in Administration
500**	analog	analog	extension
2500	analog	analog	extension
3100	analog	analog	extension
7101a	analog	analog	extension
8102	analog	analog	terminal
8110	analog	non-analog	terminal
3100	analog	non-analog	terminal
7101a	analog	non-analog	terminal
7102a	analog	non-analog	terminal
7103a	analog	non-analog	terminal
7103a-01c	analog	non-analog	terminal
7104a	analog	non-analog	terminal
7203h	hybrid	non-analog	terminal
7205h	hybrid	non-analog	terminal
7303s	hybrid	non-analog	terminal
7305s	hybrid	non-analog	terminal
7401d	digital	non-analog	terminal
7401p	digital	non-analog	terminal
7403d	digital	non-analog	terminal
7404d	digital	non-analog	terminal
7405d	digital	non-analog	terminal
7406db	digital	non-analog	terminal
7406dc	digital	non-analog	terminal
7406bn	digital	non-analog	terminal
7406bi	digital	non-analog	terminal
7406pn	digital	non-analog	terminal
7406pi	digital	non-analog	terminal
7407d	digital	non-analog	terminal
7407p	digital	non-analog	terminal
7410d	digital	non-analog	terminal
7410p	digital	non-analog	terminal
7434d	digital	non-analog	terminal
7444d	digital	non-analog	terminal
CallMaster®	digital	non-analog	terminal
7505b*	ISDN/BRI	non-analog	terminal
7506b*	ISDN/BRI	non-analog	terminal

** DIMENSION System only

* Generic 2 only

Note: The 7000 series terminals plus the 3100, PT510, 515BCT & PCDCP are non-DIMENSION Terminal Set Types.

Terminal Set Type	Type	Administered As	Object in Administration
7507b*	ISDN/BRI	non-analog	terminal
PT510	digital	non-analog	terminal
515BCT	digital	non-analog	terminal
PCDCP	digital	non-analog	terminal
ECTS5**	ECTS	non-analog	terminal
ECTS10	ECTS	non-analog	terminal
ECTS20	ECTS	non-analog	terminal
ECTS30	ECTS	non-analog	terminal
EKT5**	ECTS	non-analog	terminal
EKT10**	ECTS	non-analog	terminal
EKT20**	ECTS	non-analog	terminal
EKT30**	ECTS	non-analog	terminal
EIA	data module	data module	data-module
ADFTC	data module	data module	data-module
TDM	data module	data module	data-module
PDM	data module	data module	data-module
MTCP-ATMS	data module	data module	data module
MTCP-DCP	data module	data module	data module

ADFTC	= Analog/Digital Facility Test Circuits
BCT	= Business Communications Terminal
ISDN/BRI	= Integrated Services Digital Network/Basic Rate Interface
CDT	= Compact Digital Telephone
ECTS	= Electronic Custom Telephone Service
EIA	= Electronic Industries Association
EKT	= Electronic Key Telephone
IDT	= Integrated Display Terminal
LCDT	= Low Cost Display Telephone
MTCP-ATMS	= Automatic Transmission Measurement System
MTCP-DCP	= Digital Communication Protocol
PCDCP	= Personal Computer Digital Communications Protocol
PDM	= Processor Data Module
PT	= Personal Terminal
SLS	= Straight-Line Set
TDM	= Trunk Data Module
VDS	= Voice Data Station

Note: All Data Modules listed in the above table are **not** for the DIMENSION System.

Station-Attributes Display Command

This transaction is used for both analog and non-analog extensions and terminals to perform various searches on extension and terminal-related information, providing a variety of TCM information for one or all extensions on your system.

The following is a list of the information that the Station Attributes Display command will generate:

- Class of Service (COS)
- Associated extensions of a primary extension
- Buttons referencing a given extension or set ID
- Call appearances of a given extension
- Call coverage group number
- Call pickup group number
- Hunt to extension number
- Controlled Restriction group
- User Name
- Set ID
- State
- AP number
- Circuit

Note: This command can draw heavily on the system, especially when searching for "all" of a particular option. If it is necessary to use this command be sure to do so at the system's off-peak hours.

You use the **station-attributes display** command like any other TCM command, with "station-attributes" as the object and "display" as the verb.

Note: There are two examples of the **admin station-attributes display** screen that will appear first (Page 1 of 2). The first example is the screen that will appear for System 85 R2V4 and the second example is the screen that will appear for Generic 2 (Page 1 of 2).

For each option on the first screen, there is a second screen associated with it. This second screen is the same for both System 85 R2V4 and Generic 2. You have to enter the display criteria on the second page. Please be aware that, for the option "Working Call Pickup Group No.," **no** second screen is displayed. Fill in the appropriate fields.

Example of the first screen that will appear for System 85 R2V4.

AT&T Mgr IV 2.2	System 85 R2V4	chicago
tcm admin station-attributes display		Page 1 of 2

Choose ONE of the following items you wish to display, based on an alternate key, by placing 'x' near that item's name. Then advance to the next page and enter display criteria.

- _ Buttons Referencing a Given Extension or Set I.D..
- _ Call Appearances of a Given Extension
- _ Circuits
- _ Class of Service
- _ Call Coverage Paths of a Coverage Point
- _ Extension Attributes
- _ Set I.D. for a Given Equipment Location
- _ Working Call Pickup Group No.

This is an example of the first screen that will appear for Generic 2.

AT&T Mgr IV 2.2	DEFINITY G2.2	chicago
tcm admin station-attributes display		Page 1 of 2

Choose ONE of the following items you wish to display, based on an alternate key, by placing 'x' near that item's name. Then advance to the next page and enter display criteria.

- _ Buttons Referencing a Given Extension or Set I.D..
- _ Call Appearances of a Given Extension
- _ Circuits
- _ Class of Service
- _ Call Coverage Paths of a Coverage Point
- _ Extension Attributes
- _ Set I.D. for a Given Equipment Location
- _ Set I.D and Equipment location for a Given Set Type and Terminal Option
- _ Set I.D. and Equipment Location of a BRI terminal for a Given Service Profile I.D.
- _ Working Call Pickup Group No.

To map a primary extension to its associated extension, select the Extension Attributes field. The following screen appears:

```

AT&T Mgr IV 2.2          DEFINITY G2.2          chicago
tcm admin station-attributes display          Page 2 of 2

          Extension Attributes

          Select ONE of the following:

          Extensions with AP No.: _
Associated Extensions of Primary Extension No.: _____
          Extensions Hunting to Extension No.: _____
          Extensions in Call Pickup Group No.: ____
          Extensions in Call Coverage Group No.: ____
Associated Extensions in Controlled Restriction Group No.: ____
          Extensions in Class of Service: ____

          Extensions Homes to Set I.D.: _____
          Extensions with State: _
          Extensions with User Name: _____

          Do you wish to see all such items? y

```

Additionally, the **station-attributes** command has been included in the product-admin area which allows you to perform various types of searches of terminal related data. You can query the switch directly for the data.

1. Make sure you are in the product-admin area and connected to the switch, then enter the command **station-attributes display**. The following screen appears:

3. Enter the appropriate data in the second page of the screen. If you choose:
 - Buttons Appearing on a Set, enter the Set Equip. Loc.
 - Buttons Referencing a Given Extension or Set, enter an Extension No. **or** Set Equip. Loc.
 - Call Appearances of a Given Extension, enter an Extension No.
 - Call Coverage Paths of a Coverage Point, enter an Extension No.
 - Extension Attributes, the following screen appears:

```

AT&T Mgr IV 2.2                System 85 R2V4                chicago
tcm product-admin station-attributes display                Page 2 of 2

                                Extension Attributes

                                Select ONE of the following:

Associated Extensions of Primary Extension No.: ____
                                Extensions Hunting to Extension No.: ____
                                Extensions in Call Pickup Group No.: ____
                                Extensions in Call Coverage Group No.: ____
                                Extensions in Controlled Restriction Group No.: ____
                                Extensions in Call of Service: ____
                                Extensions in Extensions in Extension Partition: ____

                                Do you wish to see all such items? y
  
```

- Extensions Sharing a Name, enter an Extension No.
 - Unassigned Circuits, enter a Pack Type.
4. Press **EXECUTE** to execute the transaction.

Extension and Terminal Transactions

Procedures in this group consist in part of commands that add, change, display, remove, and swap individual extensions and terminals. The verb **add**, quite simply, lets you put extensions and terminals into service, just as the verb **remove** takes extensions and terminals out of service. The verb **display** shows you the current status of extension and terminal assignments within a particular group. The verb **change** automatically displays existing extensions and terminals and then allows you to modify current assignments.

The verb **swap** allows you to exchange the assignments of two analog extensions or terminals. The verb **reserve** allows you to hold a particular extension for future service; this aspect of extension administration is covered in Chapter 2, "Administering the Dial Plan." Finally, for some extensions you can request not only a specific display but also a system-wide report; for more information, see Chapter 9, "TCM Reports." Unless otherwise indicated in the procedures, all commands should be used in the administration area of TCM.

Extension Transaction

This transaction allows you to administer analog voice terminals and non-analog extensions.

The following verbs are supported for this transaction:

- **add**
- **change**
- **display**
- **move**
- **remove**
- **reserve**
- **swap**
- **unreserve**

1. Universal/XE module equipment locations can be administered when performing an **add** or **change** operation on an analog extension.
2. The new Set types 3100 and 7102A can be administered when performing an **add** or **change** operation on an analog extension.
3. The new Set types 8102 and 8110 can be administered when performing an **add** or **change** operation on an analog extension.
4. A Bearer Capability Class of Service (**0–255**) can be administered for each extension. The administered Bearer Capability Class-of-Service must be defined.
5. The Dedicated Switch Connection (DSC) Messages feature can be activated for each extension.
6. The Audible Automatic Message Waiting feature can be activated for each extension.

This feature provides Automatic Message Waiting (AMW) service for stations not equipped with AMW lamps, or for station users who prefer that their AMW lamp not be illuminated, but who will desire AMW service. The Audible Automatic Message Waiting feature will audibly alert a station user that there is a message waiting for a particular extension by connecting stutter dial tone for the first two seconds whenever the user goes off hook on an idle appearance of that extension.

Extension Transaction Prerequisites

Before you can add an extension, be sure that the following prerequisite actions have already been completed.

- All extension numbers require definition of their first digit. If the extension's first digit has not been previously assigned, use **first-digit change**.
- You must open a number group for each extension using **number-groups add** if the extension being added is not part of an existing number group. Once the number group is open, the extensions within that number group are automatically placed in the dial plan as available for assignment or reservation.
- You must also be sure that the appropriate hardware exists in the switch before you can add an analog extension.

If the appropriate equipment does not already exist, add both the carrier and the appropriate circuit pack using **carrier add**. Use **pack add** if you just want to add the circuit pack. sn222 or sn229 is the number of the traditional analog on-premises circuit pack and sn221 or sn228 is the number of the traditional analog off-premises circuit pack. tn742 is the number of the universal analog circuit pack which can be used on/off-premises, and tn746 is the number of the universal analog on/off-premises circuit pack. Use the **carrier-parameters** transaction to add carriers to the switch by way of Manager IV.

- Define the extension class of service using **class-of-service add**.
- Define the extension bearer capability class of service using **bearer-capability-cos add**.

- If you are assigning a Hunt-to extension number, then the extension that this extension will hunt to must be assigned prior to this transaction using **extension add**. An extension cannot hunt to itself or an associated extension.
- If the extension is to be associated with an Applications Processor (AP), the AP must have been previously assigned through **ap add**.
- If the extension is to be covered by a call coverage group, the coverage group must be defined using the **call-coverage-path add** transaction.
- If you are using Tenant Services [Generic 2.1, System 85 R2V4], use the command **tenant add** to assign an extension partition prior to defining extension partitioning in this transaction.
- If the User Name is copied from an existing extension, that extension must have been added previously using **extension add**, and must be assigned a name.
- If an authorization code is assigned to an extension, the authorization code must be defined in the system by using the **auth-algorithm** and **auth-code** transactions.

Terminal Transaction

This transaction allows you to administer non-analog and multi-appearance terminals. For DEFINITY Manager IV, a non-analog terminal and its features are administered through a *single* transaction. The following verbs are supported in the admin, database-admin and product-admin areas:

- **add**
- **change**
- **display**
- **remove**
- **swap**
- **type-change** (supported in the admin and database-admin areas only)

The **terminal add** screen consists of two pages.

- The first two pages are used to assign the non-analog terminal and its attributes. These two pages are the same for all terminal types.
- The third, fourth, and fifth pages of the screen are used to assign button features. This screen will differ depending on the terminal chosen (the number of buttons varies depending on the terminal chosen).

Terminal Transaction Prerequisites

Before you can actually execute the terminal command, you must be sure to have completed the following tasks:

- The extension associated with the terminal must have been previously assigned using **extension add**.
- If the appropriate hardware has not been added, add both the carrier and appropriate circuit pack using **carrier add** and **carrier-parameters add** in product admin. Use **pack add** if you just need to add the circuit pack.

- If a Personal Central Office (PCO) line is assigned to a button on a terminal, add a trunk group for the CO line pickup prior to this transaction. Use **trk-grp add** in the FM application. See the *DEFINITY Manager IV Facilities Management Operations* for more information.
- If the extension assigned to a terminal to be removed is in a call coverage path, the extension must first be removed from the coverage path using **call-coverage-path change** unless another terminal has a call appearance of the extension.
- To assign button features to a terminal, the appropriate feature must have been activated for the extension's class of service. Use **class-of-service add** to activate button features.
- For customer defined terminals, see "Defining Non-AT&T Terminals" in Chapter 2 of this manual.

ANALOG EXTENSIONS AND TERMINALS

General Terminal Administration (GTA)

General Terminal Administration (GTA) is a set of transactions that allow you to manually define the characteristics of any multi-appearance voice or data terminal that may be brought forward onto a DEFINITY Communications System Generic 2 switch.

Using the **set-type** and **button-template** transactions explained in Chapter 2, you can define a non AT&T terminal type. Terminal definition includes the number and type of basic set buttons, the number of feature buttons, the number of coverage buttons, and the number of display buttons. Once you have defined a new set type, use the **terminal** transaction to administer terminals of this type for Generic 2.

Note The extension transaction should not be used to administer non-AT&T analog terminals.

Procedure: Assigning an Analog Extension and Terminal

Purpose

This procedure allows you to assign (add) an extension line number for an analog terminal, as well as define the features and attributes of the analog terminal.

Procedure Steps

1. Be sure that you have completed the appropriate prerequisite actions described at the beginning of this chapter.
2. Enter the command **extension add** to add the new analog extension.

AT&T Mgr IV 2.2	DEFINITY G2.2	(000) 000-0000
tcm admin extension add		Page 1 of 4
Account ID: _____ Extension: _____ No. of Extns.: _____ Like Another Extn.? _ Analog? _ EXTENSION ATTRIBUTES Class of Service: _____ LWC Destination: _____ AMW? Auxiliary ANI? _____ AP No.: _____ Audible AMW? _ Hunt To Extension: _____ AUDIX Machine No.: _____ Bearer Capability COS: _____ Call Pickup Group No.: _____ OR Call Pickup Group with Extension: Call Coverage Group No.: _____ OR Call Coverage Group with Extension: Univ. Code Calling ID: _____ Attd. Controlled Restriction Group:		
EXECUTE SCHEDULE CANCEL HELP BACKWARD NEXT PG PREV PG LAST IN		

3. Enter the Account ID, up to 15 alphanumeric characters or dashes. Enter if Call Accounting is active.
4. To add a single extension, enter the extension number in the Extension: field.
 - The asterisk (*) in this field is a default value indicating that you can allow Manager IV to automatically select an extension number. For automatic selection, do not enter anything in the Extension: field and press **RETURN**.

WARNING:

If you do not have the new TN746B pack type, using Manager IV to automatically select the Equipment Location for an Off-Premises analog extension or an Off-Premises Set Type Encode 10 (Analog extension administered as a digital set) could incorrectly select the previous On-Premise Only TN746 Equipment Location.

- If you are selecting an extension number, remember that the first digit of an extension number cannot be a pound sign (#) or an asterisk (*).
5. Enter the number of extensions you wish to assign in the No. of Extns: field.
You can add up to 99 extensions at a time. If you choose to add more than one extension per transaction you cannot specify individual extension numbers. Manager IV automatically selects the extension numbers and defines all these extensions with the same features.
 6. Enter **n** in the Like another extn? field to select extension features.

15. If you want to bill toll calls to an Automatic Number Identification (ANI), enter **y** in the Auxiliary ANI? field. To bill toll calls to an extension number, enter **n** in the Auxiliary ANI? field, or skip the field.
16. Select the Automatic Message Waiting Indicator option with a **y** entry in the AMW field. Enter **n** in the AMW field to bypass this option, or just skip this field.
17. Select the Audible AMW option by entering a **y**. Enter **n** to bypass this option.
18. Enter the Leave Word Calling (LWC) destination extension number.
 - The LWC destination should be an AUDIX machine.
19. Enter the AUDIX machine number. (For System 85 R2V2/3 or DIMENSION FP8, enter the AP number.) This field must be completed if a LWC destination has been assigned.
20. Enter the Call Pickup Group number or the extension number for the Call Pickup Group in which this extension resides.
21. Enter the Call Coverage Group number or the extension number for the Call Coverage Group in which this extension resides.
22. Enter the Attendant Controlled Restriction Group number.
23. Press **RETURN** to access the second page of the screen.

AT&T Mgr IV 1.0	DEFINITY G2.2	(000) 000-0000					
tcm admin extension add		Page 2 of 4					
Set I.D.: 12345	Set Mount: ____	Set Color: _____					
SPECIAL EQUIPMENT/ADJUNCTS:							
Speakerphone? _	Price Element 1: _____	Price Element 2: _____					
Headset? _	Price Element 3: _____	Price Element 4: _____					
ABBREVIATED DIALING							
A List Type: _							
B List Type: _							
System List Access? n							
Hardware Bridged? y							
Bridged Set I.D.: 12345a	Bridged Set Mount: __	Bridged Set Color: __					
SPECIAL EQUIPMENT/ADJUNCTS FOR BRIDGED SET:							
Speakerphone? _	Price Element 1: _____	Price Element 2: _____					
Headset? _	Price Element 3: _____	Price Element 4: _____					
Extension Partition: 0	NPA-NXX Designator:	Call Fwd Off-Net Toll? n					
EXECUTE	SCHEDULE	CANCEL	HELP	BACKWARD	NEXT PG	PREV PG	LAST IN

Note: With the DIMENSION System FP8, Speed Calling and Custom Intercom fields appear instead of the Abbreviated Dialing fields.

24. [System 85] Identify the features and attributes of the terminal at this extension. None of these fields is required.
25. If the analog terminal is a 2500 or 3100 set [with System 85], the following fields are added to the second page of the screen. Make entries where applicable. None of these fields is required.

Hardware Bridged?	___		
Bridged Set I.D.:	#___	Bridged Set Mount:___	Bridged Set Color:___
SPECIAL EQUIP/ADJUNCTS FOR BRIDGED SET:			
Speakerphone?	Price Element 1:	Price Element 2:	
Headset?	Price Element 3:	Price Element 4:	

26. Enter the abbreviated dialing information for this extension.
 - For System 85, Generic 2: There are three abbreviated dialing lists that an extension can be associated with: personal, group, and system lists.
 - A **p** entry in the A or B List Type: field allows access to a personal list. Then the Personal List Size: field is added to the page. Entry in this field specifies the number of list items. Valid entries are **5–95** in increments of 5. If Hot Line is specified, a personal list must be assigned.
 - A **g** entry in the A or B List Type: field allows access to a group list. Then the Group List no: and the Controller? fields are added to the page. Group list number can be **1-9999**. A **y** entry in the Controller? field indicates that this extension is the controlling extension for the group list. If this extension is specified as the controller, then the List Size: field is added to the page.
 - Enter **y** or **n** at the System List Access? field to specify whether the extension is assigned access to the system list. System lists can only be administered by entering the **abbr-list-entries** transaction.

A single extension can have access to two personal lists, two group lists, or one of each. For information on administering abbreviated dial list members, see Chapter 2.

- For DIMENSION System FP8 only: Instead of abbreviated dialing lists, you can assign Speed Calling and/or Custom Intercom features by entering **y** in the appropriate fields that appear when DIMENSION is specified as a target for this transaction. The Speed Calling feature is used for dialing numbers outside the switch, while the Custom Intercom feature is used for dialing extensions within the switch. An extension can have either/or both features.
27. [System 85 R2V4, Generic 2.1] Assign an extension partition number (**0-99**). This field appears only if Tenant Services are active.
 28. [System 85 R2V4, Generic 2] Assign an NPA-NXX designator.

AT&T Mgr IV 2.2	DEFINITY G2.2	(000) 000-0000								
tcm admin extension add	Page 4 of 4									
User Name: _____ Additional Auth Codes: _____ _____ _____ _____ _____ _____ Definable Fields: _____ _____ _____ _____ _____ _____										
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 12.5%; text-align: center;">EXECUTE</td> <td style="width: 12.5%; text-align: center;">SCHEDULE</td> <td style="width: 12.5%; text-align: center;">CANCEL</td> <td style="width: 12.5%; text-align: center;">HELP</td> <td style="width: 12.5%; text-align: center;">BACKWARD</td> <td style="width: 12.5%; text-align: center;">NEXT PG</td> <td style="width: 12.5%; text-align: center;">PREV PG</td> <td style="width: 12.5%; text-align: center;">LAST IN</td> </tr> </table>			EXECUTE	SCHEDULE	CANCEL	HELP	BACKWARD	NEXT PG	PREV PG	LAST IN
EXECUTE	SCHEDULE	CANCEL	HELP	BACKWARD	NEXT PG	PREV PG	LAST IN			

34. Add additional user authorization codes.
 - Any additional user information associated with the extension may be included in the Definable Fields: field.
35. Press **EXECUTE** to end the transaction and process all data.

End of Procedure

Copying Like Extensions

You can copy an existing extension's features and attributes, thus saving you time from inputting the same information more than once. Manager IV automatically copies features of the "like" extension. Just enter y to the Like another extn: field. When assigning single extensions through this field, you can still assign user information by accessing the third and fourth pages of the extension screen.

Procedure: Changing the Features and Attributes of an Extension

Purpose

The **extension change** transaction allows you to change the features and attributes of the extension. You can also use this transaction to copy a name from an extension which already has a name to the extension being changed, that is to change the name of any existing extension.

Procedure Steps

1. Enter the **extension change** command. The input **extension change** screen displays.

AT&T Mgr IV 2.2	DEFINITY G2.2	(000) 000-0000					
tcm admin extension change		Page 1 of 4					
Extension No.: _____							
EXECUTE	SCHEDULE	CANCEL	HELP	BACKWARD	NEXT PG	PREV PG	LAST IN

2. Enter the Extension No. Press **RETURN**.
 - The extension must have been previously defined via the **extension add** transaction.
3. The **extension change** screen appears. The **change** screen fields are arranged in four pages. Page 1 is similar to Page 1 of the **extension add** screen. For a detailed field description of Page 1, refer to "Procedure: Assigning an Analog Extension and Terminal." Having populated the fields as appropriate, press **RETURN** to invoke Page 2 of the screen.

AT&T Mgr IV 2.2	DEFINITY G2.2	(000) 000-0000					
tcm admin extension change		Page 2 of 4					
NPA-NXX Designator:							
EXECUTE	SCHEDULE	CANCEL	HELP	BACKWARD	NEXT PG	PREV PG	LAST IN

4. Enter the NPA-NXX Designator field. This field is optional. Valid entries are **1-99**. Press **RETURN**. Page 3 of the screen appears.

AT&T Mgr IV 2.2	DEFINITY G2.2	(000) 000-0000					
tcm admin extension change		Page 3 of 4					
Copy Name from Extension No.: _____ User Name: _____ Location: _____ Room: _____ Electronic Mail Address: _____ Supervisor's Name: _____ Organization No.: _____ Start Character of Truncated Name: __ Auth Code: _____ Additional Auth Codes for this User: _							
EXECUTE	SCHEDULE	CANCEL	HELP	BACKWARD	NEXT PG	PREV PG	LAST IN

5. Page 3 brings up two fields: Copy name from Extension No: and User Name:. These fields are optional. You are allowed either to copy a name from an already existing extension, or assign a unique name to the extension being changed. To copy a name from an already existing extension, enter the Copy name from Extension No: field.

- The extension number must have been previously defined.
- The name must have been assigned to this extension.

To assign a unique name to an already existing extension, populate the User Name: field. A maximum of 30 alphanumeric characters is allowed.

- If you populate the User Name: field, the optional fields associated with the User Name appear on the screen. You can fill in these fields with the appropriate information or skip them by pressing **RETURN**.
- The Start Character of Truncated Name: field is required. Valid entries are **1-30** (defaults to **1**).

Note: If the **extension** transaction involving a name change fails in the middle, it may cause an out-of-sync condition between the database and the switch; in the database, the name may remain unchanged while the switch will contain a new name. To ensure that both the database and the switch have the correct name, review the information in the database whenever the **extension** transaction fails. If the out-of-sync problem exists, change the old name to the new name.

6. Press **RETURN**. Page 4 of the screen appears which is similar to Page 4 of the **extension add** transaction. For detailed information, refer to "Procedure: Assigning an Analog Extension and Terminal."

OVERVIEW: NON-ANALOG TERMINALS

This chapter covers general information concerning administration of non-analog terminals.

General Terminal Administration (GTA)

General Terminal Administration (GTA) is a set of transactions that allow you to manually define the characteristics of any multi-appearance voice or data terminal that may be brought forward onto a DEFINITY Communications System Generic 2 switch.

Using the **set-type** and **button-template** transactions explained in Chapter 2, you can define a non AT&T terminal type. Terminal definition includes the number and type of basic set buttons, the number of feature buttons, the number of coverage buttons, and the number of display buttons. Once you have defined a new set type, use the **terminal** transaction to administer terminals of this type for Generic 2.

GTA also allows for the administration of the three Integrated Services Digital Network/Basic Rate Interface (ISDN/BRI) voice terminals. Manager IV enables you to administer ISDN/BRI voice terminals produced by other vendors.

Adapting Terminals

Some terminals are designed to operate with specific releases of System 85 switches. Through TCM, however, you can translate such terminals so that they are compatible with other switch releases. This ability allows you to expand the kinds of terminals within your system and permits you greater flexibility in terminal assignment. For information on terminal types that can be retrofitted, refer to Appendix C, "Table C-2. Terminal Retrofitting for System 85 Releases." Table C-2 also displays the terminal types that you would use in retrofitting these terminals for prior releases of System 85.

The discrepancies between the terminal types are corrected in the Manager IV database through the command **set-attributes create**, which is used as part of the database initialization process. However, the switch itself will identify the terminal with the inaccurate terminal type. Therefore, when you administer retrofit terminals in the administration and database administration areas of TCM, you use (and Manager IV displays) the actual terminal types. However, when you administer these retrofit terminals through the **product-administration area**, use the translated terminal types noted above. For example, use the 7403d to retrofit a 7410d to R2V2, R2V3, or R2V4.

Assigning Non-analog Terminals

You can assign a non-analog terminal and define its terminal attributes (set color, set mount, equipment adjuncts), and button features using the **terminal** command. For System 85 and Generic 2, abbreviated dialing capabilities are also specified (personal, group, and system list access; personal and group list size), and Digital Terminal Data Modules (DTDMs) and Display Modules are added through this procedure.

Prerequisites

Before you can actually execute the appropriate **terminal** command, you must be sure to have completed the following tasks:

- The extension associated with the terminal must have been previously assigned using **extension add**.
- [System 85] If the appropriate hardware has not been added, add both the carrier and appropriate circuit pack using **carrier add** and **carrier-parameters add** in product-admin. Use **pack add** if you just need to add the circuit pack.
- If a Personal Central Office (PCO) line is assigned to a button on a terminal, add a trunk group for the CO line pickup prior to this transaction. Use **trk-grp add** in the FM application. See *DEFINITY*

Manager IV Facilities Management Operations for more information.

- If the extension assigned to a terminal to be removed is in a call coverage path, the extension must first be removed from the coverage path using **call-coverage-path change** unless another terminal has a call appearance of the extension. To assign any of the following button features on a terminal, the appropriate feature must have been activated for the extension's class of service. Use **class-of-service add** to activate button features.

Assigning Set IDs

In Manager IV, the set identification number (the Set ID: field) identifies the individual terminals in your system administered through TCM. For terminals and Data Modules, the Set ID is three to five digits optionally followed by an alpha character. When you assign set IDs, it is recommended that you use the same format as the set IDs generated by the initialization process of Manager IV.

Hardware-Bridged Analog Sets

A hardware-bridged analog set is an analog terminal that has assigned as its extension number an extension number already assigned to another terminal(s) with the same ELL. Only the 2500 and 3100 terminals can be bridged, and it can have only one bridged terminal (for a total of two bridged terminals). The set ID (extension number and the "a" suffix) is generated automatically by Manager IV when the terminal is added.

Call Appearances

A Call Appearance is a position on a voice terminal from which the terminal's extension number can be accessed. A lamp next to the call appearance button indicates the status of that appearance.

For System 85 and Generic 2, an extension can have up to 12 call appearances, and can appear on one set up to 12 times. Each appearance will be given a different call appearance number (**1-12**). Each call appearance may be picked up on a maximum of 16 sets, that is, have no more than 16 images. If an image is picked up on more than one set, it is known as a bridged or shared call appearance. With System 85 R2V3/R2V4 and Generic 2, it is theoretically possible for a single extension to appear on 192 different sets (12 appearances with 16 images). If an appearance is shared, it may only appear on up to 16 sets.

For the System 85 R2V2, an extension can only appear on up to 16 sets regardless of whether or not the appearances are shared. The extension may be still appear up to 12 times on a single set.

For the DIMENSION System, there are no multiple call appearances on an extension. Each extension can only appear once on a set, but may appear on up to 16 sets.

Bridged Call Appearances

The appearance of an extension number on more than one terminal is referred to as a "bridged call appearance." Non-analog (hybrid and digital) terminals can have bridged call appearances. A total of 16 terminals can have the same call appearance of a given extension number. If *all* of a terminal's call appearances are bridged appearances, you should (to make your set ID number distinct from the convention of those numbers automatically generated) assign the terminal's set ID with an uppercase alphabetic suffix.

A straight-line set can have one call appearance which may or may not be bridged. However, even when multiple call appearances are allowed on a set, an extension can have "homed" all appearances on only one set.

Adding Call Appearances

When adding multiple images of a call appearance, or multiple call appearances of a single extension on a terminal, these restrictions apply:

- An extension can be homed to a maximum of one terminal.
- The home terminal must start with appearance 01.
- There can be a maximum of 16 images of a call appearance.
- A call appearance cannot be added until its predecessor exists somewhere on the system. For example, appearance 02 cannot be added unless appearance 01 exists, and appearance 03 cannot be added unless appearance 02 exists.
- The last image of an appearance cannot be removed if higher numbered appearances of that extension still exist.
- Appearance number 01 cannot be removed from the home terminal while higher numbered appearances of that extension are still present on any set.
- Two images of the same appearance cannot exist on the same set.
- Analog extensions cannot be bridged.
- A DTDM or Data Module call appearance cannot be bridged.
- More than one SLS cannot be bridged to the same call appearance.

BRI Data Line Appearance

Generic 2 provides Data Line capability that allows for separation of voice and data calls through the administration of a Prime Data Line on a BRI terminal. The Data Line feature implies designating a call appearance as a Prime Data Line appearance or Non-Prime Data appearance. Both Prime and Non-Prime data appearances can be used exclusively for data calls.

The Prime Data Line is a special case of a data appearance and can be selected in both the origination and termination of data calls. If administered and if available on a BRI terminal, the Prime Data Line appearance will be selected for use by the first data call originated from or terminated to that station/extension that provides you with the consistent use of appearances for data calls.

A Prime Data Line appearance provides you with the ability

- To separate a data call appearance from the group of appearances used for voice calls.
- To administer several appearances of a single extension on a BRI terminal and designate one of those appearances as the Prime Data Line.
- To administer the appearance on the BRI terminal's fixed data button as the Prime Data Line.
- To bridge the Prime Data Line to another terminal.
 - These bridged images (Non-Prime Data Lines) may be used to monitor the current data call activity on Prime Data Lines that are administered on other terminals. However, you are not allowed to use the Non-Prime Data Lines to originate or terminate voice calls. The same applies to bridged images of Prime Data Lines.
 - You may use the Non-Prime Data Lines to originate or terminate data calls if the Prime Data Line has not been administered for the station or if the Prime Data Line is not available, if that image is on the home terminal for the dialed extension.

IMPORTANT: *Any image of an appearance which is administered as a Prime Data Line or a Non-Prime data appearance may not be defined as the voice prime line for a station or as an automatic appearance.*

Only one appearance per station may be a Prime Data Line though there may be images of other data appearances on the terminal.

Administration of the Prime Data Line appearance is discussed in detail in *Part 4: Administering BRI Data Lines in the Manager IV Database* and *Administering BRI Data Lines in the Generic 2 Switch* later in this chapter.

ISDN Advantage Feature

The ISDN Advantage Feature is a Telemarketing application supported on an AT&T 6538/39 multi-tasking display terminal equipped with a Digital Communications protocol (DCP) feature board and an adjunct AT&T digital (DCP) voice telephone. The Telemarketing application provides integrated voice and data services to Automatic Call Distribution (ACD) agents by multiplexing up to four voice and data sessions over a Digital Communications protocol (DCP) link to an AT&T DEFINITY Generic 2 switch.

A DCP link is made up of two information channels and one signaling channel. When a call arrives, the DCP message is sent over a DCP link to the ACD agent. The DCP message is created specifically for the Telemarketing application and includes the incoming call related information:

- Calling Party Number (CGN)
- Called Party Number (CDN)
- Indication of "start of call"
- Indication of "end of call"
- Associated call appearance

This call related information is displayed in the "Telephony Window." Based on the displayed information, the agent creates a request for the caller's billing data from the host. The host uses the call information to retrieve the caller's billing record from the database and display the billing information on the agent's screen simultaneously with the call arrival thus providing the agent with an immediate access to the data that pertains to the calling party.

The ISDN Advantage feature is supported in Generic 2 only and requires using the 6538/39 integrated voice/data terminals which have the ability to interpret the DCP messages and direct them over an ISDN/PRI link to the host for the Telemarketing application. The terminals supporting this feature are the DCP terminals that support both "display" and "data" options (option types 10 and 12).

Up to 23 terminals are supported over the PRI link. The voice services and features are provided through the adjunct voice set regardless of the state of the terminal.

The ISDN Advantage feature is administered via the **terminal add**, **change**, and **display** transactions.

Defining Straight-Line Sets

A Straight-Line Set (SLS) is an analog terminal described to the switch as a multifunction terminal without buttons. If a terminal is defined as a straight-line set, its extension can be referenced by a "busy" button on another terminal. It can also be bridged to a multifunction set as described below.

Bridging Straight-Line/Multifunction Sets

Generic 2, System 85 and DIMENSION allow a single-appearance voice terminal (administered as a straight-line set) to share a call appearance with as many as 15 other multi-appearance voice terminals.

System 85 R2V3/R2V4 switches allow the SLS to have only one call appearance, which need not be homed to the SLS. R2V2 only allows the SLS to have call appearance 01 which must be homed to the SLS. The rule for DIMENSION is that an extension may be picked up on one to sixteen sets, only one of which may be a straight-line set.

To administer call bridging between straight-line sets and multi-appearance voice terminals, first use the extension **add** transaction to administer the extension as a non-analog extension. Then use the **terminal add** transaction to administer the bridged call appearances of the extension.

The following are considerations for administering call appearances shared by straight-line sets and multi-appearance voice terminals:

- An SLS cannot share an extension with another SLS. Only one SLS is permitted to an extension.
- An SLS can be bridged to a maximum of 15 multi-appearance sets.
- An SLS does not have status lamps to indicate the busy/idle status of its single call appearance. Therefore, the user of the SLS must:
 - Go off-hook to determine the busy/idle status of the bridged appearance.
 - Wait until the bridged appearance is idle to make a call.
 - Choose between ringing, abbreviated ringing, delayed ringing, and the absence of ringing for the voice terminal. Visual alerting is not provided.

Defining Multiple Manual Signaling Buttons

Manager IV supports a feature for defining multiple appearances of manual signaling buttons. This feature allows a manual signaling button to signal more than one set at a time. It is recommended that no more than 17 sets be assigned for a button.

Administering Manual Signal Buttons

To administer this feature, add a manual signaling button using the **terminal add** transaction in the administration area. This defines the first appearance of the manual signaling button. Additional appearances of the manual signaling button must be added using the transaction **product-admin-button add**. Each appearance of the manual signaling button must be added individually for the same ELL (Equipment Line Location) button. This transaction is executed from the product-administration area only, because this information is retained in the switch, not in the Manager IV database.

To display appearances of multiple signaling buttons for a specified set, use the **product-admin button display** command. One appearance will display per transaction screen.

To remove all appearances in the Manager IV database, remove the manual signaling button using the **terminal remove** transaction in the administration area.

To remove multiple appearances in the product, use **product-admin button remove**. You can remove all appearances for a specified ELL or a specific appearance of a multiple manual signaling button.

The presence of additional appearances of manual signaling buttons associated with a removed set will not affect the functionality of multiple manual signaling.

Add-On Modules

Various modules that interact with user terminals can also be administered through commands that fall in this task group. These modules are in fact pieces of equipment that are added directly to the terminal itself; while you are adding the terminal, you can also add additional pieces of equipment to it. Which piece or pieces of equipment you can add depends on the terminal itself. This equipment includes:

- Display Modules
- Digital Terminal Data Modules (DTDMs)
- Call Coverage Modules
- Feature Key Modules
- Data Modules

Display Modules and DTDMs are added to voice terminals using the **terminal add** transaction. (See "Assigning Non-Analog Terminals," in this chapter for details.) Call Coverage and Feature Key Modules are added to voice terminals in a separate transaction. Use **coverage-module add** and **feature-module add** transactions to assign modules. These transactions are used after the terminal has been added. For Generic 2, stand-alone Data Modules may be administered using the **data-module** transaction.

Display Modules

This equipment offers an alphanumeric display of call-related and personal-service information. It can be added to a 7401p, 7401d, 7404d, 7405d, 7406db, 7406bn, or 7406pn terminal, and is automatically included on the 7406dc, 7406bi, 7406pi, 7407d, 7407p, 7444d, 515 BCT, PT 510, and PCDCP terminals. When a Display Module is assigned, the Display Module button feature assignments can be administered through the **terminal add** transaction.

Digital Terminal Data Modules

DTDM equipment provides an interface to connect a digital terminal to the Generic 2 digital terminal link. This enables you to use the associated terminal simultaneously to access voice features. A DTDM can be added to a 7401d, 7401p, 7403d, 7405d, 7406db, 7406dc, 7406bn, 7406bi, 7406pn, 7406pi, 7407d, and 7407p, and 7444d terminal, and is automatically included on the 7404d, 515 BCT, PT 510, and PCDCP terminals. To add a DTDM, you must first add an extension for it. Then enter a **y** in the DTDM? field on the screen that adds or changes the associated voice terminal, and supply the DTDM or terminal extension for it in the DTDM Extn. No. field.

The **dtm** object in the product-admin area of the TCM application is not supported under Generic 2. This functionality can be administered through the **terminal** and **button** transactions in product-admin.

Call Coverage and Feature Key Modules

A Call Coverage Module provides 20 additional buttons to which Call Appearances or features may be added. It is used especially to provide coverage for a group of extensions and will support bridged call appearances of the covered user's extensions. A Feature Key Module provides 24 additional buttons to which features can be assigned. The buttons are often used for Abbreviated Dialing lists.

These add-on modules can be added to a 7205d, 7404d, 7405d, 7434d, or PCDCP terminal. To administer these add-on modules, use the **coverage-module** or **feature-module** transaction.

Data Modules

In addition to DTDMs, which are integral parts of terminals and are normally administered with their associated terminals, you can also administer Data Modules for Generic 2. Data Modules act as interface units between keyboard/display terminals and the switch. Data Modules accomplish the necessary changes required in protocol, connections, and timing between connected equipment. The **data-module** transaction allows you to add, change, or remove Processor Data Modules (PDMs), Trunk Data Modules (TDMs), Analog/Digital Facility Test Circuits (ADFTCs), 3B5 AP 32 Digital Communications Protocol Interface (DCPI) Circuits, and Electronic Industries Association (EIA) interfaces.

ASSIGNING NON ANALOG EXTENSIONS AND TERMINALS

To add an extension and a non-analog or multi-appearance voice terminal, you must perform two procedures:

1. Add the extension using the **extension add** command. Perform the procedure *Assigning Extensions for Non-Analog and Multi-appearance Terminals* in this chapter.

Assigning an extension to non-analog and multi-appearance voice terminals allows you to identify the extensions' attributes such as Class of Service, Bearer Capability Class of Service and its ability to hunt to another extension. You also can identify Leave Word Calling options as well as the extensions' call coverage and call pickup destinations.

2. Add the terminal using the **terminal add** command. Perform the procedure *Assigning Non-Analog and Multi-appearance Terminals* in this chapter.

You can assign non-analog and multi-appearance voice terminals and define their terminal attributes (set color, set mount, equipment adjuncts) and button features using the **terminal** transaction. Terminals predefined by AT&T, such as the 7410d and the 7505B terminals, have been assigned set types within Manager IV. Non-AT&T terminals can be defined by using the **set-type** transaction. The **terminal** transaction also allows you to specify abbreviated dialing capabilities (personal, group, and system list access; personal and group list size). Finally, if appropriate for the set type, Coverage, Feature, Data and Display Modules are added through this transaction.

Procedure: Assigning Extensions for Non-analog and Multi-appearance Terminals

Purpose

This procedure allows you to assign an extension number and define extension attributes for a non-analog or multi-appearance terminal.

Procedure Steps

1. Be sure that you have completed the appropriate prerequisite actions described at the beginning of this chapter.
2. Enter the command **extension add** to add the new extension.

AT&T Mgr IV 2.2	DEFINITY G2.2	(000) 000-0000								
tcm admin extension add		Page 1 of 4								
<p>Account ID: _____</p> <p>Extension: _____</p> <p>No. of Extns.: _____ Like Another Extn.? _ Analog? _</p> <p>EXTENSION ATTRIBUTES</p> <p>Class of Service: _____ LWC Destination: _____ AMW? _____</p> <p>Auxiliary ANI? _____ AP No.: _____ Audible AMW? _____</p> <p>Hunt To Extension: _____ AUDIX Machine No.: _____ Bearer Capability COS: _____</p> <p>Call Pickup Group No.: _____ OR Call Pickup Group with Extension: _____</p> <p>Call Coverage Group No.: _____ OR Call Coverage Group with Extension: _____</p> <p>Univ. Code Calling ID: _____ Attd. Controlled Restriction Group: _____</p>										
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 12.5%; text-align: center;">EXECUTE</td> <td style="width: 12.5%; text-align: center;">SCHEDULE</td> <td style="width: 12.5%; text-align: center;">CANCEL</td> <td style="width: 12.5%; text-align: center;">HELP</td> <td style="width: 12.5%; text-align: center;">BACKWARD</td> <td style="width: 12.5%; text-align: center;">NEXT PG</td> <td style="width: 12.5%; text-align: center;">PREV PG</td> <td style="width: 12.5%; text-align: center;">LAST IN</td> </tr> </table>			EXECUTE	SCHEDULE	CANCEL	HELP	BACKWARD	NEXT PG	PREV PG	LAST IN
EXECUTE	SCHEDULE	CANCEL	HELP	BACKWARD	NEXT PG	PREV PG	LAST IN			

3. Enter the Account ID, up to 15 alphanumeric characters or dashes. Enter if Call Accounting is active.
4. To add a single extension, enter the extension number in the Extension: field.
 - The asterisk (*) in this field is a default value indicating that you can allow Manager IV to automatically select an extension number. For automatic selection, do not enter anything in the Extension: field and press **RETURN**.
 - If you are selecting an extension number, remember that the first digit of an extension number cannot be a pound sign (#) or an asterisk (*).
 - If you are adding a group of extensions, the extension numbers will all be selected by Manager IV when this transaction is executed.
5. Enter the number of extensions (**1-99**) you wish to assign in the No. of Extns: field. The default value is 1.

You can add up to 99 extensions at a time. If you choose to add more than one extension per transaction you cannot specify individual extension numbers. Manager IV automatically selects the extension numbers and defines all these extensions with the same features.
6. Enter **n** in the Like another Extn? field to select extension features.
7. Enter **n** in the Analog? field to select a non-analog extension.
8. Enter the Class of Service. Valid COS's should have been assigned previously.
9. If you are assigning this extension to a Hunt Group, enter the previously assigned extension number to which calls will go.
10. If you want to bill toll calls to an Automatic Number Identification (ANI), enter **y** in the Auxiliary ANI? field. To bill toll calls to an extension number, enter **n** in the Auxiliary ANI? field, or skip the field.

11. Select the Automatic Message Waiting Indicator option with a **y** entry in the AMW field. Enter **n** in the AMW field to bypass this option, or just skip this field.
12. Select the Audible AMW option by entering a **y**. Enter **n** to bypass this option.
13. Enter the Leave Word Calling (LWC) destination extension number.
 - The LWC destination should be an AUDIX machine.
14. Enter the AUDIX machine number. This field must be completed if a LWC destination has been assigned.
15. Enter the Call Pickup Group number or the extension number for the Call Pickup Group in which this extension resides.
16. Enter the Call Coverage Group number or the extension number for the Call Coverage Group in which this extension resides.
17. Enter the Attendant Controlled Restriction Group number.
18. Press **RETURN** to access the second page of the screen.

AT&T Mgr IV 1.0	DEFINITY G2.2	(000) 000-0000
tcm admin extension add		Page 2 of 4
Set I.D.: 12345	Set Mount: ____	Set Color: _____
SPECIAL EQUIPMENT/ADJUNCTS:		
Speakerphone? _	Price Element 1: _____	Price Element 2: _____
Headset? _	Price Element 3: _____	Price Element 4: _____
ABBREVIATED DIALING		
A List Type: _		
B List Type: _		
System List Access? n		
Hardware Bridged? y		
Bridged Set I.D.: 12345a	Bridged Set Mount: __	Bridged Set Color: __
SPECIAL EQUIPMENT/ADJUNCTS FOR BRIDGED SET:		
Speakerphone? _	Price Element 1: _____	Price Element 2: _____
Headset? _	Price Element 3: _____	Price Element 4: _____
Extension Partition: 0	NPA-NXX Designator:	Call Fwd Off-Net Toll? n
EXECUTE	SCHEDULE	CANCEL
HELP	BACKWARD	NEXT PG
	PREV PG	LAST IN

19. Assign an extension partition number (**0-99**). This field appears only in Generic 2.1 and System 85 R2V4 if Tenant Services are active.
20. Assign an NPA-NXX designator.
21. The Call Fwd Off-Net Toll? field appears only for a Generic 2.2 switch. Enter **y** to allow Call Forward Off-Net via a Toll route; otherwise enter **n**. This field defaults to **n**.
 - Prior to assigning this feature to an extension, you must set the Call Forward-Off Net feature via the **class-of-service add** transaction and WCR Toll Restriction must be allowed in class of service as discussed in "Procedure: Assigning Class of Service for Extensions" in Chapter 2.

22. Press **RETURN** to access the third page of the screen.

AT&T Mgr IV 2.2	DEFINITY G2.2	(000) 000-0000
tcm admin extension add		Page 3 of 4
Copy Name from Extension No.: _____ User Name: _____ Location: _____ Room: _____ Electronic Mail Address: _____ Supervisor's Name: _____ Organization No.: _____ Start Character of Truncated Name: __ Auth Code: _____ Additional Auth Codes for this User: _		
EXECUTE	SCHEDULE	CANCEL
HELP	BACKWARD	NEXT PG
	PREV PG	LAST IN

23. To copy a name from another, existing extension, enter the extension number to be copied and press **RETURN**.
24. To assign a unique name to the extension, enter a name in the User Name: field, then fill in the remainder of the fields with the appropriate information.
25. The Name Truncation field defaults to 1. The range for this field is 1-30 and must be less than or equal to the number of characters in the name itself.
26. If you do not want to add additional authorization codes, enter **n** in the Additional Auth. Codes for this User: field and press **EXECUTE**.
- or**
- To assign more than one Authorization Code to the user, enter **y** in the Additional Auth. Codes for this User: field. Press **RETURN** and the fourth page of the screen will be displayed.

AT&T Mgr IV 2.2	DEFINITY G2.2	(000) 000-0000								
tcm admin extension add		Page 4 of 4								
User Name: _____ Additional Auth. Codes: _____ _____ _____ _____ _____ _____ Definable Fields: _____ _____ _____ _____ _____ _____										
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 12.5%; text-align: center;">EXECUTE</td> <td style="width: 12.5%; text-align: center;">SCHEDULE</td> <td style="width: 12.5%; text-align: center;">CANCEL</td> <td style="width: 12.5%; text-align: center;">HELP</td> <td style="width: 12.5%; text-align: center;">BACKWARD</td> <td style="width: 12.5%; text-align: center;">NEXT PG</td> <td style="width: 12.5%; text-align: center;">PREV PG</td> <td style="width: 12.5%; text-align: center;">LAST IN</td> </tr> </table>			EXECUTE	SCHEDULE	CANCEL	HELP	BACKWARD	NEXT PG	PREV PG	LAST IN
EXECUTE	SCHEDULE	CANCEL	HELP	BACKWARD	NEXT PG	PREV PG	LAST IN			

27. Add additional user authorization codes.
 - Any additional user information associated with the extension may be included in the Definable Fields: field.

28. Press **EXECUTE** to end the transaction and process all data.

End of Procedure

Procedure: Assigning Non analog and Multi-appearance Terminals [admin/database-admin]

Purpose

This procedure allows you to assign a non-analog terminal and define its terminal attributes (set color, set mount, equipment adjuncts), and button features. Display Modules and Data Modules can also be assigned to the terminal through this transaction.

Prerequisites

Generic 2 only: For non AT&T terminals, the Set Type that is entered must be assigned at least one Terminal Option in the range 1-12. Refer to the "Procedure: Adding a Set Type [admin/database-admin]" in Chapter 2.

Procedure Steps

Part 1: Defining Terminal Options

1. Enter either the admin or database admin area and enter the object **terminal** and verb **add**.

AT&T Mgr IV 2.2 SR: 0123456789	DEFINITY G2.2	(000) 000-0000
tcm admin terminal add		Page 1 of 3
Set ID: 12345		
Set Type: 7406d	Equip. Loc.: __/__/__/__	Locale: __ Module Type: _
Origination Preference: 2 Termination Preference: 0 Terminal Alarming? n		
TERMINAL OPTIONS		
6500? y	Display Module? y	
Data Module? y		
ABBREVIATED DIALING		
A List Type: p	List Size: 5	
B List Type: g	Group No.: 9999	Controller? n
System List Access? y		
EXECUTE	SCHEDULE	CANCEL
HELP	BACKWARD	NEXT PG
	PREV PG	LAST IN

2. Enter the Set Type when prompted by the "set-type" screen.
3. Press **EXECUTE** to process the data.
You will now get a screen with the Set Type pre-populated.
4. Enter the Set ID. This is a mnemonic string to which you assign the terminal. This information is stored only in the Manager IV database.

5. Enter the Equipment Location of the terminal. Manager IV will subsequently verify that the Equipment Location is valid for the entered Set Type.

or

Let Manager IV automatically select an Equipment Location for you by leaving the * in the Equip. Loc: field and pressing **RETURN**. Manager IV will select the appropriate location based on the Set Type (and Locale, if available) that you previously entered.

6. If auto-selection is used and the target is a Generic 2 with a mixed universal/XE/traditional architecture, the Module Type field is displayed. Enter the Module Type. If the Module Type is not entered, a universal location will be assigned.
7. Enter the Origination Preference. This field specifies which appearance is activated automatically when the terminal goes off-hook.
8. Enter the Termination Preference. This field specifies which appearance is activated automatically when the terminal receives an incoming call.
9. If the set type you identified is a BRI terminal, enter the Terminal Endpoint ID.
10. If the set type you identified is a BRI terminal, enter the Service Profile ID. This ID is composed of a maximum of ten digits which are unique to this terminal. The Service Profile ID is required if the terminal is defined with MIM Capability of 1, 3, or 5. Otherwise it is optional.
11. If the set type you identified is a 7404d terminal or any other Voice terminal with integrated Data Module, then the Data Module field defaults to **y** and *cannot* be changed. You are not required to use both voice and data capabilities of this terminal. To utilize full functionality of a 7404d, enter a working extension number in the Data Module Extension No. field on Page 2 of the screen, otherwise leave this field blank.
12. For the DCP terminals supporting options 10 and 12, you may administer the ISDN Advantage feature via the *6500?* field.
 - The *6500?* field defaults to **n**. This field allows you to define the terminal for use with the ISDN Advantage feature which requires the terminal to have both the Data Module and Display Module. Enter **y** to enable the ISDN Advantage feature. Then the Data Module and the Display Module fields shall be also set to **y**. Additionally, the following applies to each DCP terminal administered as the "6500 Advantage" adjunct:
 - The set must be administered with more than four call appearance buttons: the first four buttons on the set shall have a default value of "CALL"; the HOLD, TRANSFER, DROP, and CONFERENCE buttons must be administerable as well. Only these buttons will appear in the "Telephony Window."
 - All buttons on the associated adjunct terminal must be administerable.
 - A standard PRI link (trunk) must be administered for the data connection between the switch and the cluster controller via the **ds1-isdn**, **d-channel**, **trk-grp** and/or **trk add** transactions under the FM application.
 - The Data Module should be built-in (Physical Type 1), have its own extension number, and be set to operate with keyboard dialing.

For all non-DCP terminal types, if the 6500? field is set to **n** (the ISDN Advantage feature does not apply), populate the Data Module and Display Module fields as follows:

- If you entered a Set Type assigned a Data Capability *other than* 1 or 5, the Data Module field defaults to **n** and *cannot* be changed to **y**.
- If you entered a Set Type assigned a Display Capability *other than* 0 and the value of the Coverage Module field is **0**, then the Display Module field may be assigned to the terminal if the terminal options for that set type allow a Display Module.

13. Enter the appropriate values for any abbreviated dialing list you may wish to assign to this terminal.

- Abbreviated Dialing capabilities may be specified for all terminals.
 - Abbreviated Dial lists are associated with Equipment Line Locations (ELLS), not extension numbers. Assign access to personal, group, and system lists, and personal and group size lists.

If Call Vectoring is present to assign vector abbreviated dial lists, see the **call-vectoring add** transaction.
 - A **p** entry in the A or B List Type: field allows access to a personal list; the Personal List Size field is added to the screen.
 - A **g** entry in the A or B List Type: field allows access to a group list. Assign a group list number in the Group List no: field that is added to the page. The Controller? field is added to the page. If the extension number or ELL of the terminal controls a group list, enter **y** in this field. The Group List Size: field is added to the page.
 - A **y** in the System list access? field assigns system list access.

14. Press **◀ NEXT PG ▶**. The second page appears for the terminal transaction.

Part 2: Defining Adjuncts and Adjunct Options

AT&T Mgr IV 2.2	DEFINITY G2.2	(000) 000-0000					
tcm admin terminal add		Page 2 of 3					
Set ID: _____ Set Type: _____							
DATA MODULE FEATURE OPTIONS		DISPLAY MODULE FEATURE OPTIONS					
Physical Data Type: _	Physical Display Type: _						
Data Module Extension No. _____	Lock/Unlock Messages? n						
Terminal Dialing? n	LWC Global Retrieval? n						
Default Terminal Dialing? n							
SPECIAL EQUIPMENT/ADJUNCTS							
Speakerphone? n	Price Element 1: _____	Price Element 2: _____					
Headset? n	Price Element 3: _____	Price Element 4: _____					
TERMINAL ATTRIBUTES							
Set Mount: _____	Set Color: _____						
EXECUTE	SCHEDULE	CANCEL	HELP	BACKWARD	NEXT PG	PREV PG	LAST IN

1. The Set ID and Set Type fields on this screen *cannot be changed*.
2. If the Data Module field on Page 1 of the **terminal** transaction contains **y**, then the list of field entries under the chapter DATA MODULE FEATURE OPTIONS appears.
3. Enter the Physical Data Type. This is a required field.
4. Enter the Data Module Extension Number. This is the extension number assigned to the Data Module. This field will not be displayed for user-defined BRI terminals.

Note: If the set type you identified is a 7404d,

- To use both voice and data capabilities of the terminal, enter a working extension number in the Data Module Extension No. field. If the specified extension number does not exist in the database, warning messages will appear indicating the situation.
- To utilize a 7404d as a Voice terminal only, leave the Data Module Extension No. field blank. Warning messages will be displayed indicating that you are not utilizing this terminal to its full capability.

5. Enter **y** or **n** for the Terminal Dialing? field. This field specifies whether or not the Data Module provides Terminal Dialing; this field defaults to **n**.
6. Enter **y** or **n** for the Default Terminal Dialing? field. This field specifies whether or not the Data Module provides Default Terminal Dialing; this field defaults to **n**.
7. The DSC messages? field will be displayed for terminals with a physical data type of 2. A **y** may be entered for this field. The default is **n**.
8. If you entered **y** for the Display Module field on Page 1 of the terminal transaction, then the list of field entries under the chapter DISPLAY MODULE FEATURE OPTIONS will appear.
9. Enter the Physical Display Type.
10. Enter **y** or **n** for the Lock/Unlock Messages? field. This entry determines whether or not you may lock or unlock the capability to retrieve LWC messages through the Display Module. This field defaults to **n**.
11. Enter **y** or **n** for the LWC Global Retrieval: field. This determines whether you may retrieve LWC messages for any other voice terminal. This field defaults to **n**.
12. For the list of field entries under SPECIAL EQUIPMENT/ADJUNCTS, enter the following:
 - Determine whether the terminal is equipped with a Speakerphone; enter **y** or **n**, accordingly.
 - Determine whether the terminal is equipped with a Headset; enter **y** or **n**, accordingly.
 - Up to four Price Elements may be entered.This information is stored only in the Manager IV database.
13. For the two field entries under TERMINAL ATTRIBUTES, enter the following:
 - Enter either **desk-mounted** or **wall-mounted** for the Set Mount: field.
 - Enter the Set Color.This information is stored only in the Manager IV database.
14. Press **(NEXT PG)**. The third page appears for the terminal transaction. The page that appears depends on the set type you entered on page one of this transaction. Each of these screens is described in Part 3 of this procedure below.
15. Once the appropriate button assignments have been made, press **(EXECUTE)** to process the data. Press **(RETURN)** to return to the command path.

Part 3: Defining Buttons on Multi-appearance Voice Terminals

All AT&T voice terminals have corresponding customized button screens that allow you to assign definitions to the buttons which appear on that voice terminal. In addition, you can administer buttons on voice terminal types that you have defined previously using the **set-type** command. In the latter case, a generic button screen is used.

Refer to Appendix C for a complete list of button assignments.

Constraints

Information applicable to *all* terminals and button feature assignments is listed below.

- **Call Appearance Buttons**

Only one Call Appearance is permitted on a terminal assigned to a Dedicated Switch Connection (DSC).

A Call Appearance (CALL) of an extension may be shared by no more than 16 terminals. For Generic 2, a Call Appearance can only be homed to one terminal. The following illustrates call appearance button assignment:

CALL extn no. 1 1 1 0 1 0 1 0

CALL	line pick up.
extn no.	two through four digit extension number (three through five digit available with R2V3/4).
1	appearance # (01-12) two-digit field.
1	prime line (0-2); 0 = non-prime, 1 = prime line, 2 = automatic (R2V2 and later), 3 = Prime Data Line (in Generic 2 and on a BRI set only), 4 = Non-Prime Data Line (in Generic 2 and on a BRI set only).
1	alert type (0-3; 0 = no alerting, 1 = alerting, 2 = delayed alerting, 3 = abbreviated alerting.
0	alert transfer encode (0-2); 0 = no alerting transfer, 1 = alerts when operated, 2 = does not alert when operated.
1	delayed abbrev. code (1-2); 1 = manual, 2 = automatic.
0	originate only? (0-1); 0 = not originate only, 1 = originate only.
1	home set? (0-1); 0 = not home terminal, 1 = is home terminal.
0 (R2V4)	SAC group (0-1); 0 = doesn't have feature, 1 = this extension, call appearance is a member of the SAC group for this terminal

- **Feature Buttons**

- If Automatic Appearance is assigned, the terminal cannot have originating or terminating preference, and the alert type must be "alert" (1) or "no alert" (0). Only one Automatic Appearance can be assigned to each terminal, and it must be the first Call Appearance.
- The extension number specified for Manual Exclusion (EXL) or ATRF must appear on the terminal. These features can be assigned to only one button appearance for each extension number.

Changing the Alerting Transfer (ATRF) encode to 0 removes ATRF from all appearances of the extension number. Only one ATRF button can be assigned to an extension number, but the button can be assigned to any number of terminals that have an appearance of the extension on them.
- Auto-In (AIN), Manual-In (MIN), Aux-Work (AUX), Staff (STAF), and Call Work Codes (CWC) features can be assigned to only one button appearance on each extension.
- Only one Call Pickup (CPU) button can be assigned to each terminal.
- More than one Automatic Message Waiting (AMW) button can be assigned per terminal; but only one AMW button is assigned per extension.
- If a DTDM is associated with the terminal, a Transfer To Data (DATA) button must be assigned to the voice terminal.
- [Generic 2 with Malicious Call Trace Active] A button type can be added to activate the Malicious Call Trace Emergency feature. Enter **MCTE** on the second page of the transaction screens for any multifunction terminal.
- Only 16 call appearances of a CO line are permitted.

- **Intercom Groups**

- Only 16 appearances of a Non-Dial Intercom group and up to 28 appearances of a Dial Intercom group are allowed. A terminal cannot have multiple appearances of the same Non-Dial Intercom.
- Each terminal assigned the Dial Intercom (DICM) feature must be assigned a unique dial code.
- If manual intercoms are assigned, manual signaling buttons should be assigned. The intercom alert rate may be changed through **ringing-parameters change**.

Intercoms can be assigned only to two-lamp buttons.
- If manual signaling is to be assigned, terminal equipment must first be assigned to both signaling and signaled terminals. Neither the signaling nor the signaled terminal can be a straight-line set.
- A Dial Intercom (DICM) group can consist of up to 28 terminals. A Manual Intercom (MICM) group can consist of up to 16 terminals. No more than two terminals in each group can be assigned to the Automatic Intercom (AICM) feature. Other terminals within the group must be assigned the MICM feature.
- Whatever is specified for a "homed" terminal or Send All Calls group membership on the first call appearance of the terminal applies to all call appearances of that extension on the terminal.

Part 4: Administering Generic 2 BRI Data Lines and System 85 Data Buttons

In Generic 2, the BRI Prime Data Line appearance can be administered on a BRI terminal (7505b, 7506b or 7507b). The system will default to button 9 (33 on the 7507b set) as the Prime Data Line appearance: all data calls will be originated or terminated at this button. You can administer any feature on button 9 (33). You can also define the Prime Data Line or Non-Prime Data Line on any other button.

You are not required to specify a unique extension number: an existing extension number can be used as well. In this event, you can designate any call appearance or available button as the Prime Data Line or Non-Prime data appearance.

For any call appearance, the line type is selected by populating the Line Type field with a valid entry:

- 0 = Non-Prime line
- 1 = Prime line
- 2 = Automatic Line Appearance
- 3 = Prime Data Line; designates the appearance associated with this button as the Prime Data Line for this station
- 4 = Non-Prime Data Line; designates the appearance to be used for data calls exclusively, but not as the Prime Data Line

Following is a default button assignment screen (Page 3 of 5) as it appears on a BRI terminal with a Data Module.

AT&T Mgr IV 2.2	DEFINITY G2.2	(000) 000-0000																														
tcm admin terminal add		Page 3 of 3																														
<p>Set ID: 12345 Set Type: 7505b</p> <p>BUTTON ASSIGNMENTS</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">03: ____</td> <td style="width: 33%;">06: CALL</td> <td style="width: 33%;">10: ____</td> </tr> <tr> <td>04: CALL</td> <td>07: ____</td> <td>11: ____</td> </tr> <tr> <td>05: CALL</td> <td>08: ____</td> <td>12: ____</td> </tr> <tr> <td>02: AMW</td> <td>09: CALL 3101010</td> <td>16: ____</td> </tr> <tr> <td></td> <td></td> <td>13: ____</td> </tr> <tr> <td></td> <td></td> <td>17: ____</td> </tr> <tr> <td></td> <td></td> <td>14: ____</td> </tr> <tr> <td></td> <td></td> <td>18: ____</td> </tr> <tr> <td></td> <td></td> <td>15: ____</td> </tr> <tr> <td></td> <td></td> <td>19: ____</td> </tr> </table>			03: ____	06: CALL	10: ____	04: CALL	07: ____	11: ____	05: CALL	08: ____	12: ____	02: AMW	09: CALL 3101010	16: ____			13: ____			17: ____			14: ____			18: ____			15: ____			19: ____
03: ____	06: CALL	10: ____																														
04: CALL	07: ____	11: ____																														
05: CALL	08: ____	12: ____																														
02: AMW	09: CALL 3101010	16: ____																														
		13: ____																														
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<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 16.6%;">EXECUTE</td> <td style="width: 16.6%;">SCHEDULE</td> <td style="width: 16.6%;">CANCEL</td> <td style="width: 16.6%;">HELP</td> <td style="width: 16.6%;">BACKWARD</td> <td style="width: 16.6%;">NEXT PG</td> <td style="width: 16.6%;">PREV PG</td> <td style="width: 16.6%;">LAST IN</td> </tr> </table>			EXECUTE	SCHEDULE	CANCEL	HELP	BACKWARD	NEXT PG	PREV PG	LAST IN																						
EXECUTE	SCHEDULE	CANCEL	HELP	BACKWARD	NEXT PG	PREV PG	LAST IN																									

Button 9 (33) is presented with a default CALL appearance button; the attribute fields for button 9 (33) default to the following values:

Button Type	Extn. No.	Call Appear.	Line Type	Alert Type	Alert Trans. Encode	A/D Alert. Encode	Orig. Only	Home Termin.	SAC Group Member
CALL			3	1	0	1	0	1	0

This table defines the default attributes for button 9 (33) administered as the Prime Data Line appearance:

ATTRIBUTE	DEFAULT VALUE	MEANING
Extension Number	left blank	-
Line Appearance Number	left blank	-
Line Type	3	Data Prime Line
Alert Type	1	Terminal Alerts
Alerting Transfer Codes	0	No Alerting Transfer
Abbreviated Delay Alerting Encode	1	Manual
Originating Call Appearance Flag	0	Not Originating Only
Home Set	1	Set is Home to this Extension
SAC Group Member	0	Not a SAC Group Member

The Extension Number and Line Appearance Number fields are left blank to provide you with an option of selecting a unique extension number to be associated with the data prime line.

If you specify a Data Module with the existing extension, then you can manually assign Prime or Non-Prime Data Line to any call appearance or available button by entering **3** or **4** in the Line Type field, respectively. When the Prime Data Line appearance is administered manually, the following restrictions apply:

- Any feature button may be administered on button 9 (or 33).
- No special action is necessary regarding button 9 on the 7505b and 7506b sets, or button 33 on the 7507b set.
- The Prime and Non-Prime Data appearances may not be used for originating or terminating voice calls.
- If any other image of the appearance has been designated either as the Prime Data Line for another station, or as a Non-Prime data appearance, then the image must be designated as Non-Prime data appearance.
- All images of this Non-Prime data appearance may be designated as Non-Prime data appearance images without making any of them as Prime Data Line. These Non-Prime data appearance images can only be used for originating and/or terminating data calls if the Prime Data Line was not available, or not administrable.

If a BRI terminal without a Data Module has already been added to the switch translations, then button 9 (or 33) may already have a feature button assigned to it which will result in blocking any attempt to add a Data Module to the set. You have to remove the feature assigned to button 9 (33) first by using the **terminal change** command, and then enter **y** in the Data Module field. The Prime Data Line will be automatically assigned to button 9 (33).

[System 85] If you do not have the Data Module Set I.D., use the **data-module add** transaction to add a Data Module. To specify the Data Module with the existing extension, follow these steps:

1. Enter *DATA* in the selected button field and press **RETURN**. The field will be extended to accommodate for 2 more entries: a Data Module Set ID and a flag.
2. Enter the Data Module Set ID. Note that the Data Module Set ID should end in a "d." Press **ESC** ! to get more information. Press **RETURN**. The cursor will advance one space.
3. Enter the extension flag. Valid entries are **0** or **1**. The flag attribute is required. Press **RETURN**.

The attribute fields for a DATA button are shown in the following table:

Button Type	Extn. No.	Flag
CALL	43251d	0 or 1

Part 5: Administering Buttons for User-Defined Terminals

Pages 3 of 5 and 4 of 5 are used to define buttons for the terminal type. For AT&T terminal types, customized button screens will be displayed. For user-defined terminal types, a generic button screen will be displayed. The following steps pertain to the assignment of buttons for user-defined terminal types. For AT&T terminal types, assign buttons as appropriate.

1. The Set ID and Set Type field are displayed, and *cannot be changed*.
2. The HOLD button must be assigned to button 1; if an AMW is assigned, it must be assigned to button 2. Assign the remaining buttons as appropriate.
3. When you have completed button entries through field 30, press **RETURN**. Page 4 of 5 appears if the number of buttons assigned is greater than thirty (30). Fill in the remainder of the button assignments from 31 to 62.
4. When you have completed the button assignment entries, press **RETURN**.

If you entered **y** for the Display Module field on Page 1 of 5 of the terminal transaction, then Page 5 of 5 will be displayed. This screen is used to assign buttons for the Display Module. The following pertains to this screen only.

1. The Set ID and Set Type fields are display only, and *cannot be changed*.
2. Enter the appropriate button assignments for the Display Module.
3. Press **EXECUTE** to execute the transaction.

End of Procedure

Procedure: Changing/Displaying/Removing a Terminal [admin/database-admin]

Purpose

Use this procedure to change or display information concerning a particular terminal, or to remove a terminal in the **admin** or **database-admin** areas.

Procedure Steps

1. Enter the following commands: area: **admin**, or **database-admin**; object: **terminal**; and one of the following verbs: **change**, **display**, or **remove**.
2. Enter the Set ID of the terminal you want to change, display, or remove.
 - The fields are populated with the information previously entered into Manager IV for this terminal.
3. Move to the appropriate fields and type over existing values if the **change** verb is selected.

Note: When a Call Appearance button is removed from a set using the **terminal change** transaction, the following buttons with the same extension number (as the Call Appearance extension number) are automatically removed from the database and the switch: AIN, ADX, AUX, ATRF, EXCL, MIN, SACE, and STAF.

4. Press **EXECUTE** to execute the transaction.

End of Procedure

7. Enter the Terminal Endpoint ID.
8. Enter the Service Profile ID. This ID is composed of one to ten *unique* numeric digits. This field is required for BRI terminals with a MIM Capability of 1, 3, or 5. It is otherwise optional.
9. The four fields under TERMINAL OPTIONS, Data Module, Display Module, Coverage Module and Feature Module, will be determined automatically by the value entered in the Terminal Option field. These values *cannot be changed*.
10. The two fields under the DATA MODULE FEATURE OPTIONS, Physical Data Type and Terminal Dialing, appear only if one of the following values was entered in the Terminal Option field: **6, 8, 9, 10, 11, or 12**.
 - If Physical Data Type is displayed, enter the value of the physical data type.
 - Enter **y** or **n** for terminal Dialing if it is displayed.
11. The three fields under the DISPLAY MODULE FEATURE OPTIONS—Physical Display Type, Lock/Unlock Messages, and LWC Global Retrieval—appear only when one of the following values was entered in the Terminal Option field: **5, 7, 10, or 12**.
 - If the Physical Display Type is displayed, enter the value for physical display type.
 - Enter **y** or **n** for the Lock/Unlock Messages? field. This determines whether or not you may lock or unlock the capability to retrieve LWC messages through the Display Module. This field defaults to **n**.
 - Enter **y** or **n** for the LWC Global Retrieval? field. This determines whether you may retrieve LWC messages for any other voice terminal. This field defaults to **n**.
12. Press to execute this transaction.

End of Procedure

Procedure: Changing/Displaying/Removing a Terminal [product-admin]

Purpose

Use this procedure to change or display information concerning a particular terminal, or to remove a terminal in the **product-admin** area only.

Prerequisites

This transaction only administers the terminal. Before **removing** a terminal, any features associated with the terminal must be removed (e.g. buttons, abbreviated dial lists). Use the appropriate transaction (such as **button** and **abbreviated-dial-lists**) to remove these features in product-admin.

Procedure Steps

1. Enter the following commands: area: **product-admin**; object: **terminal**; and one of the following verbs: **change, display, remove**.
2. Enter the Equipment Location of the terminal you want to change, display, or remove.
3. Make the desired changes if the **change** verb has been selected.
4. Press **EXECUTE** to execute the transaction.

End of Procedure

Procedure: Swapping a Terminal [admin/database-admin/product-admin]

Purpose

This transaction allows you to swap multi-appearance terminals based on the equipment type, terminal type option, and administered BRI characteristics.

Procedure Steps

1. Enter the following commands: area: **admin, database-admin, or product-admin**; object: **terminal**; verb: **swap**.
2. The permitted swapping among terminals is summarized in Table 3-2.

Use the table to determine if a terminal can be swapped based on equipment type. The intersection of each row and column for Equipment Type will be either "Y" for *yes* or "N" for *no* with an optional condition: 1, 2, or 3.

- 1 - Only options with no Display, Data, Feature, or Coverage Modules
- 2 - Only options with no Display or Data Modules
- 3 - Only when TEIs remain unique for both ports and no terminal defined as point-to-point is moved to a multipoint configuration

Note:

- The Constellation Workstation terminal can only be swapped with a Constellation Workstation.
- Terminals with equipment types other than those appearing in Table 3-2 cannot be swapped.

Table 3-2. Summary of Allowable Terminal Swaps

Equipment Type	sn228/sn229 tn742/tn746	sn224	sn224/ tn735	ann17/ tn762	sn2701/ tn7541	tn556
sn228/sn229 tn742/tn746	N	N	N	N	N	N
sn224	N	Y	Y(1)	Y(1)	Y(2)	N
sn224/tn735	N	Y(1)	Y	Y(1)	Y(1)	N
ann17/tn762	N	Y(1)	Y(1)	Y	Y(1)	N
sn2701/tn7541	N	Y(2)	Y(1)	Y(1)	Y	N
tn556	N	N	N	N	N	Y(3)

End of Procedure

Administering BRI Data Lines in the Generic 2 Switch

The **button** transaction is used in the product-admin area under the TCM application if there is an out-of-sync condition between the switch and the Manager IV database. The following verbs are supported in the product-admin area of TCM:

- **add**
- **change**
- **display**
- **remove**

Button Commands

Use the **button add** transaction to add additional appearances of the manual signaling button. If there is an out-of-sync condition between the switch and Manager IV database, use the **button add** to assign the Prime or Non-Prime Data line on a BRI terminal in Generic 2 only.

The **button display** transaction displays appearances of multiple signaling buttons. If you discovered certain inconsistencies in terminal button assignments between the Manager IV database and the switch, use this transaction to view button assignments for comparison. To correct these inconsistencies, use the **button add**, **button change**, or **button remove** transaction.

The **button remove** transaction can be used for removing multiple appearances.

Assigning a BRI Data Line Appearance

To administer a Prime or Non-Prime Data appearance on a BRI terminal in the Generic 2 switch, follow this procedure:

1. Enter the **button add** command. The following screen appears.

AT&T Mgr IV 2.2	DEFINITY G2.2	(000) 000-0000
tcm product-admin button add		Page 1 of 1
YOU ARE DIRECTLY ACCESSING THE PRODUCT		
Equip. Loc.:	00/0/d/18/03	
Button Number:	09	
Set Module:	0	
Button Type:	CALL	
Extension No.:	12346	
Call Appearance:	4	
Line Type:	3	
Alert Type:	1	
Alerting Transfer Encode:	0	
A/D Alerting Encode:	1	
Orig. Only:	0	
Home Terminal:	1	
SAC Group Member:	0	
EXECUTE	SCHEDULE	CANCEL
HELP	BACKWARD	NEXT PG
	PREV PG	LAST IN

2. Enter the Equipment Location.
3. Enter the Button Number. Valid entries are **9** or **33**.
4. Enter the Set Module. Valid entry is **0**.
5. Enter the Button Type. Valid entry is **CALL**.
6. Enter the Extension No. Valid entries are two through five digit extension numbers.
7. Select the Call Appearance. Valid entries are **01-12**.
8. Enter the Line Type. Valid entries are **0, 1, 2, 3, 4**.
 - 0 = Non-Prime line
 - 1 = Prime line
 - 2 = Automatic Line Appearance
 - 3 = Prime Data Line; designates the appearance associated with this button as the Prime Data Line for this station
 - 4 = Non-Prime Data Line; designates the appearance to be used for data calls exclusively, but not as the Prime Data Line

For more details on the BRI Data Line appearance administration, refer to "Part 4: Administering BRI Data Lines in the Manager IV Database."

End of Procedure

The Terminal Type-Change Transaction

The administration of this transaction is valid for Generic 2 only, and is supported in the admin and database-admin areas. The verb **type-change** allows you to change the Set Type of any terminal (excluding the SLS set type) providing the following prerequisites have been met:

- The new Set Type has already been defined by using the **set-type** transaction.
- The new Set Type has the same Equipment Type as the old Set Type.
- The Terminal Option assigned to the old Set Type is defined for the new Set Type.*

Note: In the product-admin area, you may change the value of the Set Type field by using the **terminal change** transaction.

Procedure: Changing a Terminal Type [admin/database-admin]

Purpose

Use this procedure to change the Set Type of a particular terminal.

Procedure Steps

1. Enter the following command: area: **admin**, or **database-admin**, object: **terminal**; verb: **type-change**.
2. Enter the Set ID and the *new* Set Type.

If the *new* and the *old* Set Types are compatible with the Terminal Option, then the transaction will automatically determine whether each button assigned to the set is defined as a usable button for the new Set Type. Additionally, this transaction will detect if any of the buttons already assigned on the old set can be used on the new set. If not, all unusable buttons will be removed.

The transaction then changes the Set Type assigned to the terminal and displays the terminal with its administered attributes.

3. You can now change any of the values administered for the terminal as if you were performing the terminal change transaction.

End of Procedure

* The 7406db and the 7406dc **cannot** be type-changed.

Assigning Data Modules

The Data-Module Transaction

This transaction allows you to administer both user-defined and AT&T predefined stand-alone Data Modules.

The following verbs are supported in the **admin**, **database-admin** and **product-admin** areas of the TCM application for Manager IV.

- **add**
- **change**
- **display**
- **remove**

Procedure: Adding a Data Module [admin/database-admin]

Purpose

This procedure will assign a Data Module and extension.

Note: The extension(s) to be assigned to the data module must not have been previously assigned. Also, abbreviated dialing and default terminal dialing features are not supported for an ADFTC Data Module.

Procedure Steps

1. Enter the following commands: area: **admin** or **database-admin**, object: **data-module**, and verb: **add**.

AT&T Mgr IV 2.2	DEFINITY G2.2	(000) 000-0000
tcm admin data-module add		Page 1 of 2
<p>Account ID: _____</p> <p>Extension: * _____ Set Type: _____</p> <p>Equip. Loc.: * _/_/_/_/_ Locale: __ Module Type: __</p> <p>Class of Service: __ Terminal Alarming? n</p> <p>Bearer Capability COS: __ Terminal Endpoint ID: 128</p> <p>Hunt To Extension: _____ Service Profile ID: _____</p> <p style="padding-left: 40px;">Audible AMW? n DSC Messages? n</p> <p style="padding-left: 40px;">Terminal Dialing? n Second Port Extension: * _____</p> <p>Default Terminal Dialing? n Second Port Hunt-To Extension: _____</p> <p>ABBREVIATED DIALING</p> <p>A List Type: __ List Size: __</p> <p>B List Type: __ Group No.: __ Controller? n List Size: __</p> <p>System List Access? n</p>		
EXECUTE	SCHEDULE	CANCEL
HELP	BACKWARD	NEXT PG
	PREV PG	LAST IN

2. Enter the data-module type to be administered and press **EXECUTE**.
A mask comes up with a pre-populated data-module type.
3. Account ID specifies the ID that will be charged for the Data Module and/or calls placed through the module. If Call Accounting (CA) is activated, enter the ID number.
4. The Extension field specifies the extension number that will be used for data calls.
5. The Set Type (specifies the type of data-module being administered), and the information you enter must correspond to either a user-defined Set Type that was added using the Set Type transaction or it must correspond to an AT&T predefined Set Type. The entered Set Type must be assigned to Terminal Option of 0.
6. Enter the Locale of the Data Module and the Module Type. For the Module Type field enter **t** for traditional, **u** for universal, or **x** for XE.
7. Enter the Class of Service being assigned to the Data Module extension.
8. Enter the Bearer Capability COS for the data module extension.
9. Enter the Hunt-To Extension for the Data Module extension.
10. Enter **n** or **y** for the Audible AMW field.
11. Enter **y** or **n** for Default Terminal Dialing. Default is **n**.
12. Enter **y** or **n** for the Terminal Alarming field. Default is **n**.
13. If you are assigning a Data Module for a IDSN/BRI terminal type (Equipment Type 5), then perform this step. Otherwise proceed with the next numbered step.
 - a. Enter the Terminal Endpoint ID. Entry specifications are as follows:
 - **0-63**: These are fixed Terminal Endpoint IDs.
 - **128**: This value is for a terminal with an automatic Terminal Endpoint ID.
 - b. Enter the Service Profile ID. This ID is composed of from one to ten *unique* numeric digits.
14. If you entered a Data Capability of either **4** or **6** for the Set Type transaction, then enter the Second Port Extension number.
15. If you entered a non-null value for the Second Port Extension field, then enter the Second Port Hunt-To Extension number.
16. The fields for A and B List Type are for abbreviated dialing.
 - Enter **p** in the A or B List Type field to allow access to a personal list.
 - Enter **g** in the A or B List Type field to allow access to a group list.

The List Size field that appears after the A List Type field indicates the size used for personal abbreviated dialing list.
17. Enter the Group Number.
18. Enter **y** or **n** for the Controller field. Default is **n**.
19. If you entered **y** for the Controller field, then the List Size field will appear; enter the appropriate size.

If you entered a Set Type other than **eia** on Page 1, then this completes this transaction. Press **EXECUTE** to execute the transaction.

If you entered **eia** for the Set Type, and **u** or **x** for the Module Type on Page 1, then press **NEXT PG** to see Page 2 of 2.

Procedure: Changing/Displaying/Removing a Data-Module [admin-database-admin]

Purpose

This procedure outlines how to **display** information about a currently assigned data-module, **change** the information, or **remove** the data-module from its current assignment.

Procedure Steps

1. Enter the following commands: area: **admin** or **database-admin**; object: **data-module**; and one of the following verbs: **change**, **display**, or **remove**.
2. Enter the Extension number of the data-module you want to change, display, or remove.
3. When you press **EXECUTE** to execute this transaction, Page 1 of 2 of the **data-module add** transaction appears. This screen allows you to **change** or **display** the information relating to the extension of the data module you choose. Performing **data module remove** will remove the data module and its assigned extension.

If you are performing an **add**, **change**, or **display** for an extension, then the following information is applicable:

- The transaction allows you to administer capability for the Data Module itself, the data module extension(s), and abbreviated dialing.
- The transaction blocks the addition of a data module with an undefined Set Type.
- The transaction blocks the addition of a data module if the Set Type is not assigned a Data Capability of 3, 4, or 6.
- The transaction allows Terminal Alarming to be enabled/disabled on a per data module basis. The Terminal Alarming feature cannot be enabled unless it has been activated for the system COS.
- The transaction allows a Data Module to be assigned to universal/XE module equipment location.
- The transaction requires an ISDN/BRI Data Module to be assigned to a universal/XE module equipment location; an ISDN/BRI Data Module cannot be assigned to an equipment location in a traditional module.
- The transition blocks the assignment of an ISDN/BRI Data Module to a RCG.
- The transaction requires a Terminal Endpoint Identifier (TEI) to be assigned to an ISDN/BRI Data Module; the transaction blocks the assignment of a TEI to a Data Module that is not ISDN/BRI.
- The transaction allows a Service Profile Identification (SPID) to be assigned to any ISDN/BRI Data Module; the transaction blocks the assignment of a SPID to a Data Module that is not ISDN/BRI.
- The transaction blocks the assignment of a SPID to a Data Module if the SPID is already in use.
- The transaction blocks the assignment of a second ISDN/BRI Data Module to a physical port if both terminals are assigned the same TEI in the range **0-63**; assignment of a second ISDN/BRI Data Module to a physical port is allowed if both terminals have a TEI of 128.

End of Procedure

Procedure: Adding a Data-Module [product-admin]

Purpose

This procedure allows the assignment of a data module to a voice terminal from the product-admin area.

Prerequisites

The extension to be assigned to the Data Module must be added using **extension add** prior to this transaction.

Procedure Steps

1. Enter the following commands: area: **product-admin**; object: **data-module**; and verb: **add**.

AT&T Mgr IV 2.2	DEFINITY G2.2	(000) 000-0000					
tcm product-admin data-module add		Page 1 of 2					
YOU ARE DIRECTLY ACCESSING THE PRODUCT							
Set Type Encode: ____							
Terminal Option: __							
Equip. Loc.: __/__/__/__							
Terminal Dialing? n							
Terminal Alarming? n							
Terminal Endpoint ID: ____							
Service Profile ID: _____							
EXECUTE	SCHEDULE	CANCEL	HELP	BACKWARD	NEXT PG	PREV PG	LAST IN

2. Enter the Set Type Encode. Valid entries range from **1-200**. Encodes 1-99 denote AT&T predefined terminals.
3. Enter the Terminal Option. All Terminal Options of a given Set Type must share the same values for Equipment Type ISDN, MIM capability, and Number of Buttons.
4. Enter the Equipment Location number of the data module.
5. Enter **y** or **n** to the Terminal Dialing field; the default is **n**.
6. Enter **y** or **n** to the Terminal Alarming field; the default is **n**.

Note: The two fields that follow appear only when a Hybrid Equipment Location appears in the Equipment Location field.

7. Enter the Terminal Endpoint ID; the default is **128**. Entry specifications are as follows:
 - **1-63**: These are fixed Terminal Endpoint IDs.
 - **128**: This value is for a terminal with an automatic Terminal Endpoint ID.
8. Enter the Service Profile ID. This ID is composed of a maximum of ten *unique* numeric digits.
9. If a Set Type Encode of 7 is entered, and the Equipment Location is universal or XE, the second page of the mask appears.
10. Press **NEXT PG** to see Page 2 of 2 of the **data-module** transaction in the product-admin area.

AT&T Mgr IV 2.2	DEFINITY G2.2	(000) 000-0000								
tcm product-admin data-module add		Page 2 of 2								
<p>Extension: ____</p> <p>EIA PORT PERMISSIONS</p> <p style="padding-left: 40px;">Keyboard Dialing? y Configuration? y</p> <p>EIA PORT OPTIONS</p> <p style="padding-left: 40px;">Auto Adjust? y Dial Echo? y Disconnect Sequence: 1 Permit Mismatch? n Answer Text? y Connection Indication? n Parity: e</p> <p>EIA PORT DATA RATES</p> <p style="padding-left: 40px;">19200 BPS? y 4800 BPS? y 1200 BPS? y Low Data Rate? n 9600 BPS? y 2400 BPS? y 300 BPS? y</p>										
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 2px 10px;">EXECUTE</td> <td style="border: 1px solid black; padding: 2px 10px;">SCHEDULE</td> <td style="border: 1px solid black; padding: 2px 10px;">CANCEL</td> <td style="border: 1px solid black; padding: 2px 10px;">HELP</td> <td style="border: 1px solid black; padding: 2px 10px;">BACKWARD</td> <td style="border: 1px solid black; padding: 2px 10px;">NEXT PG</td> <td style="border: 1px solid black; padding: 2px 10px;">PREV PG</td> <td style="border: 1px solid black; padding: 2px 10px;">LAST IN</td> </tr> </table>			EXECUTE	SCHEDULE	CANCEL	HELP	BACKWARD	NEXT PG	PREV PG	LAST IN
EXECUTE	SCHEDULE	CANCEL	HELP	BACKWARD	NEXT PG	PREV PG	LAST IN			

11. These fields will be populated with the correct values for the defined DLC (Data Line Circuit) port by Generic 2. These values are based upon the nonchangeable parameters for the sn2381.

These values may be altered according to the following rules:

 - The Busy-Out and Transparent Mode parameters may not be administered.
 - If a **y** appears for the Keyboard Dialing Permission, the following fields may be enabled: Auto Adjust, Parity, Answer Text, Configuration, Dial Echo, Disconnect Sequence, and Connected Indication Options.

End of Procedure

Procedure: Changing/Displaying/Removing a Data-Module [product-admin]

Purpose

This procedure outlines how to **display** information about a currently assigned data module, **change** the information, or **remove** the Data Module from its current assignment. Since the procedure(s) are performed from the product-admin area, the information gathered will be switch information which differs somewhat from database information.

Procedure Steps

1. Enter the following commands: area: **product-admin**; object: **data-module**; and one of the following verbs: **change**, **display**, or **remove**.
2. Enter the Equipment Location number of the data module you want to change, display, or remove.
3. When you press **EXECUTE** to execute this transaction, you will then see Page 1 of 1 of the product-admin, **data-module** screen to make the desired change or to display the information relating to the Equipment Location you choose, or to remove an Equipment Location.

If you are performing a **change**, **display**, or **remove**, the following restrictions apply to the entry field:

- The transaction provides administration capability for the Data Module itself.
- The transaction cannot provide administration capability for the Data Module extension(s); this functionality is provided through the extension transaction.
- The transaction cannot provide administration capability for the call appearances of the data module extension(s); this functionality is provided through the button transaction.
- The transaction cannot provide administration capability for abbreviated dialing or default terminal dialing; this functionality is provided through the abbreviated-dial-lists transaction.

End of Procedure

Assigning Feature Key Modules

This transaction allows you to administer a feature key module assigned to an existing voice terminal.

The following verbs are supported in the admin and database-admin areas of the TCM application.

- **add**
- **change**
- **display**
- **remove**

Some of the features of the **feature-module** transaction for Generic 2 are outlined as follows:

1. While performing a **feature-module add** transaction, the transaction verifies that the assignment of a feature key module to the corresponding terminal is valid for the Terminal Options assigned to the terminal's Set Type.
2. When performing a **feature-module add** or **feature-module remove** transaction, the transaction updates the Terminal Options assigned to the terminal to reflect whether a feature key module is assigned to the terminal.
3. When performing a **feature-module add** or **feature-module change** transaction, the transaction verifies the validity of the button assignments on the number of Feature Module Buttons and the Button Templates administered for the terminal's Set Type.

Note: Regardless of the number of Feature Module Buttons administered for the terminal's Set Type, 24 fields for button administration will be displayed.

Assigning Call Coverage Modules

This transaction allows you to administer a call coverage module assigned to an existing voice terminal.

The following verbs are supported in the admin and database-admin areas of the TCM application:

- **add**
- **change**
- **display**
- **remove**

Some of the features performed by the **coverage-module** transaction for Generic 2 include the following:

1. While performing a **coverage-module add** transaction, the transaction verifies that the assignment of a call coverage module to the terminal is valid for the Terminal Options assigned to the terminal's set type.
2. When performing a **coverage-module add** or **coverage-module remove** transaction, the transaction updates the Terminal Options assigned to the terminal to reflect whether a call coverage module is assigned to the terminal.
3. When performing a **coverage-module add** or **coverage-module change** transaction, the transaction verifies the validity of the button assignments on the Number of Coverage Module Buttons and the Button Templates administered for the terminal's Set Type.

Note: Regardless of the Number of Module Buttons administered for the terminal's Set Type, 20 fields for button administration are displayed.

Administering Call Coverage and Feature Key Modules [product-admin]

When adding a call coverage or feature key module in the **product-admin** area, perform the following:

- Invoke the **terminal change** transaction and change the Terminal Option field to specify a call coverage or feature key module.
- Execute the **terminal change** transaction.
- Invoke the **button add** transaction to add buttons for the module, then execute this transaction.

Business Communications Terminal (BCT)

For the 515 BCT terminal button assignment, this screen is displayed for all switches from System 85 R2V2—Generic 2, supporting these terminal types.

AT&T Mgr IV 2.2	System 85 R2V4	(201)92233
tcm admin terminal add		Page 3 of 3
Set ID: _____	Set Type: 515BCT	
Display Functions	03: _____	08: _____
01:NORM	04: _____	09: _____
02:INSP	05: _____	10: _____
03:DATE	06: _____	11: _____
04:CMSG	07: _____	12: _____
05:RMSG		
06:NEXT		
07:DEL	02:AMW	

- Feature Buttons:
 - The call appearance member for a call button can range from one to twelve.
 - [System 85 R2V2—R2V4] If Automatic Appearance is assigned, the terminal cannot have originating or terminating preference, and the alert type must be "alert" (1) or "no alert" (0). Only one Automatic Appearance can be assigned per extension and per terminal, and it must be the first call appearance of the extension on the set.
 - [System 85 R2V4] More than one call appearance of an extension can be added to one terminal, provided that the previous call appearance has been defined.

Administering the Compact Digital Telephone (CDT)

To assign and administer the CDT in the database and administration areas, use the **terminal** object with the following verbs: **add**, **change**, **display**, and **remove**. In the product administration area, use the terminal and button transactions.

Retrofitting the CDT 7401d and 7401p

For DEFINITY Manager IV, when administering CDTs in the database and administration areas, the actual terminal type will be displayed in the Set Type: field on page one of the transaction screen. However, in the product-administration area, the terminal type displayed in the Set Type: field is dependent on the switch release, so CDT 7401d will appear as a 7405d in the Set Type: field.

Pages 1, 2, and 3 of the screen are identical for both 7401d and 7401p terminals.

AT&T Mgr IV 2.2 SR: 0123456789	DEFINITY G2.2	(000) 000-0000								
tcm admin terminal add		Page 1 of 3								
<p>Set ID: 12345</p> <p>Set Type: 7406d Equip. Loc.: __/__/__/__ Locale: __ Module Type: _</p> <p>Origination Preference: 2 Termination Preference: 0 Terminal Alarming? n</p> <p>TERMINAL OPTIONS</p> <p> 6500? y Display Module? y</p> <p> Data Module? y</p> <p>ABBREVIATED DIALING</p> <p> A List Type: p List Size: 5</p> <p> B List Type: g Group No.: 9999 Controller? n</p> <p> System List Access? y</p>										
<table border="1"> <tr> <td>EXECUTE</td> <td>SCHEDULE</td> <td>CANCEL</td> <td>HELP</td> <td>BACKWARD</td> <td>NEXT PG</td> <td>PREV PG</td> <td>LAST IN</td> </tr> </table>			EXECUTE	SCHEDULE	CANCEL	HELP	BACKWARD	NEXT PG	PREV PG	LAST IN
EXECUTE	SCHEDULE	CANCEL	HELP	BACKWARD	NEXT PG	PREV PG	LAST IN			

For the terminal button assignment, the following screen is displayed:

AT&T Mgr IV 2.2		DEFINITY G2.2			blx11b		
tcm database-admin terminal add					Page 3 of 3		
Set ID: 14444		Set Type: 7401d					
01	02	03	04	05	06	07	
NORM	INSP	DATE	CMSG	RMSG	NEXT	DEL	
03:							
04:							
		05:					
		06:					
		07:					
		08:					
		09:					
		10:					
		11:					
		02: AMW					
EXECUTE	SCHEDULE	CANCEL	HELP	BACKWARD	NEXT PG	PREV PG	LAST IN

Electronic Custom Telephone Service (ECTS) [DIMENSION, SYSTEM 85]

The ECTS set types that can be added through the **terminal** transaction include the following:

- System 85 ECTS 10, ECTS 20, ECTS 30
- DIMENSION System FP8 ECTS 5, ECTS 10, ECTS 20, ECTS 30, EKT 5,
 EKT 10, EKT 20, and EKT 30

Administering ECTS

To assign and administer ECTS terminals in the database and administration areas, use the **ects** object with the following verbs: **add**, **change**, **display**, and **remove**. Use the **terminal** command to add the ECTS to an Equipment Line Location (ELL) and put the terminal into service. In the same transaction, define the terminal attributes and assign the button features. [System 85 R2V3/4] Abbreviated dialing capabilities and default terminal dialing may also be defined.

ECTS Terminals on System 85 Switches

ECTS terminals were developed for use with DIMENSION System FP8 switches, but they can be used with System 85 if they are translated as terminals designed for System 85. Specifically, an ECTS10 can be translated as a 7203h and an ECTS20 and ECTS30 can be translated as 7205h.

As with retrofit terminals, the inaccurate terminal types are corrected in the DEFINITY Manager IV database through the command **set-attributes create** as part of the database initialization process. However, the switch itself will identify these terminals as inaccurate terminal types. When you administer ECTS terminals used on a System 85 switch in the administration and database administration areas of TCM, you use (and DEFINITY Manager IV displays) the correct terminal types. However, when you administer these ECTS terminals in a System 85 switch in the product administration area, use the 7203h for an ECTS10 and the 7205h for an ECTS20 or an ECTS30. A product administration display will list an ECTS10 as a 7203h and an ECTS20 or ECTS30 as a 7205h.

[System 85] For ECTS terminal button assignment, this screen is displayed:

```
AT&T Mgr IV 2.2          System 85 R2V4          (201)92233
tcm admin terminal add          Page 3 of 3

Set ID: _____      Set Type: ects10

Button #
  03: _____
  04: _____
  05: _____
  06: _____
  07: _____
      02: AMW
```

- Note that additional columns of buttons appear for ECTS20 and ECTS30 terminals.
- The Call Waiting-Originating (CWO) feature has been renamed Priority Calling (PO).
- Abbreviated dialing applies to System 85 only.

[DIMENSION System FP8] For ECTS terminal button assignment, this screen is displayed:

AT&T Mgr IV 2.2	D2000 FP8	(201)92233
tcm admin terminal add		Page 2 of 2
Set ID: 4321	Set Type: ects10	
00: CALL		
01: _____		
02: _____		
03: _____		
04: _____		
05: _____		
06: _____		
07: _____		
08: _____		
09: _____		
10: _____		

- Note that additional columns of buttons appear for ECTS20 and ECTS30 terminals.
- [DIMENSION] In each Electronic Telephone Controller (ETC), slot 00, circuit 0 (port 000) is dedicated to the maintenance set (a 5-button EKT). This port must be not assigned to any terminal. Slot 20, circuit 7 is not wired, but may be assigned to a straight-line set (SLS) if slot 20 is vacant.
- A Direct Station Select (DSS) button can be assigned as a feature or trunk dial access button. Any number from 0 to 9999, inclusive, can be assigned to the button as the number to be dialed. No checks on the validity of the number are made by DEFINITY Manager IV. Therefore, the number does not have to be in the dial plan. However, the dial access code cannot have a first digit of "*" or "#."
- [DIMENSION] If a phantom equipment location assignment has been added for a straight-line set, and that phantom equipment location physically exists in the switch, then it cannot be used for any other terminal assignment.
- Intercoms can be assigned only to Electronic Key Telephone (EKT) terminals.
- A Hold Feature (HDFT) button can be assigned to unassigned or hold buttons only.
- To activate the Abbreviated/Delayed Alerting Transfer feature assign the ADAT button.
- [DIMENSION] If a Speed Calling (SPC) access button is to be assigned, use **extension add** to define the Speed Calling list.
- [DIMENSION System FP8 Issue 3.8 with Malicious Call Trace Active] A new button can be added to activate the Malicious Call Trace feature. Enter MCT on page two of the transaction screen.

Integrated Display Terminal (IDT) [System 85, Generic 2 only]

For IDT terminal button assignment, this screen is displayed:

AT&T Mgr IV 2.2	System 85 R2V4	(201)92233
tcm admin terminal add		Page 3 of 3
Set ID: _____	Set Type: 7407d	
03: _____	08: _____	15: _____
04: _____	09: _____	16: _____
05: _____	10: _____	17: _____
06: _____	11: _____	18: _____
07: _____	12: _____	19: _____
		20: _____
13: _____	14: _____	21: _____
		22: _____
Display Buttons:		23: _____
01: NORM	04: CMSG	24: _____
02: INSP	05: RMSG	25: _____
03: DATE	06: NEXT	26: _____
	07: DEL	27: _____
02: AMW		28: _____
		29: _____
		30: _____
		31: _____
		32: _____
		33: _____
		34: _____
		35: _____
		36: _____

Administering Low Cost Digital Terminals (LCDTs)

Administering LCDT Terminals

To assign and administer LCDTs in the database and administration areas use the **terminal** object with the following verbs: **add**, **change**, **display**, and **remove**. In the product administration area use the terminal and button transactions. For example, to add a 7406db, 7406dc, 7406bn, 7406bi, 7406pn, or 7406pi LCDT, use the **terminal add** command.

When administering both types of LCDTs in the database and administration areas, the actual terminal type will be displayed in the Set Type: field on the first page of the transaction screen. However, in the product administration area, the terminal type displayed is dependent on the switch release.

Note: When accessing LCDTs through product administration, there is no distinction made between 7406db and 7406dc LCDTs. To distinguish the correct terminal type use the **terminal display** command in the database administration area.

For the 7406dc, 7406bi, or 7406pi LCDT terminal, equipped with integrated Display Module, the following screen is displayed:

AT&T Mgr IV 2.2	DEFINITY G2.2	blx11b
tcm database-admin terminal add		Page 3 of 3
03:	06:	14:
04:	07:	15:
05:	13:	16:
02: AMW		
DISPLAY BUTTONS		17:
		18:
01: NORM	04: CMSG	19:
02: INSP	05: RMSG	20:
03: DATE	06: NEXT	21:
	07: DEL	22:
		23:
		24:
		25:
		25:
		27:
EXECUTE		
SCHEDULE		
CANCEL		
HELP		
BACKWARD		
NEXT PG		
PREV PG		
LAST IN		

Personal Computer Digital Communications Protocol (PCDCP) [System 85 Only]

PC/PBX Connection

The PC/PBX Connection products provide the Digital Communications Protocol (DCP) interface to personal computers. This feature is administered in DEFINITY Manager IV using the object: **terminal**. There are six PC/PBX connection packages available. Package 1 uses the 7404d voice terminal and a PC cartridge to give DCP-based communications management capabilities to the AT&T PC and compatible PCs. Package 2 provides the same capabilities for the AT&T UNIX PC. Package 3 uses a DCP interface expansion card in the AT&T PC with any 7000 series voice terminal. Package 4 provides the same capabilities as package 3 but for the AT&T UNIX PC. Packages 5 and 6 are used with packages 3 and 4 (depending on the computer) to provide 3270 terminal emulation.

With packages 3 to 6, it is recommended that one of the following voice terminals be used:

- 7403d Small Multi-appearance Terminal
- 7404d Voice Data Station
- 7406d
- 7405d Large Multi-appearance Terminal

Because the PC/PBX connection is based on the display operation of the AT&T Personal Terminal, it is recommended that this feature is not used with a voice terminal with an integrated display such as the 7407d.

However, it can be administered on earlier System 85 switches by administering them as PCDCPs with appropriate adjunct modules.

Administering the PCDCP

To administer the PCDCP in the DEFINITY Manager IV database and administration areas, use the object **terminal** with the following verbs: **add**, **change**, **display**, and **remove**. The actual terminal type, PCDCP, will be displayed in the Set Type: field on Page 1 of the transaction screen. In the product administration area, use the terminal and button transactions to administer the PCDCP for DEFINITY Manager IV.

For earlier switch releases, however, the terminal type displayed in the product-administration area is dependent on switch release. For System 85 R2V3, the PCDCP is retrofitted as a Personal Terminal 510 and has the same capabilities. For System 85 R1/R2V2, the PCDCP is retrofitted as a 7405d with the same capabilities.

Personal Terminal 510 (PT 510) [System 85]

For PT 510 terminal button assignment, this screen is displayed:

AT&T Mgr IV 2.2	System 85 R2V4	(201)92233
tcm admin terminal add		Page 3 of 3
Set ID: _____	Set Type: PT510	
Display Functions		
01: NORM	02: INSP	03: DATE
		04: CMSG
		05: RMSG
		06: NEXT
		07: DEL
03: _____		13: _____
		14: _____
04: _____		15: _____
		16: _____
05: _____		17: _____
		18: _____
06: _____		19: _____
		20: _____
		21: _____
02: AMW		

- The first four of the 2-lamp buttons on a PT 510 terminal are reserved for Call Appearances. If there are fewer than four Call Appearances for a particular PT 510 terminal, the remaining buttons in this group of four must be left unassigned. More than four call appearances cannot be assigned on a PT 510.

12-Button Terminal [System 85]

The 12-Button multifunction voice terminal is added to the system using **terminal add**. Terminal attributes, button feature assignments, and [System 85 R2V3] abbreviated dialing capabilities and default terminal dialing are defined.

The 12-Button terminal can be added as 7203h, 7403d, and 7303s terminals.

For 12-Button terminal button assignment, this screen is displayed:

AT&T Mgr IV 2.2	System 85 R2V4	(201)92233
tcm admin terminal add		Page 3 of 3
Set ID: 44	Set Type: 7203h	
BUTTON ASSIGNMENTS		
03: _____	08: _____	
04: _____	09: _____	
05: _____	10: _____	
06: _____	11: _____	
07: _____	12: _____	
02: AMW		

36-Button Terminal [System 85]

The 36-Button multifunction voice terminal is added to the system using **terminal add**. Terminal attributes, button feature assignments, abbreviated dialing capabilities and default terminal dialing are defined. The 36-Button terminal can be added as 7205h, 7405d, and 7305s terminals.

For 36-Button terminal button assignment, this screen is displayed:

AT&T Mgr IV 2.2	System 85 R2V4	(201)92233	
tcm admin terminal add		Page 3 of 3	
Set ID: 44	Set Type: 7405d		
03: _____	08: _____	13: _____	25: _____
04: _____	09: _____	14: _____	26: _____
05: _____	10: _____	15: _____	27: _____
06: _____	11: _____	16: _____	28: _____
07: _____	12: _____	17: _____	29: _____
		18: _____	30: _____
		19: _____	31: _____
		20: _____	32: _____
		21: _____	33: _____
		22: _____	34: _____
		23: _____	35: _____
02: AMW		24: _____	36: _____

Voice Data Station (VDS) [System 85]

For VDS terminal button assignment, this screen is displayed:

AT&T Mgr IV 2.2	System 85 R2V4	(201)92233
tcm admin terminal add		Page 3 of 3
Set ID: _____	Set Type: 7404d	
	03: _____	06: _____
	04: _____	07: _____
	05: _____	08: _____
	02: AMW	

COMMON FEATURES AND CAPABILITIES

This section describes tasks that are common to analog and non-analog extensions and terminals. Unless specifically noted, the features apply to all switch types.

Speed Calling and Custom Intercom [DIMENSION]

The DIMENSION System's Speed Calling and Custom Intercom features are similar to the Abbreviated Dialing feature offered with System 85. Speed Calling and Custom Intercom allow a user to dial a series of numbers by simply pressing one or two buttons on a voice terminal. The Speed Calling feature is used for dialing numbers outside of the switch, while the Custom Intercom feature is used for dialing extensions within the switch.

These features can be assigned to an extension and stored in the DEFINITY Manager IV database using the **extension add** transaction. One, or the other, or both features can be assigned to the same extension. To choose the Speed Calling and Custom Intercom features, see the procedure, "Adding Extensions and Analog Terminals" in this chapter.

A list of numbers for which Speed Calling and Custom Intercom can be used is created for each terminal user or group of terminal users. Custom Intercom or Speed Calling list entries can be administered in two different ways:

- Through TCM, using the commands **custom-intercom-entries change** or **speed-calling-entries change**.
- Through the controlling terminal in a group of terminals only. The controlling terminal can administer the lists.

Because controlling terminal administrators are able to add, change, and remove numbers from their own lists, Custom Intercom and Speed Calling entries are not retained in the DEFINITY Manager IV database. However, with TCM you can go directly to the switch to administer Custom Intercom and Speed Calling list entries.

Associated Extensions and Names Displays

An associated extension is an extension number that cannot be assigned to a terminal. Rather, it serves as an extension number to distribute calls among a group of terminals. For example, terminals within a Uniform Call Distribution (UCD) group (or ACD for System 85 R2V3/4) may have been assigned to several users who have been given the job of responding to incoming calls. Each terminal has its own individual extension number. However, the group as a whole is assigned an associated extension number, and this is the number that outside callers dial in order to reach the group. (For a more detailed explanation, see the material on UCD/ACD included in Chapter 4, "Call Distribution.") Through TCM, you can **add, display, change** and **remove** associated extensions as well as their name display entries. Also, with System 85 R2V4, associated extensions can be associated with **external-adjunct** using the external-adjunct transactions. See Chapter 8, "Switch Equipment," for details.

Note: You can map a primary extension to its associated extension via the **station-attributes display** transaction by selecting the "Extension Attributes" and "Associated Extension of Primary Extension No" options.

Recent Disconnect Intervals

A recent disconnect interval is the amount of time that an extension is unavailable for reassignment and also the amount of time that a recorded message for an extension that has been disconnected is active. After removing an extension, you have the option of putting the extension into a recent disconnect state.

Through TCM you can change the time remaining for a particular extension to exist in the recent disconnect state. You can also display the time. Because this information is not retained in the DEFINITY Manager IV database, the information shown in the administration display comes directly from the switch.

Dedicated Switch Connections

A Dedicated Switch Connection (DSC) directly connects two System 85 or DEFINITY Generic 2 switch ports so that a user on one port is automatically connected to the other when that user's terminal handset is picked up. The ports can be defined as trunks or lines. This feature was introduced for System 85 R2V3. The DSC allows for quick and immediate voice communication service that is useful in specialized situations. A DSC connection can be assigned only to terminals which have been assigned a single extension. TCM allows you to assign the DSC to two terminals and to activate and deactivate the DSC. For System 85 R2V4, DSC has been enhanced to extend connectivity between certain Data Modules (which support a dedicated mode) and host computers with DMI (BOS only) and to support connectivity between ISDN trunks. DSC connectivity is supported across switches and networks via AVD DS-1 or non-AVD DS-1 with disabled.

User Information

Through TCM, you are able to administer information on terminal users (such as room, location, electronic mail address, and authorization codes). Information on users can be added, changed, displayed and removed. Information on users associated with extensions is administered by the object **extension**; information on users not associated with extensions is administered by the object **user**. All such data on users, both those who are associated with an extension and those who are not, is retained in the DEFINITY Manager IV database; user names associated with extensions, however, are sent to the switch.

Additionally, TCM mails user changes associated with extensions to the 3B5 AP Customer Directory Service (CDS) administrator if you have the 3B5 AP Customer Directory Service.

Mnemonic Dialing

Mnemonic dialing provides the user with the ability to store and initiate a data call by entering an alphanumeric string from a data terminal. The maximum length of each mnemonic string is 10 characters.

Names and numbers are stored in a global list. The number of entries supported by System 85 R2V4 and supported by DEFINITY Manager IV has been increased to 1000. Names and numbers can be added to a mnemonic dialing list (**mnemonic dialing add**), removed (**mnemonic dialing remove**), changed (**mnemonic dialing change**), displayed (**mnemonic dialing display**) and listed (**mnemonic dialing list**). You can also display the total number of mnemonic dialing entries (**total mnemonic display**).

Call Transfer to AUDIX

This feature allows a user who has answered a call which was redirected to them via either call coverage or ACD to transfer or conference the caller to the original called party's AUDIX mailbox. Call Transfer to AUDIX can only be activated by using a dial access code.

The following transactions support this feature:

- Establish dial access codes for the feature via the **dial-access-codes** transaction.
- Associate the AUDIX machine via the **external-adjunct** transaction. (An AUDIX adjunct can have up to 32 physical voice ports.)

For details on the dial-access-code transaction, see "Administering the Dialing Plan" in Chapter 2, "Administering TCM." See Chapter 8, "Switch Equipment," for information on external adjuncts.

DCS Centralized Messaging

This feature allows a Message Center Service (MCS) or AUDIX to be shared by several nodes in a DCS network. Users can transfer calls to or from AUDIX in a DCS. Messages will be transported through the network to the correct node for the extension.

The TCM and FM transactions that accommodate this feature are:

- **dac-to-extension**—a TCM transaction that associates the node number of the switch with the extension.
- **station-number-steering**—an FM transaction which associates the dial access code with the steering code. The steering code is also associated with the node number in the switch.
- **external-adjunct**—a TCM (or FM) transaction which associates the network adjunct class, such as AUDIX and the network adjunct number, with the node number.
- **DCIU-channel**—an FM transaction that associates the new Enhanced Services feature with the network adjunct class and network adjunct number.

The **station-no-steering** transaction creates an association between an extension or steering code and a dial access code. This transaction allows a node number of the switch or Message Center Service to be associated with the extension and the dial access code. A number between 1 and 999 will be accepted in the node field.

The extension is assigned to a node number so that messages for the extension go to the correct switch in the DCS network.

4. CALL DISTRIBUTION

This is the second of two chapters on network features. It deals with the AT&T call distribution features that allow incoming calls to be terminated, without attendant assistance, at an idle terminal in a pre-arranged group. Call distribution features are useful in handling a high volume of incoming calls. Each of the features listed below minimizes call completion time, the need for attendant service and the use of Direct Inward Dialing (DID) trunks. The AT&T call distribution features are:

- Uniform Call Distribution (UCD)
- Automatic Call Distribution (ACD)
- Enhanced Uniform Call Distribution (EUCD)
- Call Vectoring.

The term Automatic Call Distribution (ACD) is used in two ways: it can be used as a generic term to describe all call distribution systems, or it can identify a specific AT&T system. See the explanation below under "Notes on Terminology." Under most call distribution systems, incoming calls are directed to a group queue and then distributed using a pre-established hunting pattern. If all terminals are busy, a call remains in queue until a terminal is available.

Each terminal in an UCD, ACD, or EUCD group can receive calls either as a group (split) member or as an individual system terminal. One terminal in each group is designated as the controlling terminal and is assigned to the group supervisor. The group is given an associated extension number (LDN) which, when dialed, places the incoming call in the group queue. The associated extension number is not assigned to any actual extension. With Call Vectoring, however, a call is not sent to a group, split, or queue but to the least-busy agent.

Call Distribution Attributes

Uniform Call Distribution (UCD) features permit incoming trunk calls, local voice terminal calls, and attendant extended calls to terminate directly to the next idle terminal in a pre-arranged group, or split, of terminals. UCD distributes incoming calls using a circular or uniform hunting sequence that begins at the terminal next in line (according to a pre-arranged sequence) after the terminal that received the previous call. If the selected terminal is busy when the incoming call is received, the next terminal in the sequence is checked, then the next, and so on; if all terminals are busy, the call remains in queue until a group terminal becomes idle.

Direct hunting follows a linear pattern and always begins at the controlling terminal. If the controlling terminal is busy, the other terminals in the hunting sequence are checked to determine if any are idle. If all terminals are busy, the call remains in queue until a terminal becomes idle.

Enhanced Uniform Call Distribution (EUCD) replaces and enhances the UCD feature. EUCD allows you to initiate the circular hunting of UCD or to demand the hunting always begin with the controlling terminal.

Automatic Call Distribution (ACD) permits calls to terminate directly to the agent in a pre-arranged group whose terminal has been idle the longest. ACD also incorporates the capabilities of EUCD.

Generic 2 and System 85 R2V4 support **Call Vectoring**, a sophisticated call handling feature generally used in conjunction with ACD. For more information, see "Call Vectoring" later in this chapter.

Call Coverage

A Call Coverage path is a sequence of extensions to which calls can be redirected under certain circumstances. You can add, change, display, or remove a Call Coverage path through Manager IV for Generic 2, System 85 and DIMENSION System FP8, Issue 3.8 only. A Call Coverage Group includes the conditions and the extensions specified in setting up the path. You can set up a path that includes up to three extensions or up to two extensions and a UCD group (or ACD group for Generic 2 and System 85 R2V3/V4).

For Generic 2, and System 85 R2V4, if Call Vectoring is present, you can set up a path that includes a Vector Directory Number (VDN).

Each extension, UCD group (or ACD group for Generic 2 and System 85 R2V3/R2V4), or VDN within the path is referred to as a point. The three points will then form a particular group. The path is assigned a number which is also given to the group. For example, if extension 1234 is assigned Call Coverage by Call Coverage Path 12, that extension's calls are sent to the extensions in Call Coverage Group 12 in the order that you have specified.

Note that the UCD group (or ACD for Generic 2 and R2V3/R2V4) may be assigned as the *last* point in the coverage path. However, if the Generic 2/R2V4 Call Vectoring feature is enabled, a VDN may instead be the last point in the coverage path.

In addition to the Call Coverage Group number, Call Coverage path attributes include the ability to determine when an outside call or an inside call is to be sent to Call Coverage. For each, you can specify that the incoming call will be covered when the extension is active, busy, or both, or after a no-answer interval (for which you specify the number of unanswered rings).

Dual coverage is a capability available on Generic 2 and System 85 R2V3/R2V4. It permits the coverage points in two Call Coverage paths to function as if they belonged within a single Call Coverage Group. If each of the two paths contains three points (the maximum number), then the dual coverage capability allows six coverage points. Each path may have different attributes. Dual coverage is administered through a single transaction through which TCM prompts you to enter information for both paths.

Call Forwarding and Call Distribution

Call Forwarding can be used to forward calls routed to another ACD or UCD group queue, an individual terminal, attendant queue, or centralized attendant queue. An ICI (Incoming Call Identification) message is displayed alphanumerically for each call routed to an attendant. Call Forwarding offers the following features:

- **Call Forwarding—Follow Me.** When activated, this feature immediately routes the incoming call to the ACD or UCD group queue; when inactive, this feature allows the call to remain in the group queue 7 seconds before forwarding.
- **Call Forwarding—Busy/No Answer.** If activated when all terminals are busy at the time a call is received, this feature places the incoming call in the group queue 7 seconds before forwarding. If in those 7 seconds an idle group terminal becomes available, the call is routed to that terminal instead. This feature provides queue overflow; if the number of calls in a queue exceeds a preset level, the call longest in queue can be forwarded to another PBX location. This, in turn, can provide Overload Balancing.
- **Call Forwarding—All Calls.** This feature forwards any call directed to the ACD or UCD group (except from the attendant) to a local PBX attendant, station, or CAS attendant.

Notes on Terminology

ACD has a different meaning in the context of Centralized Attendant Service (CAS). In that case, ACD refers to a specific piece of hardware, the call distribution device, which distributes incoming calls automatically among a group of attendants. In this chapter, ACD is used exclusively for Automatic Call Distribution on groups.

The term "split" is used on some Manager IV screens. A split is a group of agents assigned to answer incoming calls. A split is also referred to as an ACD or UCD group.

Feature Availability

The table below shows which switch releases are compatible with specific features.

Switch	Feature Availability	
	Issue	Feature Name
DIMENSION	FP8, 1.16	UCD
DIMENSION	FP8 3.8	EUCD
System 85	R2V2	EUCD
System 85	R2V3,V4	ACD
System 85	R2V4	ACD, Call Vectoring
DEFINITY	Generic 2.1, 2.2	ACD, Call Vectoring

UNIFORM CALL DISTRIBUTION (UCD)/ENHANCED UCD (EUCD) ADMINISTRATION

UCD [DIMENSION FP8 1.16 only], EUCD [System 85 R2V2 and DIMENSION FP8 3.8]

In the following chapter, UCD refers to both UCD and EUCD, except where noted.

Administering UCD/EUCD with Manager IV

The sequence of tasks associated with adding Uniform Call Distribution and the supporting hardware to your Manager IV system is similar to ACD Manager IV administration. However, the commands and screens used for UCD groups are different. To administer UCD with Manager IV:

- Define UCD features using **sys-cos change**. See "Defining ACD Features on the Switch" later in this chapter for more information.
- Assign extensions to members and to the group supervisor using the transaction **extension add**.
- Assign the associated extension numbers for the Queue Directory Number and Priority Extension using the transaction **associated-extension**.
- Add trunk groups using **trk-grp add**. For more information, refer to the procedure "How to Add Trunks and Trunk Groups" in Chapter 4 of the *DEFINITY® Manager IV Facilities Management Operations* manual. Trunk groups that are needed for UCD include the following:
 - The incoming trunks that will terminate at the UCD group.
 - Delayed recorded announcement trunks (Type 68).
 - Queuing trunk group (Type 6); assign one queuing trunk per UCD group.
 - A Contact Interface (Type 65) trunk group. UCD status lamps provide the attendant with information about specific lines and inform them when the number of calls waiting in the queue exceeds a specified threshold. You can use Manager IV to add, remove, or change lamp assignments.

To monitor the status of the UCD or EUCD queue, check to ensure that there is a Contact Interface trunk group in the switch. If not, use the **trk-grp add** command to assign a Contact Interface trunk group (Type 65) and lamp circuits. If you need more than 30 trunks, enter the **trk add** command after **trk-grp add**. When adding Contact Interface trunks, enter **3** as the Board Type.

Up to 15 lamps can each be assigned to a queue as warning indicators of too many calls waiting in the queue. The Contact Interface type is specified on the **trk-grp add** screen.

For DIMENSION FP8 1.16 only, to measure terminating trunks, assign Contact Interface Type 4 via the **ucd-lamps** command.

- Music-on-Hold interface (Type 62).
- Set up UCD groups. To create the group and assign its attributes, use the command **ucd-grp add**. To assign members to the group, use the command **ucd-members add** for System 85 R2V2 or DIMENSION. The maximum number of UCD groups is 28; the maximum number of members in a group is 40.

- [Optional step] Associate incoming trunk groups with specific UCD groups or splits using **term-trk-grps change**.
- [System 85 R2V2 and DIMENSION 3.8] For EUCD only, associate specific announcements (by announcement number or ELL) with specific trunk groups or splits using **ucd-announcements**. A single delayed recorded announcement can be assigned to each EUCD group. The recorded announcement may incorporate the music-on-hold feature. The UCD announcement screen is the same as that for ACD announcements. See "Administering ACD Recorded Announcements" later in this chapter.
- [Optional step, DIMENSION System FP8 1.16 only] Add UCD trunk status indicator lamps using **ucd-lamps add**.
- [Optional step] Add UCD queue status indicator lamps using **ucd-status-lamps add**.

Procedure: Administering UCD/EUCD Groups

Refer to "ACD/UCD/EUCD Groups" later in this chapter.

Procedure: Administering UCD Group Members

[System 85 R2V2 and DIMENSION 3.8 only]

The **ucd-members display** transaction can be accessed from the product-admin area only.

1. Enter **ucd-members display** and press **RETURN**.
2. Enter **x** in the By UCD Group No. field to display all members of a specified group.

```

AT&T Mgr IV 2.2  SR:          System 85 R2V2          <target>
tcm admin ucd-members display          Page 1 of 1

                THIS INFORMATION IS RETAINED ONLY IN THE PRODUCT

Select Display Option:
  x By UCD Group No.          UCD Group No.: ____
  By Member Extension No.    Member Number(s)

```

- Enter the number of the group for which you want to display members, then the member number(s) you want to see. The display also shows the first available member in the group and the number of members available.
- Press **EXECUTE**.

Administering UCD Lamps

Status lamps can be used to monitor the status of the EUCD members [System 85 R2V2 and DIMENSION 3.8] or of UCD trunks [DIMENSION 1.16 only]. To administer lamps to measure the trunks, use the command **ucd-lamps**. To administer lamps to measure the UCD member status, use **ucd-status-lamps**.

Before you can administer trunk measurement lamps, you must use **trk-grp add** and/or **trk add** to assign a Contact Interface trunk group (Type 65) and lamp circuits. Assign the Contact Interface for DIMENSION 1.16 only, as Type 4, UCD trunk.

Procedure: Trunk Status Lamps (ucd-lamps)

[DIMENSION System FP8 1.16 only]

Use this procedure to add status indicator lamps to measure UCD trunk status.

1. Enter **ucd-lamps add** and press **RETURN**.

AT&T Mgr IV 2.2 SR: D2000 FP8 <target>		
tcm admin ucd-lamps add Page 1 of 1		
Trunk Equip Loc	Board Index	Circuit Index
—/—/—/—/—	—	—
—/—/—/—/—	—	—
—/—/—/—/—	—	—
—/—/—/—/—	—	—
—/—/—/—/—	—	—
—/—/—/—/—	—	—
—/—/—/—/—	—	—

2. In the Trunk Equip Loc field, enter the ELL of the trunk to be measured. The trunk locations that you enter must terminate at a UCD group, but each can belong to a different UCD group.
3. Enter the Board Index (**0—15**) and Circuit Index (**0—7**) of the Contact Interface equipment associated with the appropriate status lamp.
4. Press **EXECUTE** to enter the data.

Procedure: Administering UCD Member Status Lamps

[System 85 R2V2 and DIMENSION 3.8 only]

The **ucd-status-lamps add** transaction administers lamps that display Uniform Call Distribution (UCD) member status information.

Equipment locations must be added in pairs. Paired locations are represented on the 106B display unit. This pairing allows the switch to light all lamps when the test button on the 106B is pressed; there is one test button per unit. Paired equipment locations must be consecutive circuits on an sn224 circuit pack.

1. Enter the command **ucd-status-lamps add** to administer member status lamps.

```

AT&T Mgr IV 2.2  SR:          System 85 R2V2          <target>
tcm admin ucd-status-lamps add                          Page 1 of 1

                THIS INFORMATION IS RETAINED ONLY IN THE PRODUCT
Display Unit                Paired
Equipment Location: ___/___/___/___/___   Equipment Location: ___/___/___/___/___

Column  Member  UCD                Column  Member  UCD
No.      No.    Grp                No.      No.    Grp
-        -      -                -        -      -
-        -      -                -        -      -
-        -      -                -        -      -
-        -      -                -        -      -
-        -      -                -        -      -
-        -      -                -        -      -
-        -      -                -        -      -
-        -      -                -        -      -
-        -      -                -        -      -
-        -      -                -        -      -

```

2. Enter the Equipment Location.
 - When populating the ELLs, select the correct values for the *Traditional* Module. For more details, refer to the explanation provided for the *Traditional* Module in Chapter 8, "Switch Equipment."
3. Enter the Member Number and the UCD Group number of the member to be associated with each of the 20 status lamps on the display unit.
4. Press **EXECUTE** to enter the data.

Procedure: Displaying Trunk Groups Terminating to UCD Groups

The **term-trk-grps display** command allows you to display the trunk groups terminated to UCD groups by Trunk Group Number only. The screens are the same as for the trunk groups terminating to ACD groups. Except, wherever ACD is referenced, UCD is used instead. For a detailed description, refer to "Procedure: Displaying Trunk Groups Terminating to ACD Groups."

Procedure: How to Terminate Trunk Groups to UCD Groups

Use this procedure to associate incoming trunk groups with UCD groups. The trunk groups must be added first using **trk-grp add**.

1. Enter **term-trk-grps change** and press **RETURN**.
2. When the screen appears, enter **x** in the Uniform Call Distribution [UCD] field and press **RETURN**. The screen is the same as for the trunk groups terminating to the ACD groups, except references to ACD are replaced by UCD. For a detailed description, refer to "Procedure: Terminating Trunk Groups to ACD Groups."

Procedure: Assigning EUCD Recorded Announcements

[System 85 R2V2 and DIMENSION System FP8 3.8]

1. Enter **ucd-announcements add** and press **RETURN**.

```
AT&T Mgr IV 2.2          System 85 R2V2          <target>
tcm admin ucd-announcements add          Page 1 of 1

          Select one of the following:
          _ Delay Announcement
          _ City of Origin Announcement
          _ Queue of Origin Announcement
```

2. Specify the type of announcement to be administered by entering **x** next to one of the options. Each type of announcement has its own screen. All announcement screens include the Auxiliary Equip. Loc. field. When populating the ELLs, select the correct values for the *Traditional* Module only. For more details, refer to the explanation provided for the *Traditional* Module in Chapter 8, "Switch Equipment."

If you choose Delay Announcement, the following screen is displayed:

```
AT&T Mgr IV 2.2  SR:          System 85 R2V2          <target>
tcm admin ucd-announcements add          Page 1 of 1

          Select one of the following:
          x Delay Announcement
          _ City of Origin Announcement
          _ Queue of Origin Announcement

UCD Group No.   First Wait Time   Auxiliary Equip. Loc.   Second Wait Time
-----
                                     -----

          Second Announcement
          Auxiliary Equipment Location: __/__/__/__
```

- Enter the UCD/DDC Group Number (**1—30**) with which you want to associate an announcement.
- In the First Wait Time field, enter the number of 2 second intervals (**1—15**) after which the first delay announcement should be heard.
- Enter the Auxiliary Equip. Loc. for the first announcement. Because each first announcement machine has its own announcement, you can assign each group listed an appropriate first delay announcement.
- In the Second Wait Time field, enter the number of 2 second intervals for the second delay announcement

- In the Second Announcement Auxiliary Equipment Location field, enter the ELL of the machine for the second delay announcement. Since there is only a single second delay announcement, all groups using a second announcement share the same machine.
- You do not have to assign a second announcement to *all* groups. You *cannot*, however, assign a second announcement to a group without assigning a first announcement.

If you choose City of Origin Announcement, the following screen is displayed:

```

AT&T Mgr IV 2.2  SR:          System 85 R2V2          <target>
tcm admin ucd-announcements add          Page 1 of 1
sp

                Select one of the following:
                    _ Delay Announcement
                    x City of Origin Announcement
                    _ Queue of Origin Announcement

Trunk Group Number: __ City-of-Origin Announcement
                    Auxiliary Equip. Loc.: __/__/__/_

```

- A city of origin announcement is heard by agents when a call has been redirected from a distant node via a specified trunk group. Enter the Trunk Group Number (**18—999**) and the ELL of its associated announcement.

If you choose Queue of Origin Announcement, the following screen is displayed:

```

AT&T Mgr IV 2.2  SR:          System 85 R2V2          <target>
tcm admin ucd-announcements add          Page 1 of 1

                Select one of the following:
                    _ Delay Announcement
                    _ City of Origin Announcement
                    x Queue of Origin Announcement

UCD Group Number: ___ Queue-of-Origin Announcement
                    Auxiliary Equip. Loc. __/__/__/_

```

- A queue of origin announcement is heard by agents when a call is redirected from another local UCD group. Enter the UCD group number (**1—30**) and the ELL of its associated announcement.

3. Press **EXECUTE** to enter the data.

AUTOMATIC CALL DISTRIBUTION (ACD/UCD) ADMINISTRATION

[Generic 2, System 85 R2V3, R2V4]

Administering ACD Groups and Group Members

Automatic Call Distribution (ACD) features permit incoming trunk calls, local voice terminal calls, and attendant extended calls to terminate directly to the voice terminal in a pre-arranged group which has been idle the longest. A group of agents assigned to answer incoming calls are referred to as an ACD group or split. Each terminal in an ACD split can receive calls as a split member or as an individual system terminal.

The ACD splits are administered via the **acd-grp** transaction. This transaction is supported by Generic 2 and System 85 R2V3-R2V4. To assign members to ACD groups, use the **acd-members** transaction. Refer to "ACD Group Members" later in this chapter.

You can run the **acd-grp** command from the database-admin, admin, and product-admin areas. The verbs supported are: **add**, **display**, **change**, and **remove**.

To add an ACD group to your system, use the **acd-grp add** command. To measure ACD groups, assign an Outflow Level and Contact Interface Board and Circuit via the **acd-grp add** command. In Generic 2.2, you may use the **acd-grp add** transaction to define any ACD group as measured by enabling CMS (Call Management System) Measurement. For more details, refer to "Individual Split Assignment" later in this chapter.

If Call Vectoring feature is enabled [Generic 2, System 85 R2V4], the screens may appear different, and additional procedures may be needed. See "Call Vectoring" later in this chapter.

To display ACD splits, enter the **acd-grp display** command.

To change the characteristics of an ACD split, use the **acd-grp change** command.

To remove an ACD split from the database and the switch, use the **acd-grp remove** command.

ISDN Gateway

ISDN Gateway is a type of application which allows you to simultaneously deliver a call and display the caller's extension number (number only) or the caller's name and extension number (name and number) on the terminal screen. You can enable the ISDN Gateway feature via the **acd-grp add** transaction by selecting either the ISDN Gateway (number only) or ISDN Gateway (name and number). The appropriate split type will receive this call and place it over the ISDN PRI facilities assigned to the ISDN Gateway application. The call will include:

- Automatic Number Identification (ANI) which is the caller's billing number (a caller's extension number only or caller's name and extension number).
- Extension number of the agent who answered the call.

The ISDN Gateway software resides on a 3B2 computer performing the necessary protocol conversion and passing the information from the switch to the host.

Individual Split Assignment

[Generic 2.2]

The Individual Split Assignment feature allows ACD splits to be marked as measured or unmeasured. An agent is considered measured if this agent is a member of a measured split.

A split can contain any number of agents within an overall system maximum; system maximum being 2048, the maximum number of agents in a single split is 1024, and the maximum number of agents allowed to be measured by CMS at one time is 1023.

To mark a split as measured or unmeasured, enable or disable CMS Measurement via the **acd-grp add** transaction (**y** or **n** in the CMS Measurement field). Note that you can administer CMS Measurement only if the Call Management System feature has been activated via the **sys-cos change** transaction (**y** in the Call Management System Enabled field). For more details, refer to Chapter 3, "Network Feature Administration" in the *DEFINITY® Manager IV Facilities Management Operations* manual.

Call Work Codes (CWC)

[Generic 2.2]

The Call Work Codes (CWC) feature provides an agent with a method of recording the occurrence of a customer defined event which happens during an ACD inbound call or while in After Call Work (ACW) mode following the call. The recorded event is not stored in the switch but is sent to an adjunct CMS which provides the event/digit string recording function.

The CWC feature is available on DCP (Digital Communications Protocol) terminals in Generic 2.2 only. Only one CWC button may be allowed per set. A CWC button can only be administered if the Call Work Codes feature was enabled during the system initialization.

Using the DCP terminal, an ACD agent can enter the work code (a string of up to 16 digits) by operating the CWC feature button and using the dial pad. The CWC feature is provided in addition to Stroke Count (SC) as an AT&T controlled optional feature.

A Forced Entry option is provided in a measured split for both Stroke Count and Call Work Codes feature buttons. When activated, this option serves as a reminder to attempt a Stroke Count or Call Work Codes before pressing the Manual-In button that makes a member available for a next call.

Stroke Count

[Generic 2.2]

The Stroke Count (SC) feature buttons are used to assist the Call Management System (CMS) to monitor ACD activity. These buttons are used in conjunction with CMS to tabulate events of current interest. Whenever such an event occurs, an agent presses an SC button which sends a message to CMS that provides the event recording function. CMS increments a counter for the agent who pressed the button and for the entire split of which the agent is a member.

Status lamp indications are provided for existing Stroke Count.

Prerequisites

To administer ACD using Manager IV, do the following:

1. Enter the **sys-cos change** command to define ACD features. For more information, see "Network Feature Administration" in Chapter 3 of the *DEFINITY® Manager IV Facilities Management Operations* manual.
 - Enter **y** in the Abandoned Call Search Enabled field if the search function should be enabled.
 - Enter **y** in the Call Management System Active field if your system also has a Call Management System.
 - Enter the number of the attendant console that will be the ACD supervising console.
 - Enter **y** in the Warning Tone field if you want to alert the agent when the call is being observed by the supervisor. Press **EXECUTE** to end the transaction.
2. Assign a class of service which has the ACD Members enabled. For a detailed description, refer to Chapter 2, "Assigning System Features."
3. Enter the **extension add** command to assign a Supervisor extension. This extension must have been associated with the class of service previously added.
4. Enter the **associated-extension add** command to assign a Queue Directory Number and Priority Extension Number.
5. Enter the **trk-grp add** command to assign a Queuing Trunk Group (Trunk Type 6) and Contact Interface Trunk group (Trunk Type 65).
 - ACD status lamps provide the attendant with information about specific lines and inform them when the number of calls waiting in the queue exceeds a specified threshold. You can use Manager IV to add, remove, or change lamp assignments.

To monitor the status of the ACD queue, check to ensure that there is a Contact Interface trunk group in the switch. If not, use the **trk-grp add** command to assign a Contact Interface trunk group (Type 65) and lamp circuits. If you need more than 30 trunks, enter the **trk add** command after **trk-grp add**. When adding Contact Interface trunks, enter **3** as the Board Type.

Up to 15 lamps can each be assigned to a queue as warning indicators of too many calls waiting in the queue.

ACD/UCD/EUCD Groups

Manager IV administers ACD splits and EUC/UCD groups via the **acd-grp** and **ucd-grp** transactions. The **acd-grp** transaction is supported by Generic 2 and System 85 R2V3-R2V4. The **ucd-grp** transaction is used to administer the EUCD groups [System 85 R2V2 and DIMENSION 3.8] and UCD groups [DIMENSION 1.16].

Procedure: Adding ACD/UCD/EUCD Groups

Use this procedure to add ACD splits [Generic 2 and System 85 R2V3-R2V4] and Uniform/Enhanced Uniform Call Distribution groups [System 85 R2V2, DIMENSION 3.8 and 1.16]. Both **acd-grp add** and **ucd-grp add** transactions can be accessed from the database-admin, admin, and product-admin areas in both FM and TCM hierarchies.

1. [Generic 2, System 85 R2V3-R2V4] To add ACD groups, enter the **acd-grp add** command. Press **RETURN**. The following screen appears.

```
AT&T Mgr IV 2.2   SR:          DEFINITY G2.2           <target>
tcm admin acd-grp add                               Page 1 of 1

                ACD - SPLIT CHARACTERISTICS

        ACD Split No.:  __

        SPLIT CHARACTERISTICS           SPLIT SUPERVISOR AND CHARACTERISTICS

Queuing Trunk Group:  __                Multiple Call Handling? n
        Hunt Type: 0 (CIRCULAR)          Auto Available? n
        Split Type: 0 (REGULAR)          Supervisor Extension No.:  __
        Machine Number: 0                Queue Directory No.:  __
Outflow/Queue Level:  __                Priority Extension No.:  __
        Inflow Level:  __                Forced Entry? n
        ICI Message Number: 0           LAMP CONTROL CIRCUIT

        CMS Measurement? y                Board Index:  _
                                           Circuit Index:  _
```

2. The Split Size field does not appear on the screen for Generic 2.2. This field applies to Generic 2.1 and System 85 R2V3-R2V4 where ACD groups must be defined with a fixed size.

In Generic 2.2, you do not need to specify the split size; split sizes are dynamic, just as large as the number of agents assigned to the split. A split may contain any number of agents; the maximum number of agents allowed per split is 1024, and per system is 2048. The maximum number of CMS measured ACD agents allowed per system is 1023.

If Call Vectoring is enabled, the following fields do not appear on the screen: Inflow Level, ICI Message Number, Queue Directory No., and Priority Extension No.

3. [System 85 R2V2, DIMENSION 3.8 and 1.16] To add UCD/EUCD groups, enter the **ucd-grp add** command. The screen appears as follows:

UCD GROUP CHARACTERISTICS

EUCD Group No.: ___

GROUP CHARACTERISTICS

GROUP SUPERVISOR AND CHARACTERISTICS

Group Size: _____

Queuing Trunk Group: _____

Hunt Type: 0 (CIRCULAR) Supervisor Extension No.: _____

Split Type: 0 (REGULAR) Queue Directory No.: _____

Machine Number: 0 Priority Extension No.: _____

Outflow/Queue Level: ___

Inflow Level: 0

ICI Message Number: 0

LAMP CONTROL CIRCUIT

Board Index: _

Circuit Index: _

Notes:

- The Data Attribute field appears only for DIMENSION 3.8.
- The Split Type, Machine Number, Queue Directory No. and Priority Extension No. are dynamic fields.

The ACD and UCD/EUCD screens are similar. Therefore, explanation provided below applies both to the **acd-grp add** and **ucd-grp add** transaction.

4. Enter the ACD Split Number or EUCD Group Number. This field is required. Valid entries are **1—60** for Generic 2 and System 85 R2V4, **1—30** for System 85 R2V2-R2V3 and DIMENSION FP8. Press **RETURN**.
5. Enter the Split Size or Group Size value. This field is required. The Split Size field applies to Generic 2.1 and System 85 R2V3-R2V4 only. Press **RETURN**.
 - [Generic 2.1 and System 85 R2V3-R2V4] Valid entries are multiples of **16**, up to **1024**.
 - [System 85 R2V2 and DIMENSION FP8] Valid entries are multiples of **16**, up to **512**.
6. Enter the Queuing Trunk Group number. This field is required. Press **RETURN**. The Queuing Trunk Group must have already been assigned using the **trk-grp add** transaction.
 - [Generic 2 and System 85 R2V3-R2V4] Valid entries are **18—999**.
 - [System 85 R2V2 and DIMENSION 3.8] Valid entries are **18—255**.
 - [DIMENSION 1.16] Valid entries are **18—99**.
7. Enter the Hunt Type field. Default is **0**. Press **RETURN**.
 - [Generic 2 and System 85 R2V3-R2V4] Valid entries are **0—3**.
 - [System 85 R2V2 and DIMENSION 3.8] Valid entries are **0—1**. This field does not apply to DIMENSION 1.16.

Within a split, select a hunting type as follows:

- **0** - Circular (default).
- **1** - Direct.
- **2** - Most idle agent hunt. The agent will stay in the same relative position in queue after an outgoing call. This hunting type is not supported by System 85 R2V2 and DIMENSION 3.8.
- **3** - Most idle agent hunt. The agent will move to the bottom of the queue after making an outgoing call. This hunting type is not supported by System 85 R2V2 and DIMENSION 3.8.

8. Enter the Split Type. Default is **0**. This field is optional. Press **RETURN**.

- [Generic 2 and System 85 R2V4] Valid entries are **0—4**.
- [System 85 R2V2-R2V3 and DIMENSION 3.8] Valid entries are **0—2**.

Select a split type, as follows:

- **0** - Regular (Default).
- **1** - Message Center (MCS).
- **2** - AUDIX.
- **3** - ISDN Gateway (number only). This feature is only supported for Generic 2 and System 85 R2V4.
- **4** - ISDN Gateway (name and number). This feature is only supported for Generic 2 and System 85 R2V4.

9. Enter the Machine Number.

- [Generic 2, System 85 R2V3-R2V4] Valid entries are **0—8**.
- [System 85 R2V2, DIMENSION] Valid entries are **1—7**.

This field is required. The entry in the Split Type field determines valid values for the Machine Number field as shown in the table below:

SPLIT TYPE		MACHINE NUMBER			
Name	Encode	G2	R2V3-R2V4	R2V2	DIMENSION 3.8
Regular	0	0	0	0	0
Message Center	1	1 - 7	1 - 7	1 - 7	1 - 3
Audix	2	1 - 8	1 - 4	1	1 - 4
ISDN Gateway	3	1 - 7	1 - 7	n/a	n/a
ISDN Gateway	4	1 - 7	1 - 7	n/a	n/a

For all switch releases, if the Split Type field has been populated with **0**, the cursor will skip over the Machine Number field. The Machine Number field defaults to **0**.

10. In the Outflow/Queue Level field, enter the number of calls above which calls must be forwarded to another ACD group. For all switch releases, valid entries are **1—99**. This field is optional. Press **RETURN**.

- If an Outflow/Queue Level has not been assigned, the Board Index and Circuit Index fields cannot be assigned.

- If a level is assigned, enter the Board Index and Circuit Index of the Contact Interface associated with this ACD group (Type = 3).
11. In the Inflow Level field, enter the threshold level of incoming calls. For all switch releases, valid entries are **0—98**. Default is **0**. This field is optional. When the number of calls breaks this threshold, status lamps will light.
[Generic 2, System 85 R2V4] This field does not appear if Call Vectoring is present. Press **RETURN**.
 12. Enter the ICI Message Number to be associated with this group. The message is a 4 character alphanumeric identification number that displays on the attendant console to indicate call origin. The message itself is administered in the transaction **console-messages**. This field is optional. Default is **0**.
 - [Generic 2 and System 85 R2V3-R2V4] Valid entries are **0** for no message, or **4—63** for the ICI message number.
 - [System 85 R2V2 and DIMENSION FP8] Valid entries are **0** for no message, or **1—30** for the ICI message number.
 [Generic 2 and System 85 R2V4] The ICI Message Number field does not appear if Call Vectoring is present. Press **RETURN**.
 13. Enter **y** or **n** in the CMS Measurement field. Default is **y**. This field applies to Generic 2.2 only and does not appear on the screen for earlier switch releases. You can administer CMS Measurement only if the Call Management System feature has been enabled via the **sys-cos change** transaction (**y** in the Call Management System Enabled field). If the Call Management System feature has not been activated, the system will automatically change this field to **n**; **y** will not be accepted. For a detailed information on administering ACD groups with the Call Management System feature enabled, refer to "Administering ACD When You Have Call Management (CMS)" later in this chapter.
 14. Enter **y** if Multiple Call Handling is assigned to this split. Valid entries are **y** or **n**. Default is **n**. This field is optional. This feature allows an agent to place a call on hold and remain available to receive other ACD calls. This field does not apply to System 85 R2V2-R2V3 and DIMENSION FP8. Press **RETURN**.
 15. Type **y** if the Auto Available feature should be assigned to this split. Otherwise, enter **n**. Default is **n**. This feature puts split members automatically into the available state or, if Call Management is present, logs the split members into the Call Management System. This field does not apply to System 85 R2V2-R2V3 and DIMENSION FP8. Press **RETURN**.

Note: Do not enable the Auto Available feature for AUDIX. AUDIX sets the agent availability through DCIU messages.
 16. Enter the Supervisor Extension No. This must be a primary extension and cannot be an LDN. The extension must be assigned via the **extension** transaction before it can be assigned to the ACD group in this transaction. For all switch releases, valid entry is any valid extension number (**000—99999**) with a class of service which has ACD parameters activated. This field is required. Press **RETURN**.
 17. Enter the Queue Directory No. This is the associated extension number that is the LDN of the ACD group. It must be assigned using the transaction **associated-extension** before it can be assigned here. This field is required. For all switch releases, valid entry is any valid associated extension number (**000—99999**). This field does not apply to DIMENSION FP8.
[Generic 2 or System 85 R2V4] This is not used if Call Vectoring is present. Press **RETURN**.
 18. Enter the Priority Extension No. This is a number that can be dialed by callers to whom you want to give a higher priority in the queue. It also must be assigned using the transaction **associated-extension add**. This field is optional. For all switch releases, valid entry is any valid associated

extension number (**000—99999**). This field does not apply to DIMENSION FP8.
 [Generic 2 and System 85 R2V4] This is not used if Call Vectoring is present. Press **RETURN**.

19. [Generic 2.2 only] In the Forced Entry field, enter **y** to enable the forced entry. Otherwise, enter **n**.
 This field applies to Generic 2.2 only and does not appear on the screen for earlier switch releases.
 Default is **n**.
 - The Forced Entry and Auto Available features may not be enabled to the same split simultaneously.
 - The Forced Entry and Multiple Call Handling features may not be enabled to the same split simultaneously.
20. Enter the Board Index number. This field is optional. Press **RETURN**.
 - [Generic 2, System 85 R2V2-R2V3 and DIMENSION 3.8] Valid entries are **0—7**.
 - [DIMENSION 1.16] Valid entries are **0—1**.
21. Enter the Circuit Index number. For all switch releases, valid entries are **0—7**. This field is optional. Press **RETURN**.
22. Press **EXECUTE** to enter the data.

Procedure: Displaying ACD/UCD/EUCD Groups

The **acd-grp display** or **ucd-grp display** transaction allows you to view the characteristics of the specified ACD/UCD/EUCD group.

1. Enter the **acd-grp display** or **ucd-grp display** command. The input **acd-grp display** or **ucd-grp display** screen appears.

```

AT&T Mgr IV 2.2  SR:                DEFINITY G2.2                <target>
tcm admin acd-grp display                Page 1 of 1

ACD Split No.: __
  
```

Note: For **ucd-grp display** transaction, the EUCD Group No. field appears in place of the ACD Split No. field.

2. Enter the ACD Split Number (**1—60**) or UCD/EUCD Group Number (**1—30**). This number must be defined in the database. Press **RETURN**. The output will display all characteristics associated with a given group.

Procedure: Changing ACD/UCD/EUCD Groups

The **acd-grp change** or **ucd-grp change** transaction allows you to change the characteristics of the specified ACD split or UCD/EUCD group. The Split No., Split Type, Machine Number, and Supervisor Extension fields cannot be modified. These fields are display only.

1. Enter the **acd-grp change** or **ucd-grp change** command. The input **acd-grp change** or **ucd-grp change** screen appears. The screen is identical to the input **acd-grp display** or **ucd-grp add** screen. Refer to "Procedure: Displaying ACD/UCD/EUCD Groups."
2. Enter the ACD Split No. or EUCD Group No. This number must be defined in the database. This field is required. Press **RETURN**. The output **acd-grp change** or **ucd-grp change** screen appears. The screen is identical to the **acd-grp add** or **ucd-grp add** screen. For a detailed field description, refer to "Procedure: Adding ACD/UCD/EUCD Groups."
3. Populate the fields with valid entries. Press **EXECUTE**.

Procedure: Removing ACD/UCD/EUCD Groups

The **acd-grp remove** or **ucd-grp remove** transaction allows you to remove the specified ACD split or UCD/EUCD group. The transaction completes successfully if you execute the following prerequisite procedures:

- [Generic 2, System 85 R2V4] Remove any VDN assignment to the vector via the **call-vectoring move/remove** transaction.
 - [Generic 2, System 85 R2V4] If the ACD or UCD/EUCD group number has been associated with a vector, enter the **vector-features change/remove** command to remove this association.
 - If the ACD or UCD/EUCD group has been assigned to a call coverage group, use the **call-coverage change/remove** transaction to remove this association.
 - If trunk groups have been terminated to an ACD or UCD/EUCD, use the **term-trk-grps change** command to remove the ACD or UCD/EUCD termination.
 - Remove any assignment of members to the split.
1. Enter the **acd-grp remove** or **ucd-grp remove** command. The input **acd-grp remove** or **ucd-grp remove** screen appears. The screen is identical to the input **acd-grp display** or **ucd-grp add** screen. Refer to "Procedure: Displaying ACD/UCD/EUCD Groups."
 2. Enter the ACD Split No or UCD Group No. This number must be defined in the database.
 3. Press **EXECUTE**.

Administering ACD Group Members

Use the **acd-members**, **acd-grp**, and the **acd-allocation display** commands in the following procedures to administer facilities for ACD group members.

Procedure: Adding ACD/UCD Group Members

1. Enter **acd-members add** or **ucd-members add**.
2. Enter **x** in either the Single Member or Multiple Members field. If you choose multiple members, the following screen is displayed:

```

AT&T Mgr IV 2.2  SR:          DEFINITY G2.2          <target>
tcm admin acd-members add/ucd-members add          Page 1 of 1

                THIS INFORMATION IS RETAINED ONLY IN THE PRODUCT

Select Add Option:          ACD Split No.:  ___
    Single Member
    x Multiple Members

    Member      Member      Member      Member      Member
    No.  Extn   No.  Extn   No.  Extn   No.  Extn.   No.  Extn

    _____  _____  _____  _____  _____
    _____  _____  _____  _____  _____
    _____  _____  _____  _____  _____
    _____  _____  _____  _____  _____
    _____  _____  _____  _____  _____
    _____  _____  _____  _____  _____
    _____  _____  _____  _____  _____
    _____  _____  _____  _____  _____
    
```

Note: For the **ucd-members add** transaction, the UCD Group No. field appears in place of the ACD Split No. field.

3. If you have used the **display** verb to display existing group members, you can press **(ESC)** to populate this screen with the information.
4. Enter the ACD Split No./UCD Group No. Valid entries are **1—60** for Generic 2 and System 85 R2V3-R2V4 and **1—30** for System 85 R2V2 and DIMENSION. This field is required. Press **(RETURN)**.
5. Enter the Member Number. Valid entries are **1—1023** for Generic 2 and System 85 R2V3-R2V4 and **1—511** for System 85 R2V2 and DIMENSION. Press **(RETURN)**.
6. Enter the Member Extension number. Valid entries are **000—99999**. Press **(RETURN)**.
 - If you have chosen to add a single member, you will be prompted to add information for only one member.
 - Member numbers must be greater than zero. The **acd-grp add** or **ucd-grp add** transaction adds Member Number 0 to the ACD/UCD group.
7. Press **(EXECUTE)** to enter the data.

Procedure: Displaying ACD Group Members

1. Enter **acd-members display** and press **RETURN**.
2. Choose the display option:
 - Enter **x** in the By Member Extension No. field to display a group member by extension number.

```

AT&T Mgr IV 2.2  SR:          DEFINITY G2.2          <target>
tcm admin acd-members display          Page 1 of 1

                THIS INFORMATION IS RETAINED ONLY IN THE PRODUCT

Select Display Option:
  _ By ACD Group No.          Member Extension No.: ____
  x By Member Extension No.
    
```

— Enter the extension of the member you want to see (**00000—99999**). The display will show the ACD group number and the member number associated with that extension.

- Enter **x** in the By ACD Group No. field to display all members of a specified group.

```

AT&T Mgr IV 2.2  SR:          DEFINITY G2.2          <target>
tcm admin acd-members display          Page 1 of 1

                THIS INFORMATION IS RETAINED ONLY IN THE PRODUCT

Select Display Option:
  x By ACD Group No.          ACD Split No.: ____
  By Member Extension No.    Member Number(s)
    
```

— Enter the number of the group (**1—60**) for which you want to display members, then the member number(s) in a group of 40 or less as **1—16** or **41—80** or **981—1020** up to **1023**. In System 85, the display also shows the first available member in the group and the number of members available. In Generic 2.2, the display shows the highest member in the split.

3. Press **EXECUTE**.

Procedure: Displaying Split Member Allocation Information in Generic 2.2

The **acd-allocation display** transaction allows you to view split member allocation information in Generic 2.2. This includes the following information:

- Whether the split is measured or not
- The number of members assigned to the split
- The number of members that can be assigned to the split
- The highest member number assigned in this split
- The total number of members assigned to all splits

The **acd-allocation display** transaction is supported by Generic 2.2 only in the admin and product-admin areas under FM and TCM hierarchies.

1. Enter the **acd-allocation display** command. Press **RETURN**. The following screen is displayed.

```

AT&T Mgr IV 2.2      SR:          DEFINITY G2.2          <target>
tcm admin/product-admin acd-allocation display          Page 1 of 1
                    YOU ARE DIRECTLY ACCESSING THE PRODUCT

                    Split Number:  __

```

2. Enter the Split Number. Valid entries are **0—60**. This field is required. Press **EXECUTE**.
3. For the specified split number, the following information will be displayed:

```

AT&T Mgr IV 2.0      SR:          DEFINITY G2.2          <target>
tcm admin/product-admin acd-allocation display          Page 1 of 1
                YOU ARE DIRECTLY ACCESSING THE PRODUCT

                SPLIT MEMBER ALLOCATION

                Split Number:  __

                CMS Measured?  _

                Number of Members Assigned to This Split:  ____

Number of Members That Can Be Added to This Split:  ____

                Highest Member Number Assigned in This Split:  ____

                Total Number of Members Assigned to All Splits:  ____

```

4. All fields are display only and cannot be changed:

- Split Number - contains the number of the split (**0—60**) you specified via the input screen.
- CMS Measured - **y** (measured by CMS), **n** (unmeasured by CMS)
- Number of Members That Can Be Added to This Split - **0—1024**, **0—1023** (if measured)
- Highest Member Number Assigned in This Split - **0—1024**, **0—1023** (if measured)
- Total Number of members Assigned to All Splits - **0—2048**

Administering ACD Recorded Announcements

ACD is available with a single delay recorded announcement to be used for incoming trunk calls to inform callers of a delay. (Incoming calls to a specific terminal in the ACD group do not receive this announcement.) Each ACD group can be provided with the announcement. If Call Forwarding is active for the ACD group, the call is forwarded before the announcement.

Second or repeated announcements can also be provided. Between repeated announcements or after a single announcement, the caller can hear either silence or music, depending on the options available with your feature package. As soon as a terminal becomes idle, whether the announcement is being heard or not, the waiting call is automatically directed to that terminal, and the caller hears ringback tone.

In System 85 R2V2, all EUCD groups share the same recorded announcement. In Generic 2, and System 85 R2V3, R2V4 each group can have its own announcement and a second announcement (identical for each group) can also be added. In order to provide the Intercept Treatment—Recorded Announcement feature, a second recorded announcement machine must be used. A single recorded announcement machine cannot be shared for both Recorded Delay Announcement and Intercept Treatment—Recorded Announcement features.

Procedure: Assigning Announcement Information

1. Enter **acd-announcement add** and press **RETURN**.

```

AT&T Mgr IV 2.2  SR:      DEFINITY G2.2          <target>
tcm admin acd-announcements add                Page 1 of 1

                Select one of the following:
                  x Delay Announcement
                  City of Origin Announcement
                  Queue of Origin Announcement
  
```

If Call Vectoring is present, the screen is different, since you can also associate Vector Directory Numbers (VDNs) with announcements. See "Call Vectoring" for details.

2. Specify the type of announcement to be administered by entering **x** next to one of the options. Each type of announcement has its own screen. All announcement screens include the Auxiliary Equip. Loc. field. When populating the ELLs, select the correct values for the *Traditional*, *Universal* or *XE* Module. For more details, refer to the explanation provided for the *Traditional*, *Universal* and *XE* Modules in Chapter 8, "Switch Equipment."

If you choose Delay Announcement, the following screen is displayed:

```

AT&T Mgr IV 2.2  SR:      DEFINITY G2.2          <target>
tcm admin acd-announcements add                Page 1 of 1

                Select one of the following:
                  x Delay Announcement
                  City of Origin Announcement
                  Queue of Origin Announcement

ACD Split No.   First Wait Time   Auxiliary Equip. Loc.   Second Wait Time
-----
                Second Announcement
Auxiliary Equipment Location: __/__/__/__
  
```

- Enter the ACD Split No. with which you want to associate an announcement. Valid entries are **1—60**. This field is required. Press **RETURN**.
- In the First Wait Time field, enter the number of 2 second intervals (**0—15**) after which the first delay announcement should be heard.
- Enter ELLs for the Auxiliary Equip. Loc. This field is required.
- In the Second Wait Time field, enter the number of 2 second intervals (**0—15**) for the second delay announcement. This field is required. Press **RETURN**.
- In the Second Announcement Auxiliary Equipment Location field, enter the ELL of the machine for the second delay announcement. Since there is only *one* second delay announcement, all groups using a second announcement share the same machine.

- You do not have to assign a second announcement to *all* groups. You *cannot*, however, assign a second announcement to a group without assigning a first announcement.

If you choose City of Origin Announcement, the following screen is displayed:

```

AT&T Mgr IV 2.2  SR:      DEFINITY G2.2                <target>
tcm admin acd-announcement add                          Page 1 of 1

                Select one of the following:
                    Delay Announcement
                    x City of Origin Announcement
                    Queue of Origin Announcement

Trunk Group Number: ____ City-of-Origin Announcement
                    Auxiliary Equip. Loc.: __/__/__/_/
    
```

- Enter the Trunk Group Number (**18—999**) and the ELL of its associated announcement. All fields are required.

If you choose Queue of Origin Announcement, the following screen is displayed:

```

AT&T Mgr IV 2.2  SR:      DEFINITY G2.2                <target>
tcm admin acd-announcement add                          Page 1 of 1

                Select one of the following:
                    Delay Announcement
                    City of Origin Announcement
                    x Queue of Origin Announcement

ACD Split Number: ____ Queue-of-Origin Announcement
                    Auxiliary Equip. Loc.: __/__/__/_/
    
```

- A Queue of Origin Announcement is heard by agents when a call is redirected from another local ACD split. Enter the ACD Split Number (**1—60**) and the ELL of its associated announcement.

3. Press **EXECUTE** to enter the data.

Procedure: Administering ACD Member Status Lamps

The **acd-status-lamps add** transaction administers lamps that display Automatic Call Distribution (ACD) member status information.

Equipment locations must be added in pairs. Paired locations are represented on the 106B display unit. This pairing allows the switch to light all lamps when the test button on the 106B is pressed; there is one test button per unit. Paired equipment locations must be consecutive circuits on an sn224 circuit pack.

2. Enter the Equipment Location. When populating the ELLs, select the correct values for the *Traditional*, *Universal* or *XE* Module. For more details, refer to the explanation provided for the *Traditional*, *Universal* and *XE* Modules in Chapter 8, "Switch Equipment."
3. Depending on the switch release, enter the data as follows:
 - [Generic 2.2] Enter the ACD agent Extension No. Valid entries are **000—99999**. This field is required.
 - [Generic 2.1, System 85 R2V2-R2V4] Enter the Member Number and the ACD Group number of the member to be associated with each of the 20 status lamps on the display unit. These fields are required.
4. Press **EXECUTE** to enter the data.

Terminating Trunk Groups to ACD Groups

An ACD group can receive calls from various trunk types: DID, non-DID, private switched, network, and dial repeating or automatic tie trunks. An ACD group can also receive calls from other system terminals or attendants.

Incoming calls to the group LDN are directed to a group in one of two ways: calls coming in on an automatic-in trunk are routed to the ACD group on which the trunk group is terminated; calls coming in on a dial-repeating (such as a DID) trunk are routed to the trunk dialed which can terminate to an ACD group.

With the ACD feature, incoming CO (Central Office), FX (Foreign Exchange), 800 Service, and automatic tie trunks can terminate in an ACD group queue rather than at an attendant or centralized attendant console. Any non-DID trunk group(s) can have only one pre-assigned destination: an ACD group, an attendant console, or a release link trunk to a centralized attendant console.

Terminating Trunk Group Commands

The **term-trk-grps** transaction is used to terminate trunk groups to ACD/EUCD/UCD, VDN, CAS, and Special Services. This transaction can be accessed from the database-admin, admin, and product-admin areas. The verbs supported are: **display** and **change**.

To view trunk group terminations as they were defined in the database, use the **term-trk-grps display** command.

To terminate trunk groups to ACD/EUCD/UCD, VDN, CAS, and Special Services terminating trunk groups, use the **term-trk-grps change** command.

Procedure: Displaying Trunk Groups Terminating to ACD Groups

The **term-trk-grps display** transaction allows you to view the trunk groups terminated to an ACD/EUCD/UCD.

1. Enter the **term-trk-grps display** command. Press **(RETURN)**. The following screen appears.

```

AT&T Mgr IV 2.2                DEFINITY G2.2                <target>
tcm admin term-trk-grps display                Page 1 of 1

Enter one of the following

Trunk Group Number: ___
ACD Split: ___

```

2. You are allowed to display a trunk group terminated to an ACD either by Trunk Group Number or by ACD Split number. One of these fields is required.
 - To display terminating groups by Trunk Group Number, enter the Trunk Group Number. Valid entries are **18—999** for Generic 2 and System 85 R2V4, **18—255** for R2V2-R2V3 and DIMENSION 3.8, and **18—99** for DIMENSION 1.16 only. The cursor will skip over the ACD Split field. Press **(EXECUTE)**. The following screen appears:

```

AT&T Mgr IV 2.2                DEFINITY G2.2                <target>
tcm admin term-trk-grps display                Page 1 of 1

Trunk Group Number: 242

Termination:

X Automatic Call Distribution [ACD]
_ Special Services Attendant
_ Centralized Attendant Service

CMS/MIS: _

ACD Split: 1
ACD Priority: 1

```

- In the Automatic Call Distribution [ACD] field, the entry **x** indicates that the specified trunk group is terminated to an ACD split.
- For trunk groups terminating to ACD, the ACD Split and ACD Priority fields are always displayed.
- To display terminating trunk groups by ACD Split number, press **RETURN** when the cursor is in the Trunk Group Number field. The cursor will be placed in the ACD Split field. Enter the split number. Valid entries are **1—60** for Generic 2 and System 85 R2V4, **1—30** for R2V3, and **1—28** for R2V2 and DIMENSION FP8. Press **EXECUTE**. The following screen is displayed:

```

AT&T Mgr IV 2.2                DEFINITY G2.2                <target>
tcm admin term-trk-grps display                Page 1 of 1

      Trunk Group Number: ____
            ACD Split: 1

Trunk Grp  Priority  Trunk Grp  Priority  Trunk Grp  Priority
-----  -
242        1          ____      -          ____      -
____       -          ____      -          ____      -
____       -          ____      -          ____      -
____       -          ____      -          ____      -
____       -          ____      -          ____      -
____       -          ____      -          ____      -
____       -          ____      -          ____      -
____       -          ____      -          ____      -

```

Procedure: How to Terminate Trunk Groups to ACD Groups

Use this procedure to define trunk groups as ACD terminating trunk groups. The trunk groups must have already been added using **trk-grp add**.

1. Enter **term-trk-grps change** and press **RETURN**. The input **term-trk-grps change** screen appears.

```

AT&T Mgr IV 2.2                DEFINITY G2.2                <target>
tcm admin term-trk-grps change                Page 1 of 1

      Trunk Group Number: ____

```


- Enter the Trunk Group Number. Valid entries are **18—999** for Generic 2 and System 85 R2V4, **18—255** for R2V2-R2V3 and DIMENSION 3.8, and **18—99** for DIMENSION 1.16 only. Press **EXECUTE**. The output **term-trk-grps change** screen is displayed.

```

AT&T Mgr IV 2.2                DEFINITY G2.2                <target>
tcm admin term-trk-grps change                Page 1 of 1

Trunk Group Number: 242

Termination:

X Automatic Call Distribution [ACD]
_ Special Services Attendant
_ Centralized Attendant Service

CMS/MIS: _

ACD Split: 1
ACD Priority: 1

```

You are allowed to change entries in the Termination, CMS/MIS, ACD Split, and ACD Priority fields.

- Select the ACD termination by entering **x** in the Automatic Call Distribution [ACD] field. The ACD Split and ACD Priority fields will appear only for an ACD termination. Press **RETURN**.

4. [Generic 2 or System 85 R2V3-R2V4 only] If you have a Call Management System and you want the trunk to be measured by CMS, enter the CMS or MIS Type number of the trunk. Enter **1** for outgoing, **2** for incoming, or **3** for two-way. You are allowed to skip this field by pressing **RETURN**.
 - With trunk types 16, 19, 20, 21, 24, 25, 26, 35, 38, 39, (50 and 66 in Generic 2 and System 85 R2V4), the CMS/MIS field is always displayed for the trunk groups within the range of **18—999** for Generic 2 and System 85 R2V4, **18—255** for R2V2-R2V3 and DIMENSION 3.8, and **18—99** for DIMENSION 1.16 only. The CMS/MIS field will be displayed for trunk types other than these. Therefore, you will be able to specify measurements both for terminating and non-terminating trunks.
Note: Trunk Type 50 is only allowed when Speaker Verification is enabled via the **sys-cos change** transaction.
5. Enter the ACD Split number. Valid entries are **1—60** for Generic 2 and System 85 R2V4, **1—30** for R2V3, and **1—28** for R2V2 and DIMENSION FP8. Press **RETURN**.
6. Enter the Priority Level if each is to be given priority; leave the field empty if no priority is to be given.
Note: If you are using Call Management System (CMS) in conjunction with ACD, make sure you assign the groups sequentially. CMS measures group activities (such as speed of answering or average holding time) for a sequence of ACD groups. Remember to tell the CMS Administrator whenever you make changes that affect CMS. See "Administering ACD Groups and Group Members" (with CMS) earlier in this chapter for more information.
7. Press **EXECUTE** to enter the data.

Administering ACD When You Have Call Management (CMS)

If you also have a Call Management System (CMS), you may prefer to use that system to manage and track certain aspects of the (ACD) feature. If you use Manager IV to administer your Generic 2 and System 85 as a whole, and Call Management to administer your ACD data, you must keep track of changes made to the switch by both Manager IV and Call Management.

The following procedures are provided to help avoid problems that may result from using two different systems to administer ACD. They recommend which system to use for specific ACD administration, assuming that Call Management is the preferred system to administer those data items. If you have a Call Management system, refer to these procedures when you need to administer ACD.

For details about using each command, refer to the ACD procedures earlier in this chapter.

Most of the ACD commands appear under both the TCM and FM hierarchies for user convenience. When a command is specified in the procedures, the command line indicates TCM or FM, depending on the hierarchy for the specified command.

Call Management Administration of Switch Translation Data

The following table describes the data items that can be administered both by Call Management and Manager IV. The table lists the Manager IV transaction used to administer the data and whether this data is stored in the Manager IV database as well as in the product.

Table 8-1. Call Management Administration of ACD Data

Description of Data Items	Manager IV Transaction	Manager IV Database?
ACD inflow level	acd-group	y
ACD outflow level	acd-group	y
Delay 1st announce	acd-announcements	y
Delay 2nd announce	acd-announcements	y
ACD member extn	acd-members	n
ACD split to which trunk group is terminated	term-trk-grps	y

The table implies that Call Management can administer only a subset of ACD features. The rest of the translations must be made via Manager IV. You can also see that the data administrable by Call Management is not self-contained, and depends on certain data items that are only administrable by Manager IV. Conversely, some of the data items that can only be administered by Manager IV are dependent on data that can be administered only by Call Management.

Procedure: Busying out Call Management with Manager IV

Administration of ACD data by Manager IV should always be coordinated with the Call Management Administrator, as Call Management is the end user of this data. Before Manager IV can administer certain ACD data, Call Management must be "busied out" using the Manager IV command **fm admin cms busyout**. While Call Management is busied out, it cannot administer any switch translation data. Certain statistic gathering and monitoring activities by Call Management are also suspended. If these functions are stopped for more than a short period of time, there is a large impact on Call Management statistics and reports. When Manager IV has finished administering this data, it must "release" Call Management, using the command **fm admin cms release**.

Note: It is imperative that you coordinate any busy out of Call Management with the Call Management Administrator.

Call Management must be busied out before these Manager IV commands can be executed:

- **acd-grp**
- **acd-members**
- **cms-extension**
- **term-trk-grps**
- **trk-grp, trk** (only if trunk group is measured by Call Management).

In Generic 2.2, CMS needs only to be busied out for ACD members, ACD groups or terminating trunk groups when changing the status from measured to unmeasured or unmeasured to measured.

Call Management must be released via the **fm admin cms release** transaction only if a **fm admin cms busyout** was previously performed.

Procedure: How to Busy out Call Management

1. Contact the Call Management Administrator to arrange a mutually agreed time to busy out Call Management.
2. Run the command **fm admin cms busyout**.
3. Perform the necessary ACD administration through Manager IV.
4. Run the command **fm admin cms release** as soon as the ACD data has been administered.
5. Inform the Call Management Administrator that this process is complete.

Displaying the Switch's ACD Data

Manager IV can use the product-admin area to display any ACD data from the switch at any time, with no impact on Call Management. Data can be displayed from the Manager IV database at any time, using the database-admin area. However, remember that database displays show only what is in the Manager IV database, and do not guarantee that the data items that are administrable by Call Management are correct. For these data items, you should use only product-admin displays from Manager IV.

Downloading Manager IV Transactions to the Switch

Although you would normally schedule ACD transactions in Service Requests that download to the switch overnight, this is not recommended when you are administering ACD data that is interdependent with Call Management. For the transactions contained in the procedures in the following chapters, schedule the Service Request to download only a few minutes from the current time, or run transactions immediately. You might also create the Service Request during off-hours when Call Management is not active, and then schedule it during the same off-hour period. This will prevent Service Request failures caused by Call Management changing some related data item. It will also prevent Manager IV from inadvertently undoing a change that Call Management has already made.

Saving Data in a Model

Some of the procedures in the following chapters require saving data from a product-admin display transaction in a model, and then reading the data from the model into an admin change screen. This enables information from the switch to be read into admin or database-admin screens, reducing the chances of data entry errors that might put the switch and database out of sync. For information on modeling, see *Getting Started with DEFINITY® Manager IV*.

Administering ACD Groups

ACD splits must be added or removed via Manager IV. In addition, changes to data items, except for inflow and outflow, can only be made through Manager IV. The **acd-grp** command is used to add, change, display, or remove an ACD split and to define its characteristics. The prerequisites and commands used in each transaction are shown below.

Procedure: Adding an ACD Group

1. Busy out Call Management using **fm admin cms busyout**.
2. Add the ACD group using **acd-grp add**. You can use the **acd-grp add** transaction to mark a split as measured or unmeasured by entering **y** or **n** in the CMS Measurement field [Generic 2.2 only]. In pre-Generic 2.2 switches, agents are defined as measured not splits. For a detailed screen description, refer to "Procedure: Adding ACD/UCD/EUCD Groups" earlier in this chapter.
3. Release Call Management using **fm admin cms release**.
4. Inform the Call Management Administrator when the ACD split has been successfully added to the switch.

Procedure: Removing an ACD Group

1. Contact the Call Management Administrator to determine when the ACD split will no longer be in use.
2. In the product-admin area, run **acd-members display** to determine if there are extensions assigned as members of the indicated ACD split. If there are, contact the Call Management Administrator.
 - If the Call Management Administrator wants these extensions removed as ACD members, and agrees that this can be done via Manager IV, run **acd-members remove** to remove them.

[Generic 2.2] If the split is measured, the **acd-members remove** transaction will move the members to Split 0 which is measured by default. Use the **cms-extension** transaction to remove these members from Split 0 if measurement is no longer required.

3. In the product-admin area, run **term-trk-grps display** to determine if there are trunk groups terminating on the ACD split. If there are, contact the Call Management Administrator.
 - If Call Management does not want the termination of the trunk group(s) removed, the ACD split cannot be removed.
 - If Call Management agrees that the termination can be removed, run **term-trk-grps remove**. The trunk groups will no longer be terminated on the ACD split in both the Manager IV data base and the switch.
4. Busy out Call Management using **fm admin cms busyout** in the admin area.
5. Remove the ACD group using **acd-grp remove** in the admin area.

[Generic 2.2] If the split is measured, the **acd-grp remove** transaction will move the supervisor's extension to Split 0 which is measured by default. Use the **cms-extension** transaction to remove the member from Split 0.

6. Release Call Management using **fm admin cms release** in the admin area.

Procedure: Changing an ACD Group

1. Run **acd-grp display**. Save the output in a model.
2. Busy out Call Management using **fm admin cms busyout**. In Generic 2.2, run **fm admin cms busyout** only if you are changing measurement status.

3. Run **acd-grp change**. Read the data from the model into the change screen. Do not change the inflow or outflow level unless instructed to do so by the Call Management Administrator. Any of the other fields on the screen can be changed.
4. Release Call Management using **fm admin cms release**.

Administering ACD Announcements

The **acd-announcements** command is used to add, change, display, or remove ACD recorded announcement data. The only data items of this transaction that can be administered by Call Management are the delay times for the first and second announcements. The recorded announcement unit can only be associated with an equipment location via Manager IV. You do not need to busy out Call Management before running this transaction.

Adding an ACD Announcement Unit

Add the announcement using **acd-announcements add** and contact the Manager IV Administrator when ACD announcement data has been successfully added to the switch.

Removing an ACD Announcement Unit

Contact the Call Management Administrator to verify that the recorded announcement is not in use for the indicated ACD split, and then remove the announcement using **acd-announcements remove**.

Changing ACD Announcement Data

In the product-admin area, run **acd-announcements display**, saving the output in a model. In the admin area, run **acd-announcement change**. Read the data from the model into the change screen. Do not change the first or second announcement delay time unless instructed to do so by the Call Management Administrator. Any of the other fields can be changed.

Administering ACD Members

The **acd-members** command is used to add, display, or remove ACD agents from an ACD split. This transaction is product-only, and the Manager IV database does not store data that indicates whether an extension is an ACD agent. This data can also be administered by the ACD split supervisor. Run this transaction only if instructed to do so by the Call Management Administrator since this is a task typically performed by Call Management.

Procedure: Adding/Changing/Removing ACD Agents

1. Busy out Call Management using **fm admin cms busyout**.
2. Administer the members of the ACD group using the appropriate transaction: **acd-members add/display/remove**
3. Release Call Management using **fm admin cms release**.

If You Have Call Management (CMS)

If you have the Call Management System feature, you can use it to measure and report on ACD splits. As an alternative, you may want to add ACD split members so their work load can be measured by CMS, even though the split itself is not measured.

Procedure: Adding a Measured Extension

1. Inform the CMS administrator that you will be adding a measured extension to CMS. The administrator must know that you are going to busy out CMS, since this will cause an interruption in CMS data collection.
2. Busy out CMS using the command **fm admin cms busyout**.
3. Enter the command **cms extension add**.

```

AT&T Mgr IV 2.2  SR:      DEFINITY G2.2          <target>
tcm admin cms-extension add                    Page 1 of 1

THIS INFORMATION IS RETAINED ONLY IN THE PRODUCT
PLEASE BUSYOUT CMS BEFORE ADDING AN EXTN

CMS Extension No:

```

4. Enter the extension to be measured by CMS (**000000—99999**).
5. Press **EXECUTE** to run the transaction.
6. Release CMS using the command **fm admin cms release**.

Note: It is recommended that the **fm admin cms busyout** and **fm admin cms release** transactions be scheduled in Service Requests.

Administering Terminating Trunk Groups with ACD

The **term-trk-grps change** command is used to terminate a trunk group to an ACD split, as well as to define whether the trunk group has priority termination, and whether it is measured by Call Management. The only data item in this transaction that can be administered by Call Management is the ACD split number to which the trunk group terminates. The ACD priority and Call Management measurement indication can only be administered via Manager IV.

Procedure: Adding a Trunk Group Termination

1. Run **fm product-admin term-trk-grps display** to check if this trunk group is already terminated to an ACD split. If it is, contact the Call Management Administrator to resolve the discrepancy.
2. Busy out Call Management using **fm admin cms busyout**.

[Generic 2.2] Run the **fm admin cms busyout** transaction only if the trunk is terminating to an ACD split measured by CMS.

3. Assign the terminating trunk group to the ACD split using **fm admin term-trk-grps change**.
4. Release Call Management using **fm admin cms release**.
5. Contact the Call Management Administrator when the trunk group has been successfully terminated to the ACD split at the switch.

Procedure: Removing a Trunk Group Termination from an ACD Split

1. Contact the Call Management Administrator to verify that the trunk group should no longer be terminated on an ACD split.
2. Display the existing switch data using **fm product-admin term-trk-grps display**.
3. Busy out Call Management using **fm admin cms busyout**.
4. Remove the terminating trunk groups using **fm admin term-trk-grps change**.
5. Release Call Management using **fm admin cms release**.

Procedure: Changing Trunk Group Termination Attributes

Use this procedure to change the ACD split to which the trunk group is terminated, the ACD priority, or the Call Management measurement flag.

1. To be sure the information you entered matches the switch information, run **fm product-admin term-trk-grps display** for the specified trunk group. Save the output in a model.
2. Busy out Call Management using **fm admin cms busyout**. In Generic 2.2, run **fm admin cms busyout** only if ACD is measured by CMS.
3. To change a data item, run **fm admin term-trk-grps change**. Read in the data from the model, then change the specific data item.
4. Release Call Management using **fm admin cms release**.

Recovering from Service Request Errors

These procedures rely on your contact with the Call Management Administrator to keep the Manager IV database in sync with the switch for the data items that are administrable via Call Management. If Manager IV's ACD data does become out of sync with the switch, Service Request transactions may fail to download to the switch. This chapter explains what to do if this occurs.

Removing Trunk Groups

If Manager IV attempts to remove a trunk group that Call Management has terminated to an ACD split, the Service Request will fail to download to the switch. Because removing trunk groups is not a common task, this error condition is unlikely. In the event it occurs, take the following steps to recover from this error.

- To see to which ACD split the trunk terminates, run **fm product-admin term-trk-grps display** and enter the trunk group number.
- Contact the Call Management Administrator to resolve the discrepancy.
- If the Administrator agrees that the trunk group no longer needs to terminate to the split, run **fm product-admin term-trk-grps change** to remove the termination.
- Re-run the Service Request to remove the trunk group using **fm admin service-request run**. It should download successfully.

CALL VECTORING [GENERIC 2, SYSTEM 85 R2V4]

The Call Vectoring feature is an enhanced and flexible way of processing incoming calls to the Generic 2, or System 85 R2V4 switches. It allows you to define the processing of incoming calls to ACD splits in a way that provides additional flexibility over existing methods. Call Vectoring can change ACD call treatments by making the determination of a call treatment on a per call, rather than a per split, basis, and redirection can occur based on the time the call is in the queue as well as on the number of calls that are in the queue. Call Vectoring increases the feedback given to a caller while waiting, and improves the handling time of each call.

In Generic 2.2, Call Vectoring allows you to distribute ACD calls to a subset of ACD agents based on agents' skills and skills required to handle a call. For more details, refer to "Expert Agent Selection" later in this chapter.

Vectors, a set of predefined call processing steps, are the basis of the Call Vectoring feature. A vector will define the call processing sequences to be taken for incoming calls. Each vector can have up to 15 steps including delays, announcements, and split queuing.

You can assign steps to a vector and features to each step using the **vector-features** command. There are 9 available step types, 10 for Generic 2.2, explained in the procedure that follows.

In Generic 2.1 and System 85 R2V4, you can define up to 128 vectors, which can be assigned to one or more incoming trunk groups or directory numbers. In Generic 2.2, the range of administrable vector numbers is **1—511**.

In order to administer and use the Call Vectoring feature, transactions are required in the TCM application as well as in Facilities Management (FM) Operations application. The following TCM Call Vectoring transactions are explained in this chapter:

- Adding a Vector Directory Number (VDN) via **vdn add**. A VDN is a "soft" extension number that is used for dial access to vectors. The **vdn** command is also available to FM users.
- Changing an available abbreviated dial list to be used by Call Vectoring to store call destinations. This is done with the command **vector-abbr-list change**.
- Assigning a VDN as the last point in a call-coverage path via the **call-coverage path** command.

To administer Call Vectoring in FM, perform the transactions listed below:

- Assign features to a vector using the **vector-features add** command.
- Assign a Vector Number to a VDN using the **call-vectoring add** command.
- Assign trunk groups to VDNs using the **term-trk-grps** command.
- Associate ACD Announcements with VDNs via the **acd-announcements** command.

Note: There are 84 assignable announcements, 255 in Generic 2.2. These announcements are used for vector features and acd-announcements. Vector features must use non-continuous announcements only. ACD announcements must be continuous. Use the **trk-grp add** transaction (Type **90**) to assign the continuous or non-continuous recorded announcements. For a continuous assignment, populate the Continuous Announcement field with **y**. To define a non-continuous announcement, enter **n** in the Continuous Announcement field. For a screen description, refer to "Procedure: How to Add Trunks and Trunk Groups" in Chapter 4 of the *DEFINITY® Manager IV Facilities Management Operations* manual.

If the Call Vectoring feature is not present when Manager IV is initialized, it cannot be administered via Manager IV. The feature cannot be activated through Manager IV. If Call Vectoring is installed in a switch after Manager IV is initialized, Manager IV must be reinitialized before it can be administered.

CALL MANAGEMENT SYSTEM (CMS) ADMINISTRATION

If you have a Call Management System, you may prefer to use that vehicle to administer certain Call Vectoring data. You must be sure to keep track of changes made to the switch with either Manager IV or Call Management. Refer to "Administering Call Vectoring When You Have Call Management (CMS)" later in this chapter.

Expert Agent Selection

[Generic 2.2]

The Expert Agent Selection (EAS) feature introduces additional qualifications or restrictions on the distribution of calls to Automatic Call Distribution (ACD) agents within a split. This feature is available on Generic 2.2 only and can only be enabled at the system initialization. When activated, Expert Agent Selection allows ACD calls to be distributed to a subset of ACD agents that are members of larger ACD splits. The distribution of calls is based on agents' skills and skills required to handle a call.

A skill is a two or three digit number that represents the service or call handling ability required for servicing a call. Agent Skills is the call handling skill active for a logged in agent in a skill tens group. A skill number is derived from the split number (hundreds and tens digit) and a last (units) digit which is either the default for the split (a **0** digit) or a non-zero digit.

A skill number with a zero last (units digit) is assigned as a default for all agents logged into a split. A call with a default skill of **0** active will be distributed to any available agent in the split. A skill number other than the default (**0**) skill for a skill tens group has a last (units) digit range of **1** to **9**. For example, for split 1, the tens digit is a 1 with no hundreds digit while for split 60, the hundreds digit is 6 and the tens digit is 0. The skill number range in split 1 is **10—19**, while for split 60, it is **600—609**.

An Expert Agent is simply a number from one through nine that can be associated with an ACD agent, an ACD call, a Vector Directory Number (VDN), and a **vector-features** command. From login, agents dial a special Expert Agent Dial Access Code (DAC) to define to the switch their skill level. An incoming ACD call is distributed to an ACD agent based on matching any one of a set of skill requirements of a call to one or more skill abilities of the agent. Both ACD calls and ACD agents may have one or more skills active at any one time.

The Expert Agent Selection feature is optional and can only be activated if Call Vectoring is also enabled. Conversely, Call Vectoring cannot be deactivated if Expert Agent Selection is active.

The Expert Agent Selection feature is implemented by associating the skill level with an ACD agent, an ACD call, and a VDN using the following transactions:

- **vector-features add** to assign skills to ACD calls (VDNs)
- **dial-access-codes add/change** to define feature Dial Access Code to map to ACD agent skills
- **agent-skills change** to assign skill preferences or skill numbers to VDNs

When executing a transaction used in implementation of Expert Agent Selection consider the following:

- When Call Vectoring is enabled, before executing the **term-trk-grps** transaction, the Call Management System (CMS) must be busied out if measurement status is changing, measured to unmeasured or unmeasured to measured
- When a VDN is assigned to a vector number, CMS must be busied out before executing a **call-vectoring** transaction if measurement status is changing.

Vector Features

The actual steps of the vector are assigned using the **vector-features** command. There are 9 step types, 10 step types in Generic 2.2, that can be assigned to a vector, and up to 15 steps can be used in each vector.

This chapter discusses the step types and their parameters. It then explains the actual steps involved in administering vector features and describes the programming for a sample vector.

Vector Features Step Types

Each of the 9, 10 in Generic 2.2, available step types has its own parameters. The step type and other parameters are assigned by number. The step types are numbered from 1 to 9 (1 to 10 in Generic 2.2); each step and its options are described below.

(1) Queue to Main Split. This step type queues the call to any of the 60 ACD splits. Queuing is available at the four different priority levels listed below:

- (0) Low
- (1) Medium
- (2) High
- (3) Top.

These levels are specified on the vector-features screen by number under the category **Priority**. Once queued, calls are eligible to be answered by ACD agents.

(2) Check Backup Split. Calls are not connected or queued to a backup split unless the threshold conditions have been met. Specify the condition by number (**0, 2, 5, 7**) under the **Condition** heading. The conditions are:

- **0** = Number of available agents > threshold
- **2** = Number of staffed agents > threshold
- **5** = Number of calls queued < threshold
- **7** = Oldest call waiting < threshold.

Once the condition has been entered, the threshold must be specified under the **threshold** category. Threshold refers to the number of calls that can be queued here. The wait time for thresholds can also be set in 2-second increments up to 998 seconds.

(3) Route to Step Type. This step type routes callers to local or external destinations including:

- Local extensions
- Attendant
- CAS Attendant
- Vector Directory Number
- AAR/ARS Calls
- DCS Calls.

Route to destinations are stored in the vector abbreviated dial list that is created via the **vector-abbr-dial-list** command.

(4) Announcement Step Type. There are 84 assignable announcements, 255 in Generic 2.2. Unlike standard ACD, they can be used flexibly. When the caller is connected to the announcement, the system resumes supervision of the call.

(5) Delay Step Type. This step type delays caller progression through a vector. The three types of delay treatment are as follows:

- (0) Silence
- (1) Ringback
- (2) Music.

Specify the delay type by entering the number under the Condition head.

(6) Go-to-step Type. This step type transfers control within a vector to a specified step or transfers control unconditionally. There are ten condition types as listed below:

- (-) Unconditional
- (0) Number of available agents > threshold
- (1) Number of available agents < threshold
- (2) Number of staffed agents > threshold
- (3) Number of staffed agents < threshold
- (4) Number of calls queued > threshold
- (5) Number of calls queued < threshold
- (6) Oldest call waiting < threshold
- (7) Oldest call waiting > threshold
- (8) Day-Time of Day start
- (9) Day-Time of Day end.

(7) Forced Disconnect Step Type. This step type disconnects a caller and stops all vector processing. Answer supervision is returned with this step type, except when ISDN trunks are used. Answer supervision is returned because the call must be "answered" before it is disconnected.

(8) Forced Busy. This step type returns a busy tone to a caller and stops all vector processing. The caller is then removed from the queue and backup split scanning is stopped.

(9) Stop Step Type. This step type stops all vector processing. The call stays queued and backup split continues.

(10) Goto Vector. [Generic 2.2 only] This step type allows vector processing to continue using another vector in the same manner that the Goto Step type (6) allows processing to continue from a different step. This is another method of chaining vectors to create longer vectors in addition to the Route to VDN step type. All conditions that apply to Goto Step apply to Goto Vector.

Procedure: Assigning Vector Features

Follow the procedure below to administer vector features.

1. Enter the command **vector-feature add**. The following screen is displayed.

AT&T Mgr IV 2.2	DEFINITY G2.2	<target>						
tcm admin vector-features add		Page 1 of 1						
Vector Number: ____								
Step No.	Step Type	Destination	Priority	Condition	Threshold	Skill Type	Start Time	End Time
-----	-----	-----	-----	-----	-----	-----	-----	-----

Notes:

- [Generic 2.2] The Skill Type field appears only if the Expert Agent Selection feature is activated. Otherwise, the ACD No. field is displayed.
- [Generic 2.1 and System 85 R2V4] The ACD No field is displayed in place of Skill Type.

2. Fill in the Step No. from 1 to 15. You can enter up to 15 steps. Begin with 1.

3. Enter the number of the Step Type to be assigned to each step:

- [Generic 2.1 and System 85 R2V4] Valid entries are **1—9**.
- [Generic 2.2 only] Valid entries are **1—10**.

See "Vector Feature Step Types" for a list of step types.

4. Enter the appropriate information in the rest of the fields. Fields are dynamic and will be underlined depending on the step type you select. These are valid parameters for the following fields:

Destination. This field is required based on the Step Type.

- [Generic 2.1 and System 85 R2V4] Enter the number of the main or back-up ACD split (**1—60**) for Step Type 1 or 2. Enter the Vector Abbreviated Dial List entry number (**1—95**) for Step Type 3. Enter the recorded announcement number (**16—99**) for Step Type 4 or 7. Enter the step number (**1—15**) for Step Type 6.
- [Generic 2.2 only] Enter the number of the main or back-up ACD split (**1—60**) for Step Type 1 and 2 when the Expert Agent Selection (EAS) feature is not active.

For Step Type 1 and 2, if EAS is active, enter Skill Preference (**1—3**) or Skill Number (**10—609**).

For Step Type 3, enter Abbreviated Dial Group List **1—95, 101—195, 201—295, 301—395, 401—495** (abbreviated dial list/member number).

For Step Type 4, enter announcement number **16—99** or **1—255** [Generic 2.2].

For Step Type 6, enter Goto Step number **1—15**.

For Step Type 7, enter forced disconnect after recorded announcement number **16—99** or **1—255** [Generic 2.2].

[Generic 2.2] For Step Type 10, enter vector number **1—511**.

Priority. This field is required based on Step Type.

- Enter the appropriate priority level: (**0**) low, (**1**) medium, (**2**) high, (**3**) top, for Step Type 1, 2, 6, and 10 (Generic 2.2 only).

Condition. This field is required based on Step Type.

- [Generic 2 and System 85 R2V4] Enter the number that corresponds to the condition you want to set:
 - (-) Unconditional
 - (0) Number of available agents > threshold
 - (1) Number of available agents < threshold
 - (2) Number of staffed agents > threshold
 - (3) Number of staffed agents < threshold
 - (4) Number of calls queued > threshold
 - (5) Number of calls queued < threshold
 - (6) Oldest call waiting > threshold
 - (7) Oldest call waiting < threshold
 - (8) Time of day after start time
 - (9) Time of day after end time.

For Step Types 6 (for all switch releases) and 10 (Generic 2.2 only), if you enter **8** or **9**, on the screen, it will appear like **8/9**. This means that start time corresponds to Condition 8, and end time corresponds to Condition 9.

For Step Type 5, Condition 0=silence, 1=ring back, and 2=music.

- For Step Type 2, condition range is **0, 2, 5**, or **7**.

Threshold. This field is required based on Step Type.

ACD No. This field always appears in Generic 2.1 and System 85 R2V4. In Generic 2.2, ACD No. appears only when Expert Agent Selection is not activated.

- Enter the number of the ACD split (**1—60**) for Step Type 6.

Skill Number [Generic 2.2 only] Enter VDN skill preference (**1—3**) or skill number (**10—609**) for Step Type 6, or 10 with Condition = 0—7 when the Expert Agent Selection feature is activated.

Start time Enter day to be started, for Step Type 6, Condition 8. You can enter a number between **0** and **7**; (**0**) corresponds to every day, (**1**) to Monday, etc. Next, enter the hour to start. You can enter a number between **0** and **23**; (**0**) corresponds to 12:00 am. Enter the minute to be started. You can enter a number between **0** and **59**.

End Time Enter day to be ended, for Step Type 6, Condition 8. You can enter a number between **0** and **7**; (**0**) corresponds to every day, (**1**) to Monday, etc. Next, enter the hour to finish between **0** and **23**; (**0**) corresponds to 12:00 am. Enter the minute to be finished between **0** and **59**.

5. Enter the rest of the required information for this vector.

Below is a typical vectoring scenario to provide you with a detailed example of adding vector features.

Sample Scenario: Sending Calls to Night Service

[Generic 2.1 and System 85 R2V4]

This example shows you how to develop vector features to send calls to night service. In this example, calls received between Monday at 7:30 am and Friday at 4:00 pm are to be queued and answered. Calls between Friday at 4:00 pm and Monday at 7:30 am are routed to the night service extension.

The vector steps for this scenario are:

1. Step Type 6: If the day and time is between Friday 4:00 pm and Monday 7:30 am, the call should go to Step 5, which will route them to night service.
2. Step Type 1: At all other times, the call should queue to main split, with low priority (priority 0).
3. Step Type 5: Calls should receive a 2-second delay, with ringback.
4. Step Type 9: Stop processing.
5. Step Type 3: Calls should route to night service, specified as Destination 50. Calls sent to this Step have already met the time criteria specified in Step 1.
6. Step Type 9: Stop processing.

On the screen, you would enter the information for this scenario as follows:

AT&T Mgr IV 2.2		DEFINITY G2.1		<target>			
tcm admin vector-features add				Page 1 of 1			
Vector Number: ____							
Step No.	Step Type	Destination	Priority	Condition	Threshold ACD No	Start Time	End Time
1	6	5		8/9		5/4/00	1/7/30
2	1	1	0				
3	5			2	2		
4	9						
5	3	50					
6	9						

Procedure: Defining DACs for Agent Skills

The **dial-access-codes** transaction is used to administer Dial Access Codes (DACs) associated with a terminal feature or attendant console feature.

In Generic 2.2, Expert Agent Skills Selection can only be administered if the Dial Access Code (DAC) is set for the agents' skills. The **dial-access-codes** transaction allows you to assign DACs that are used by agents to define to the switch their skill level. This activates the distribution of ACD calls based on agents' skills and skills required to handle calls. For more details, refer to "Expert Agent Selection" earlier in this chapter.

1. Enter the **dial-access-codes change** transaction. The following screen appears:

AT&T Mgr IV 2.2	DEFINITY G2.2	<target>
tcm admin dial-access-codes change		Page 1 of 1
ACD Agent Skills:		_____
ACD(UCD) Member Aid:		_____
ACD(UCD) Member Delete:		_____
Agent Login:		_____
Agent Logout:		_____
Agent Override:		_____
Agent Override Tone:		_____
Announcement Verify:		_____
ARL Timed Reminder Change:		_____

- In the ACD Agent Skills field, enter the Dial Access Code (*, #, 0—9). Press **RETURN**.
- Populate the rest of the fields as appropriate. Press **RETURN**.

Procedure: Displaying Dial Access Codes

Use the **dial-access-codes display** transaction to view DACs associated with terminal features or attendant console features. In Generic 2.2, this transaction also displays DACs mapping to ACD agents' skills.

- Enter the **dial-access-codes display** transaction. The **display** screen is the same as described for the **dial-access-codes change** transaction. For more details, refer to "Procedure: Defining DACs for Agent Skills."

Assigning VDN Skill Preferences

The **agent-skills** transaction allows you to administer a prioritized list of skill preferences (*Primary, Secondary, Tertiary Skill*) for a Vector Directory Number (VDN). The VDN Skill Preferences are required or preferred for the handling of the calls directed to the VDN.

Commands

The **agent-skills** transaction can be accessed from the admin, or product-admin area under the FM or TCM application. This transaction is supported only on Generic 2.2. The verbs supported are: **change** and **display**.

Procedure: Assigning Skill Preferences or Skill Numbers to VDNs

The **agent-skills change** transaction is used to assign skill preferences or skill numbers to Vector Directory Numbers.

- Enter the **agent-skills change** transaction and press **RETURN**. The following screen appears.


```

AT&T Mgr IV 2.2                DEFINITY G2.2                <target>
tcm admin agent-skills change                Page 1 of 2

                YOU ARE DIRECTLY ACCESSING THE PRODUCT

                Vector Directory Number (VDN): 50000

                Primary Skill Number: ____

                Secondary Skill Number: ____

                Tertiary Skill Number: ____

```

2. Enter the Vector Directory Number to be associated with a skill preference or skill number. Valid entries are **000—99999**. This field is required. Press **(RETURN)**.
- Note:** Primary Skill Number, Secondary Skill Number and Tertiary Skill Number are dynamic fields; they appear after you enter the Vector Directory Number.
3. For Primary, Secondary, and Tertiary Skill Number field, valid entries are **10—609**. Populate these fields as appropriate. Press **(EXECUTE)**.

Procedure: Displaying VDN Skill Preferences

The **agent-skills display** transaction allows you to view skill preferences or skill numbers assigned to the specified Vector Directory Numbers.

1. Enter the **agent-skills display** transaction. The input **display** screen appears.
2. Enter the Vector Directory Number whose skill preferences you wish to display. Press **(RETURN)**. The Primary Skill Number, Secondary Skill Number and Tertiary Skill Number fields will be brought up. The **display** screen is the same as described for the **agent-skills change** transaction. For a detailed field description, refer to "Procedure: Assigning VDN Skill Preferences or Skill Numbers to VDNs".

Assigning Vectors to VDNs

After assigning features to a vector, the next step is associate these vectors with VDNs. The vector-VDN associations are administered via the **call-vectoring** transaction. This transaction applies to Generic 2 and System 85 R2V4 only. You can run the **call-vectoring** command from the database-admin, admin, and product-admin areas.

To associate a vector with VDN(s), use the **call-vectoring add** transaction.

To display vectors that have been already assigned to VDNs, enter the **call-vectoring display** command.

To change vector-VDN association(s), use the **call-vectoring change** transaction.

To change the Vector associated with a VDN to a different Vector number, enter the **call-vectoring move** command.

To remove vector-VDN association(s), enter the **call-vectoring remove** command.

Procedure: Associating Vectors with VDNs

The **call-vectoring add** transaction allows you to assign a vector number to either a single or multiple VDNs. Prior to administering vector-VDN associations, be sure to define vector features by entering the **vector-features add** command.

To associate a vector number to a VDN, follow the steps below:

1. Enter the **call-vectoring add** command; the following screen is displayed:

```

AT&T Mgr IV 2.2          DEFINITY G2.2          <target>
tcm admin call-vectoring add          Page 1 of 1

                                Select Option:
                                _ Single VDN
                                x Multiple VDNs

Vector Number: ____
    
```

2. Enter the Vector Number.
 - [Generic 2.1 and System R2V4] Valid range is **1—128**
 - [Generic 2.2] Valid range is **1—511**.
 - If the vector number has already been assigned, you cannot associate this vector with VDN(s).
3. Mark an **x** next to the single VDN or multiple VDN field depending on whether you are associating the vector number with one or more VDNs.

Depending on whether you select single, or multiple, one or several lines of the following categories are displayed as shown below:

```

AT&T Mgr IV 2.2          DEFINITY G2.2          <target>
tcm admin call-vectoring add          Page 1 of 1

Vector          CMS          Console          Return Call          Display
Directory No.   Measured          Message          Indicator          Override
-----          -          -/_/_/_/_          -          -
    
```

4. Enter the Vector Directory No. being associated with the vector. Valid entries are **000—99999**. Press **(RETURN)**.
 - If the Vector Directory Number is not defined in the database, you will not be able to associate a vector with this VDN number. Use the **vdn add** transaction to assign the VDN number (FM and TCM application).
5. In the CMS Measured field, enter **y** or **n**.
6. Enter the Console Message to be displayed with this vector number. Valid entries are "-", **0—9**, **A—Z**. These characters will be displayed on the console or on the integrated display. You can use

this field to identify the group or department to whom the call is being made. Press

RETURN.

7. Enter the Return Call Indicator. Enter **1** if the vector has an ACD split with a message center service; **2** if the vector has AUDIX; if the vector has both AUDIX and message center, enter **-**; if the vector has no machine assigned, enter **0**.
8. Enter the Display Override field. Valid entries are **y**, or **n**. Press **RETURN**.

Procedure: Displaying Vector-VDN Associations

The **call-vectoring display** transaction allows you to view vectors that have been already assigned to VDNs.

1. Enter the **call-vectoring display** command. Press **RETURN**. The following screen appears.

```

AT&T Mgr IV 2.2                DEFINITY G2.2                <target>
tcm admin call-vectoring display                Page 1 of 1

                                Select Option:
Vector Number: 1                    _ Single VDN
                                x Multiple VDNs
VDN Number: ____

```

2. Enter the Vector Number.
 - [Generic 2.1 and System 85 R2V4] Valid entries are **1—128**.
 - [Generic 2.2] Valid entries are **1—511**.
 Press **RETURN**.
3. Depending on whether you are associating the vector number with one or more VDNs, enter **x** next to the Single VDN or Multiple VDNs. Press **RETURN**.
 - If you select the Single VDN, the VDN Number field appears on the screen.
 - If you select Multiple VDNs, the VDN Range field appears on the screen.
4. Enter the VDN Number or VDN Range. Valid entries are **000—99999**. This field is required. Press **RETURN**. The output **call-vectoring display** screen appears.

AT&T Mgr IV 2.2	DEFINITY G2.2	<target>		
tcm admin call-vectoring display		Page 1 of 1		
Vector Number: 1				
Vector Directory No.	CMS Measured	Console Message	Return Call Indicator	Display Override
-----	-----	-----	-----	-----
_____	-	_/_/_/_/	-	-
_____	-	_/_/_/_/	-	-
_____	-	_/_/_/_/	-	-
_____	-	_/_/_/_/	-	-
_____	-	_/_/_/_/	-	-
_____	-	_/_/_/_/	-	-
_____	-	_/_/_/_/	-	-
_____	-	_/_/_/_/	-	-
_____	-	_/_/_/_/	-	-

Procedure: Changing Vector-VDN Associations

The **call-vectoring change** transaction allows you to change vector-VDN associations. You are allowed to change single or multiple vector-VDN associations.

1. Enter the **call-vectoring change** command. Press **RETURN**. The **call-vectoring change** screen appears. To populate the fields, refer to "Procedure: Associating Vectors with VDNs" as the **change** screens are the same as for the **call-vectoring add** transaction.

You are allowed to change values in the following fields: CMS Measured, Console Message, Return Call Indicator, and Display Override. Vector Number and Vector Directory No. fields are display only and cannot be changed. To change the Vector Number for a particular VDN, use the **call-vectoring move** transaction.

Procedure: Changing the Vector Number for a Particular VDN

The **call-vectoring move** transaction allows you to change the Vector Number for a particular VDN.

1. Enter the **call-vectoring move** transaction. The following screen appears.

```

AT&T Mgr IV 2.2                DEFINITY G2.2                <target>
tcm admin call-vectoring move   Page 1 of 1

      Select Option:
      x Single VDN
      _ Multiple VDNs

      VDN Number: _____
      Vector Number: _____
    
```

2. VDN Number (VDN Range) and Vector Number are dynamic fields. These fields appear when you select a single or multiple VDNs by entering **x** in the Single VDN or Multiple VDNs fields. VDN Range appears in place of the VDN Number field when you select multiple VDNs.
3. Enter the VDN Number or VDN Range. Valid entries are **000—99999**. This field is required. Press **RETURN**.
4. Enter the Vector Number at which the VDN number or VDN range are terminating. Valid entries are **1—511**. This field is required. Press **EXECUTE**.
5. All of the information relevant to the specified VDN or range of VDNs will be displayed. Enter the Destination Vector Number at which the VDNs are going to be moved to and press **EXECUTE**.

```

AT&T Mgr IV 2.2                DEFINITY G2.2                <target>
tcm admin call-vectoring move   Page 1 of 1

      Destination Vector Number: 1

      Vector          CMS          Console          Return Call          Display
      Directory No.   Measured   Message          Indicator            Override
      -----
      _____    -         -/_/_/_/         -                   -
      _____    -         -/_/_/_/         -                   -
      _____    -         -/_/_/_/         -                   -
      _____    -         -/_/_/_/         -                   -
      _____    -         -/_/_/_/         -                   -
      _____    -         -/_/_/_/         -                   -
      _____    -         -/_/_/_/         -                   -
      _____    -         -/_/_/_/         -                   -
      _____    -         -/_/_/_/         -                   -
      _____    -         -/_/_/_/         -                   -
    
```

Procedure: Removing Vector-VDN Associations

The **call-vectoring remove** transaction allows you to remove vector-VDN association(s). You are allowed to remove single or multiple vector-VDN associations.

1. Enter the **call-vectoring remove** command. Press **(RETURN)**. The **call-vectoring remove** screen appears.

```

AT&T Mgr IV 2.2                DEFINITY G2.2                <target>
tcm admin call-vectoring remove                Page 1 of 1

                                Select Option:
                                _ Single VDN
                                x Multiple VDNs

Vector Number: ____

Vector Directory Number:

____
____
____
____
____
____
____
____
____

```

2. Depending on whether you are removing single, or multiple vector-VDN associations, enter **x** next to the Single VDN or Multiple VDNs. Press **(RETURN)**.
3. The Vector Directory Number field appears on the screen. Depending on whether you select single, or multiple, one or several lines are displayed for the Vector Directory Number field. Enter one or multiple VDN number(s). Valid entries are **000—99999**. Press **(RETURN)**.
 - If a trunk group has been terminated on the VDN, you cannot remove this vector-VDN association. First, enter the **term-trk-grp change** command to remove this termination.

Administering ACD Announcements

If Call Vectoring is present, the **acd-announcement** transaction has been modified to allow you to associate VDNs, as well as ACD splits or trunk groups with particular announcements. These announcements identify the source of a caller to the ACD agent by identifying the Vector Directory number (VDN field), the originating ACD split or department from which the call originates (Queue of Origin), or city (city of origin) where the call originates.

If you use the command

1. Enter the **acd-announcements add** transaction. The following screen will appear.

```

AT&T Mgr IV 2.2  SR:          DEFINITY G2.2          <target>
tcm admin acd-announcements add                    Page 1 of 1

                Select one of the following:
                  x VDN of Origin Announcement
                  City of Origin Announcement
                  Queue of Origin Announcement

```

2. Select the type of announcement to be assigned, and follow the appropriate procedure below.

Procedure: Assigning VDN of Origin Announcements

With Call Vectoring, you can associate a recorded announcement with a Vector Directory Number.

1. Select VDN of Origin and the following screen will be displayed.

```

AT&T Mgr IV 2.2  SR:          DEFINITY G2.2          <target>
tcm admin acd-announcements add                    Page 1 of 1

                Select one of the following:
                  x VDN of Origin Announcement
                  City of Origin Announcement
                  Queue of Origin Announcement

                Vector Directory Number: ____
                Recorded Announcement Number: ____

```

2. Enter the Vector Directory Number to be assigned to the announcement. You can enter a number between **000** and **99999**. This field is required. Press **RETURN**.
3. Enter the Recorded Announcement Number that is to be associated with the VDN. This field is dynamic; it appears after you enter the Vector Directory Number. The Recorded Announcement Number field is required. Valid entries are **16—99** or **1-255** [Generic 2.2]. Press **RETURN**.

Procedure: Assigning City of Origin Announcements

With Call Vectoring, the City of Origin announcement can still be assigned to a trunk group, as well as a Vector Directory Number. In this way, calls to that directory number would be given the assigned City of Origin announcement, while calls from trunk groups using the same vector could use the specific City of Origin announcement assigned to that trunk group.

1. Select "City of Origin Announcement".

```

AT&T Mgr IV 2.2  SR:          DEFINITY G2.2          <target>
tcm admin acd-announcements add                    Page 1 of 1

                Select one of the following:
                    VDN of Origin Announcement
                x City of Origin Announcement
                    Queue of Origin Announcement

Trunk Group Number:___  City-of-Origin Announcement Number: ___
    
```

2. Enter the Trunk Group Number (**18—999**) to which the announcement is to be assigned. This field is required. Press **(RETURN)**.
3. Enter the City-of-Origin Announcement Number. Valid entries are **1—255** for Generic 2.2 and **16—99** for Generic 2.1 and System 85 R2V2-R2V4. This field is required. Press **(EXECUTE)**.

Procedure: Assigning Queue of Origin Announcement

With Call Vectoring, the Queue-of-Origin Announcement will continue to be associated with an ACD split number and will only apply when a call is queued to that split.

1. Select Queue of Origin Announcement; the following screen is displayed.

```

AT&T Mgr IV 2.2  SR:          DEFINITY G2.2          <target>
tcm admin acd-announcements add                    Page 1 of 1

                Select one of the following:
                    VDN of Origin Announcement
                    City of Origin Announcement
                x Queue of Origin Announcement

ACD Split Number:___  Queue-of-Origin Announcement Number: ___
    
```

2. Enter the ACD Split Number (**1—60**) for this announcement. This field is required. Press **(RETURN)**.
3. Enter the Queue-of-Origin Announcement number. Valid entries are **1—255** for Generic 2.2 and **16—99** for Generic 2.1 and System 85 R2V2-R2V4. This field is required. Press **(EXECUTE)**.

How to Terminate Trunk Groups to VDNs

With Call Vectoring, trunk groups are no longer associated with ACD split numbers. The terminating trunk group transaction is modified if Call Vectoring is present to show whether a trunk group terminates at Centralized Attendant Service (CAS), Special Services Attendant, or a VDN. It is in this important transaction that trunk groups are associated with VDNs.

Procedure: Displaying Trunk Groups Terminating to VDNs

The **term-trk-grps display** transaction allows you to display the trunk groups terminated to VDN(s) either by Trunk Group Number or by VDN number. Valid entries for the VDN number are **000—99999**.

1. Enter the **term-trk-grps display** command. Press **RETURN**. The screens are similar to the trunk groups terminating to ACD groups. Except, wherever the ACD is referenced, VDN is used instead. Also, instead of the ACD Split field, the VDN field displays. For a detailed description, refer to "Procedure: Displaying Trunk Groups Terminating to ACD Groups."

Procedure: Terminating Trunk Groups to VDNs

Use the **term-trk-grp change** transaction to define trunk groups as VDN terminating trunk groups. The trunk groups must have already been added using **trk-grp add**.

1. Enter **term-trk-grp change** and press **RETURN**. When the screen appears, enter **x** in the Vector Directory Number [VDN] field and press **RETURN**. The screen is similar to the trunk groups terminating to ACD groups. Except, references to ACD are replaced by VDN. You are allowed to change entries in the Termination, CMS/MIS, and VDN fields. For a detailed description, refer to "Procedure: Terminating Trunk Groups to ACD Groups."

Administering ACD Groups

The **acd-grp** transaction changes when Call Vectoring is present because queue directory numbers and priority extensions are no longer used. However, queue warning lamps can still be provided. The appropriate lamp lights when the number of calls in the split's queue is greater than or equal to the assigned threshold. However, when Call Vectoring is enabled, the warning threshold designated here can be a different value from the vector step parameter that is actually used to send calls to another destination.

When Call Vectoring is present on a Generic 2, or R2V4 switch, the following screen is displayed when you enter the command **acd-grp add**.

```

AT&T Mgr IV 2.2   SR:                DEFINITY G2.2                <target>
tcm admin acd-grp add                                     Page 1 of 1

                ACD - SPLIT CHARACTERISTICS

        ACD Split No.: __

        SPLIT CHARACTERISTICS                SPLIT SUPERVISOR AND CHARACTERISTICS

                Queuing Trunk Group: ____                Multiple Call Handling? n
                Hunt Type: 0 (CIRCULAR)                Auto Available? n
                Split Type: 0 (REGULAR)                Supervisor Extension No.: _____
                Machine Number: 0
                Outflow/Queue Level: __                Forced Entry? n
                Inflow Level: 0_

                LAMP CONTROL CIRCUIT

                CMS Measurement? y                Board Index: _
                Circuit Index: _
    
```

The CMS Measurement and Forced Entry fields apply to Generic 2.2 only and do not appear on the screen for earlier switch releases.

The Split Size field does not appear on the screen for Generic 2.2. This field applies to Generic 2.1 and System 85 R2V3-R2V4 where ACD groups must be defined with a fixed size.

In Generic 2.2, you do not need to specify the split size; split sizes are dynamic, just as large as the number of agents assigned to the split. A split may contain any number of agents; the maximum number of agents allowed per split is 1024, and per system is 2048. The maximum number of CMS measured ACD agents allowed per system is 1023.

On this screen, you can set parameters, such as thresholds, as you did in "Adding ACD/UCD/EUCD Groups."

Administering Call Vectoring When You Have Call Management (CMS)

If you also have a Call Management System (CMS), you may prefer to use it to manage and track certain aspects of the Call Vectoring feature. If you use Manager IV to administer your Generic 2 and System 85 as a whole, and Call Management to administer your Call Vectoring data, it is important that you keep track of changes made to the switch by both Manager IV and Call Management.

The following procedures are provided to help avoid problems that may result from using two different systems to administer Call Vectoring. These procedures recommend the vehicle you should use for specific administration; however, if Call Management can administer a specific data item, it is the preferred system. If you have a Call Management System, refer to these procedures when you need to administer Call Vectoring data.

For details about using each command, refer to the "Call Vectoring" procedures earlier in this chapter.

Most of the Call Vectoring commands appear under both the TCM and FM hierarchies for user convenience. When a command is specified in the procedures, the command line indicates TCM or FM, depending on the usual hierarchy for the specified command.

CMS Administration of Switch Translation Data

The following table describes the data items that can be administered by both Call Management and Manager IV. The table lists the Manager IV transaction used to administer the data and indicates whether this data is stored in the Manager IV database as well as in the product.

Table 8-2. Call Management Administration of Call Vectoring Data

Description of Data Items	Manager IV Transaction	Manager IV Database?
Terminate VDN to a vector.	call-vectoring	y
Terminate trunk group to a VDN.	term-trk-grps	y
Define vector steps	vector-features	y
ACD member extn.	acd-members	n

The table implies that Call Management can administer only a subset of Call Vectoring features. Call Management cannot add or remove VDNs or trunk groups; it can only change their assignment to vectors. Other administration must be done via Manager IV. You can also see that the data administrable by Call Management is not self-contained, and depends on certain data items that are only administrable by Manager IV. Conversely, some of the data items that can only be administered by Manager IV are dependent on data that can be administered only by Call Management.

Procedure: Busying out Call Management with Manager IV

Administration of any Call Vectoring data by Manager IV should always be coordinated with the Call Management Administrator, as Call Management is the end user of this data. Before Manager IV can administer certain Call Vectoring data, Call Management must be "busied out" via the Manager IV command **cms busyout**. While Call Management is busied out, it cannot administer any switch translation data. Certain statistic gathering that is done by Call Management is also suspended during the busy out period. When Manager IV has completed administering this data, it must "release" Call Management, using the command **cms release**.

When Call Management is busied out, all data collection and monitoring activities are stopped until it is released again. If these activities are stopped for more than a short period of time, there is obviously a large impact on Call Management statistics and reports.

Note: It is imperative that you coordinate any busy out of Call Management with the Call Management Administrator.

Call Management must be busied out before the following Manager IV commands can be executed:

- **acd-grp**
- **acd-members**
- **cms-extension**
- **term-trk-grps**
- **call-vectoring**
- **trk-grp, trk** (only if trunk group is measured by Call Management).

In Generic 2.2, CMS needs only to be busied out for ACD members, ACD groups or terminating trunk groups when changing the status from measured to unmeasured or unmeasured to measured.

Call Management must be released via the **cms release** transaction only if a **cms busyout** was previously performed.

Procedure: How to Busy out Call Management

1. Contact the Call Management Administrator to arrange a mutually agreed upon time to busy out Call Management.
2. Run the command **cms busyout**.
3. Perform the necessary Call Vectoring administration through Manager IV.
4. Run the command **cms release** as soon as the Call Vectoring data has been administered.
5. Inform the Call Management Administrator when this process is complete.

Displaying Call Vectoring Data

Manager IV can use the product-admin area to display any Call Vectoring data from the switch at any time, with no impact on Call Management. Data can be displayed from the Manager IV database at any time, through the database-admin area. However, remember that database displays show only what is in the Manager IV database, and do not guarantee that the data items that are administrable by Call Management are correct. For these data items, you should use only product-admin displays from Manager IV.

Downloading Manager IV Transactions to the Switch

Although you would normally schedule transactions using Service Requests that download to the switch overnight, this is not recommended when you are administering Call Vectoring data that is interdependent with Call Management. For the transactions contained in the procedures in the following sections, schedule the Service Request to download only a few minutes from the current time, or run transactions in the immediate mode. You might also create the Service Request during off-hours when Call Management is not active, and then schedule the Service Request during the same off-hour period. This will prevent Service Request failures caused by Call Management changing some related data item. It will also prevent Manager IV from inadvertently undoing a change to a data item that Call Management has already made.

Saving Data in a Model

Some of the procedures in the following sections require saving data from a product-admin display transaction in a model, and then reading the data from the model into an admin change screen. This enables information from the switch to be read into admin or database-admin screens, reducing the chances of data entry errors that can make the two databases incompatible. For information about modeling, see *Getting Started with DEFINITY® Manager IV*.

Administering Vector Directory Numbers

Vector Directory Numbers (VDN) can only be added or removed through Manager IV. The **vdn** command is used to add, change, remove, or display a vector directory number and to associate a name with it. The **vdn display** command also displays the associated vector, if one exists.

Procedure: Adding or Removing VDNs

In adding or removing VDNs, always work closely with the Administrator of your Call Management system. After using **vdn add** successfully, tell the Administrator. Before removing a VDN:

1. Contact the Call Management Administrator to verify that the VDN will no longer be in use.
2. Run **fm product-admin vdn display** to determine if the VDN is associated with a vector. If it is, contact the Call Management Administrator to resolve the discrepancy.
3. If the Call Management Administrator agrees that the VDN can be removed, run **vdn remove**.

Changing the name for the VDN has no impact on Call Management; use the command **vdn change**.

Administering Vector Steps

The **vector-features** command is used to add, change, remove, and display all of the program steps (up to 15) for a given vector. Data items pertaining to vectors usually are administered via Call Management. Before you use Manager IV to administer vectors, contact the Call Management Administrator to verify that the vector should be administered via Manager IV.

Procedure: Adding a Vector

1. Run **tcm product-admin vector-features display** to determine whether this vector has been previously added by Call Management.
2. If it has, save the output in a model. To bring the Manager IV database in sync with the switch, run **tcm database-admin vector-features add**. Read the data from the model and execute the command to bring the Manager IV database in sync with the switch.
3. [Generic 2.1, System 85 R2V2-R2V4] Busy out Call Management using **fm admin cms busyout**.
4. If the vector has not been added by Call Management, run **vector-features add**.
5. [Generic 2.1, System 85 R2V2-R2V4] Release Call Management using **fm admin cms release**.

Procedure: Vectors and VDNs for Generic 2.2

In Generic 2.2,

1. Busy out CMS only if VDN is changing from measured to unmeasured or from unmeasured to measured.
2. CMS need not be busied out when adding a vector. Busy out CMS only when assigning a VDN as measured to the vector.

Procedure: Removing a Vector

1. Run **fm product-admin vector-features display** to determine if the vector is currently defined in the switch.
2. If the vector was not defined in the switch but it is defined in the Manager IV database, run **fm database-admin vector-features remove** to remove it from the database.
3. If the vector exists in both the switch and the Manager IV database do the following:
 - [Generic 2.1, System 85 R2V2-R2V4] Busy out Call Management using **fm admin cms busyout**.
 - Run **fm product-admin call-vectoring display** to determine whether any VDNs are assigned to the vector. If there are, follow the procedures in the following section for "Removing VDNs from a Vector".
 - Remove the vector using **fm admin vector-features remove**.
 - [Generic 2.1, System 85 R2V2-R2V4] Release Call Management using **fm admin cms release**.

Procedure: Changing Vector Steps

1. To get a copy of the vector as it appears in the switch, run **fm product-admin vector-features display** and save the output in a model.
2. Run **vector-features change** and read the data from the model into the change screen.
3. Busy out Call Management using **fm admin cms busyout**. In Generic 2.2, run **cms busyout** only if you are changing measurement status.
4. Add new vector steps, or remove or change existing vector steps; execute the transaction.
5. Release Call Management using **fm admin cms release**.

Administering VDNs to Vectors

The **call-vectoring** command is used to:

- Terminate VDN(s) to a vector
- Determine if a VDN's activity is to be measured
- Administer the return call indicator
- Assign a console message for the VDN.

Before **call-vectoring** can be run, the vector must first be defined via **vector-features add** (described above) and the VDN must be defined via **vdn add**. The termination of VDNs to a vector is the only data item in this transaction that can be administered by Call Management. The console message, return call indicator, and the measured flag can be administered via Manager IV only.

If a VDN termination is to be changed from one vector to another, contact the Call Management

Administrator. However, if the termination *must* be changed under DSM, the VDN must be removed from the existing vector and then added to the new vector. Follow the above procedures "Removing VDNs from a Vector and then "Adding VDNs to a Vector".

Procedure: Adding VDNs to a Vector

1. Run **fm product-admin call-vectoring display** to determine whether any VDN is terminated at the vector.
2. If there is a VDN terminating to the vector:
 - Save the output to a model.
 - Contact the Call Management Administrator to determine whether the VDN to be administered should also be terminated to the vector, or if some discrepancy needs to be corrected.
3. [Generic 2.1, System 85 R2V2-R2V4] Busy out Call Management using **fm admin cms busyout**.
4. If there were no VDNs assigned to the vector in the switch and the Manager IV database, run **fm admin call-vectoring add**.
5. If the vector was already assigned a VDN in the switch, but not in the Manager IV database do the following:
 - Correct the Manager IV database so it is in sync with the switch. To do this, run **fm database-admin call-vectoring add** and read in the data from the model; then execute the transaction.
 - Run **fm admin call-vectoring change** to add additional VDNs to the vector and to define any of the Call Vectoring characteristics.
6. [Generic 2.1, System 85 R2V2-R2V4] Release Call Management using **fm admin cms release**.

Procedure: Removing VDNs from a Vector

1. Run **fm product-admin call-vectoring display** to make sure that the vector has associated VDNs.
2. If the vector does not have VDNs associated with it in the switch, but it does in the Manager IV database, run **fm database-admin call-vectoring remove** to bring the Manager IV database in sync with the switch.
3. If the switch and the Manager IV database are in sync, do the following:
 - [Generic 2.1, System 85 R2V2-R2V4] Busy out Call Management using **fm admin cms busyout**.
 - Run **fm admin call-vectoring remove**.
 - [Generic 2.1, System 85 R2V2-R2V4] Release Call Management using **fm admin cms release**.

Procedure: Changing Vector-VDN Characteristics

The **call-vectoring** command is used to change the VDN return call indicator, console message and the Manager IV flag. To implement this command:

1. Run **fm product-admin vdn display** to determine the vector to which the VDN was re-assigned by Call Management.
2. Run **fm product-admin call-vectoring display** and save the output in a model.
3. If the VDN to be administered is not terminated with the indicated vector in the Manager IV database, do the following:

- Run **fm database-admin call-vectoring remove** and remove the VDN from the vector in the Manager IV database.
 - Run **fm database-admin call-vectoring add** and read in the data from the model, then execute the transaction.
4. If the VDN to be administered terminates at the expected vector in both the switch and the Manager IV database, do the following:
 - Busy out Call Management using **fm admin cms busyout**. In Generic 2.2, run **cms busyout** only if you are changing measurement status.
 - Run **fm admin call-vectoring change**, using the data from the model as input, and then change the data items as required.
 - Release Call Management using **fm admin cms release**.

Terminating Trunk Groups to VDNs

The **term-trk-grps** command is used for three types of tasks: terminating a trunk group to a VDN, removing the termination, and determining if the trunk group is measured by Call Management. The Call Management measurement indicator can only be administered through Manager IV, but the first two tasks can be performed through Call Management or Manager IV.

Procedure: Adding Trunk Group Termination to a VDN

1. Run **fm product-admin term-trk-grps display** for the VDN, to determine whether any trunk groups are already terminated to the VDN. If there are, save the output in a model.
2. [Generic 2.1, System 85 R2V2-R2V4] Busy out Call Management using **fm admin cms busyout**.
3. Run **fm admin term-trk-grps change**; enter **X** in the VDN field.
4. If trunk groups were already terminated to the VDN, read in the data from the model. The terminating trunk group(s), along with the Call Management measurement indicator, can then be defined for the VDN.
5. [Generic 2.1, System 85 R2V2-R2V4] Release Call Management using **fm admin cms release**.

Procedure: Removing Trunk Group Termination from a VDN

1. If only a single trunk group termination is to be removed, run **fm product-admin term-trk-grps display** and indicate the trunk group option.
2. If the trunk group termination is defined in the switch, do the following:
 - [Generic 2.1, System 85 R2V2-R2V4] Busy out Call Management using **fm admin cms busyout**.
 - Remove the terminating trunk group using **fm admin term-trk-grps change**.
 - [Generic 2.1, System 85 R2V2-R2V4] Release Call Management using **fm admin cms release**.
3. If it is not defined in the switch, run **fm database-admin term-trk-grps change**.
4. To remove the termination for all trunk groups terminating to a particular VDN:
 - Run **fm product-admin term-trk-grps display**; enter **x** in the VDN field. To obtain a list of the trunk groups in the vector, do the following:
 - Busy out Call Management using **fm admin cms busyout**.

- For each trunk group terminated to the VDN, run **fm admin term-trk-grps change**.
- Release Call Management using **fm admin cms release**.

Procedure: Changing Terminating Trunk Group Attributes

Use this procedure to change the VDN where the trunk group is terminated or to change the Call Management measurement flag.

1. To be sure the information you enter matches the switch information, run **fm product-admin term-trk-grps display** for the specific trunk group. Save the output in a model.
2. Busy out Call Management using **fm admin cms busyout**. In Generic 2.2, run **cms busyout** only if you are changing measurement status.
3. To change a specific data item, run **fm admin term-trk-grps change**. Read in the data from the model, then change the data item.
4. Release Call Management using **fm admin cms release**.

Administering Trunks with Call Management

When you administer trunks that are in trunk groups measured by Call Management, you must busy out Call Management first. Call Management does not administer any trunk attribute data; therefore, no special procedures are needed to add trunks or change trunk attributes except busying out Call Management. The procedure to remove a measured trunk is explained below.

The **trk-grp** or **trk** command is used to administer trunks. The **term-trk-grps** command is used to indicate that a given trunk group is to be measured by Call Management.

Procedure: Removing Trunks Measured by Call Management

1. [Generic 2.1, System 85 R2V2-R2V4] Busy out Call Management using **fm admin cms busyout**.
2. To remove a single trunk, run **fm admin trk remove**.
3. If the entire trunk group needs to be removed, run **fm admin term-trk-grps change** so the trunk group is no longer measured by Call Management. Then use **trk remove** to remove the trunks from the group, and then **fm admin trk-grp remove** to remove the trunk group.
4. If a **trk-grp remove** transaction fails to download to the switch because some vector has a recorded announcement step, follow the procedure for "Changing Vector Steps" to remove all of the recorded-announcement vector steps. Then run **fm admin service-request run** to re-run the Service Request to remove the trunk.
5. [Generic 2.1, System 85 R2V2-R2V4] Release Call Management using **fm admin cms release**.

Administering ACD Members

The **acd-members** command is used to add, display, or remove ACD agents from an ACD split. This transaction is product-only, and the Manager IV database does not store data that indicates whether an extension is an ACD agent. This data can also be administered by the ACD split supervisor.

Run this transaction only if instructed to do so by the Call Management Administrator.

Procedure: Adding/Changing/Removing ACD Agents

1. Busy out Call Management using **fm admin cms busyout**.
2. Administer the members of the ACD group using the appropriate transaction: **fm admin acd-members add/display/remove**
3. Release Call Management using **fm admin cms release**.

Defining a Vector Abbreviated Dial List

The **tcm admin vector-abbr-list** command is used to define an existing abbreviated dial group list for use by Call Vectoring.

[Generic 2.1 and System 85 R2V4] You can **change**, **remove**, or **display** the abbreviated dial list using this command.

In Generic 2.2, only two verbs are supported: **change** and **display**.

Refer to "Defining a vector Abbreviated Dial List" later in this chapter for procedures on administering abbreviated dial lists. This data cannot be administered by Call Management; however, the vector abbreviated dial list must be defined before Call Management can use the abbreviated dial list items in route-to steps of a vector.

Procedure: Defining Vector Abbreviated Dial Lists in Generic 2.2

In Generic 2.2, the **vector-abbr-list change** transaction allows you to assign up to 5 group lists for use by Call Vectoring.

1. Enter the **vector-abbr-list change** transaction. The following screen appears:

```
AT&T Mgr IV 2.2          DEFINITY G2.2          <target>
tcm admin vector-abbr-list change          Page 1 of 1
          YOU ARE DIRECTLY ACCESSING THE PRODUCT

List 0 Group Number: ____
List 1 Group Number: ____
List 2 Group Number: ____
List 3 Group Number: ____
List 4 Group Number: ____
```

2. For any of the fields listed on the screen, select one of these valid ranges: **1—95, 101—195, 201—295, 301—395** or **401—495**. Populate the fields as appropriate. Press **(EXECUTE)**.

Displaying Vector Abbreviated Dial Lists in Generic 2.2

Use the **vector-abbr-list display** transaction to display abbreviated dialing group lists assigned to Call Vectoring.

1. Enter the **vector-abbr-list display** transaction. The **display** screen appears. The screen is the same as described for the **vector-abbr-list change** transaction. For field description, refer to "Procedure: Defining Vector Abbreviated Dial Lists in Generic 2.2"

Recovering from Service Request Errors

The Call Management/Call Vectoring procedures explained in this section rely on your contact with the Call Management Administrator to keep the Manager IV database synchronized with the switch for data items which can be administered through Call Management. If Manager IV's Call Vectoring data does differ with the switch's, Service Request transactions may fail to download to the switch. This section explains what to do if this occurs.

Extensions Assigned to Call Coverage Groups Using VDNs

A VDN can be assigned as the last point in a Call Coverage path. If an extension is assigned to a Call Coverage Group that has a VDN as its last point, the AP or AUDIX number of the extension must be the same as the AP or AUDIX number of the VDN. The AP or AUDIX is not directly associated with the VDN; the VDN's AP or AUDIX number is the number assigned to the ACD split defined in one of the steps in the vector to which the VDN is terminated.

As the following example illustrates, the association of AP or AUDIX with VDN involves several levels of redirection. The extension is linked to a Call Coverage Group, which is in turn linked to a VDN. The VDN is linked to a vector, which is linked to an ACD group that has an AP or AUDIX number.

AP/AUDIX NUMBER ASSOCIATIONS

extn = 10000	ccg = 20	VDN = 20000	vector = 100	ACD = 13
ccg = 20	point 3 is	terminates on	step 2 is	AP = 1
AP = 1	VDN=20000	vector = 100	queue-to-main	
			ACD = 13	

Because the AP or AUDIX for the Call Coverage Group is derived from vector steps, which are administrable by Call Management, there is the possibility that the AP or AUDIX for the Call Coverage Group can be changed by Call Management. While this is unlikely to occur, the following procedures are offered to resolve Service Request failures resulting from failed **extension** transactions.

Procedure: Displaying AP or AUDIX Extension Numbers

1. Run **fm admin station-attributes display**. Pick the extension option on Page 1, and enter the Call Coverage Group number on Page 2. You only need to display one extension, since all extensions in the group must have the same AP or AUDIX number.
2. Run **fm admin extension display** for the extension number obtained from station attributes. Note the extension's AP and AUDIX number.
3. Run **fm admin call-coverage-path display** to find the VDN in the path.
4. Run **fm product-admin vdn display** to find the vector for the VDN.
5. Run **fm product-admin vector-features display** to find the ACD split accessed in the vector steps.
6. Run **fm admin acd-grp display** to find the AP or AUDIX number of the ACD group.

Vector Abbreviated Dial List

If the **change** (Generic 2 and System 85 R2V4) or **remove** (Generic 2.1 and System 85 R2V4 only) transaction fails to download to the switch because a vector is still using the vector abbreviated dial list, run these two procedures:

- Follow the procedure for "Changing Vector Steps" to remove all of the route-to steps from all vectors accessing the vector abbreviated dial list.
- Run **fm admin service-request run** to re-run the Service Request to change or remove the vector abbreviated dial list.

Removing Trunk Groups

If a Manager IV user attempts to remove a trunk group that the Call Management administrator has terminated to a VDN, the Service Request will fail upon download to the switch. Because removing trunk groups is not a common task, this error condition is unlikely. However, in the event it does occur, take the following steps:

- Run **fm product-admin term-trk-grps display** and input the trunk group number.
- Contact the Call Management administrator to resolve the discrepancy.
- If the administrator agrees that the trunk group no longer needs to terminate to the vdn, run **fm product-admin term-trk-grps change** to remove the termination.
- Re-run the Service Request to remove the trunk group using **fm admin service-request run**. It should download successfully.

5. ATTENDANT CONSOLES

This chapter is made up of tasks that allow you to administer a switch's attendant console or consoles. An attendant console is used by the attendant console operator to manage incoming calls for a group of voice terminals. System 85 attendant consoles can be used either in their basic form or with the Direct Extension Selection with Busy Lamp Field (DXS/BLF) option.

All attendant consoles in a switch must be of the same type; for System 85/Generic 2, types 1 to 3 are available. For the DIMENSION System FP8, console types 11 to 15 are available. Also, the Attendant Consoles are all assigned the same features, extension hundreds groups, Direct Trunk Group Select Keys, control keys, and console messages. In fact, when you use the objects **blf-dxs-group-keys**, **console-features**, **console-messages**, **control-keys**, **direct-trk-grp-keys**, and **dxs-extended**, you are administering *all* the attendant consoles connected to the switch.

Each attendant console has its own attendant interface and data channel equipment locations. These are administered individually for each console using the object **console-equipment**. In this case, you identify the individual console by its console number, which is assigned by TCM when the console is added. For a switch that uses more than one console, the consoles must be numbered consecutively. No gaps may be left in the numbering sequence.

Console Design

The assignment of features, services, and parameters to attendant consoles is reflected by the console itself. In addition to the keyboard, there are other parts of the console, such as the handset/headset and various controls. Furthermore, the basic console can support the DXS/BLF panel option. The DXS/BLF panel has 18 Hundreds Select (or Group Select) buttons and 100 Extension Select buttons. Each extension hundreds group assigned to a BLF/DXS group select key (or to a BLF for the extended DXS feature) represents a group of 100 extensions. By using the BLF/DXS group select key (or BLF field) with the direct extension select key, the attendant can access a specific extension.

The Console Keyboard

The keyboard is divided into various areas. Each area has its own designated function and sequence of keys or buttons and indicators, or a display. The transaction screen for console administration is designed to resemble the actual keyboard, which is described here.

The Trunk Group Select Area

In the Trunk Group Select area, located on the left-hand side of the keyboard, there are 24 trunk group buttons that are used to directly access pre-designated outgoing trunk groups for outgoing calls. The Trunk Group Select buttons are labeled to indicate the trunk group assigned to each button. The lower 12 have associated control (CONT), warning (WARN) and BUSY lamps that indicate the status of each assigned trunk group. The warning lamp indicates that a pre-established number of trunks are busy in the associated trunk group, while a busy lamp signals that all trunks in the associated trunk group are busy. The control lamp indicates that a feature has been activated to control the associated trunk group. The upper 12 buttons have only associated busy lamps.

Dialing Pad, Loop Buttons, and Indicators

In the center of the console is a Touch-Tone dialing pad, which supports dialing and also provides access to voice features. Above the dialing pad are six loop buttons. These allow the attendant to process and originate calls. Each button has five associated call status indicators: HOLD, attendant (ATND), BUSY, RING, and answer (ANS). These indicators provide call status and timed reminder to the attendant.

There are special indicators on either side of the dialing pad. The attendant is notified that a trouble condition has been detected in the system by an alarm (ALM) indicator. An acknowledge (ACK) indicator

lights when the maintenance center has been notified of the alarm condition. A priority (PR) indicator signals the priority status of an incoming call. A lamp above it indicates that there are queued calls waiting (CW).

Alphanumeric Display and ICI Indicator

At the top of the console's right-hand side is an 8-character alphanumeric display. This displays a console message and a message number. A console message is a four-character alphanumeric display that allows the attendant to identify the type of service or trunk group associated with a call. Each console message has an associated message number or [System 85 R2V3/4, Generic 2] an associated Listed Directory Number (LDN). Legal characters for a console message are A—Z, a—z, and 0—9. A 1- or 2-digit number is used to identify a particular console message. For System 85 R2V2, message numbers 4—63 can be assigned; for R2V3/4 and Generic 2, message numbers 4—68 can be assigned. Message numbers 1—3 are preassigned, but may be changed [System 85 R2V4, Generic 2 only]. Message number 1 is for incoming calls (INC); message number 2 is for attendant calls (ATND); message number 3 is for attendant recall (RCL). The alphanumeric display provides messages for the following:

- Call Number Display, which shows the extension number of a user who is calling;
- Class-of-Service (COS) Display, which indicates the COS of a calling extension number;
- Centralized Attendant Service (CAS) Display, which may indicate up to 40 customer-selectable branch location codes.

For a DIMENSION System FP8 with attendant console types 11 to 15, an Incoming Call Identification (ICI) indicator is used rather than a console message. Each ICI indicator has an associated call type or trunk group. It identifies the type of service or trunk group associated with a call. An ICI indicator is a single digit, 1 to 6.

Control Keys and Call Processing Buttons

Below the alphanumeric display are 18 control keys. These may be used to access specific features. Sixteen of these buttons have an associated indicator. You may designate the assignment of features to 11 of these buttons. They may be used for features such as Paging, Hold, and Trunk Identification. The remaining seven buttons are preassigned to Audible Off (AD OFF), Position Busy (PSBY), Class of Service (CLASS), Position Unattended (UNA), Verify that an extension is busy (VERIFY), Cancel (CANCL), and Station Identification (STA ID). Additionally, for System 85 R2V4 and Generic 2, there are two console control keys for Malicious Call Trace. They are MCT Emergency (MCTEM), and MCT Control (MCTCN).

Directly below the Feature Access Buttons are three additional buttons used in call processing. These are marked START, ANSWER, and RELEASE. Above the release button is a Position Available (PA) indicator.

CONSOLE ADMINISTRATION TRANSACTIONS

The following transactions allow you to administer all attendant consoles in your system. These transactions should be performed in the order that they appear. They may be administered from the **admin** or **product-admin** area, but since the information is product information, it is not stored in the DEFINITY Manager IV database.

The Console Equipment Transaction

This is the first transaction that should be used when adding or removing a console. It assigns the equipment location and the data channel equipment location to the console. For System 85 R2V4 and Generic 2, it also assigns the NPA-NXX Designator and Listed Directory Number (LDN) to the console.

Consoles must be added and removed in sequential order (e.g. add 1 before 2, 2 before 3, etc., and remove 3 before 2, 2 before 1).

The following verbs are supported in the **admin** and **product-admin** areas:

- add
- change
- display
- remove

Procedure: Administering Console Equipment

1. From the **admin** or **product-admin** area, enter **console-equipment add**. The following screen is displayed:

```
AT&T Mgr IV 2.2          DEFINITY G2.2          Connect <target>
tcm admin console-equipment add          Page 1 of 1

          YOU ARE DIRECTLY ACCESSING THE PRODUCT

Console Number  __

          Attendant Interface Equip Loc:  __/__/__/__

          Data Channel Equip Loc:  __/__/__

          NPA-NXX Designator:  __
          Listed Directory Number:  _____
```

2. Enter the attendant console number in the Console Number field.
3. Enter the equipment location for the attendant console interface in the Attendant Interface Equip Loc field.
4. Enter the equipment location (carrier, slot, and circuit) for the data channel associated with the attendant console in the Data Channel Equip Loc field.
5. [System 85 R2V4, or Generic 2] Enter the NPA-NXX Designator number.
6. [System 85 R2V4, or Generic 2] Enter the Listed Directory Number.

7. Press **EXECUTE** to execute the transaction.

Procedure: Display, Change, Remove Console Equipment

1. From the **admin** or **product-admin** area enter **console-equipment**, and either **display**, **change**, or **remove** as the verb.
2. Enter the console number to be changed, displayed, or removed.
3. The information related to the entered console number will be displayed.
4. Perform change or remove operations as necessary.
5. Press **EXECUTE** to execute change or remove transactions.

The Console Features Transaction

This transaction administers specified features associated with all attendant consoles in the system. The following can be administered:

- the type of consoles in the system
- the features assigned to the consoles
- the facility restriction level (FRL) for the consoles.

The following verbs are supported in the **admin** or **product-admin** areas:

- add
- display
- change.

Procedure: Administering Console Features

1. From the **admin** or **product-admin** area, enter **console-features add**. The following screen is displayed:

```
AT&T Mgr IV 2.2          DEFINITY G2.2          Connect <target>
tcm admin console-features add          Page 1 of 1

          YOU ARE DIRECTLY ACCESSING THE PRODUCT

Console Type ___

          Calls Waiting Level: ___
          Class of Service Display: _
          Direct Trk Grp Select Feature? _
          Don't Answer Timing: _
          Extended Direct Extn Select Feature? _
          Facility Restriction Level: _
          Interposition Calling: _
          Privacy Feature? _
          Lockout Feature? _
          Trunk Test Feature? _
          Two Party Hold Feature? _
```

2. Enter the console type (**1—3**).
3. Enter the Calls Waiting Level (**1—99**).
 - The Calls Waiting Level is the number of calls waiting for the attendant console. When the call waiting level is exceeded, the call waiting lamp will flash.
 - To use this feature, Call Waiting must have been previously enabled with the **sys-cos change** transaction.
4. Enter the Class of Service Display. The valid choices are : **1**=numeric, **2**=alphanumeric.
5. Enter **y** to select the Direct Trk Grp Select Feature or **n** if you do not wish to activate it.
6. Enter your choice for the Don't Answer Timing feature. The valid choices are **1** to **8** seconds.
 - The Don't Answer Timing feature is the number of altering cycles before it is assumed that the call will not be answered. Each altering cycle is a 2-second interval.

7. Enter **y** to activate the Extended Direct Extn Select Feature.
8. Enter the Facility Restriction Level. The valid choices are **0** to **7**.
 - The Facility Restriction Level determines the terminal user's access to trunks as well as the routes that are to be used. Entering **0**, will give you the most access, and entering **7** will give you the least access.
9. Enter your choice for interposition Calling. The valid choices are: **1** interposition only or **2** interposition plus extension to select attendant.
10. Enter **y** to activate the Privacy Feature or **n** if you do not want it activated.
 - If the privacy feature is activated, the Lockout feature must also be assigned.
11. Enter **y** to activate the Lockout Feature or **n** to exclude it.
 - This feature must be assigned if the Lockout feature has been activated.
12. Enter **y** to activate the Trunk Test Feature or **n** if you do not want to use it.
13. Enter **y** to activate the Two Party Hold Feature.
14. After you have input the appropriate options for the above features, press **EXECUTE** to execute the transaction.

Procedure: Display, or Change Console Features

1. From the **admin** or **product-admin** area, enter **console-features**, and either **display**, or **change** as the verb.
2. The **add** screen will be displayed with the appropriate features selected.
3. Changes can be made as necessary from this point if the **change** verb has been selected.
4. Press **EXECUTE** to execute the change transaction.

The Control Keys Transaction

Use this transaction to administer console features to the control buttons on the console.

The following features are dependent on switch release:

[For System 85 R2 and Generic 2]

- Manual preemption
- Call precedence level display
- Called number display
- Flash
- Set precedence level

[For System 85 R2V4 and Generic 2]

- Malicious Call Trace Control
- Malicious Call Trace Emergency

The following verbs are supported in the **admin** and **product-admin** areas:

- change
- display

Procedure: Administering Control Keys

Prerequisites

- Use **console-equipment add** to add the attendant interface equipment assignment and the data channel equipment assignment associated with a console.
- Use **console-feature add** to add the features to the console, or use **console-feature change** to change the features.
- Before removing a control key from service, make sure the associated lamp (LED) is not illuminated. If the lamp is illuminated on the console and the control feature key assignment is removed from the console control key, the lamp may remain illuminated.

Notes:

- The rows for the control keys on the bottom are numbered from bottom to top. The console keys for the control features are numbered from left to right.
- The control key features HOLD and CANCL are factory assigned and cannot be modified.
- To activate the Loudspeaker Paging Control feature, use control key features priority paging zones (1—6) and priority paging-all zones.
- Trunk Identification control key

For switch generated Automatic Circuit Assurance (ACA) referral calls, the data in the Alphanumeric Display is rotated in the following sequence:

- type of referral call (long or short)
- trunk group DAC
- specific trunk number

- For attendant related trunk calls, the data is rotated in this sequence:
 - trunk group Dial Access Code (DAC)
 - specific trunk number
 - original Incoming Call Identification (ICI)
- [System 85 R2V4, Generic 2] There are two control keys for MCT Emergency (MCTEM) and MCT Control (MCTCN). The MCT auxiliary trunk (type 93) for MCT recorder is administered via the **trk-grp add** transaction.

1. From the **admin** or **Product-Admin** area enter **control-keys change**. The following screen is displayed:

```

AT&T Mgr IV 2.2          DEFINITY G2.2          Connect <target>
tcm admin control-keys change          Page 1 of 1

          YOU ARE DIRECTLY ACCESSING THE PRODUCT

KEYS      (1)      (2)      (3)      (4)      (5)      (6)
          (3) PPAG4  BPAG5  PPAG1  PPAG2  TRKID  RLTRL
R
O          (2) AUSIG  COS    BUSYV  BPAGA  NIGHT  PBUSY
W
          (1) CANCL  SPLIT  MCTEM  MCTCN  PPAG3  HOLD

          START          ANSWER          RELEASE
  
```

2. Position the cursor at the desired buttons, and make the appropriate entries.
3. Press **EXECUTE** to submit the transaction.

The Direct Trunk Group Keys Transaction

Use this transaction to:

- assign dial access codes to trunk group select buttons
- administer busy or busy/warning lamps for a trunk group
- administer warning levels for a trunk group.

Encodes for Busy or Busy/Warning Status Lamps are:

- 0 - Busy for this trunk group only
- 1 - Busy for this trunk group and route advance trunk groups
- 2 - Busy/Warning for this trunk group only
- 3 - Busy/Warning for this trunk group and route advance trunks.

Note: Encodes 2 and 3 are not valid for rows 2 and 3.

The warning lamp will light when the number of idle trunks is less than or equal to the administered warning level (0—7). If a warning level of 0 is used, and all trunks in the trunk group are busy, both the busy and warning lamps will light. The warning level must be set to 0 if either encode 0 or 1 is assigned to the Busy Status Lamp.

The verbs supported for this transaction are:

- display
- change

Procedure: Administering Direct Trunk Group Keys

1. From the **admin** or **product-admin** area, enter **direct-trk-grp-keys change**. The following screen is displayed:

The Console Messages Transaction

Use the **console-messages** transaction to assign an alphanumeric message (Incoming Call Identification (ICI) identifier) to a trunk group or call type, and to assign a message number to the alphanumeric message display. This transaction administers all attendant consoles in the system.

The following verbs are supported in the **admin** and **product-admin** areas:

- add
- change
- display
- remove

Procedure: Administering Console Messages

1. From either the **admin** or **product-admin** area, enter **console-messages add**. The following screen is displayed:

```
AT&T Mgr IV 2.2          DEFINITY G2.2          Connect <target>
tcm admin console-messages add          Page 1 of 1

          YOU ARE DIRECTLY ACCESSING THE PRODUCT

Choose either:
  _ Trunk Group
  _ Call Type
```

2. Enter an **x** next to the item for which the ICI will be assigned. Press **RETURN**.
3. If Trunk Group is chosen, the following screen is displayed:

```
AT&T Mgr IV 2.2          DEFINITY G2.2          Connect <target>
tcm admin console-messages add          Page 1 of 1

          YOU ARE DIRECTLY ACCESSING THE PRODUCT

          Fill in all appropriate values:

          X Trunk Group          Trunk Group No: ____

          Message Number: ____

          Alpha Message: _____
```

4. Enter in the appropriate values.

5. If Call Type is chosen, the following screen will be displayed:

AT&T Mgr IV 2.2	DEFINITY G2.2	Connect <target>
tcm admin console-messages add		Page 1 of 1
YOU ARE DIRECTLY ACCESSING THE PRODUCT		
Fill in all appropriate values:		
X Call Type		Call Type No: ____
		Message Number: ____
		Alpha Message: _____

6. Enter the appropriate values.
7. Press **EXECUTE** to execute the transaction.

The Extended DXS Transaction

Use this transaction to assign a terminal extension hundreds group to the attendant console Extended Direct Extension Selection (DXS) buttons and busy lamps. This transaction only applies to console types 33 and 34, and does not apply to systems with a five-digit extension dialing plan. The Extended DXS must first be assigned using the **console-features** transaction. The following verbs are supported in the **admin** or **product-admin** area:

- add
- display
- remove

Procedure: Administering Extended DXS

1. From the **admin**, or **product-admin** area enter **dxs-extended add**. The following screen will be displayed:

```
AT&T Mgr IV 2.2          DEFINITY G2.2          Connect <target>
tcm admin dxs-extended add          Page 1 of 1

                YOU ARE DIRECTLY ACCESSING THE PRODUCT

                Hundreds Group - Thousands Digit: _
                Hundreds Group - Hundreds Digit:  _
```

2. Enter the appropriate digit.
3. Press **EXECUTE** to execute the transaction.

Procedure: Display or Remove Extended DXS

1. From the **admin** or **product-admin** area, enter **dxs-extended**, and either **display** or **remove** as the verb.
2. The **add** screen will be displayed with the appropriate digits.
3. The **remove** transaction can be performed at this point.
4. Press **EXECUTE** to execute the remove transaction.

Administering Listed Directory Numbers (LDNs)

For System 85 R2V3/R2V4 and Generic 2, LDNs can be defined using the command **console-messages add**. Similarly, they can be changed, displayed, and removed using the same object. Once the LDNs are known by using the command **control-messages display** in the product-admin area, it is recommended that you reserve these extensions with a state of "r" by using the **extension reserve** command in the database-admin area.

For System 85 R2V2 switches, and DIMENSION System FP8, LDNs are administered using the LDN procedures and the object **listed-directory-number** described in "Administering the Dialing Plan," in Chapter 2.

6. ISDN

The System 85 R2V4, Generic 2 Integrated Services Digital network (ISDN) feature allows the customer to connect to both public and private networks that use the current ISDN standards.

The ISDN concept is a world-wide standard for integrated voice and data networks. International standards for ISDN are still evolving and are set by the CCITT (International Telegraph and Telephone Consultative Committee).

There are two types of interfaces for ISDN: the Basic Rate Interface (BRI) and the Primary Rate Interface (PRI). Only the Primary Rate Interface is supported by System 85 R2V4. Generic 2 supports both the Primary Rate Interface, and the Basic Rate Interface. ISDN must be activated on the System 85 R2V4 and Generic 2 switches. The feature cannot be enabled from DEFINITY Manager IV, but it can be administered from DEFINITY Manager IV.

Basic Rate Interface

The Basic Rate Interface provides for station direct interface. With BRI, each station has its own interface that sends and receives control and signaling messages. BRI is supported only on Generic 2.

Primary Rate Interface

The Primary Rate Interface provides an ISDN interface for switches. This interface covers network connections (for both private and public networks), switch-to-host computer connections, and host computer-to-network connections. PRI is supported for System 85 R2V4 and Generic 2.

With PRI, individual stations work within the network provided by the local switch and do not have direct ISDN connectivity. The PRI provides twenty-four 64kps channels. These are arranged as 23 information bearer (B) channels, and one channel for common control and signaling (D). (This is the standard only in North America.)

TCM ISDN TRANSACTIONS

There are several transactions necessary to administer ISDN on the System 85 R2V4 and Generic 2 using TCM. They include:

- Assigning an LDN and NPA-NXX designator to an attendant console using the **console-equipment** transaction.
- Assigning an NPA-NXX to an "abbreviation" in the NPA-NXX designator transaction.
- Associating the NPA-NXX-designator to an extension in the **extension** transaction.
- Providing for two more requirements, bearer capability and ISDN routing, in the **class-of-service** transaction.
- Administering DS1-ISDN circuit packs (see Chapter 8 "Switch Equipment").

The **console-equipment** and NPA-NXX-designator transactions are described on the following page.

CONSOLE EQUIPMENT TRANSACTIONS

This transaction assigns an LDN and a NPA-NXX designator to an attendant console. You can add (**console-equipment add**), remove (**console-equipment remove**), change (**console-equipment change**), and display (**console-equipment display**) console equipment.

NPA-NXX DESIGNATOR [SYSTEM 85 R2V4, GENERIC 2]

This transaction assigns an NPA-NXX and its thousands digit to a NPA-NXX designator. Then, instead of needing to assign each NPA-NXX-X to an extension or an attendant console, you can merely assign the NPA-NXX designator because it is tied to the NPA-NXX-X number.

You can add (**npa-nxx-designator add**), change (**npa-nxx-designator change**), display (**npa-nxx-designator display**), and remove (**npa-nxx-designator remove**) a designator. Note that you must remove the designator from all extensions and console equipment prior to using the **npa-nxx-designator remove** command.

Procedure: Adding an NPA-NXX Designator

Purpose:

Use **npa-nxx-designator add** to assign an NPA (area code), an NXX (local exchange), and a thousands digit to an NPA-NXX Designator. The designator is then added to the system. Up to 99 designators (1—99) may be defined.

Procedure Steps: To add a designator, follow these steps:

1. Enter **npa-nxx-designator add**.

```
AT&T Mgr IV 2.2          DEFINITY G2.2          (123)456-7890
tcm admin npa-nxx-designator add          Page 1 of 1

NPA-NXX Designator:

NPA:
NXX:
Thousands Digit:
```

2. Enter the NPA-NXX Designator.
3. Enter the NPA for a 3-digit area code. Valid entries include: (0—1), (2—9), (2—9).
[Generic 2.2] Valid entries for an NPA are 000—999.
4. Enter the NXX for a 3-digit local exchange. Valid entries are (200—999).
[Generic 2.2] Valid entries for an NXX are 000—999.
5. Enter the thousands digit, (0—9).

7. TENANT SERVICES

The Tenant Services feature allows a large System 85 R2V4 or Generic 2.1 to appear to its users as many small, independent switches. This capability allows a single, large System 85 R2V4 or Generic 2.1 to be shared among a wide assortment of user groups (referred to as "tenants"). A System 85 R2V4 or Generic 2.1 configured as a "partitioned switch" can appropriately serve the telecommunications needs of: a major airport, an industrial park, a large medical center, or a large office complex.

In actuality, not all switch resources are divided up. Furthermore, two sets of partitions exist: extension partitions and attendant partitions. Some resources, like trunk groups, can be assigned to one or more extension partitions, and hence may be completely partitioned, partially partitioned, or not partitioned at all. The number of trunk groups has been increased in the System 85 R2V4 and Generic 2.1 releases from 256 to 999, to support the Tenant Services feature and to allow users full use of their partitioned switch.

An extension partition may serve one or more extensions. However, each extension number can only be assigned to one extension partition. There can be up to 1000 extension partitions in the partitioned switch, numbered 0 to 999. Extension partitioning is based on extension numbers, not equipment line locations.

Users can make calls within their extension partition by dialing just the extension number, but they must dial the full 7-digit number (Central Office Code plus extension number) to make calls outside of their partition. Users in extension partition 0 are the exception; they can dial anywhere within the system by dialing just the extension number.

An attendant partition may serve one, several, or all extension partitions. There can be up to 41 attendant partitions in a partitioned switch.

The **sys-cos display** may be used to determine if the R2V4 or Generic 2.1 Tenant Services feature is active. Although Manager IV may be used to administer Tenant Services, the System 85, R2V4 or Generic 2.1 feature cannot be activated/deactivated through Manager IV. For System 85 R2V4 and Generic 2.1, Tenant Services must be activated at the time Manager IV is installed. The Tenant Services feature is administered in both the FM and TCM applications. In TCM, extension partitions are assigned to tenants and then the extensions are assigned to extension partitions. Several additional steps are required to assign attendants to attendant partitions: attendant consoles and attendant partition attributes are assigned to attendant partitions, and Listed Directory Numbers (LDNs) are assigned to attendant partitions.

In FM, trunk groups must be assigned to both attendant partitions and extension partitions, and ARS call categories can be assigned to extension partitions. Authorization codes can be assigned to extension partitions to prevent users from accessing certain trunks and call categories.

ADMINISTERING TENANT SERVICES IN TCM

There are two principal steps to administering Tenant Services in TCM, setting up attendant partitions and setting up extension partitions. The tasks related to these steps are described in detail in this chapter. These tasks are documented in the recommended sequence in which they should be performed.

PARTITIONING ATTENDANTS

There are several transactions necessary to administer attendant partitions in TCM. They are:

- Adding an attendant console to the system using **console-equipment add**.
- Assigning attendant consoles to attendant partitions using the **control-console** transaction.
- Assigning attendant partition attributes using **attd-part-attributes**.
- Assigning extension partitions to attendant partitions via the **attd-extension-partition** transaction.
- Assigning a Listed Directory Numbers (LDNs) to attendant partitions via the **ldn-attd-partition** transaction.
- Associating console messages with an LDN using the **console-messages** transaction.
- Assigning extension partitions to extensions using the **extension** transaction.

Note: If you specify an ELL via the **console-equipment add** transaction, use the **tcm database-admin circuit change** command to change the ELL state to "reserved".

If you enter the **console-equipment remove** command, use the **tcm database-admin circuit change** transaction to change the ELL state to "available".

For information about the console-equipment and console-messages transactions see Chapter 5, "Attendant Consoles." The remaining transactions in the above list are detailed in this chapter.

ASSIGNING ATTENDANT CONSOLES TO ATTENDANT PARTITIONS

The product-only transaction **control-console** administers the assignment of attendant consoles to attendant partitions, and defines the control console for the attendant partition. (Attendant partition 0 does not have a control console.)

One of the attendant consoles assigned to an attendant partition must be the control console for that partition. Therefore, the first attendant console assigned to an attendant partition must be the control console, and the control console must also be the last console removed from an attendant partition. Removal of the control console from an attendant partition effectively removes the attendant partition.

Console attributes can be added (**control-console add**), changed (**control-console change**), and removed (**control-console remove**). Attributes associated with an attendant console are displayed (**control-console display**) and a list of all attendant partitions assigned to an attendant console can be obtained (**control-console list**). Specifics about these transactions are discussed below followed by a procedure for adding console attributes.

Changing Console Attributes

The **control-console change** command allows a new console to be designated as the control console for an attendant partition. The same screen used in the **control-console add** transaction is displayed when you issue the change command. The **control-console change** command cannot be used to move a console from one attendant partition to another.

One attendant console may be assigned to several attendant partitions, allowing that attendant console to possess several sets of attributes. Therefore, you can use either of the two following methods to access a specific set of console attributes.

- Enter a specific console number. The attributes displayed will correspond to the first attendant partition assigned to that console.
- Enter both a console number and an attendant partition. The command will display the attributes of the console for the attendant partition entered.

Note that only one console in the attendant partition can be the control console. To designate a new control console for the attendant partition, make a **y** entry in the Control Console? field of the transaction screen. The value of the Control Console? field for the current control console will be changed automatically.

Displaying Console Attributes

You can display the attributes associated with an attendant console by using the **control-console display** command. The attributes displayed include the attendant partition to which the console is assigned, and whether the console is the control console for that attendant partition.

Because an attendant console may be assigned to several attendant partitions, a single attendant console may possess several sets of attributes. Therefore, you can use any of the following methods to display console attributes.

- Enter only the console number, and the attributes displayed will correspond to the first attendant partition assigned to that console.
- Enter only the attendant partition, and the attributes of the control console for that attendant partition will be displayed.
- Enter both the console number and the attendant partitions the attributes of the console for the attendant partition will then be displayed.

To display all attendant partitions assigned to a given console use the **control-console list** command.

Removing Console Attributes

The **control-console remove** command removes an attendant console from an attendant partition. Be sure to specify the correct attendant console to be removed (because one attendant console may be assigned to several attendant partitions).

Before you remove a console, be sure to use either the **control-console add** or **control-console change** to designate another console as the control console. If the console to be removed is the last console in the partition, then removing that console effectively removes the entire attendant partition. If you wish to remove the entire attendant partition, you must execute the following transactions prior to removing the console:

1. Use **attd-part-attributes change** to assign a new overflow partition to each attendant partition which overflows to the partition being removed.
2. Use **attd-extension-partition change** to assign a new attendant partition to each extension partition assigned to the partition being removed.
3. Use **ldn-attd-partition change** to assign a new attendant partition to each LDN assigned to the partition being removed.
4. Use the FM command **trk-grp remove** to remove all trunks groups assigned to the attendant partition to be removed.

If the designated attendant partition is the only attendant partition to which the console is assigned, the console is reassigned to attendant partition 0. To remove an attendant console from attendant partition 0, you must add the console to a different attendant partition. Use the **control-console add** command.

Procedure: Adding a Control Console

Use this command to add an attendant console to an attendant partition and specify whether the console is the controlling console for that partition.

Before you add console attributes, you may need to use the command **console-equipment add** to add the console to the system.

1. Enter the command **control-console add** and the following screen is displayed: (System 85 R2V4 and Generic 2 only)

```
AT&T Mgr IV 2.2          DEFINITY G2.2          (123)456-7890
tcm product-admin control-console add          Page 1 of 1

          Console Number:
          Attendant Partition:
          Control Console?
```

2. Enter the console number to be assigned to the attendant partition. A number between 1 and 40 will be accepted.
 - The first console assigned to an attendant partition must be the control console.
 - The Automatic Circuit Assurance (ACA) console cannot be assigned to attendant partitions 1—40. It must be assigned to attendant partition 0; all referral calls are routed to the designated attendant console for attendant partition 0.
3. Enter the attendant partition number of the console being assigned. A number between 1 and 40 will be accepted.
 - On initialization, all attendant partitions are assigned to attendant partition 0.
 - Consoles that are not assigned to an attendant partition through this transaction are automatically assigned to attendant partition 0.
 - Attendant partition 0 does not have a control console.
4. Specify whether the console is the control console by entering **y** or **n** in the Control Console? field.
 - Only one console in an attendant partition can be the control console. To designate a new console for the attendant partition enter **y** in the Control Console? field. The value for the current control console will be changed from **y** to **n** automatically.
5. Press **EXECUTE** to process the data.

ADMINISTERING ATTENDANT PARTITION ATTRIBUTES

This is a product-only transaction that provides for the assignment of some attributes such as overflow type, overflow partition, unattended console default extension, and controlled restriction groups, to the attendant partition. A brief description of these attributes follows:

- The overflow type describes three options for triggering overflow:

Type 0 = No overflow (default value)

Type 1 = Each console in the attendant partition has the POSITION BUSY key activated or the headset removed.

Type 2 = The above condition applies when all six of the console's switched loops are in use.

- The overflow partition allows new calls to be routed to another attendant partition when all attendants in the partition are busy.
- The unattended console default extension is where a call is routed when it enters an attendant partition that is in the unattended console mode.
- A controlled restriction group is a group of extensions and terminals that are assigned the same controlled restriction level. In this way, call restrictions can be assigned automatically on a group of extensions. These restrictions are set through the **class-of-service** transactions.

To add attributes to an attendant partition, use the **attd-part-attributes add** command, remove them using the **attd-part-attributes remove** command, display them using the **attd-part-attributes display** command and list them using the **attd-part-attributes list** command. You can also use the **attd-part-attributes change** command to change the values assigned to the attendant partition attributes. The **attd-part-attributes display** command can also be used to display the attributes of a given attendant partition. The **attd-part-attributes list** command allows you to display one of the following attributes of a given attendant partition:

- LDNs
- Extension partitions
- Console numbers.

You can also associate Listed Directory Numbers (LDNs) and attendant consoles with the attendant partition. Use **ldn-attd-partition change** to add an LDN to an attendant partition and **console attributes add** to associate attendant consoles with attendant partitions.

Procedure: Adding Attendant Partition Attributes

Use **attd-part-attributes add** to define attributes associated with an attendant partition. These attributes include the Overflow parameters, Unattended Console Default Extension, and Controlled Restriction Groups assigned to the partition.

Before you add attributes to an attendant partition, be sure that you have done the following:

- Assigned a control console to the attendant partition using the **console-attributes add** command.
- Added the unattended console default extension using the **extension add** command. This is the extension to which a call will be routed if it comes to an attendant partition that is in the unattended console mode. This step is optional. The default extension must be a working extension, cannot be an associated extension, and must belong to an extension partition which is associated with the attendant partition.

To add attendant-partition attributes, follow these steps:

1. Enter the command **attd-part-attributes add**. The following screen will be displayed:
(For System 85 R2V4 and Generic 2 only)

```

AT&T Mgr IV 2.2          DEFINITY G2.2          (123)456-7890
tcm admin attd-part-attributes add          Page 1 of 1

          Attendant Partition:

                Overflow Type:
                Overflow Partition:

Unattended Console Default Extension:

          Controlled Restriction Groups

          --  --  --  --  --  --  --  --  --
          --  --  --  --  --  --  --  --  --
          --  --  --  --  --  --  --  --  --
          --  --  --  --  --  --  --  --  --
          --  --  --  --  --  --  --  --  --
          --  --  --  --  --  --  --  --  --
          --  --  --  --  --  --  --  --  --
  
```

2. Enter the number of the attendant partition in the Attendant Partition: field. A number between **0** and **40** will be accepted.
3. Enter the overflow type, one of the three separate overflow parameters.
 - If you do not specify overflow parameters, the default (overflow type 0) is assigned (no overflow will occur).
 - Overflow parameters cannot be assigned to attendant partition 0.
4. Enter the overflow partition. A number between **0** and **40** will be accepted.
 - Normally if all attendants in an attendant partition are busy on other calls when a new call comes in, the call waiting lamp on the console would be lit. However, as an alternative, new calls may be routed to another attendant partition, the overflow partition.
 - An overflow partition cannot be assigned to the attendant partition if the overflow type is 0 (no overflow).
5. Enter the unattended console default extension. A number between **00000** and **99999** will be accepted.
 - Whenever a call comes into an attendant partition that is in the unattended console mode, that call is routed to the unattended console default extension number.
6. Enter the desired control restriction groups. A number between **1** and **63** will be accepted.

ASSIGNING EXTENSION PARTITIONS TO ATTENDANT PARTITIONS

The **attd-extension partition** transaction is a product-only transaction which provides for the assignment of extension partitions to attendant partitions.

An attendant partition may serve one, several, or all extension partitions. The assignment of attendant partitions to extension partitions allows attendant calls to be routed to different attendants based on the calling or called extension partition. There may be a maximum of 41 attendant partitions, numbered 0 through 40.

To assign an extension partition to an attendant partition use the command **attd-extension-partition change**. Initially, all extension partitions are assigned to attendant partition 0; attendant partition 0 is the default.

You can also display the attendant-extension partition relationship; you can then see which attendant partition is associated with a specific extension partition by using **attd-extension-partition display**. To list the attendant partition assigned to every extension partition in the system use **attd-extension-partition list**.

Procedure: Changing an Attendant Extension Partition

Use this command to assign/change the attendant partition associated with an extension partition. This command is valid only if the Tenant Services feature is active.

Before reassigning an extension partition to a new attendant partition, be sure to determine whether the new attendant partition is defined. Use **console-attributes display** to view attendant partitions. If the new attendant partition is not already defined, use these two commands before you change the assignment of the extension partition:

- Use **console-attributes add** to assign a control console to the attendant partition.
- Use **attd-part-attributes add** to define that partition's attributes.

To assign extension partitions to attendant partitions, follow these steps:

1. Enter **attd-extension-partition change**.

System response: (System 85 R2V4 and Generic 2 only)

```
AT&T Mgr IV 2.2          DEFINITY G2.2          (123)456-7890
tcm admin attd-extension-partition change          Page 1 of 1

          Extension Partition:

          Attendant Partition:
```

2. Enter the number of the extension partition to be assigned to an attendant partition. A number from 0 to 999 will be accepted.
3. Enter the number of the attendant partition to be associated with the extension partition. A number from 0 to 40 will be accepted.
4. Press **EXECUTE** to complete the transaction and process the data.

ASSIGNING LDNS TO ATTENDANT PARTITIONS

The assignment of Listed Directory Numbers (LDNs) to attendant partitions further provides for the proper routing of incoming calls. An LDN is a published, local telephone number. LDNs are routed to an attendant console in the attendant partition to which the LDN is assigned. There may be up to 999 LDNs in the system. For information about administering LDNs, see Chapter 5, "Attendant Consoles."

The assignment of Listed Directory Numbers (LDNs) to attendant partitions is administered through **ldn-attd-partition** transactions. These transactions are product-only and are available only if the R2V4 or Generic 2.1 Tenant Services feature is active. One or more LDNs are assigned to an attendant partition (**ldn-attd-part change**), displayed (**ldn-attd-part display**), or listed by LDN (**ldn-attd-part list**).

Initially, all LDNs are assigned to attendant partition 0. Use the **ldn-attd-part change** command to assign LDNs to other attendant partitions.

Procedure: Changing an Attendant Partition

Use **ldn-attd-part change** to assign Listed Directory Number(s) to an attendant partition so that incoming calls are properly routed. You can also assign LDNs to other attendant partitions using this command. Tenant Services must be active.

To change an attendant partition, follow these steps:

1. Enter **ldn-attd-part change** and the following screen will be displayed: (System 85 R2V4 and Generic 2 only)

```

AT&T Mgr IV 2.2                DEFINITY G2.2                (123)456-7890
tcm product-admin ldn-attd-part change

                                Listed Directory Number:
                                Attendant Partition:

```

2. Enter the Listed Directory Number to be reassigned. A 3- to 5-digit extension will be accepted.
 - All LDNs are initially assigned to attendant partition 0.
 - If an LDN is required to route to a specific attendant console, then that LDN must be assigned to the attendant partition containing that console.
 - More than one LDN may be assigned to a given attendant partition, but only one attendant partition can be assigned to an LDN.
3. Enter the attendant partition number to which the LDN is being assigned. A number between 0 and 40 will be accepted.

ASSOCIATING CONSOLE MESSAGES WITH LDNS

You can now associate console messages with LDNs, as well as with trunk groups or call types. You can add console messages (**console-messages add**), display (**console-messages display**), and remove them (**console-messages remove**). See Chapter 5, "Attendant Consoles," for details about these transactions.

PARTITIONING EXTENSIONS

TCM allows you to administer partitioning of the extension blocks if the Tenant Services is active through the **extn-partition** transaction. The **extn-partition** transaction can be accessed from the product-admin area only. The verbs supported are: **display** and **change**. To view extension partitions, use the **extn-partition display** command. To change the extension partition number, use the **extn-partition change** command.

There are two steps needed to assign extensions to extension partitions. They are:

- Assigning an extension partition to a "tenant" using the **tenant** transaction.
- Assigning extensions to extension partitions using the **extension** transaction. The default extension partition is 0.
- [Optional] Assigning extension partitions to attendant partitions using **attd-extension-partition** transactions. The default attendant partition is 0.

For information about assigning extension partitions to attendant partitions, see the procedure "Assigning Extension Partitions To Attendant Partitions" in the beginning of this chapter. See Chapter 3, "Extensions and Terminals," for information on the extension transactions.

Procedure: Displaying Extension Partitions

The **extn-partition display** transaction allows you to display the extension partition information as it resides in the switch.

1. Enter the **extn-partition display** command. The following screen appears:

```
AT&T Mgr IV 2.2          DEFINITY G2.2          <target>
tcm product-admin extn-partition display          Page 1 of 1

      Starting extension: _____

      Extension Partition: ____

      NPA-NXX Designator:  __
```

2. One of the displayed fields is required. You can retrieve the extension partition information by populating one of these fields: Starting extension, Extension Partition, or NPA-NXX Designator. If you populate one of these fields and press **RETURN**, the cursor will skip the rest of the fields. Press **EXECUTE** to invoke the **display** output screen.
 - To display the extension partition information by starting extension, populate the Starting extension field. Valid entries are three to five digit extension numbers.
 - To display the extension partition information by extension partition number, populate the Extension Partition field. Valid entries are **0—999**.
 - To display the extension partition information by NPA-NXX designator, populate the NPA-NXX Designator field. Valid entries are **1—99**.
3. The output **display** screen will contain the following information:

```
AT&T Mgr IV 2.2                DEFINITY G2.2                <target>
tcm product-admin extn-partition display                Page 1 of 1

Starting extension: 46000

Ending extension: 46600

Extension Partition: 15

NPA-NXX Designator: 10
```

Procedure: Changing Extension Partition Numbers

The **extn-partition change** transaction allows you to change the extension partition number for extension blocks.

1. Enter the **extn-partition change** command. The following screen appears:

```
AT&T Mgr IV 2.2          DEFINITY G2.2          <target>
tcm product-admin extn-partition change          Page 1 of 1

          Starting extension: 46000

          Ending extension: 46600

          Extension Partition: 15

          NPA-NXX Designator: 10
```

You are allowed to change the value in the Extension Partition field only. Valid entries are **0** through **999**. The rest of the fields are display only.

2. Enter a new Extension Partition number. Valid entries are **0** through **999**. Press **RETURN**. Press **EXECUTE**.
 - Changing the extension partition number to **0** will remove the extension block from this partition.

ASSIGNING A TENANT TO AN EXTENSION PARTITION

Before you assign individual extensions to an Extension Partition, you need to assign the extension partition to a "tenant." The **tenant add** transaction associates a particular extension partition with the name and address of the tenant, the "owner" of that partition. You can also remove tenants (**tenant remove**), display tenants (**tenant display**) and change the owner of an extension partition (**tenant change**).

Procedure: Adding a Tenant

Use the command **tenant add** to assign an extension partition and tenant. With FM, **tenant add** also assigns ARS call categories to an extension partition. This command is available only when the R2V4 or Generic 2.1 Tenant Services feature is active. To add a tenant, follow these steps:

1. Enter the command **tenant add** and the following screen will be displayed: (System 85 R2V4 and Generic 2 only)

8. SWITCH EQUIPMENT

DEFINITY Manager IV maintains an equipment inventory of the carriers and circuit packs administered for each of your PBXs. This allows circuit assignments made through Manager IV to be validated before they are downloaded to the PBX.

The hardware configured for each PBX is loaded into the Manager IV database along with the switch translations during system initialization. This chapter describes procedures for administering changes to your system's hardware configuration through Manager IV. These procedures are similar for all switch types, though differences necessarily exist because of differing switch administration requirements.

Identifying Equipment Locations

Many of the procedures for administering switch translations require the entry of an *Equipment Location* or *Equipment Line Location* (ELL). Each equipment location is identified through an addressing hierarchy comprised of the following components:

- Module
- Cabinet
- Carrier
- Slot
- Circuit.

Valid values for each of these components are summarized for different switch and hardware types in the following table:

Switch Type	Module Type	Module	Cabinet	Carrier	Slot	Circuit
DEFINITY Generic 2	Universal	0-30	0	a-e	0-20	0-23
	XE	0-30	0	a-e	1-18	0-23
	Traditional	0-30	0-7	0-3	0-3,5-8,13-16,18-21	0-7
System 85 R2V2-R2V4	-	0-30	0-7	0-3	0-3,5-8,13-16,18-21	0-7
DIMENSION FP8	-	0-14	0-4	0-4	0-25	0-7

As indicated in the table above, the Generic 2 switch supports three different module configurations:

- The *universal* module configuration is derived from the System 75 R1 port boards and a modified System 85 R2V4 Module Control Carrier. Within a *Universal* Module, only universal carrier types and circuit packs may be assigned.
- The *traditional* module configuration is derived from the port boards and Module Control Carrier developed for the System 85 R2V4 switch. Within a *Traditional* Module, only traditional carrier types and circuit packs may be assigned.
- The *XE* Module configuration is a single stack of up to 5 modular carriers stacked vertically. The bottom carrier containing one or two module processors is derived from the existing System 75 control carrier shell with a new backplane and power supplies. The Port Carriers are derived from the XE port carriers: up to 3 XE Port Carriers may be stacked on top of the Control Carrier.

The *XE* Module hardware is incorporated into the Generic 2 Module Control Cabinet to provide a migration path for the System 75 customers to Generic 2 while maintaining the current System 75 hardware.

The *XE* Module looks very much like the *Universal* Module, and is treated as a modified *Universal* Module:

- Uses the same port packs and control boards as the *Universal* Module.
- An *XE* Port Carrier provides only 18 slots as opposed to 21 in a Common Port Carrier of the *Universal* Module. Slots in an *XE* Port Carrier are numbered **1** through **18**, and correspond electrically to the slots of the same numbers in the Common Port Carrier.
- In an *XE* Control Carrier, the electrical slots are the same as in the *Universal* Module though the circuit packs remain in different physical slots.
- Within an *XE* Module, only *XE* carrier types and universal packs may be assigned.
- If you have an *XE* Module, you can administer it the same way as the *Universal* Module with fewer slots in a Port Carrier.

A Generic 2 switch may be assigned any combination of *Traditional*, *Universal*, or *XE* Modules. The configuration cannot be *all XE* Modules since the *XE* Modules are restricted to being remote modules only.

Entering Equipment Locations

Manager IV equipment locations are represented by the five components of the addressing hierarchy (described above) separated by slashes ("/"). For example, module 2, cabinet 0, carrier 2, slot 3, circuit 1 is represented as "02/0/2/03/1". The entry of equipment locations through Manager IV varies slightly for different switch types and module configurations.

For the Generic 2 *Universal* Module,

- If the entered Module is universal, the Cabinet field is set to **0** and the cursor advances to the Carrier field automatically.
- Valid entries for the Carrier field are **a-e**.
 - a and b apply only to control carriers
 - c through e apply only to port carriers.
- Valid entries for the Slot field are **0-20**.
- Valid entries for the Circuit number are **0-23**. Depending on the type of circuit being administered, the range of valid entries may be smaller.

For the Generic 2 *XE* Module,

- If the entered Module is *XE*, the Cabinet field is set to **0** and the cursor advances to the Carrier field automatically.
- Valid entries for the Carrier field are **a-e**.
 - a and b apply only to control carriers
 - c through e apply only to port carriers.
- Valid entries for the Slot field are **1-18**.
- Valid entries for the Circuit number are **0-23**. Depending on the type of circuit being administered, the range of valid entries may be smaller.

For the Generic 2 *Traditional* Module and System 85 R2V2-R2V4,

- Valid entries for the Cabinet field are **0-7**.
- Valid entries for the Carrier field are **0-3**.
- Valid entries for the Slot field are **0-3, 5-8, 13-16, and 18-21**.
- Valid entries for the Circuit field are **0-7**. Depending on the type of circuit being administered, the range of valid entries may be smaller.

For DIMENSION FP8,

- Valid entries for the Cabinet field are **0-4**.
- Valid entries for the Carrier field are **0-4**.
- Valid entries for the Slot field are **0-18** or **0-25**, depending upon the type of carrier being administered.
- Valid entries for the Circuit field are **0-7**. Depending on the type of circuit being administered, the range of valid entries may be smaller.

When an equipment location is entered, the system uses these values to validate the entered data. For Generic 2 switches, Manager IV determines whether a given module is traditional, universal, XE, or unassigned at the time the Module is entered. If the data entered is not valid for the switch or module type, a short help message describing the valid values will be displayed.

Locale Assignments

To simplify hardware management for large PBXs with remote modules or carriers, Manager IV allows a *locale* to be assigned to each Equipment Location. Locales allow you to group your hardware based on its physical location, making it easier to choose a suitable Equipment Location.

During system initialization, the locale of each equipment location is set to the Module number. However, Manager IV allows you to change this default assignment and to assign locales to new hardware as it is added.

Locales are primarily used by the TCM application of Manager IV in conjunction with Manager IV's Automatic Selection feature for assigning extension and terminal equipment locations.

Manager IV Hardware Administration Commands

The first portion of this chapter contains instructions and procedures for administering changes to your equipment inventory that are applicable to all switch types.

- Changes to the equipment inventory in the Manager IV database are administered through the objects **carrier**, **slot**, **pack**, **locale**, and **circuit**. These objects appear in the admin and database-admin areas of the FM and TCM applications.
- Changes to the equipment inventory in the switch database are administered through the object **carrier-parameters**. This object appears in the product-admin area of the FM and TCM applications.

Procedures for administering changes to your equipment inventory are summarized below:

1. Adding carriers to the Manager IV database
 - **carrier add**
 - **carrier display**.
2. Adding circuit packs to existing carriers in the Manager IV database
 - **slot select**

- **pack add**
 - **slot display**.
3. Removing circuit packs from carriers in the Manager IV database
 - **slot display**
 - **pack remove**.
 4. Removing carriers from the Manager IV database
 - **pack remove**
 - **carrier remove**.
 5. Changing locale assignments in the Manager IV database
 - **locale display**
 - **locale change**.
 6. Reserving circuits in the Manager IV database
 - **circuit display**
 - **circuit change**.
 7. Administering carriers in the PBX
 - **carrier-parameters add**
 - **carrier-parameters display**
 - **carrier-parameters change**
 - **carrier-parameters remove**.

The remaining portions of this chapter contain information for administering hardware-related features such as ISDN Codeset Mappings [Generic 2] and DS1 and ISDN circuit pack parameters [Generic 2 and System 85]. These features are administered through the objects **codeset-mapping** and **ds1-isdn**.

Procedures for administering these features are summarized below:

1. Administering codeset/codepoint mappings
 - **codeset-mapping add**
 - **codeset-mapping display**
 - **codeset-mapping list**
 - **codeset-mapping change**
 - **codeset-mapping remove**.
2. Administering DS1/ISDN and pack parameters in System 85 R2V3-R2V4 and Generic 2
 - **ds1-isdn add**
 - **ds1-isdn display**
 - **ds1-isdn change**
 - **ds1-isdn remove**.

ASSIGNING CARRIERS AND PACKS IN THE MANAGER IV DATABASE

Carriers must be administered before assigning port circuit packs. There are two command objects, **carrier** and **carrier-parameters**, used to administer carriers within a system or network cabinet. Use the **carrier** command in the admin or database-admin areas to enter a carrier and packs in the Manager IV database. Use **carrier-parameters** in the product-admin area to administer the characteristics of the carrier in the switch. Both commands provide the **display**, **add** and **remove** verbs; **carrier-parameters** also provides the **change** verb.

The **carrier** transaction can be used to **add** or **remove** carriers. The **add** verb adds the carrier to the cabinet and allows you to add packs to the carrier with the same transaction. The **display** verb shows the pack type of each filled slot in a carrier. You can use this command to identify the packs in each carrier and to locate available slots.

Generic 2 and System 85 Port Carriers and Packs

Generic 2 traditional and System 85 port carriers house sn- and ann-coded packs as listed in Table 8-2 in "Chapter 8 Tables." These port carriers must be designated as either Non-DS1 (Digital Signal 1) or DS1 carriers.

Non-DS1 carriers house only sn-coded packs to interface to the Non-DS1 facilities and the pack type "ann17" for 7300S series MFAT voice terminals.

DS1 carriers house ann-coded circuit packs used with the DS1 and ISDN interfaces. The DS1 carriers may accommodate both DS1 and Non-DS1 packs. DS1 carriers may be used to interface to:

- Lines and trunks
- Remote Carriers
- Digital Multiplex Interface (DMI)
- Multi-Function Analog Terminals (MFATs)
- Integrated Services Digital Network (ISDN) packs.

For DS1 carriers, more information must be supplied to Manager IV through the **carrier add** command so that slots can be properly assigned.

The DS1 interface allows 24 logical trunks within one pair of physical wires. This is possible because the information is digitally multiplexed over 24 channels. Each DS1 channel can be administered individually; therefore, each channel has an ELL associated with it.

When you specify a DS1-ISDN Application Type, Manager IV automatically reserves ELLs for these channels using virtual slots. (A virtual slot is a slot that is physically empty but whose circuits may be assigned.) The number of ELLs will total 24 if 24th channel signaling is not in use (voice grade service); it will total 23 if 24th channel signaling is in use (ISDN and alternate voice/data service).

In certain cases, the physical pack has 4 ELLs available, so 5 virtual slots with 4 circuits each are required to reserve the additional 20 ELLs. In other cases, the pack has 8 ELLs, so 2 virtual slots with 8 circuits each are required to reserve the additional 16 ELLs. The number of packs required and the number of circuits that can be assigned to each pack depend on the application, that is, the function of the particular trunk, port or carrier board being administered. Application types are described below. See "Procedure: Adding a Generic 2 Traditional or System 85 DS1/MFAT Carrier" later in this chapter.

Generic 2 Universal Carriers and Packs

Generic 2 universal carriers house tn-coded circuit packs as listed in Table 8-1 (for *Universal Module* only) that appears in "Chapter 8 Tables." Depending on the interface, two types of the tn-coded circuit packs are used: DS1-ISDN ("tn767") and Non-DS1-ISDN (all tn-coded packs, except "tn767"). There is only one type of the universal port carrier that is used for all DS1-ISDN and Non-DS1-ISDN packs.

When assigning packs, make sure you select the appropriate universal pack types. For all DS1-ISDN Applications (0, 1, 2, and 5), select the pack type "tn767". To choose the correct pack type for Non-DS1 applications, invoke the "DEFINITY Generic 2 Universal Module Pack Types" list by pressing **ESC** !.

When assigning universal packs, you are not restricted to any particular slot numbers:

- For the DS1-ISDN applications,
 - With Application 2 (DS1-Line), you are allowed to select any slot within the range **1-20**.
 - With Applications 0,1,and 5, you are allowed to select any slot within the range **1-19**. Slot 20 may not be assigned for these Application Types since the next slot is reserved as a virtual slot.

Generic 2 XE Carriers and Packs

Generic 2 XE carriers house tn-coded circuit packs as listed in Table 8-1 (for *Universal* and *XE Modules* only) that appears in "Chapter 8 Tables." Depending on the interface, two types of the tn-coded circuit packs are used: DS1-ISDN ("tn767") and Non-DS1-ISDN (all tn-coded packs, except "tn767"). There is only one type of the XE port carrier that is used for all DS1-ISDN and Non-DS1-ISDN packs.

When assigning packs, make sure you select the appropriate universal pack types. For all DS1-ISDN Applications (0, 1, 2, and 5), select the pack type "tn767." To choose the correct pack type for Non-DS1 applications, invoke the "DEFINITY Generic 2 Universal Module Pack Types" list by pressing **ESC** !.

When administering the XE carriers, the following types may be selected:

- Module Control Carrier
 - Carrier *a* used as Control Carrier 0.
 - Carrier *b* used as Control Carrier 1.
- Module Port Carrier
 - Carriers *c* through *e* used as Port Carriers.
 - In an XE Port Carrier, slots are numbered **1** through **18** and correspond electrically to the slots of the same numbers in the *Universal* Port Carrier.

The XE Module size depends on a number of carriers used: carrier *c* is required, carriers *d* through *e* are optional.

DIMENSION Carriers and Packs

The DIMENSION carriers house lc-coded and zlc12 circuit packs as listed in Table 8-3 that appears in "Chapter 8 Tables." The following types need to be selected when administering carriers and packs:

- Common Control carriers
 - The Common Control carrier contains the central processor, main memory circuit packs, network channels, and data channels.
 - Common Control carriers are not stored in the Manager IV database.

- Growth Control Carriers
 - Growth Control carriers provide data channels and network channels in addition to slots for main memory.
 - Growth Control carriers are not stored in the Manager IV database.

- Trunk Port carriers
 - A Trunk Port carrier provides optional positions for certain types of the lc-coded circuit packs. Each DIMENSION Module can contain up to eight Trunk Port carriers, and each carrier has a maximum capacity of 32 trunks of the following types:
 - a. Attendant Conference
 - b. Remote Access CO Trunk
 - c. 2-way/1-way Ground Start CO Trunk
 - d. DID Trunk
 - e. Touch Tone Register and Receiver
 - f. Tie, CCSA, APLT
 - g. Touch Tone Sender
 - h. Auxiliary Trunk
 - i. Contact Interface
 - j. Message Register Loop Signaling
 - k. Data Trunk.

- Line Port carriers
 - A Line Port carrier provides slots for certain types of the lc-coded circuit packs. Each Line Port carrier provides a maximum of 64 line circuits of the following types:
 - a. Regular Line
 - b. Message Waiting
 - c. Data Trunk.

Up to 15 Line Port carriers can be used per Module.

- Line Group Control carrier
 - A Line Group Control carrier provides the group network and network control circuitry plus service for a maximum of 48 lines and is required in any cabinet that contains lines. The maximum number of these carriers is four:
 - a. Regular Line
 - b. Message Waiting
 - c. Tone Plant A
 - d. Tone Plant B
 - e. Attd.Interface
 - f. ATMS Test.

- Module Control and Trunk Port carrier

- A Module Control and Trunk Port carrier provides optional positions for certain types of the lc-coded circuit packs. Each DIMENSION Module can contain up to eight carriers, and each carrier has a maximum capacity of 22 trunk circuits of the following types:

- Remote Access CO Trunk
- 2-way/1-way Ground Start CO Trunk
- DID Trunk
- Touch Tone Register and Receiver
- Tie, CCSA, APLT
- Touch Tone Sender
- Auxiliary Trunk
- Contact Interface
- Message Register
- Loop Signaling
- ANI Data Transmitter
- Fixed Announcement.

Each slot of each DIMENSION carrier type is limited to hold only certain types of circuit packs. To view the valid pack types for a given slot, press **(ESC) ?** or **(ESC) !** for a complete list of all DIMENSION pack types.

Procedure: Assigning a New Module

A new Module is assigned by adding the first carrier to the Module. For System 85 and DIMENSION FP8 switches, adding a carrier to a new module is no different from adding a carrier to an existing module. When assigning the first carrier to a new Generic 2 Module, the Module Type must be specified.

1. Enter the **carrier add** command. The **carrier add** input screen is displayed.

```

AT&T Mgr IV 2.2          DEFINITY G2.2          <target>
tcm admin carrier add          Page 1 of 1

Carrier Location:      Module:  __      Module Type: __
                       Cabinet:  _
                       Carrier:  _
                       Locale:  __
  
```

2. Enter the Module number. Valid values are **0-30** for Generic 2 and System 85, and **0-14** for DIMENSION.
3. [Generic 2] When you specify the Module number, the system determines the Module Type. If the Module is not assigned, the system prompts you for a Module Type. Enter either "t" (traditional), "u" (universal), or "x" (XE). If the entered Module has already been assigned as a *Traditional*, *Universal*, or *XE* Module, the Module Type field will not appear. If a *Traditional* Module is specified, the cursor will advance to the Cabinet field. If a *Universal* or *XE* Module is specified, the Cabinet field will default to **0** and the cursor will advance to the Carrier field.

4. To add a carrier to a Generic 2 *Traditional* Module or System 85, follow the steps described in the following "Procedure: Adding a Generic 2 *Traditional* or System 85 Non-DS1 Carrier to the Database" or "Procedure: Adding a Generic 2 *Traditional* or System 85 DS1/MFAT Carrier to the Database." To add a carrier to a Generic 2 *Universal* or *XE* Module, refer to "Procedure: Adding a Universal/*XE* Carrier to the Manager IV Database." To add a carrier to a DIMENSION module, refer to "Procedure: Adding a DIMENSION Carrier to the Manager IV Database."
5. [Generic 2] Whenever you add the first carrier to a new module, you must notify all DEFINITY Manager IV users to either log out or change targets to update this information. The system will remind you about it by displaying the following message: "This carrier is the first carrier to be added to Module #. Please notify all DEFINITY Manager IV users that they must either log out or change targets before accessing equipment locations in this module." Failure to comply with this request can cause serious database corruption.

Procedure: Adding a Generic 2 Traditional or System 85 Non-DS1 Carrier to the Database

[DEFINITY Generic 2 Traditional Module and System 85 R2V2-V4]

1. Determine the location of the carrier to be added.
2. From the admin or database-admin area, enter the command **carrier add**. The following screen appears.

```

AT&T Mgr IV 2.2          DEFINITY G2.2          <target>
tcm admin carrier add

Carrier Location:          Module:
                           Cabinet:
                           Carrier:
                           Locale:

```

3. Enter the location (module, cabinet, carrier and locale) of the carrier to be added. The following screen will be displayed:

```

AT&T Mgr IV 2.2          DEFINITY G2.2          <target>
tcm admin carrier add

Carrier Location:          Module:
                           Cabinet:
                           Carrier:
                           Locale:
                           DS1 Carrier? n
                           Electrical Port Carrier? n

```

4. The DS1 Carrier field defaults to **n**. To add a Non-DS1 carrier, choose the default.
5. If the carrier is to be assigned Electrical Port Carrier Number 0, then enter **y** in the Electrical Port Carrier field.
6. Enter the appropriate pack types for each slot. Refer to the list of pack types in Table 8-2 that appears in "Chapter 8 Tables," or use on-line help to remind you of available pack types.
 - Slots 04, 09, 10, 11, 12, and 17 are reserved for system control packs and cannot be assigned. These slots are not displayed.
7. Press **EXECUTE** to execute the transaction.

Procedure: Adding a Generic 2 Traditional or System 85 DS1/MFAT Carrier to the Database

[DEFINITY Generic 2 Traditional Module and System 85 R2V2-V4]

To add a DS1/MFAT carrier:

1. Determine the location of the carrier to be added.
2. Enter the command **carrier add**. The same carrier screen shown in Step 2 of "Adding A Carrier," the previous procedure, appears.
3. Enter the Carrier Location on the screen.
4. Enter **y** in the DS1 Carrier field, and press **RETURN**. The following screen will be displayed:

```

AT&T Mgr IV 2.2          DEFINITY G2.2          <target>
tcm admin carrier add          Page 1 of 1

Carrier Location:          Module: xx
                          Cabinet: x
                          Carrier: x
                          Locale: x
                          DS1 Carrier? y
                          Electrical Port Carrier? n

Slot 00 DS1 Application Type: __          Slot 13 DS1 Application Type: __
Slot 05 DS1 Application Type: __          Slot 18 DS1 Application Type: __

Slot 00:          Slot 05:          Slot 13:          Slot 18:
Slot 01:          Slot 06:          Slot 14:          Slot 19:
Slot 02:          Slot 07:          Slot 15:          Slot 20:
Slot 03:          Slot 08:          Slot 16:          Slot 21:

```

- The Application Type fields prompt you to enter the application type for the physical slots that can be occupied by DS1 (ann11) or ISDN (ann35) packs. DS1 can be used for six different applications (numbered **0-5**) and the ELL assignment varies depending on the Application Type.

Valid types are:

- **Type 0: Trunks Mixed.** DS1 can replace a variety of analog trunks including private network tie trunks, CO trunks, FX trunks, and WATS trunks. This Application Type may be assigned to Slots 05 and 18.
- **Type 1: Digital Multiplex Interface (DMI).** DS1 can interface between data ports and a host computer. For example, users can dial into the Generic 2 or System 85 and connect to a host computer. This application type may be assigned to Slots 05 and 18.
- **Type 2: Off-Premises Station Lines (OPS).** A single DS1 interface can support up to 24 off-premises terminals. This allows users to access the Generic 2 or System 85 from a remote location. This Application Type may be assigned to Slots 00, 05, 13, and 18.
- **Type 3: Remote Carrier Board Connected by T1 System.** The DS1 interface can be used in conjunction with T1 to connect a remote carrier to a System 85. Remote carriers can be placed a maximum of 100 miles away from a System 85. This Application Type may be assigned to Slots 00, 05, 13, and 18.
- **Type 4: Remote Carrier Board Connected by Fiber.** [System 85 R2V3] This is the same as Application Type 3, but the transmission medium is fiber rather than T1.
- **Type 5: ISDN.** [Generic 2 Traditional Module and System 85 R2V4] DS1 carriers are used for ISDN circuit packs that connect ISDN trunks in the network. This Application Type may be assigned to Slots 05 and 18. See Chapter 4, "Trunk Group and Modem Pool Administration" in "DEFINITY® Manager IV Facilities Management Operations" for more information on tasks related to Generic 2 and System 85 R2V4.

5. An Application Type may be entered for each of the following slots: 00, 05, 13 and 18.

- For a DS1 with Application Types 0, 1, or 2, Manager IV automatically fills in the slot field for the physical slot with ann11, and the virtual slots with ds1.
 - For Slot 05 with Types 0 or 1, the virtual slots are 00, 01, 02, 06, and 07.
 - For Slot 18 with Types 0 or 1, the virtual slots are 13, 14, 15, 19, and 20.

Note: If 24th Channel signaling is used, Slots 02 and/or 15 can have only three circuits assigned, since the fourth circuit is used as a signaling channel. If Robbed Bit signaling is used, however, all four circuits can be assigned. The use of 24th Channel signaling is specified when the parameters of the pack are input via **ds1-isdn** [Generic 2, System 85 R2V3-R2V4].

- If Application Type 2, 3, or 4 is entered for Slot 00, only Application Types 2, 3, and 4 are allowed for Slot 05. Similarly, if Application Type 2, 3, or 4 is entered for Slot 13, only Application Types 2, 3, and 4 are allowed for Slot 18.
- For Application Type 5, Manager IV fills in the field for the physical slot with "ann35" and the virtual slots with "isdn."
 - For Slot 05, the virtual slots are 00, 01, 02, 06, and 07.
 - For Slot 18, the virtual slots are 13, 14, 15, 19, and 20.
- Application Types 3 and 4 are used for remote carrier administration. A remote carrier provides either four or eight slots in what is known as a *remote group housing*. The slots parallel the DS1 carrier control slots so that DS1 control slots 00 and 13 each map to a remote slot 00 and DS1 control slots 05 and 18 each map to a remote slot 05.

The following configurations illustrate the concept:

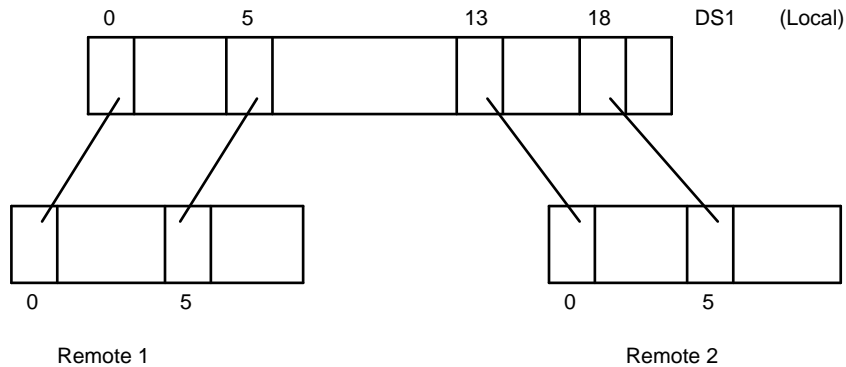


Figure 8-1 DS1 Carrier Connected to Two Remote Carriers

Figure 8-1 shows a DS1 carrier connected to two remote carriers; these may be in separate locations. Note that only 8 slots may be used in each of the remote carriers.

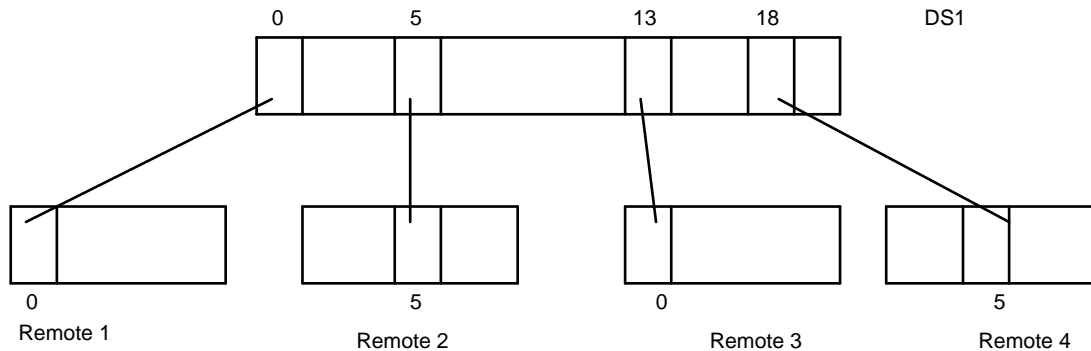


Figure 8-2 DS1 Carrier Connected to Four Remote Carriers

Figure 8-2 shows a DS1 carrier connected to four remote carriers. Note that only 4 slots may be used in each of the remote carriers. In addition, DS1 slots 05 and 18 cannot be connected to remote slot 0, nor can DS1 slots 0 and 13 be connected to remote slot 05.

- Manager IV assumes that the local DS1 carrier has an ann15 controlling pack physically inserted in Slot 00 and/or 05, and/or Slot 13 and/or 18. It also assumes that there is a corresponding ann16 controlling pack in Slots 00 or 05 of the remote carrier.
- If Slot 00 of the remote carrier contains an ann16, Slots 01, 02, and 03 can be used for sn228, sn270l, sn270t, sn238l, sn238t, or ann17 packs. If Slot 05 of the remote carrier contains an ann16, Slots 04, 07, and 08 can be used for the same pack types.
- Manager IV needs to know the ELLs on the local DS1 carrier in order to administer the local and remote carrier. However, in order to show the remote pack types accurately on the system inventory reports, Manager IV also needs to know the physical pack types in the remote carrier. To accomplish this, Manager IV pairs the ELLs from the local carrier with the pack types in the remote carrier.
- For the ELLs on the local carrier, enter the physical pack types as they exist in the remote carrier. This table outlines the relationship between the local and remote slots.

Carrier Administration	
DS1 Application Types 3 and 4	
Manager IV Database Slot	Contains pack type of slot
00	01
01	02
02	03
03	03
05	04
06	07
07	08
08	08
13	01
14	02
15	03
16	16
18	04
19	07
20	08
21	21

The prompts for the affected slots will change to reflect this relationship, as shown below:

```

AT&T Mgr IV 2.2          DEFINITY G2.2          <target>
tcm admin carrier add          Page 1 of 1

Carrier Location:      Module: 00
                      Cabinet: 1
                      Carrier: 2
                      Locale: 0
                      DS1 Carrier? y
                      Electrical Port Carrier? n

Slot 00 DS1 Application Type: 3      Slot 13 DS1 Application Type: _
Slot 05 DS1 Application Type: 3      Slot 18 DS1 Application Type: _

(R1)Slot 00: _____ (R4)Slot 05: _____ Slot 13: _____ Slot 18: _____
(R2)Slot 01: _____ (R7)Slot 06: _____ Slot 14: _____ Slot 19: _____
(R3)Slot 02: _____ (R8)Slot 07: _____ Slot 15: _____ Slot 20: _____
Slot 03: _____ Slot 08: _____ Slot 16: _____ Slot 21: _____

```

- If the carrier is being used for MFAT terminals (pack type ann17), tab past the Application Type field. Each ann17 pack will be given 8 circuits instead of the usual 4 that are assigned if the pack is located in a Non-DS1 carrier. The ann17 pack will also be given 8 circuits if it is placed in any of the free slots: 03, 08, 16, and 21.

6. Enter an appropriate pack type in other available slots, if desired.
 - Refer to the list of pack types in Table 8-2 that appears in "Chapter 8 Tables," or use on-line help, to remind you of available pack types.
 - Slots 04, 09, 10, 11, 12, and 17 are reserved for system control packs and cannot be assigned. These slots are not displayed.
7. Press **EXECUTE** to execute the transaction.

If any of the packs have been added with Application Types 0, 1, 2, or 5, run **ds1-isdn** [Generic 2, System 85 R2V3-R2V4] to administer the parameters for each DS1 or ISDN pack. You can then assign equipment to the pack. For more information, see "Assigning DS1 and ISDN Circuit Pack Parameters" later in this chapter.

Procedure: Adding a Generic 2 Universal/XE Carrier to the Manager IV Database

[Generic 2 Universal/XE Module]

If you are adding a universal or XE carrier to the Manager IV database, follow this procedure since both carrier types are administered in the same manner.

1. Determine location of the carrier to be added.
2. From the admin or database-admin area, enter the command **carrier add**. The **carrier add** input screen appears:

```
AT&T Mgr IV 2.2          DEFINITY G2.2          <target>
tcm admin carrier add          Page 1 of 1

Carrier Location:      Module:  __
                      Cabinet:  _
                      Carrier:  _
                      Locale:  __
```

3. Enter the Equipment Location of the universal/XE carrier to be added. This field is required.
 - Enter the Module location. Valid entries are **0-30**. Make sure you select the number assigned to the *Universal* or *XE* Module. Press **RETURN**.
 - The Cabinet field defaults to **0**. The system skips to the Carrier field. Enter the Carrier location. Valid entries are **c-e**. Press **RETURN**.
 - To view the valid entries, press **ESC** ?. The short help messages are provided for each Equipment Location field.
 - The Locale field defaults to the Module Number. You are allowed to change the default value. Valid entries are **0-99**. Press **RETURN**. Fields for entering pack types appear at the bottom of the screen. This screen appears when you add a *Universal* carrier.

```

AT&T Mgr IV 2.2                DEFINITY G2.2                <target>
tcm admin carrier add                Page 1 of 1

Carrier Location:      Module:  __
                        Cabinet: _
                        Carrier: _
                        Locale:  __

Slot 00:  _____          Slot 11:  _____
Slot 01:  _____          Slot 12:  _____
Slot 02:  _____          Slot 13:  _____
Slot 03:  _____          Slot 14:  _____
Slot 04:  _____          Slot 15:  _____
Slot 05:  _____          Slot 16:  _____
Slot 06:  _____          Slot 17:  _____
Slot 07:  _____          Slot 18:  _____
Slot 08:  _____          Slot 19:  _____
Slot 09:  _____          Slot 20:  _____
Slot 10:  _____

```

If you add an *XE* carrier, only 18 slots are displayed.

```

AT&T Mgr IV 2.2                DEFINITY G2.2                <target>
tcm admin carrier add                Page 1 of 1

Carrier Location:      Module:  __
                        Cabinet: _
                        Carrier: _
                        Locale:  __

Slot 01:  _____          Slot 10:  _____
Slot 02:  _____          Slot 11:  _____
Slot 03:  _____          Slot 12:  _____
Slot 04:  _____          Slot 13:  _____
Slot 05:  _____          Slot 14:  _____
Slot 06:  _____          Slot 15:  _____
Slot 07:  _____          Slot 16:  _____
Slot 08:  _____          Slot 17:  _____
Slot 09:  _____          Slot 18:  _____

```


4. Assign the appropriate pack types.

- Enter the pack types for each slot. Refer to the list of pack types in Table 8-1 that appears in "Chapter 8 Tables," or use on-line help to remind you of available pack types.
- If you specify the DS1-ISDN pack type ("tn 767"), the Application Type prompt is displayed next to the slot occupied with "tn767."
 - For all DS1-ISDN Applications (0, 1, 2, and 5), enter the pack type "tn767."

```
AT&T Mgr IV 2.2                DEFINITY G2.2                <target>
tcm admin carrier add                Page 1 of 1

Carrier Location:      Module: 3
                        Cabinet: 0
                        Carrier: c
                        Locale: 3

Slot 00: tn748                Slot 11: _____
Slot 01: tn735                Slot 12: _____
Slot 02: tn767  Application Type: 0  Slot 13: _____
Slot 03: ds1                  Slot 14: _____
Slot 04: tn767  Application Type: 1  Slot 15: _____
Slot 05: ds1                  Slot 16: _____
Slot 06: tn767  Application Type: 2  Slot 17: _____
Slot 07: tn767  Application Type: 5  Slot 18: _____
Slot 08: isdn                 Slot 19: _____
Slot 09: _____           Slot 20: _____
Slot 10: _____
```

— In an XE carrier, slot 1 is the only place where you can add "tn748" pack.

```

AT&T Mgr IV 2.2                DEFINITY G2.2                <target>
tcm admin carrier add                Page 1 of 1

Carrier      Location:      Module: 3_
                Cabinet: 0
                Carrier: c
                Locale: 3_

Slot 01: tn748                Slot 10: _____
Slot 02: tn767  Application Type: 0    Slot 11: _____
Slot 03: ds1                Slot 12: _____
Slot 04: tn767  Application Type: 1    Slot 13: _____
Slot 05: ds1                Slot 14: _____
Slot 06: tn767  Application Type: 2    Slot 15: _____
Slot 07: tn767  Application Type: 5    Slot 16: _____
Slot 08: isdn                Slot 17: _____
Slot 09: _____          Slot 18: _____

```

- For Application Types 0 and 1, Manager IV automatically reserves the next slot as a DS1 virtual slot. For Application Type 5, Manager IV automatically reserves the next slot as an ISDN virtual slot.
- Press **EXECUTE** to execute the transaction.

Procedure: Adding a DIMENSION Carrier to the Manager IV Database
[DIMENSION FP8]

1. Determine location of the carrier to be added.
2. From the admin or database-admin area, enter the **carrier add** command. The **carrier add** input screen appears:

```

AT&T Mgr IV 2.2                D2000 FP8                <target>
tcm admin carrier add

Enter x to select DIMENSION Carrier Type:

  __Trunk Port Carrier          __Line Group Control Carrier
  __Line Port Carrier          __Module Control and Trunk Port Carrier

Carrier Location:      Module:
                      Cabinet:
                      Carrier:
                      Locale:

```

3. Select a carrier type by entering **x** in one of the carrier type fields. The following screen is displayed for the Trunk Port, Line Port, and Line Group Control Carrier Types:

```

AT&T Mgr IV 2.2                D2000 FP8                <target>
tcm admin carrier add

Enter x to select DIMENSION Carrier Type:

  x Trunk Port Carrier          __Line Group Control Carrier
  __Line Port Carrier          __Module Control and Trunk Port Carrier

Carrier Location:      Module:
                       Cabinet:
                       Carrier:
                       Locale:

Slot 01:      Slot 06:      Slot 11:      Slot 16:
Slot 02:      Slot 07:      Slot 12:      Slot 17:
Slot 03:      Slot 08:      Slot 13:      Slot 18:
Slot 04:      Slot 09:      Slot 14:

```

4. The following screen is displayed for the Module Control and Trunk Port Carrier Types:

```

AT&T Mgr IV 2.2                D2000 FP8                <target>
tcm admin carrier add                Page 1 of 1

Enter x to select DIMENSION Carrier Type:
  __Trunk Port Carrier          __Line Group Control Carrier
  __Line Port Carrier          x Module Control and Trunk Port Carrier

Carrier Location:      Module:
                       Cabinet:
                       Carrier:
                       Locale:

Slot 00:      Slot 05:      Slot 10:      Slot 15:      Slot 20:
Slot 01:      Slot 06:      Slot 11:      Slot 16:      Slot 21:
Slot 02:      Slot 07:      Slot 12:      Slot 17:      Slot 22:
Slot 03:      Slot 08:      Slot 13:      Slot 18:      Slot 23:
Slot 04:      Slot 09:      Slot 14:      Slot 19:      Slot 24:
                                           Slot 25:

```

5. Enter the Module, Cabinet, and Carrier of the carrier to be added. These fields are required.
 - Enter the Module number. Valid entries are **0-14**.
 - Enter the Cabinet number.
 - For the Module Control and Trunk Port Carrier Types, valid entries are **0-1**. For all other carrier types, valid entries are **0-4**.

- Enter the Carrier number. Valid entries are **0-4**.
 - If you have selected the Module Control and Trunk Port Carrier Type, the Cabinet field will default to **0** and the cursor will advance to the Locale field.
 - Enter the Locale for the carrier. Valid entries are **0-99**. This field is optional. By default, the locale assigned to the carrier will be the same as the module number.
6. Enter the appropriate pack types, assigned to each slot. The valid slots and pack types for each slot will vary with the carrier type selected.
- Refer to the list of pack types Table 8-3 that appears in "Chapter 8 Tables," or use on-line help to remind you of available pack types.
 - Press **ESC** or **EXECUTE**.

Procedure: Displaying a Generic 2 or System 85 Carrier

To display a Generic 2 or System 85 carrier,

1. Enter the **carrier display** command and press **RETURN**. The **carrier display** input screen appears.

```

AT&T Mgr IV 2.2          DEFINITY G2.2          <target>
tcm admin carrier display          Page 1 of 1

Carrier Location:      Module:  __
                       Cabinet:  _
                       Carrier:  _
  
```

You are allowed to display the carriers by specifying the following Equipment Location fields: Module, Cabinet and Carrier. All three fields are required.

2. Enter the Module location. Valid entries are **0-30**. Press **RETURN**.
 - If you enter a Module location which has not been assigned, the following error message is displayed: "Module is unassigned."
 - [Generic 2] If you populate the Module field with a number assigned to a *Universal* or *XE* Module, the Cabinet field will default to a "0." The cursor will skip to the Carrier field. Go to step 4.
 - [Generic 2] If you populate the Module field with a number assigned to a *Traditional* Module, the cursor will advance to the Cabinet field. Go to step 3.
3. Enter the Cabinet location. This field is required. Valid entries are **0-7**.
4. Enter the Carrier. For a Generic 2 universal or XE carrier, valid entries are **c-e**. For a Generic 2 traditional or System 85 carrier, valid entries are **0-3**. Press **RETURN**.
5. Press **EXECUTE**.

6. The **carrier display** output screen is displayed.

- For Generic 2 *Universal* Module, if the DS1-ISDN pack(s) "tn767" have been assigned on this carrier, the following screen is displayed:

```
AT&T Mgr IV 2.2          DEFINITY G2.2          <target>
tcm admin carrier display          Page 1 of 1

Carrier Location:      Module: 3
                        Cabinet: 0
                        Carrier: c
                        Locale: 3

Slot 00: tn748          Slot 11: _____
Slot 01: tn735          Slot 12: _____
Slot 02: tn767  Application Type: 0  Slot 13: _____
Slot 03: ds1           Slot 14: _____
Slot 04: tn767  Application Type: 1  Slot 15: _____
Slot 05: ds1           Slot 16: _____
Slot 06: tn767  Application Type: 2  Slot 17: _____
Slot 07: tn767  Application Type: 5  Slot 18: _____
Slot 08: isdn          Slot 19: _____
Slot 09: _____     Slot 20: _____
Slot 10: _____
```

- If the universal carrier contains only Non-DS1 packs, the Application Type prompts do not appear:

```
AT&T Mgr IV 2.2          DEFINITY G2.2          <target>
tcm admin carrier display          Page 1 of 1

Carrier Location:      Module: 3
                        Cabinet: 0
                        Carrier: c
                        Locale: 3

Slot 00: tn748          Slot 11: _____
Slot 01: tn735          Slot 12: _____
Slot 02: _____     Slot 13: _____
Slot 03: _____     Slot 14: _____
Slot 04: _____     Slot 15: _____
Slot 05: _____     Slot 16: _____
Slot 06: _____     Slot 17: _____
Slot 07: _____     Slot 18: _____
Slot 08: _____     Slot 19: _____
Slot 09: _____     Slot 20: _____
Slot 10: _____
```

- The screens for an XE carrier with the DS1-ISDN packs and NON-DS1 packs are the same as shown above for the *Universal* Module, except in the *XE* Module, only 18 slots are displayed. See the screens provided for an *XE* Module in "Procedure: Adding a Generic 2 Universal/XE Carrier to the Manager IV Database" earlier in this chapter.
7. The screen description provided in "Procedure: Adding a Generic 2 Traditional or System 85 DS1/MFAT Carrier to the Database" is applicable to the **carrier display** output screens.

Procedure: Displaying a DIMENSION Carrier

[DIMENSION FP8]

To display a DIMENSION carrier:

1. Enter the **carrier display** command and press **RETURN**. The **carrier display** input screen appears.

```

AT&T Mgr IV 2.2                D2000 FP8                <target>
tcm admin carrier add                Page 1 of 1

Carrier Location:      Module:  __
                      Cabinet:  _
                      Carrier:  _

```

You are allowed to display the carriers by specifying the following Equipment Location fields: Module, Cabinet, and Carrier. All three fields are required.

2. Enter the Module location. Valid entries are **0-14**. Press **RETURN**.
3. Enter the Cabinet location. This field is required. Valid entries are **0-4**. Press **RETURN**.
4. Enter the Carrier. Valid entries are **0-4**. Press **RETURN**.
5. Press **EXECUTE**. The **carrier display** output screen is displayed.

```

AT&T Mgr IV 2.2                D2000 FP8                <target>
tcm admin carrier display                Page 1 of 1

Carrier Location:      Module:  __
                      Cabinet:  _
                      Carrier:  _
                      Locale:  __

Slot 00:  __      Slot 05:  __      Slot 10:  __      Slot 15:  __
Slot 01:  __      Slot 06:  __      Slot 11:  __      Slot 16:  __
Slot 02:  __      Slot 07:  __      Slot 12:  __      Slot 17:  __
Slot 03:  __      Slot 08:  __      Slot 13:  __      Slot 18:  __
Slot 04:  __      Slot 09:  __      Slot 14:  __

This is a Trunk Port Carrier

```

All fields are display only.

Procedure: Removing a Carrier

Perform the following procedures before issuing the **carrier remove** command, if the carrier is not empty:

1. Enter the **carrier display** command to check which slots are occupied.
2. Enter the **pack remove** command and specify the slot numbers for removing the packs (applies to DIMENSION as well). For a detailed description of the **pack remove** transaction, refer to "Procedure: Removing a Pack."

```
AT&T Mgr IV 2.2          DEFINITY G2.2          <target>
tcm admin pack remove          Page 1 of 1

Slot Location:      Module:  __
                   Cabinet: _
                   Carrier: _
                   Slot:   _
```

3. Enter the **carrier remove** command. The **carrier remove** input screen is displayed.

```
AT&T Mgr IV 2.2          DEFINITY G2.2          <target>
tcm admin carrier remove          Page 1 of 1

Carrier Location:   Module:  __
                   Cabinet: _
                   Carrier: _
```

4. Enter the Module, Cabinet, and Carrier of the carrier to be removed and press **EXECUTE**.
 - If the carrier is not empty, the error message "CARRIER IS NOT EMPTY. USE THE CARRIER DISPLAY AND PACK REMOVE COMMANDS" is displayed.
 - If you successfully remove the carrier, the following message is displayed: "Command completed successfully."
- Whenever you remove the last carrier from an existing Module (Generic 2 only), you must notify all DEFINITY Manager IV users to either log out or change targets to update this information. The system will remind you about it by displaying the following message: "This carrier was the last carrier in Module #. Please notify all DEFINITY Manager IV users that they should either log out or change targets to prevent from accidentally accessing equipment locations in this module." Failure to observe this procedure can cause database corruption.

Procedure: Adding Generic 2 or System 85 Circuit Packs

TCM administrators seldom have to add a carrier to the cabinet, but adding a circuit pack to an existing carrier can be a frequent task.

To add a pack to the carrier,

1. Enter **pack add**. The following screen appears:

```
AT&T Mgr IV 2.2          DEFINITY G2.2          <target>
tcm admin pack add          Page 1 of 1

Slot Location:           Module:
                          Cabinet:
                          Carrier:
                          Slot:

                          Pack Type:
                          DS1 Carrier? n
```

The DS1 Carrier field is only displayed for System 85 switches.

2. Enter the Module, Cabinet, Carrier, and Slot location of the pack.
3. Enter the Pack Type of the pack to be added.
4. [Generic 2 *Traditional* Module and System 85] If the pack will be located in a Non-DS1 carrier, enter **n** in the DS1 Carrier field.
5. [Generic 2 *Traditional* Module and System 85] If the pack will be in a DS1/MFAT carrier, the DS1 Application Type field displays. Enter the DS1 Application Type. (See "Adding a Generic 2 Traditional or System 85 DS1/MFAT Carrier," above for more information.)
 - If the Application Type is 3 or 4, enter the pack types as they are specified in the remote carrier. See the table in Step 5 of "Adding a Generic 2 Traditional or System 85 DS1/MFAT Carrier" above for more information. Do not enter the controlling pack type number (ann15 or ann16); enter the pack type of the physical pack in the remote carrier.
6. Press **EXECUTE** to execute the transaction.

If the pack is a DS1 or ISDN pack, run **ds1-isdn** [Generic 2 or System 85 R2V3-R2V4] to specify the parameters of the DS1 or ISDN pack. See "Assigning DS1 and ISDN Circuit Pack Parameters" later in this chapter for more information. You can then assign equipment to the pack.

Procedure: Adding DIMENSION Circuit Packs

To add the pack to the DIMENSION carrier,

1. Enter **pack add**. The following screen appears:

```
AT&T Mgr IV                D2000 FP8                <target>
tcm admin pack add                Page 1 of 1

Select DIMENSION Carrier Type:
  _ Trunk Port Carrier          _ Line Group Control Carrier
  _ Line Port Carrier           _ Module Control and Trunk Port Carrier

Slot Location:      Pack Type: _____
                   Module:   ___
                   Cabinet:  _
                   Carrier:  _
                   Slot:    _
```

2. Select a carrier type by entering **x** in one of the Carrier Type fields.
3. Enter the Pack Type of the pack to be added.
4. Enter the Module, Cabinet, Carrier, and Slot location of the pack.
5. Press **EXECUTE** to execute the transaction.

Procedure: Changing Generic 2 or System 85 Packs

During the hardware initialization, it is not always possible to distinguish between the ambiguous packs such as an sn228 off-premises line pack and an sn229 on-premises line pack, a tn742 on/off-premises pack and a tn746 on/off-premises one.

An sn228 pack is translated exactly like an sn229 and will be initialized as an SN229. These packs have the same number of circuits, and it is not always possible to determine which pack type is actually used.

Similarly, a tn742 pack is translated exactly like a tn746 and will be initialized as a tn746. A tn746 can be initialized as a tn742. However, a tn746 has 16 circuits, and a tn742 has only 8. If a tn746 is initialized as a tn742, 8 extra circuits will be unusable. If a tn742 is initialized as a tn746, the non-existent equipment locations will be auto-selected for use by the customer. Use the **pack change** transaction as the corrective step in the event that the initialization fails to correctly identify one of the above mentioned packs.

The **pack change** transaction allows bidirectional conversion of packs between a tn742 and a tn746, and between an sn228 and an sn229. This transaction prevents eliminating an equipment location which is in use, or placing an off-premises line on an on-premises pack.

If the initialization for one of the ambiguous packs fails, follow these steps:

1. Use the **slot select** transaction to determine the equipment location of the failed circuit pack.
2. Enter **pack change**. The following screen appears:

AT&T Mgr IV 2.0	DEFINITY G2.2	<target>
tcm admin pack change		Page 1 of 1
Slot Location:	Module:	
	Cabinet:	
	Carrier:	
	Slot:	
	Pack Type:	

3. Enter the Module. Press **RETURN**.
4. The Cabinet, Carrier, Slot, and the Pack Type fields will be displayed. Enter the Carrier and Slot locations of the pack to be changed.
5. Enter the new Pack Type.
6. Press **EXECUTE**.

Procedure: Removing a Pack

1. Remove all equipment associated with the pack to be removed.
 - Use the **circuit display** command to verify that no circuits in the pack are assigned or reserved.
 - For trunks, use **trk-grp-assignment report** to see a list of trunk groups by Equipment Line Location (ELL). Then use **trk remove** to delete these trunks from the system.
 - For terminals, use the command **station-attributes display** to see what terminals are associated with assigned circuits. Select the option "Set ID for a Given Equipment Location." Then use **extension remove** or one of the terminal transactions (12-button, 36-button, etc.) to remove that set ID from the system.
2. Enter the command **pack remove**.
 - The remove screen is displayed.
3. Enter the ELL of the pack to be removed.
 - Manager IV removes the pack in the requested slot if none of the circuits are in use.
 - [Generic 2, System 85] For DS1/ISDN pack types "ann11," "ann35," and "tn767," the command removes both virtual and physical slots. If you request the removal of a virtual slot, Manager IV asks you to enter the physical slot. The circuits in the virtual slots are removed automatically when the pack in the physical slot is removed.
4. Press **EXECUTE** to execute the transaction.

CHAPTER 8 TABLES

Circuit Pack List

This table lists specific circuit packs supported by Manager IV products. The number of circuits for each pack type is listed, along with a short description of the pack.

Table 8-1. Generic 2 Universal/XE Modules Circuit Pack List

Pack Type	No. of Circs.	Description
tn7261	8	EIA Line
tn726t	8	EIA Trunk
tn735	8	MFET Line
tn742	8	On/Off-premises Analog Line,Data Port,Contact Intf Pt.
tn746	16	On/Off-premises Analog Line,Data Port,Contact Intf Pt.
tn747	8	CO Trunk
tn748	12	Tone Detector
tn753	8	DID Trunk
tn754l	8	Digital Line
tn754t	16	Digital Trunk
tn760	4	Tie Trunk
tn762	8	MFAT Line
tn763	4	Auxiliary Trunk
tn767	24l,12t	DS1,ISDN PRI
tn768	2	Aux Tone
tn556	24	ISDN BRI
tn771B	4	Maintenance/Test Circuit Pack

Table 8-2. Generic 2 Traditional Module and System 85 Circuit Pack List

Pack Type	No. of Circs.	Description
ann11	4/8	DS1 Interface
ann15	8	DS1 Controlling Pack
ann16	8	DS1 Remote Controlling Pack
ann17	8	MFAT - (7300s Series)
ann35	4	ISDN - R2V4, Generic 2
sn220	8	Analog On-Premises
sn221	8	Analog Off-Premises
sn222	8	Analog On-Premises
sn224	4	MFET line port
sn224+	4	ECTS set
sn228	8	Analog Off-Premises
sn229	8	Analog On-Premises
sn230	4	CO trunk
sn231	4	Auxiliary trunk
sn232	4	DID trunk
sn233	4	Tie trunk
sn238l	4	EIA - line interface
sn238t	4	EIA - trunk interface
sn240	0	Message Register
sn241	8	Contact Interface
sn244	4	ANI
sn242	4	ANI Data Transmitter
sn243	4	Data Port/ Modem Pool
sn250	1	Call Progress Tones
sn251	4	Touch Tone Receiver
sn252	4	Touch Tone Sender
sn253	1	Auxiliary Tone Plant
sn254	1	Attendant Conference
sn255	4	Tone detector
sn260	2	Analog Facility test
sn261	2	Analog/Digital Fac. test
sn270l	4	GPP - line interface
sn270t	4	GPP - trunk interface

Note: The pack types "ann15" and "ann16" are controlling packs. These packs cannot be administered directly in Manager IV.

Table 8-3. DIMENSION FP8 Circuit Pack List

Pack Type	No. of Circs.	Description
lc002	4	Regular Line
lc003	4	Message Waiting
lc004	1	Tone Plant A
lc005	1	Tone Plant B
lc006	1	Attendant Conference
lc007	1	Remote Access CO Trunk
lc008	2	2-way/1-way Ground Start CO Trunk
lc009	2	DID Trunk
lc010	1	Touch Tone Register and Receiver
lc011	2	Tie, CCSA, APLT
lc012	2	Touch Tone Sender
lc013	2	Auxiliary Trunk
lc015	2	Contact Interface
lc016	8	Message Register
lc017	1	Tone Plants A and B
lc032	2	ANI Data Transmitter
lc034	2	Dual Data
lc036	2	RAM Control
lc045	2	Attd. Interface
lc100	4	Link Circuit
lc145	2	Transmission Testing
lc190	1	Fixed Announcement
lc204	1	Tone Plants A and B
lc280	2	Internat 2 Wire
lc285	2	Internat Loop
lc361	2	Loop Signaling
lc366	4	Quad Data Channel
lc567	2	Data Trunk
lc568	4	Data Cap Link
zlc12	2	ATMS Test

Manager IV's Wiring Inventory

Manager IV's wiring inventory includes the jack number-to-Equipment Line Location (ELL) associations, the IDs of cables connecting jacks to ELLs, and jack location assignments. You can add, change, display, or remove items from the wiring inventory using the Manager IV object **wire** in the admin and database-admin areas. The wiring inventory for your network is not established at initialization. All information must be input manually and updated whenever you physically change the switch hardware or install cables between the terminal jacks and the ELLs.

ASSIGNING CARRIER PARAMETERS IN THE PBX

The **carrier-parameters** object can be used in the product-admin mode with four verbs: **add**, **change**, **remove** and **display**.

The verb **add**, when used with the **carrier-parameters** object, enters the carrier type and its location into the switch database. It also administers other data, depending on the type of carrier being added.

Considerations in Adding Carriers

Prior to adding Generic 2 and System 85 port carriers, you must add the control carrier(s). At least one control carrier is required per module.

For Generic 2 and System 85, a second control carrier is required for Duplicated Module Control. The two steps described below involve the **carrier-parameters** object; procedures for this object are detailed later in this chapter.

For Generic 2 *Traditional* Module and System 85,

1. If you are preparing to add the *first* carrier to a module, add a Traditional Module Control 0 carrier by entering Carrier Type 6.
 - If the module is to provide duplicated common control, enter **y** in the Duplicated Module Control field on the Carrier Type 6 and then you must also add a Module Control carrier with Carrier Type 7.
2. For Non-DS1 carrier ports, enter Carrier Type 12 and for DS1 ports, enter Type 11.
 - Carrier Types 1, 4-9, 11, 12, and 15 may be administered through the **carrier-parameters** procedure.

For the Generic 2 *Universal* Module,

1. If you are preparing to add the *first* carrier to a module, add a Universal Module Control 0 carrier with Carrier Type 2.
2. If the module is to provide duplicated common control, enter **y** in the Duplicated Module Control field on the Carrier Type 2 and then you must also add a Universal Module Control carrier with Carrier Type 3.

For the Generic 2 *XE* Module,

1. If you are preparing to add the *first* carrier to a module, add an XE Module Control 0 carrier with Carrier Type 16.
2. If the module is to provide duplicated common control, enter **y** in the Duplicated Module Control field on the Carrier Type 16 and then you must also add an XE Module Control carrier with Carrier Type 17.

Carrier Types

The required carrier type depends on its use, location [System 85 and Generic 2 only] and Module type [Generic 2 only]. The data administered depends on the carrier type selected.

For Generic 2 *Traditional* Module and System 85 R2V2-V4, you are allowed to use the following traditional carrier types:

- 1=Traditional Module Common Control
 - A Common Control carrier houses tn- and un-coded circuit packs that make up the 501CC processor complex and related I/O circuitry on the **Traditional** Module.
- 4=Traditional Module Common Control 0
 - A Duplicated Common Control carrier provides common control for the digital switch.
- 5=Traditional Module TMS 0 Growth
 - A Time-Multiplexed (TMS) carrier houses a time-multiplexed space division switch that interconnects modules in a multimodule system. The TMS carrier can be configured as "basic" or "growth". A TMS 0 Growth configuration contains an interface circuitry for up to 8 additional modules.
- 6=Traditional Module TMS 0 Control
 - A TMS basic configuration which contains an interface circuitry for up to 7 modules.
- 7=Traditional Module Control 1
 - Provides Module call processing and the associated circuits that detect and process requests for service. It controls the Module switching network and serves as an intelligent interface between the Common Control and the port circuits.
- 8=Traditional Module TMS 1 Control
 - A duplicated TMS basic configuration that contains an interface circuitry for up to 7 modules.
- 9=Traditional Module TMS 1 Growth
 - A duplicated TMS Growth configuration that contains an interface circuitry for up to 8 additional modules.
- 11=Traditional DS1 Port Carrier
 - A modified port carrier that provides high density dedicated interface circuits for DS1 trunks and/or 7300S series terminals.
- 12=Traditional Port Carrier
 - Connects the system to the external equipment. Provides the dedicated port circuits determined by the peripheral terminal equipment or trunking facilities connected. It also provides an interface to the Module control and status information and for pulse code with DS1 or ISDN trunks (per basic TMS).

- 15=Traditional RMI (Remote Module Interface) Carrier
 - Provides fiber optic interface circuitry at the central location for connecting switch modules to remote modules.

The following universal carrier types are used with Generic 2 *Universal* Modules:

- 2=Universal Module Control 0
- 3=Universal Module Control 1
- 10=Universal Port Carrier

The following XE carrier types are used with Generic 2 *XE* Modules:

- 16=XE Module Control 0
- 17=XE Module Control 1
- 18=XE Port Carrier

The following carrier types are used with DIMENSION:

- 0=Line Group Control
- 1=Line Port
- 2=Module Control and Trunk Port
- 3=Trunk Port
- 4=Link - full carrier
- 5=Link - left half only

Procedure: Adding a Generic 2 Traditional or System 85 Carrier to the Switch

1. Enter the **connection create** command to establish a connection with the switch.
2. From the product-admin area, enter the **carrier-parameters add** command. The **carrier-parameters add** input screen appears:

```

AT&T Mgr IV 2.2          DEFINITY G2.2          Connect <target>
tcm product-admin carrier-parameters add          Page 1 of 1
          THIS INFORMATION IS RETAINED ONLY IN THE PRODUCT

          Carrier Type: __

Carrier Location:      Module: __
                      Cabinet: _
                      Carrier: _
  
```

3. Enter the Carrier Type. This field is required. Valid entries are:

- 1=Traditional Module Common Control
- 4=Traditional Module Common Control 0
- 5=Traditional Module TMS 0 Growth
- 6=Traditional Module TMS 0 Control
- 7=Traditional Module Control 1
- 8=Traditional Module TMS 1 Control
- 9=Traditional Module TMS 1 Growth
- 11=Traditional DS1 Port Carrier
- 12=Traditional Port Carrier
- 15=Traditional RMI (Remote Module Interface) Carrier

If you are adding the first carrier to a *Traditional* Module, follow the procedure described below for Carrier Types **6** and **7**. For Non-DS1 and DS1 carrier ports, go to step 4.

- Enter **6** in the Carrier Type field. Press **RETURN**.

```
AT&T Mgr IV 2.2          DEFINITY G2.2          Connect <target>
tcm product-admin carrier-parameters add          Page 1 of 1
                IS RETAINED ONLY IN THE PRODUCT

                Carrier Type: 6          Traditional Module Control 0

Carrier Location:      Module:  __
                    Cabinet:  _
                    Carrier:  _

Module Control:              Local RMI Equipment Location:

    Duplicated Module Control? n          Module:  __
                                TMS? n          Cabinet:  _
    Number of I/O Boards:  _          Carrier:  _
    Port Data Store Boards:  _          Slot:  __

                SCS Equipped? n
```

- Enter the Module number. This field is required. Valid entries are **0-30**. Press **RETURN**.
- Enter the Cabinet number. Valid entries are **0-7**. This field is required. Press **RETURN**.
- Enter the Carrier number. This field is required. Valid values are **0-3**. Press **RETURN**.
- Populate the fields associated with Carrier Type 6:
 - Select **y** or **n** in the Duplicated Module Control field. This field is required. The default is **n**. Press **RETURN**.

- Select **y** or **n** in the TMS field. Default is **n**. This field is required. Press **RETURN**.
- Enter the Number of I/O boards. Valid entries are **1-3**. Press **RETURN**.
- Enter the Port Data Store Boards number. Can be no more than twice the number of I/O boards. This field is required. Press **RETURN**.
- Select **y** or **n** in the SCS Equipped field. Default is **n**. This field is required. Press **RETURN**.
 - a. If you enter **y**, the Local RMI Equipment Location title and the associated fields disappear.
- If the SCS Synchronizer is disabled, the cursor advances to the Module field for the Local RMI Equipment Location. Enter the Module number. Valid entries are **0-30** or **99** (for common control). This field is optional. You are allowed to either skip or populate this field with valid entries.
 - a. To skip the field, press **RETURN**. The cursor skips the rest of the fields and the "End of Form" message is displayed. Press **EXECUTE**.
- Enter the Local RMI Cabinet number. This field is required. Valid entries are **0-3** for the *Traditional* Module; [Generic 2] **0** for *Universal* or *XE*. Press **RETURN**.
- Enter the Local RMI Carrier number. This field is required. Valid entries are **0-1**, if the Local RMI Equipment Location is traditional; [Generic 2] **a** or **b**, if Local RMI Equipment Location is universal or XE. Press **RETURN**.
- Enter the Local RMI Slot number. This field is required. Valid entries are **0-3, 5-8, 13-16, 18-21**, or **25**, if the Local RMI Equipment Location is traditional; [Generic 2] **15-21** if the Local RMI Equipment Location is universal and **15-18** if the Local RMI Equipment Location is XE. Press **RETURN**.
- Press **EXECUTE**.
- If the Module must provide duplicated common control, enter **y** in the Duplicated Module Control field on the Carrier Type 6 and then add a Module Control carrier with a Carrier Type 7 by entering the **carrier-parameters add** command. Enter the Carrier Type **7**. Follow the procedure described for a Carrier Type 6. The screen for Carrier Type 7 is identical to the screen for Carrier Type 6, except the title is "Traditional Module Control 1."

When specifying the Local RMI Equipment Location:

- Valid entries for the Cabinet field are **0-3**.
- Valid entries for the Slot number are **0-3, 5-8, 13-16, or 18-21**.

4. To add traditional DS1 and Non-DS1 carriers, the procedure is as follows:

- Enter Carrier Type **11** (DS1) or **12** (Non-DS1). This field is required. Press **RETURN**. The **carrier-parameters add** input screen for Carrier Type 11 or 12 is displayed.

```
AT&T Mgr IV 2.2          DEFINITY G2.2          Connect <target>
tcm product-admin carrier-parameters add          Page 1 of 1
      THIS INFORMATION IS RETAINED ONLY IN THE PRODUCT

          Carrier Type: 11          Traditional DS1 Port Carrier

Carrier Location:      Module:  __
                    Cabinet:  _
                    Carrier:  _

Port Electrical Carrier Number:  __
```

For Carrier Type 12, the screen is identical, except the title is "Traditional Port Carrier."

- Enter the Module number. This field is required. Valid entries are **0-30**. Press **RETURN**.
- Enter the Cabinet number. Valid entries are **0-7**. This field is required. Press **RETURN**.
- Enter the Carrier number. This field is required. Valid values are **0-3**. Press **RETURN**.
- Enter the Port Electrical Carrier Number. This field is required. Valid entries are **0-11**. Press **RETURN**.

5. Press **EXECUTE**.

6. To add traditional TMS Control and Growth carriers, the procedure is as follows:

- Enter Carrier Type **4** (TMS 0 Control), **5** (TMS 0 Growth), **8** (TMS 1 Control), or **9** (TMS 1 Growth). This field is required. Press **RETURN**. The **carrier-parameters add** input screen for Carrier Type 4, 5, 8, or 9 is displayed.

```
AT&T Mgr IV 2.2          DEFINITY G2.2          Connect <target>
tcm product-admin carrier-parameters add          Page 1 of 1
      THIS INFORMATION IS RETAINED ONLY IN THE PRODUCT

          Carrier Type: 4          Traditional Module TMS 0 Control

Carrier Location:      Module:  __
                    Cabinet:  _
                    Carrier:  _

TMS Electrical Carrier Number:  __
```

For Carrier Type 5, the screen is identical, except the title is "Traditional Module TMS 0 Growth."

For Carrier Type 8, the screen is identical, except the title is "Traditional Module TMS 1 Control."

For Carrier Type 9, the screen is identical, except the title is "Traditional Module TMS 1 Growth."

- The TMS carriers must be mounted in the Common Control Cabinet. The Module number for the System Control Cabinet is **99**. The Module field defaults to **99**. The cursor skips to the Cabinet field.
- Enter the Cabinet number. This field is required. Valid entries are **0-3**. Press **RETURN**.
- Enter the Carrier number. This field is required. Valid values are **0-3**. Press **RETURN**.
- Enter the TMS Electrical Carrier Number. This field is required. Valid entries are **0-3**. Press **RETURN**.
 - If you enter **0**, the SCS Equipped field is displayed. This field defaults to **n**. The SCS Equipped field is required. Valid entries are **y** or **n**. Select the value and press **RETURN**.

7. To add a traditional RMI carrier, the procedure is as follows:

- Enter Carrier Type 15. This field is required. Press **RETURN**. The **carrier-parameters add** input screen for Carrier Type 15 is displayed.

```

AT&T Mgr IV 2.2                DEFINITY G2.2                Connect <target>
tcm product-admin carrier-parameters add                Page 1 of 1
      THIS INFORMATION IS RETAINED ONLY IN THE PRODUCT

                Carrier Type: 15_                Traditional RMI Carrier

Carrier Location:                Module: __
                                Cabinet: __
                                Carrier: __

Port Electrical Carrier Number: __                Local RMI Equipment Location:
                                                Module: __
  
```

The Module field defaults to **99**. The cursor skips to the Cabinet field.

- Enter the Cabinet number. This field is required. Valid entries are **0-3**. Press **RETURN**.
- Enter the Carrier number. This field is required. Valid values are **0-3**. Press **RETURN**.
- Enter the TMS Electrical Carrier Number. This field is required. Valid entries are **0-3**. Press **RETURN**.
- Press **EXECUTE**.

Procedure: Adding a Generic 2 Universal/XE Carrier to the Switch

Use this procedure to add universal or XE carriers to the switch.

1. From the product-admin area, enter the **carrier-parameters add** command. The **carrier-parameters add** input screen appears:

```
AT&T Mgr IV 2.2          DEFINITY G2.2          Connect <target>
tcm product-admin carrier-parameters add          Page 1 of 1
          THIS INFORMATION IS RETAINED ONLY IN THE PRODUCT

          Carrier Type:  __

Carrier Location:      Module:  __
                    Cabinet:  _
                    Carrier:  _
```

2. Enter the Carrier Type. This field is required. Valid entries are **2, 3, or 10** for a universal carrier. If you are adding an XE carrier, valid entries are **16, 17, or 18**. Press **(RETURN)**.
 - Press **(ESC)** ! to display the "Carrier Types" List.

When adding carriers to a new module, carriers must be added in the following sequence:

- Enter **2** to specify a Universal Module Control 0 or **16** to specify an XE Module Control 0.
- Enter **3**, if you need to specify a duplicated Universal Module Control 1 or **17** to specify a duplicated XE Module Control 1.
- Enter **10** to select a Universal Port Carrier or **18** to select an XE Port Carrier.

The fields associated with the specified Carrier Type are displayed. The cursor is positioned in the Module field. Following is the screen for universal Carrier Type 2.

```
AT&T Mgr IV 2.2          DEFINITY G2.2          <target>
tcm admin carrier add          Page 1 of 1

          Carrier Type:  2_          Universal Module Control 0

Carrier Location:      Module:  __
                    Cabinet:  0
                    Carrier:  _

Module Control:          Local RMI Equipment Location:

          Duplicated Module Control? n          Module:  __
                    TMS? n          Cabinet:  _
                    Carrier:  _
                    Slot:  __

          SCS Equipped? n
```

This screen is displayed for XE Carrier Type 16.

```
AT&T Mgr IV 2.2          DEFINITY G2.2          <target>
tcm product-admin carrier add          Page 1 of 1

          Carrier Type: 16          XE Module Control 0

Carrier Location:          Module: ___
          Cabinet: 0
          Carrier: _

Module Control:          Local RMI Equipment Location:

          Duplicated Module Control? n          Module: ___
          TMS? n          Cabinet: _
          Carrier: _
          Slot: ___
```

3. Enter the Module location. This field is required. Valid entries are **0-30**. Make sure you select the correct *Universal/XE* Module number. Press **RETURN**.
4. The Cabinet field defaults to **0**. The cursor skips to the Carrier field.
5. Enter the Carrier location. This field is required. Valid entries are **a** for Carrier Types 2 and 3, **b** for Carrier Types 16 and 17, and **c-e** for Carrier Type 10 or 18. Press **RETURN**.
6. If you selected Carrier Types 2, 16, 3, or 17, populate the fields associated with either of these types, as follows:
 - Enter the Duplicated Module Control field. This field is required. Press **RETURN**.
 - To enable the Duplicated Module Control, enter **y**. If you add a Carrier Type 3, first enter a Carrier Type 2 and then add a Module Control carrier with a Carrier Type 3. If you add a Carrier Type 17, first enter a Carrier Type 16 and then add a Module Control carrier with a Carrier Type 17.
 - Enter **y** in the TMS field, if the TMS carrier is present. Otherwise, use the default entry. This field is required. Press **RETURN**.
 - [Universal Module only] Enter **y** in the SCS Equipped field, if System Clock Synchronizer is set. Otherwise, use the default value. This field is required. Press **RETURN**.
 - If you enter **y** in the SCS Equipped field, and press **RETURN**, the "End of Form" message appears at the bottom of the screen. Press **EXECUTE**.
 - If the System Clock Synchronizer is not set (default entry is used), the Local RMI Equipment Location title with the associated field is displayed.

7. The fields associated with the Local RMI Equipment Location are optional in a *Universal* Module, and mandatory in an *XE* Module. You can define a universal or XE carrier with the traditional, universal or special RMI (RMI is a special type of a traditional carrier):
 - Enter the Module location. Press **RETURN**.
 - Enter the Cabinet number. Valid entries are **0-7** for a *Traditional* Module, and **0** for *Universal*. Press **RETURN**.
 - Enter the Carrier number. Valid entries are **0-1** for a *Traditional* Module, and **a** and **b** for *Universal*. Press **RETURN**.
 - Enter the Slot number. Valid entries are **15-21** for a universal carrier Type **2**, and **0-3, 5-8, 13-16, and 18-21** for an RMI carrier Type 15. Press **RETURN**.
8. Press **EXECUTE**.
9. If you selected universal Carrier Type 3, the screen is identical to universal Carrier Type 2:

```

AT&T Mgr IV 2.2                DEFINITY G2.2                <target>
tcm product-admin carrier add                Page 1 of 1

                                Carrier Type:  3_          Universal Module Control 1

Carrier Location:                Module:  __
                                Cabinet:  0
                                Carrier:  _

Module Control:                  Local RMI Equipment Location:

    Duplicated Module Control? n          Module:  __
                                TMS? n          Cabinet:  _
                                Carrier:  _
                                Slot:  __

                                SCS Equipped? n
  
```


10. If you selected XE Carrier Type 17, the screen is identical to XE Carrier Type 16:

```
AT&T Mgr IV 2.2          DEFINITY G2.2          <target>
tcm admin carrier add          Page 1 of 1

          Carrier Type: 17          XE Module Control 1

Carrier Location:      Module: __
                   Cabinet: 0
                   Carrier: _

Module Control:          Local RMI Equipment Location:

    Duplicated Module Control? n          Module: __
                   TMS? n          Cabinet: _
                   Carrier: _
                   Slot: __

          SCS Equipped? n
```

Administration procedures for Carrier Type 3 are identical to those for Carrier Type 2, and for Carrier Type 17 are identical to those for Carrier Type 16.

11. If you select Carrier Type 10, the following screen is displayed:

```
AT&T Mgr IV 2.2          DEFINITY G2.2          <target>
tcm admin carrier add          Page 1 of 1

          Carrier Type: 10          Universal Port Carrier

Carrier Location:      Module: __
                   Cabinet: 0
                   Carrier: _
```

12. Carrier Type 10 is a Universal Port Carrier.

- If you select Carrier Type 18, the following screen is displayed:

```

AT&T Mgr IV 2.2          DEFINITY G2.2          <target>
tcm admin carrier add          Page 1 of 1

          Carrier Type: 18          XE Port Carrier

Carrier Location:          Module: __
          Cabinet: 0
          Carrier: _

```

- Carrier Type 18 is an XE Port Carrier.
- Only carriers **c-e** are valid for both universal and XE carriers.

Procedure: Adding a DIMENSION Carrier to the Switch

- Enter the **connection create** command to establish a connection with the switch.
- From the product-admin area, enter the **carrier-parameters add** command. The **carrier-parameters add** input screen appears:

```

AT&T Mgr IV 2.2          D2000 FP8          Connect <target>
tcm product-admin carrier-parameters add          Page 1 of 1

          Carrier Type:          __

Carrier Location:          Module: __
          Cabinet: __
          Carrier: __

          Maintenance Circuit: __

```

- Enter the Carrier Type field. This field is required. Valid entries are **0=Line Grp Ctrl**, **1=Line**, **2=Mod Ctrl and Trk**, **3=Trk**, **4=Link (full)**, **5=Link(half)**. Press **RETURN**. The Maintenance Circuit field is displayed.
- Enter the Module number. This field is required. Valid entries are **0-14**. Press **RETURN**.
- Enter the Cabinet number. Valid entries are **0-4**. This field is required. Press **RETURN**.
- Enter the Carrier number. This field is required. Valid values are **0-4**. Press **RETURN**.
- Enter the Maintenance Circuit field. This field is required. Valid values are **0-1**. Press **RETURN**.
- Press **EXECUTE**. The **carrier-parameters add** output screen is displayed. The screen is identical to the **carrier add** output screen. For a detailed explanation, refer to "Procedure: Adding a DIMENSION Carrier to the Database."

Procedure: Displaying Carriers from the Switch Database

1. From the product-admin area, enter the **carrier-parameters display** command. The **carrier-parameters display** input screen appears:

```
AT&T Mgr IV 2.2          DEFINITY G2.2          Connect <target>
tcm product-admin carrier-parameters display          Page 1 of 1
          THIS INFORMATION IS RETAINED ONLY IN THE PRODUCT

Carrier Location:      Module:  __
                      Cabinet:  _
                      Carrier:  _
```

2. Press **EXECUTE**.
3. The **carrier display** output screen is displayed. All fields on the screen are display only. The **carrier-parameters display** output screen is identical to the **carrier-parameters add** input and output screens, and will vary depending upon the switch type and carrier type being administered. For a detailed description, refer to "Procedure: Adding a Generic 2 Universal/XE Carrier to the Switch."

Procedure: Changing Carrier Parameters in the Switch

1. From the product-admin area, enter the **carrier-parameters change** command. The following **carrier-parameters change** input screen appears:

```
AT&T Mgr IV 2.2          DEFINITY G2.2          Connect <target>
tcm product-admin carrier-parameters change          Page 1 of 1
          THIS INFORMATION IS RETAINED ONLY IN THE PRODUCT

Carrier Location:      Module:  __
                      Cabinet:  _
                      Carrier:  _
```

2. Enter the Carrier location. Press **EXECUTE**. The carrier parameters administered for the carrier will be displayed. Enter the new values in the fields you wish to change, and press **EXECUTE**. Refer to "Procedure: Displaying Generic 2 and System 85 Carriers."

For DIMENSION, the following **carrier-parameters** output screen appears:

```
AT&T Mgr IV 2.2          D2000 FP8          Connect <target>
tcm product-admin carrier-parameters change          Page 1 of 1
          THIS INFORMATION IS RETAINED ONLY IN THE PRODUCT

Carrier Location:      Module:  __
                      Cabinet:  _
                      Carrier:  _

          Maintenance Circuit:  __

          This is a Trunk Port Carrier
```

The Equipment Location fields are display only. The cursor skips to the Maintenance Circuit field. You are allowed to change the Maintenance Circuit field only. Valid entries are **0** or **1**.

Procedure: Removing Carriers from the Switch

1. From the product-admin area, enter the **carrier-parameters remove** command. The **carrier-parameters remove** input screen appears. The screen is identical to the **carrier-parameters display** input screen. For field description on the Generic 2 or System 85 switches, refer to "Procedure: Displaying Universal/XE and Traditional Carriers from the Switch Database." For the DIMENSION FP8 switch, see "Procedure: Displaying DIMENSION Carriers from the Switch Database."
2. Press **EXECUTE**.

LOCATING AVAILABLE SLOTS

The **slot select** transaction is used to locate an appropriate, available slot in particular locale. The procedure is as follows:

1. Enter the **slot select** command. The **slot select** input screen appears:

```
AT&T Mgr IV 2.2          DEFINITY G2.2          <target>
tcm admin slot select          Page 1 of 1

Pack Type: _____
Locale:  __
```

- The screen prompts you to enter the type of pack you wish to add.
 - You also have the option of entering a locale.
 - [Generic 2 and System 85] If you enter pack type "ann11" (DS1), "ann35" (ISDN), "tn767" or specify that the pack is to be added to a DS1 carrier (for remote carrier administration, for example), the command prompts you to enter an Application Type. See "Adding a Generic 2 or System 85 Traditional DS1/MFAT Carrier," above, for more information.
2. Enter the Pack Type and press **RETURN** followed by **EXECUTE**. The **slot select** output screen is displayed:

```
AT&T Mgr IV 2.2          DEFINITY G2.2          <target>
tcm admin slot select          Page 1 of 1

Pack Type: tn7541
Locale: 00

Slot Location:      Module: 17
                   Cabinet: 0
                   Carrier: c
                   Slot: 10
```

3. The output screen displays the location of the available slot for the specified pack type.

LOCATING AVAILABLE CIRCUITS

The Unassigned Circuit Report lists available circuits on a switch. Use the command **unassigned-ckt report** from the report-admin area to run this report. For details, see "Unassigned Circuit Report" in Chapter 12 of "DEFINITY® Manager IV Facilities Management Operations."

The command **circuit display** can also be used to display the pack type and state of a specified circuit. Circuit states are:

- a - available (unassigned)
- w - working (assigned)
- r - reserved through Manager IV
- x - reserved by the PBX. This state applies only to the first circuit of Slot 0 in a DEFINITY Generic 2 Traditional or System 85 carrier with Electrical Port Carrier Number 0.

ASSIGNING LOCALES IN THE MANAGER IV DATABASE

Procedure: How to Change the Locale of a Single Carrier

1. Enter the command **locale change** and press **RETURN**.
2. Enter the appropriate module, cabinet and carrier numbers at the prompts on the screen.
3. Press **EXECUTE**. The system will display the locale assigned to the carrier, as shown here:

```
AT&T Mgr IV 2.2                DEFINITY G2.2                <target>
tcm admin locale change

Carrier Location                Module: 02
                                Cabinet: 0
                                Carrier: 0
                                Locale: 02
```

4. Enter the new locale of the carrier.
5. Press **EXECUTE** to change the information in the database.

Procedure: How to Change Multiple Carrier Locales

1. Enter module and cabinet numbers (or module only for Generic 2 *Universal* or *XE* Module).
2. In the Carrier field, enter an asterisk (*).
3. Press **EXECUTE**.
4. The system displays the Locale field so you can enter the new locale for all carriers in this cabinet.
5. Press **EXECUTE** again.

RESERVING CIRCUITS IN THE MANAGER IV DATABASE

Manager IV's automatic selection capability can select an ELL for you if you enter an asterisk in the ELL field of certain commands. Manager IV selects an unassigned ELL with an appropriate pack type and assigns it to the equipment being administered.

If you plan to use a circuit for a specific purpose, and you do not want Manager IV to assign that circuit through automatic selection, you can place the unassigned circuit in a reserved state by using the command **circuit change**. Up to 99 circuits can be reserved at a time.

1. Enter the **circuit change** command. The **circuit change** input screen appears:

```
AT&T Mgr IV 2.2          DEFINITY G2.2          <target>
tcm admin circuit change          Page 1 of 1

          Select ONE of the following:

          _ Reserve available circuits
          _ Unreserve circuits
```

2. To reserve a circuit, enter **x** at the prompt that says "Reserve one or more available circuits." The following screen is displayed:

```
AT&T Mgr IV 2.2          DEFINITY G2.2          <target>
tcm admin circuit change          Page 1 of 1

          Select ONE of the following:

          _ Reserve available circuits
          _ Unreserve circuits

          Number of Circuits (1-99): 1

          Equip. Loc.: ___/___/___/___
          Pack Type: _____
          Locale:  ___
```

3. At the Number of Circuits prompt, enter the number of circuits you want to reserve (**1-99**).
 - If you are reserving only one circuit, you may enter the circuit's ELL explicitly. If you are reserving multiple circuits, then Manager IV will choose the circuits for you.

4. At the Pack Type prompt, enter the type of the circuit to be reserved. This step is not necessary if you have entered an ELL explicitly.
5. If you wish to reserve circuits in a specific locale, enter the locale in the Locale field. This step is not necessary if you have entered an ELL explicitly. Press **EXECUTE**.

To make a reserved circuit available again, you also use the **circuit change** command.

1. To change the state of a reserved circuit to available, enter **x** at the prompt that says "Un-reserve a circuit." The following screen appears:

```
AT&T Mgr IV 2.2          DEFINITY G2.2          <target>
tcm admin circuit change          Page 1 of 1

          _ Reserve available circuits
          _ Unreserve circuits

          Equip. Loc.: __/__/__/_/___
```

2. Enter the module, carrier, cabinet and slot of the circuit.
3. Press **EXECUTE**.

ASSIGNING DS1 AND ISDN CIRCUIT PACK PARAMETERS

The **ds1-isdn** transaction is used to administer the interface characteristics and System Clock Synchronizer reference for certain digital circuits like Digital Services-1 (DS1), Digital Multiplexed Interface (DMI), Integrated Services Digital Network (ISDN) and Remote Carrier Line (RCL) boards.

DS1 is a way of digital signal transmission from one piece of digital equipment, such as System 85, to another piece of digital equipment. This facility is a Bit Oriented Interface (BOS) running at 1.544 Mbps with digital multiplexing over 24 channels. The DS1 signaling format uses 23 channels for data communication and one channel for signaling. DS1 can interface to lines, trunks, Remote Carriers, DMI, Multi-Function Analog Terminals (MFAT), and ISDN.

The DMI Interface provides digital connectivity between Generic 2 or System 85, and a host computer. DMI uses a DS1 signaling format, which provides 23 channels for data communication and one channel for signaling. The DMI feature is available in two versions: Bit Oriented Signaling (BOS) and Message Oriented Signaling (MOS). The BOS version is an enhanced format bit-oriented signaling that provides 23 "clear" channels (free of signaling information).

This enhanced version is supported by Generic 2, System 85, and System 75 switches, host computers (DMI licensees), and the public network. However, the 5ESS® switch used for local CO does not support the new format, nor can it be used with the ISDN/PRI feature.

The DMI MOS version is designed to interface to ISDN. The MOS version is fully compatible with the ISDN interface. This version also uses the same 23 64-Kbps clear channels and one common channel signaling multiplexed on a 1.544 Mbps that BOS uses.

The ISDN interface provides end-to-end digital connectivity within the network and links to other ISDNs through the internationally accepted standard interfaces. The ISDN interface runs at 1.544 Mbps and supports 23 64-Kbps voice or data clear channels and one 64-Kbps signaling (D-) channel. The D-channel contains multiplexed signaling information for the other 23 channels.

DS1-ISDN Boards Characteristics

Following are the **ds1-isdn** board characteristics administered via the **ds1-isdn** transaction:

1. Framing Format. Via the DS1-ISDN Interface, data is transmitted in either **D4** or **Fe** format.
 - The **D4** format uses 12 frames, the **Fe** format requires 24 frames (superframe). One frame consists of 193 bits; an 8-bit sample for each of the 24 channels ($8 \times 24 = 192$) plus 1 sync bit ($192 + 1 = 193$).
 - To prevent false framing, the Cyclic Redundancy Check (CRC) is done for every 4th frame, starting with frame 2. This is implemented by the sync pulse which comes up for every 4th frame, starting with frame 4. The CRC check acts as a low speed communications link for every other frame, starting with frame 1.
2. Signaling Options. Two types of signaling are supported: Robbed Bit and 24th Channel.
 - In 24th Channel Signaling, the signaling bits are placed in the 24th channel, leaving 23 (64 kbps) channels for data only (clear channels). Both the DMI and ISDN Interfaces use the 24th channel signaling.

When selecting the Channel Signaling, first, identify whether it is the *Traditional*, *Universal*, or *XE* Module. For the *Traditional* Module, if the Application Type is 0, 3, or 5 and 24th Channel Signaling is selected:

- You are allowed to use 23 circuits when assigning the trunks.
- If the physical pack is on slot "05," circuit 3 of virtual slot "02" cannot be used.

- If the physical pack is on slot "18," circuit 3 of the virtual slot "15" cannot be used.
 - In Robbed Bit Signaling, the low bit in each channel of the 6th and 12th frames is used for signaling. These bits provide for analog type signaling.
 - You are allowed to use 24 circuits when assigning the trunks.
 - Circuit 3 of virtual slot "02" or "15" can be used.
 - For the *Universal* or *XE* Module, with the Application Type 0, 1, or 2,
 - If the 24th Channel Signaling is selected, the 11th circuit of the virtual slot (adjacent to the physical slot) cannot be used.
 - If the Robbed Bit Channel Signaling is selected, the 11th circuit is used.
3. Coding Scheme. To prevent transmission of eight consecutive zeroes, two basic techniques are used: Zero Code Suppression (ZCS) and Bipolar eight Zero Suppression (B8ZS).
 - The **ZCS** Suppression detects a sequence of eight zeroes in a time slot and changes bit 2 to "1."
 - The **B8ZS** Suppression detects a sequence of eight zeroes in a time slot and inserts the bipolar violations which are detected at the receiving end and all eight zeroes are restored.
 4. Equipment Type. This field allows you to specify whether the SCS board is installed in the Module Control carrier.
 5. Transmit Type. This field allows you to select the transmission medium: copper or fiber.
 6. Synchronization. Two PBXs using the T1 interface are in master/slave relationship; the incoming DS1 signal from the transmitting PBX is used to derive timing for the receiving PBX. Each DS1 and ISDN board has a provision for two outputs of the received clock signal. One of these outputs is cabled to the System Clock Synchronizer board (SCS). With no inputs, the SCS board runs off the internal High Accuracy Clock (HAC).

A master PBX will run off the HAC. The "No SCS" field selects the HAC clock. If the Equipment Type field contains the No SCS value, the Synchronization field will default to the system selected value (None). Otherwise, you are allowed to select any of the options listed below:

 - Primary Clock is the first selection.
 - If the Primary Clock fails, Secondary Clock must be chosen.
 - If both Primary and Secondary Clock fail, "None" is selected which activates the HAC clock.
 7. ISDN Signaling. This field must be specified for the ISDN/PRI Interface only. Two types of the ISDN Signaling are valid: **23B + D** and **24B**.
 - For Application Type 0, 1, 2, or 3, this field defaults to **23B + D** and is not used by the switch.
 - If you select **24B**, this selection will override the **24th Channel** selection in the Signaling Options field. All 24 circuits can be used in assigning the trunks.
 - For Application Type 5, if the D-Channel Group needs to be assigned, then perform the **ds1-isdn** transaction and select **23B + D**.
 8. Special Access
 9. Slip Count Enable
 10. External Loop Test Enable
 11. DS1 Loop Length. This field specifies the DS1 loop length to the Network Circuit Terminating Equipment. The specification is in increments of 133 feet up to 655 feet.

12. E-Bit. This field specifies whether the signaling is proprietary or non-proprietary for Universal/XE boards with 24th Channel Signaling.
13. [Generic 2 only] Interface Identifier. This field is used to identify the NFAS Arrangement. For more details, refer to Chapter 4, "D-Channel Administration" in "DEFINITY® Manager IV Facilities Management Operations."
14. Bit Inversion
15. Interface Type
16. Facility Test Code
17. Level 2 PRI Timers
18. Terminal Endpoint
19. Maximum Number of Data Packets
20. Maximum Number of Retransmissions
21. [Generic 2 only] Codeset Map Number. This field contains the Codeset Map Number as it is defined in the switch database via the **codeset-mapping add** command.
22. Hyperactivity Management. This field is used to shut off an ISDN link when too many messages are being sent across the link.

DS1-ISDN Commands

[Generic 2 and System 85 R2V4]

The **ds1-isdn** transaction is administered with the **ds1-isdn** object which supports the verbs **add**, **display**, **change** and **remove**.

Add DS1-ISDN Parameters

Use the **ds1-isdn add** command to assign **ds1-isdn** parameters. Depending on the Application Type specified through the **carrier** or **pack add** command, the screen varies. For example, for Application Type 5 only (ISDN/PRI), Page 2 is provided for ISDN/PRI characteristics.

Display DS1-ISDN Characteristics

You can use the **ds1-isdn display** command to display the characteristics for Application Types 0, 1, 2, 3, 4, and 5. The **ds1-isdn display** output screen appears. The output screen displays the fields which apply to the specified Application Type and *Traditional*, *Universal*, or *XE* Module.

Change DS1-ISDN Characteristics

The **ds1-isdn change** command allows you to change the DS1-ISDN parameters specified via the **ds1-isdn add** transaction. Specify the DS1-ISDN board by entering the Equipment Location. The system retrieves the parameters for the specified Equipment Location from the Manager IV database.

Remove DS1-ISDN Characteristics

To remove the DS1-ISDN characteristics, enter the **ds1-isdn remove** command. The **ds1-isdn remove** input screen appears. You are allowed to remove the DS1-ISDN board by the Equipment Location.

Performing DS1-ISDN Commands

You can update, remove or retrieve the **ds1-isdn** information by directly accessing the Manager IV or Generic 2 databases or by scheduling the Service Requests (SRs). To optimize usage of the switch resources, and because of the restrictions imposed on port access, scheduling **ds1-isdn** transactions in Service Requests is preferred over direct port access.

Procedure: Assign DS1-ISDN and Pack Parameters in Generic 2 and System 85 R2V4

To successfully administer the **ds1-isdn** transaction, the following prerequisites must be performed prior to entering the **ds1-isdn add** command:

- Add carriers to the Manager IV or switch database.
- Assign the *Traditional* and *Universal(XE)* packs.

When assigning the Equipment Locations, make sure you enter the valid values for the *Traditional*, *Universal*, or *XE* Modules as shown in the table below:

Physical Address	Module	Cabinet	Carrier	Slot
Sys 85, Generic 2 Traditional	0-30	0-7	0-3	0,5,13,18
Generic 2 Universal	0-30	0	c-e	1-20
Generic 2 XE	0-30	0	c-e	1-18

To correctly select the Application Type, slots and circuits depending on the *Traditional, Universal, or XE* Module, refer to the following table:

Trad/ Univ/ XE	Applic. Type	Application	Physic. Slot	Virtual Slot	Pack Type	24th Chan. Signaling	Robbed Bit Signaling
t	0	DS1 Trunks	05 18	0,1,2,6,7 13,14,15,19,20	ann11	slots 2,15 have 3 ckts	slots 2,15 have 4 ckts assigned
u	0	DS1 Trunks	1-19	Adjacent	tn767	11th ckt is used as signaling	12 ckts can be assigned
x	0	DS1 Trunks	1-17	Adjacent	tn767	11th ckt is used as signaling	12 ckts can be assigned
t	1	DMI	05 18	0,1,2,6,7 13,14,15,19,20	ann11	slots 2,15 have 3 ckts assigned	
u	1	DMI	1-19	Adjacent	tn767	11th ckt used as signaling	
x	1	DMI	1-17	Adjacent	tn767	11th ckt used as signaling	
t	2	DS1-LINE	0,5,13,18	2 Adjacent	ann11		Up to 8 ckts can be assigned
u	2	DS1-LINE	1-20	No virtual slots	tn767		12 ckts can be assigned
x	2	DS1-LINE	1-18	No virtual slots	tn767		12 ckts can be assigned
t	3/4	Remote	0,5,13,18	2 Adjacent	ann11	24th channel signal.	
u	3/4	NOT SUPPORTED FOR UNIV. MODULE					
x	3/4	NOT SUPPORTED FOR XE MODULE					

Trad/ Univ/ XE	Applic. Type	Application	Physic. Slot	Virtual Slot	Pack Type	24th Chan. Signaling	Robbed Bit Signaling
t	5	ISDN/PRI	05 18	0,1,2,6,7 13,14,15,19,20	ann35, isdn for virtual slots;	slots 2,15 have 3 ckts assigned	
u	5	ISDN/PRI	1-19	Adjacent	tn767, isdn for NFAS Arrange. (tn555)		
x	5	ISDN/PRI	1-17	Adjacent	tn767, isdn for NFAS Arrange. (tn555)		

For a detailed description of how to assign the Equipment Locations for one of the above listed Application Types, refer to "Procedure: Adding a Generic 2 or System 85 Traditional DS1/MFAT Carrier to the Database." Consider the dependencies shown in the table when performing the prerequisite transactions:

1. Enter the **carrier** or **pack add** command. If the Module is *Traditional*,
 - For the prompt "DS1 Carrier?" enter **y**.
 - For the physical slot 00, 05, 13, or 18, enter the Application Type **0, 1, 2, 3, or 5**.
 - The system will populate the valid pack types in the physical and virtual slots.
 - If the Application Type is 0, 1, or 2, the pack type "ann11" appears in the physical slot, and "ds1" in the virtual slot.
 - If the Application Type is 5, "ann35" is displayed in the physical slot and "isdn" in the virtual slot. DS1 Application Types and associated physical and virtual slots are described in "Procedure: Adding a DS1/MFAT Carrier."
 - If the Module is *Universal*,
 - For the Application Type 0,1, or 5, any slot from 1-19 can be used. If the Application Type is 2, use any slot from 1-20. Depending on the Application Type selected, enter the physical slot.
 - If you use **carrier-parameters add** command from the product-admin area, you are not prompted for the Application Type. You will have to specify the Application Type via the **ds1-isdn add** input screen.
 - If the Module is *XE*,
 - For the Application Type 0,1, or 5, any slot from 1-17 can be used. If the Application Type is 2, use any slot from 1-18. Depending on the Application Type selected, enter the physical slot.
 - If you use **carrier-parameters add** command from the product-admin area, you are not prompted for the Application Type. You will have to specify the Application Type via the **ds1-isdn add** input screen.

2. Enter the **ds1-isdn** command. The **ds1-isdn add** input screen is displayed.

```

AT&T Mgr IV 2.2          DEFINITY G2.2          <target>
tcm admin ds1-isdn add

                          Equip.Loc.  __/__/___/___

```

You are allowed to specify the Equipment Location for the *Traditional*, *Universal*, or *XE* Module. Valid entries for both Modules are discussed in "DS1-ISDN Commands" earlier in this chapter. Enter the equipment location as appropriate. The following screen appears.

```

AT&T Mgr IV 2.2          DEFINITY G2.2          <target>
tcm admin ds1-isdn add          Page 1 of 2

                          Equip Loc  __/__/___/___
APPLICATION TYPE
_DS1 Trunk Board   _DS1 Line Board   _DMI   _ISDN/PRI
_Remote Carrier

FRAMING FORMAT   SIGNALING OPTIONS CODING SCHEME
  _D4             _Robbed Bit         _ZCS
  _Fe             _24th Channel       _B8ZS

TRANSMIT TYPE    ISDN SIGNALING
_Copper          _ 23 B + D
_Fiber           _ 24 B

Slip Count Enabled?_ DS1 Loop Length:_ Interface Identifier:_
External Loop Test Enabled?_

```

- If the Equipment Locations were created via the **carrier** or **pack add** transactions, the APPLICATION TYPE is filled in with the default value.
- If the Equipment Locations were created via the **carrier-parameters add** transaction accessed from the product-admin area, the APPLICATION TYPE is a required field. The cursor is positioned in the APPLICATION TYPE field. You are allowed to select any of the displayed fields by entering **x** in the appropriate field:
 - DS1 Trunk Board (Application 0)
 - DMI (Application 1)
 - DS1 Line Board (Application 2)
 - Remote Carrier (Application 3,4)

- a. The Remote Carrier field is displayed only for the *Traditional* Module. With the *Universal* or *XE* Module selected, this field disappears.
 - b. ISDN/PRI (Application 5)
3. Select the FRAMING FORMAT. The valid selections are **D4** or **Fe**.
4. Enter the SIGNALING OPTIONS. The valid selections are Robbed Bit or 24th Channel. Depending on the APPLICATION TYPE, the field permissions vary:
 - For APPLICATION TYPE 1, 3, and 5, the SIGNALING OPTION field defaults to the 24th channel. This is a display only field. The cursor skips to the CODING SCHEME field.
 - For APPLICATION TYPE 2 (DS1 Lines), signaling is Robbed Bit.
 - If Robbed Bit Signaling is selected (true for the *Universal* and *XE* Modules only), the E-Bit field is displayed.
 - For APPLICATION TYPE 0, you are allowed to select either Robbed Bit or 24th Channel Signaling.
 - To verify the valid selections, press **ESC** ? .
5. Enter the CODING SCHEME. Valid selections are **ZCS** or **B8ZS**. With the ISDN/PRI specified, this field defaults to **ZCS**.
6. Enter the TRANSMIT TYPE. The default is "Copper."
7. Enter the ISDN SIGNALING [Generic 2 only]. Valid selections are **23 B + D** or **24 B**.
 - If the APPLICATION TYPE is 0, 1, 2, or 3, this field defaults to the **23 B + D**. You are not allowed to change the default value.
 - If the APPLICATION TYPE is 5, this field is required. You are allowed to select either of the two values: **24 B** or **23 B + D**. With the **23 B + D** selection, you can assign the D-Channel Group Number via the **d-channel add** command. Make a selection and press **RETURN**.
8. Enter the SPECIAL ACCESS. Valid selections are **SA** or **FX**.
9. Enter the Slip Count Enabled. Valid selections are **y** or **n**.
10. Enter the External Loop Test Enabled. Valid selections are **y** or **n**.
11. Enter the DS1 Loop Length [Generic 2 only]. Valid selections are **0, 1, 2, 3, or 4**. Press **RETURN**.
 - This field only appears for the *Universal* or *XE* Modules.
 - This field is required. To view the valid entries, press **ESC** ? . The short help message "For Loop Length Enter: 0=0-133, 1=134-266, 2=267-399, 3=400-533, 4=533-655" is displayed.
12. Enter the E-Bit [Generic 2 only]. Valid selections are **y** or **n**.
 - The E-Bit field is displayed only if the Robbed Bit signaling is specified and the Module is *Universal* or *XE*.
13. Enter the Interface Identifier [Generic 2 only]. This field is optional. Valid entries are **0-31**.
 - This field is populated for both *Traditional*, *Universal* and *XE* Modules and if the Application Type is 5.

14. Enter the Bit Inversion. Valid entries are **n** or **y**.
 - The Bit Inversion field is displayed, if you select **B8ZS** in the CODING SCHEME field. If you enter **ZCS**, this field does not appear.
15. Page 2 is displayed for APPLICATION TYPE 5 only.

```

AT&T Mgr IV 2.2          DEFINITY G2.2          <target>
tcm admin dsl-isdn add          Page 2 of 2

          Equip Loc ___/___/___

          ISDN PARAMETERS

INTERFACE TYPE          FACILITY TEST CODE          LEVEL 2 PRI TIMERS
_User-side              _None                      T203: ___
_Network-side          _Level 2                      T200: ___
                      _Level 3
                      _Both

          Hyperactivity Management?_
          Terminal Endpoint Id:___
          Maximum Number of Data Packets:___
          Maximum Number of Retransmissions:___

```

All fields contain the default values but may be changed by placing **x** next to the option required.

16. Enter the INTERFACE TYPE.
17. Enter the FACILITY TEST CODE.
 - Select None, if no facility test codes are required.
 - Select Level 2, if Level 2 facility test code is required.
 - Select Level 3, if Level 3 facility test code is required.
 - Select Both, if both Level 2 and 3 facility test codes are required.
18. Enter the LEVEL 2 PRI TIMERS.
19. Enter the Hyperactivity Management [Generic 2 only]. Valid entries are **y** or **n**.
 - This field is populated for APPLICATION TYPE 5.
20. Enter the Terminal Endpoint Id. Valid entries are **0-126**.
21. Enter the Maximum Number of Data Packets. Valid entries are **1-7**.
22. Enter the Maximum Number of Retransmissions. Valid entries are **1-10**.

If you enter the **ds1-isdn add** command in the product-admin area, the following screen appears:

```

AT&T Mgr IV 2.2          DEFINITY G2.2          <target>
tcm product-admin ds1-isdn add          Page 1 of 2

          Equip Loc ___/___/___

APPLICATION TYPE
  _ DS1 Trunk Board  _ DS1 Line Board  _ DMI      _ ISDN/PRI

FRAMING FORMAT  SIGNALING OPTIONS CODING SCHEME
  x D4           _ Robbed Bit          _ ZCS
  _ Fe           _ 24th Channel        x B8ZS

TRANSMIT TYPE   ISDN SIGNALING    EQUIPMENT TYPE   SYNCHRONIZATION
x Copper        x 23 B + D        x No SCS         x None
_ Fiber         _ 24 B            _ DS1/T1 SCS    _ Primary SCS
                                     _ Secondary SCS

          Slip Count Enabled?_ DS1 Loop Length:_ Interface Identifier:_
External Loop Test Enabled?_          Bit Inversion? n

```

1. The EQUIPMENT TYPE field. This field is required. The default is **No SCS**. You are allowed to change the entry or leave the default by pressing **RETURN**. Prior to selecting an entry, you have to find out if the SCS equipment is installed:
 - In the product-admin area, enter the **carrier-parameters display** command to verify if the SCS Equipment is installed in the Module Control. If the SCS Equipment is not installed, you are allowed to either specify the **SCS** or select the **No SCS** option. To specify the SCS Equipment:
 - Enter the **carrier-parameters add** transaction. Enable the SCS Equipped field.
 - If the SCS Equipment is installed, when using the **ds1-isdn add** command, select the **DS1/T1 SCS** option in the EQUIPMENT TYPE field.
 - If you select the **No SCS**, the system automatically populates the SYNCHRONIZATION field with **None** (Internal Clock). The SYNCHRONIZATION field becomes a display only field. The cursor will skip over this field.
2. The SYNCHRONIZATION field. The cursor will be positioned in this field only if you selected the **DS1/T1 SCS** entry in the EQUIPMENT TYPE field. Otherwise, the cursor skips to the ISDN SIGNALING field. You are allowed to select any of the three values:
 - None
 - Primary SCS
 - Secondary SCS

For APPLICATION TYPE 5 only, Page 2 of the screen is displayed which is identical to Page 2 in admin or database-admin area. In addition, the Codeset Map Number field appears.

1. The Codeset Map Number field appears for Generic 2 only in the product-admin area; this field is not displayed under the admin or database-admin hierarchy. Use the **codeset-mapping display** command to get the valid Map Number as it is defined in the Generic 2 switch. Press

RETURN.

- The Codeset Map Number is populated for Application Type 5.

Procedure: Display DS1-ISDN Information

To perform the **ds1-isdn display** transaction,

1. Enter the **ds1-isdn display** command. The **ds1-isdn display** input screen appears. The format of the screen is the same as for the **ds1-isdn add** input screen. For more details, refer to "Procedure: Assign DS1-ISDN and Pack Parameters in Generic 2 and System 85 R2V4."
2. Populate the Equipment Location fields with the valid entries. Press **RETURN**. For the valid values description for both *Traditional* and *Universal/XE* Modules, refer to "Procedure: Assign DS1-ISDN and Pack Parameters in Generic 2 and System 85 R2V4."
3. The **ds1-isdn display** output screen is displayed. The screen is formatted the same way as the **ds1-isdn add** output screen. All displayed fields contain the values entered via the **ds1-isdn add** transaction.

Depending on the Module and Application Types, the output screen varies. If you specify the DS1-ISDN board assigned for the ISDN/PRI Application and the ISDN SIGNALING was set to **23 B + D**, the output screen will be comprised of two pages. Page 2 of 2 will display the ISDN/PRI characteristics.

Procedure: Change DS1-ISDN and Pack Parameters

You are allowed to change the characteristics of the specified **ds1-isdn** boards.

1. To invoke the **ds1-isdn change** input screen, enter the **ds1-isdn change** command. The input screen prompts for Equipment Location. The screen looks the same way as the **ds1-isdn add** input screen.
2. Enter the Equipment Location. Press **RETURN**. The **ds1-isdn change** output screen (Page 1 of 2) appears. You are allowed to change the entries made via the **ds1-isdn add** transaction. The description provided for the **ds1-isdn add** screens (Page 1 and 2) applies to the **change** output screens. For a detailed screen description, refer to "Procedure: Assign DS1-ISDN and Pack Parameters in Generic 2 and System 85 R2V4."

You cannot change the Application Type value by entering the **ds1-isdn change** command. You can only do it by following a sequence of procedures described below:

- Enter the **ds1-isdn remove** command to remove the ds1-isdn parameters.
- Enter the **carrier remove** command to remove the specified carrier.
- Enter the **carrier add** command to create the Equipment Locations for the specified Application Type.
- Enter the **ds1-isdn add** command.

3. If you enter the **ds1-isdn change** command to modify the ISDN SIGNALING from **23 B + D** to **24 B** for the Equipment Location assigned to the D-Channel and associated with the trunks, the error message is displayed: "ISDN SIGNALING CANNOT BE CHANGED TO 24 B, IT IS ASSIGNED TO A D-CHANNEL." To successfully administer the **ds1-isdn change** transaction:
 - Enter the **d-channel remove** command to remove the D-Channel Group Assignment for the D-Channel. If the trunks were assigned to that Equipment Location, prior to using the **d-channel remove** transaction,
 - Enter the **trk display** command to find out which trunk is assigned with the D-Channel Group Number.
 - Enter the **trk add** or **trk change** command and change the D-Channel Group Number to a NULL.
4. If you enter the **ds1-isdn change** command to replace the **24 B** selection with the **23 B + D**, and there were some trunks assigned to 24 circuits, the error message is displayed: "TRUNKS ASSIGNED TO EQUIP.LOC., CANNOT CHANGE THE ISDN SIGNALING." To successfully administer the **ds1-isdn change** transaction, you have to remove the trunks assigned to that Equipment Location.
5. You are not allowed to change the SIGNALING OPTIONS, if any trunks are assigned to the **ds1** packs.
6. You are not allowed to change the display only fields:
 - If the trunks assigned to the DS1 packs are AVD (Alternate Voice/Data), then the signaling defaults to **24th Channel**.
 - For APPLICATION TYPE 5, if the signaling is **24th Channel**, this field cannot be changed.
 - For APPLICATION TYPE 2, Robbed Bit Signaling is required.
7. To change the Interface Identifier if the trunks have been assigned to the specified Equipment Location:
 - Remove the assigned trunks prior to entering the **ds1-isdn change** command. Otherwise, the error message will be displayed: "TRUNKS ASSIGNED TO EQUI.LOC., CANNOT CHANGE THE INTERFACE IDENTIFIER."

Procedure: Remove DS1-ISDN and Pack Parameters

To remove the DS1-ISDN assignment, follow the same steps described in "Procedure: Change DS1-ISDN and Pack Parameters."

The **remove** operation cannot be completed when a trunk is assigned to any of 23 circuits if the signaling is **23 B + D** and 24 circuits if the signaling is **24 B**. This error message will be displayed: "EQUIPMENT LOCATION IN USE, CANNOT REMOVE DS1-ISDN CHARACTERISTICS."

If a D-Channel is assigned to that Equipment Location, the error message returned is: "DS1-ISDN CHARACTERISTICS ARE ASSOCIATED WITH D-CHANNEL, REMOVE D-CHANNEL FIRST."

Procedure: Assign DS1 and Pack Parameters in System 85 R2V3

You can add, change, remove, or display DS1 circuit pack parameters for System 85 R2V3 with the command **ds1-isdn**. This procedure explains how to assign parameters to DS1 circuit packs. Parameters must be assigned before equipment associated with the packs can be used. Before you use the **ds1-isdn** command, be sure that you have assigned the circuit pack using either the **pack add** command or the **carrier add** command.

1. Enter the command **ds1-isdn add**. The following screen displays if the command is run from admin or database-admin area.

```
AT&T Mgr IV 2.2          System 85 R2V3          <target>
tcm admin ds1-isdn add   Page 1 of 1

Equip. Loc.:  _/_/_/_
```

2. Enter the Equipment Location of the DS1 circuit pack. The screen shown below is displayed.

```
AT&T Mgr IV 2.2          System 85 R2V3          <target>
tcm admin ds1-isdn add   Page 1 of 1

Equip. Loc.:  2/0/3/05

APPLICATION TYPE
  x DS1 Trunk Board  _ DS1 Line Board          _ DMI
  _ Remote Carrier (T1 Carrier)                _ Remote Carrier (Fiber)

FRAMING FORMAT          SIGNALING OPTIONS          CODING SCHEME
  x D4                   x Robbed Bit                x ZCS
  _ Fe                   _ 24th Channel                _ B8ZS

Slip Count Enabled? n
External Loop Test Enabled? n
```

- If the command was executed from the admin or database-admin area, the system detects and displays the Application Type that was specified when the pack was added.
- If the command was executed from the product-admin area, the system displays two more fields: EQUIPMENT TYPE and SYNCHRONIZATION.

```

AT&T Mgr IV 2.2                System 85 R2V3                <target>
tcm admin dsl-isdn add          Page 1 of 1

                                Equip. Loc.: ___/___/___

APPLICATION TYPE
  _ DS1 Trunk Board      _ DS1 Line Board      _ DMI
  _ Remote Carrier (T1 Carrier)  _ Remote Carrier (Fiber)

FRAMING FORMAT          SIGNALING OPTIONS          CODING SCHEME
  x D4                  _ Robbed Bit              _ ZCS
  _ Fe                  x 24th Channel          _ B8ZS

EQUIPMENT TYPE          SYNCHRONIZATION
  x No SCS              x None
  _ DS1/T1 SCS          _ Primary SCS
                        _ Secondary SCS

Slip Count Enabled? n
External Loop Test Enabled? n

```

- Note that in the product-admin area, you must specify the Application Type by marking **x** next to the correct type. The system will not automatically fill it in.
 - Some other fields may be filled when the screen is displayed. The administration software is designed to select certain values "automatically" when a specific pack type is chosen to ensure that certain incompatible parameters are not assigned.
3. Enter **x** next to the appropriate FRAMING FORMAT, **D4** or **Fe**.
 4. Enter **x** next to the appropriate SIGNALING OPTION, **Robbed Bit** or **24th Channel**.
 5. Enter **x** next to the appropriate CODING SCHEME. **ZCS** is Zero Code Suppression; **B8ZS** is Bipolar 8 Zero Suppression.
 6. In the product-admin area,
 - Enter **x** next to the appropriate EQUIPMENT TYPE. Select **No SCS** if the SCS board is not installed in the Module Control carrier.
 - Enter **x** next to the appropriate SYNCHRONIZATION field. For more details, refer to the description provided for Generic 2 and R2V4 earlier in this chapter.
 7. Enter **y** or **n** for Slip Count Enabled.
 8. Enter **y** or **n** for External Loop Test Enabled.
 9. Press **(ESC)** **e** or **(EXECUTE)** to end the transaction.

9. TCM REPORTS

Reports are an important tool for your administration of the Terminal Change Management (TCM) application. They are designed to give you detailed information about your system. Reports can be used before you begin a task to obtain specific details needed for that task; they can also be used to verify changes that have been made. Some reports, such as the Circuit Inventory Report, are useful for determining available switch equipment, and planning future growth.

Reports give you added flexibility. By producing paper copies, you can review a report more leisurely, add notes, and consult with others. You can also display reports on the screen.

This chapter includes an overview of available reports, the release version of the switch (if applicable) that is necessary for that report's availability, the procedures for producing reports, and a report directory that gives detailed information about all reports.

AVAILABLE REPORTS

Reports are available for the following task groups: dialing plan, system-wide features, extensions and terminals, and switch equipment. (See Chapters 2, 3, and 8, respectively, for an overview of these task groups.) Table 9-1 lists the reports available in each category.

Remember that display transactions in the administration area are also a type of report. You may even produce paper copies of these displays by using the **PRINT** or **ESC P** keys. For those cases where both screen print and report capabilities exist, such as the User Name report, you should determine which method of gathering data best suits your needs at the time.

Most reports cover a wider range than displays. If you were looking for information on which extensions had controlled restriction group numbers, for example, instead of all information about a specific extension number, you would save time by requesting a report.

You may also produce customized reports to meet the particular circumstances of your company by using the DEFINITY Manager IV query language. For more information, consult your DEFINITY Manager IV system administrator or *DEFINITY® Manager IV Query and Report Languages*.

Table 9-1. Available TCM Reports

For Information Related to	See
System-Wide Features	Bearer Capability COS Report Call Coverage Report Class of Service (COS) Report Class of Service (COS) Profile Report Call Pickup Group (CPG) Report
Extensions and Terminals	Abbreviated Dial Report [System 85 only] Automatic Call Distribution (ACD) Group Report [Sys 85 & DEF G2] Controlled Restriction Group (CRG) Report Db Extension EII Report Dial Intercom Group Report ECTS Controller Report [DIMENSION System Only] ECTS Pack Report [DIMENSION System Only] Extension Report Extension-to-Node Report [Sys 85 & DEF G2] Group List Report [Sys 85 & DEF G2] Hunt Group Report Intercom Set ID Report Line Appearance Report [Sys 85 & DEF G2] Non-Dial Intercom Group Report PBX Available Extension Report [Sys 85 & DEF G2] PBX Call Coverage Group Members (CCG) Report [Sys 85 & DEF G2] PBX Call Pickup Group (CPG) Members Report [Sys 85 & DEF G2] PBX Extension EII Report Personal Central Office (PCO) Line Report Set-Type Report Spare Pack Inventory Report Tenant Report [Sys 85 & DEF G2.1] Uniform Call Distribution (UCD) Group Report [DIMENSION System Only] User Report Vector Directory Numbers (VDN) Report [Sys 85 & DEF G2]
Switch Equipment	Cabinet Report Circuit Inventory Report Circuit Status Report Db Module Type Report Equipment Report Equipment Summary Report Free Slot Inventory Report Installation Report Office Equipment Report PBX Circuit Pack Report PBX Module Type Report PBX Physical Circuit Pack Report [Sys 85 & DEF G2] Unassigned Circuit Report Wire Report
ISDN	NPA-NXX Designator Report [Sys 85 & DEF G2]
Tenant Services	Tenant Report [System 85 Only]
Call Vectoring	Vector Directory Numbers (VDNs) Report [Sys 85 & DEF G2]

DEFINITY Manager IV gives you great flexibility by providing you with four options for producing reports. You may do any of the following:

- View the report on-line.
- Send the report to the printer to get a paper copy.
- Schedule the report to be sent to the printer.
- Schedule the report to be sent to a file.

Viewing the report on-line provides you with immediate feedback on the condition of your system. Producing a paper copy allows you to review the report at a convenient time and to compare the information with other reports. You can schedule these reports to be produced during non-busy hours to avoid consuming the processing time that is needed for other transactions. You can also schedule the report to be sent to a results file from the scheduling screen. See "Sample Procedure: Producing a Report" below for a sample scheduling screen. To access information in the results file use **results display**. See "DEFINITY Manager IV On-Line Command Help" for information on the **results display** transaction. Scheduling reports is also useful to check the completion of scheduled system changes.

The data for your report is taken from the database because retrieving data from the database is much faster than retrieving data from the switch. Remember that pending Service Requests (SRs) will influence what the database reflects. If you suspect that the database may reflect the future status of the switch, you may want to compare the data from the database with data from the product. You can obtain this information through a display in the product administration area. Reports are always on a per-switch basis.

You should request reports individually. It is *not* advisable to run multiple report requests simultaneously because the process of creating a report places heavy demands on the system. It is, therefore, best to schedule reports separately, during times when the system is least busy.

The remainder of this chapter contains a sample procedure for producing a TCM report, and TCM directory.

All reports apply to System 85, DEFINITY Generic 2 and DIMENSION unless specified otherwise.

Sample Procedure: Producing a Report

The following procedure illustrates how to schedule the report to be produced at a later time. A report can either be sent to a printer or a results file, depending on which output destination you specify.

1. You have already entered TCM, specified a target, and must now enter an area. Enter **report-admin** and press **RETURN**.

```

AT&T Mgr IV 2.2                DEFINITY G2.2                (000)000-0000
tcm report-admin
  
```

2. Enter **extension** and press **RETURN**.

```

AT&T Mgr IV 2.2                DEFINITY G2.2                (000)000-0000
tcm report-admin extension
  
```

3. Enter **report** and press **RETURN**.

```

AT&T Mgr IV 2.2                DEFINITY G2.2                (000)000-0000
tcm report-admin extension report

Enter Extension(s): _____
    
```

4. Enter an extension number or a range of extension numbers for which you want a report, and press **RETURN**. Then press **EXECUTE** or **ESC** **e** to submit the data immediately, or press **ESC** **s** to schedule the report. If you choose the latter, the following screen appears:

```

AT&T Mgr IV 2.2                DEFINITY G2.2                (000)000-0000
tcm report-admin extension report

Scheduling Information

Schedule Date: _____
Schedule Time: _____
Task Number: _____
Output Destination: ____
    
```

5. Enter the schedule date, the schedule time and the task number.
6. Enter the Output Destination. You can either send the report to a file or a printer.
 - If you enter **f** for file, the screen will display the Results File* Name: field containing the same number or name that you entered for the task number.

Note: Select unique file names when scheduling multiple-file reports to avoid overwriting of the previous output file with the more recent one.
 - If you enter **p** for printer, the screen will prompt you for the name of the printer. Enter the name of the line printer you choose to print the report.
7. Press **EXECUTE** or **ESC** **e** to enter the data.
 - You will receive a message informing you that your report has been scheduled.
8. Press **RETURN** to go to the command path.

REPORT DIRECTORY

Each TCM report is included in this directory. The reports are arranged alphabetically by report name. Each entry includes the following:

PATH: The command path you use to produce the report.

PURPOSE: A summary of the content and the uses of the report. Read the purpose to get an idea of how and why you might use the report.

SELECTION OPTIONS: The values you can enter on the input screen. Many of the reports give you the option to enter all items. Other reports allow you to select a list or a range of items. A single item is an option for some reports, but in most cases it is more efficient to use a display transaction in the administration area to view a single item. Lists are two or more items, separated either by commas or by spaces. A range is an inclusive list; you enter two items separated by a hyphen. To gather all data for a report enter **all**.

Example: If you want to produce an Extension Report, you can enter one extension (2040), a list of extensions (2040, 2050, 2060), a range of extensions (2040—2060), or all extensions (you enter **all**).

SORT ORDER: A description of how the report data is organized; most reports have information organized in ascending numerical order.

SAMPLE OUTPUT: A partial report is shown to give you an idea what each report looks like. (In general, reports have up to forty items per column on a page, so it would be too lengthy to include the entire report here.) The specific fields on the report are not explained since most are self-evident. If you do have any questions, use the on-line command help.

EXTENSIONS									

COS:	17								
---	--								
66727	66728	66729	66730	66731	66732	66733	66734	66735	66736
66737	66738	66739	66740	66741	66742	66743	66744	66745	66746
66747	66748	66749	66750	66751	66752	66753	66754	66755	66756

ABBREVIATED DIAL REPORT

RELEASE: System 85 and DEFINITY Generic 2 only

PATH: tcm report-admin abbreviated-dial report

PURPOSE: This report lists the Abbreviated Dial capabilities of each specified set ID. The abbreviated dial capabilities include: personal list access and personal list size, group list number and group list size, indication of who owns the group list, and an indication of set access to an abbreviated dial list.

SELECTION

- OPTIONS:**
- One set ID number
 - A list of set ID numbers
 - A range of set ID numbers
 - All set ID numbers

SORT

ORDER: Output is organized in ascending order by set ID.

SAMPLE

OUTPUT:

Setid	A Lst Typ	Prs Lst Sze	Grp Lst Num	Grp Lst Own	Grp Lst Sze	B Lst Typ	Prs Lst Sze	Grp Lst Num	Grp Lst Own	Grp Lst Sze	Sys Lst Acc
----	---	---	---	---	---	---	---	---	---	---	---
44160						g		100	n		n
44164	p	5									y
44166	p	5									y
44172	p	5				g		100	n		y
44307	p	10									n
44312	p	10				g		100	n		n
44320	p	5				p	5				y
44322						g		100	n		n
44330	p	10									y
44336	p	5									y

AUTOMATIC CALL DISTRIBUTION (ACD)

RELEASE: System 85 and DEFINITY Generic 2 only

PATH: tcm report-admin acd-grp report

PURPOSE: This report allows you to compare the attributes of one or more of the assigned Automatic Call Distribution (ACD) groups. All field values are presented in the same format as you have entered them.

**SELECTION
OPTIONS:**

- One ACD group
- A list of ACD groups
- A range of ACD groups
- All ACD groups

SORT

ORDER: Output is arranged by ACD Group in ascending numerical order.

**SAMPLE
OUTPUT:**

ACD Grp	Group Size	Queueing Trunk	ICI Msg	Supv. Extn	QDN	Priority Extn	Inflow Level	Outflow Level	Hunt Patrn
1	16	18	0	2222	333	2222	0	1	IEND
2	32	22	2	3333	2222	4444	0	2	TERM

BEARER CAPABILITY COS REPORT

PATH: tcm report-admin bearer-capability-cos report

PURPOSE: This report will display the data administered for each Bearer Capability Class of Service (BCCOS).

**SELECTION
OPTIONS:**

- One BCCOS
- A list of up to five BCCOSs
- A range of BCCOSs
- All BCCOSs

**SORT
ORDER:** Output is sorted by BCCOS number.

**SAMPLE
OUTPUT:**

BEARER CAPABILITY CLASS OF SERVICE REPORT		
Bearer Capability Class of Service: 0		
BEARER CAPABILITY CLASS ACTIONS	DATA RATES	FACILITY ATTRIBUTES
Voice: 0	64000 bps? n	Transport Mode: c
Mode 1: 0	56000 bps? n	Channel Type: r
Mode 2: 0	19200 bps? n	Async/Sync: a
Mode 3: 0	9600 bps? n	Duplex: f
Mode 0: 0	4800 bps? n	Clock: i
Voice Grade Data: 0	2400 bps? n	
Unknown Digital: 0	1200 bps? n	
Unknown Analog: 0	300 bps? n	
Mode 3/2: 0	low bps? n	
X.25: 0		
DEFAULT ATTRIBUTES		
Default Bearer Capability Class: 0		Default Transport Mode: c
Default Data Rate (bps): none		Default Channel Type: r

CABINET REPORT

PATH: tcm report-admin cabinet report

PURPOSE: This report summarizes the circuit usage for each slot of each carrier for a specified cabinet. If DS-1 packs are involved, additional information that defines the DS-1 application type is displayed.

SELECTION OPTIONS: The following report types are available:

- Traditional Port Carrier
- Traditional DS-1 Carrier
- Universal Common Port Carrier
- Dimension (output is the same as Traditional Port Carrier)

To obtain a report for a specific module and cabinet, enter the following:

Module A single module number ranging from **00** to **30**.

Cabinet If the module type is traditional, the cabinet number ranges from **0** (zero) through **7**.

If the module is universal, the cabinet number must be **0** (zero).

Carrier A carrier can be identified by a single number, a range of numbers, a list, or by entering **ALL** to indicate all carrier numbers.

— If the module is traditional, valid carrier numbers are **0** (zero) through **3**.

— If the Module is universal, valid carrier numbers are **C** through **E** (or **c** through **e**).

SORT

ORDER: Primary sorting of output is by carrier number; secondary sorting within carriers is by slot number.

APPLICATION

TYPES: Cabinet reports for Traditional DS-1 and Universal Common Port carriers include an additional application type field; possible application types are:

- **MIX/TRK** — (Trunks/Mix)
- **DMI** — Digital Multiplex Interface
- **OPS** — Off-Premise Station Lines
- **T1 RMT CAR** — Remote carrier via fiber
- **ISDN** — Integrated Services Digital Network

**SAMPLE
INPUT:**

```

AT&T Mgr IV 2.2          DEFINITY G2          <name>
rcm report-admin cabinet report          Page 1 of 1

          CABINET REPORT

Enter Module(s):  _____
Enter Cabinet(s) :  _____
Enter Carrier(s) :  _____

To send the report to a file or printer, use the schedule command(<esc>s).

Page 1 of 1
    
```

Sample Cabinet Report: Traditional Port Carrier

CABINET REPORT							
Mod	Cab	Car	slot	Pack Type	Assigned Circuits	Available Circuits	Reserved Circuits
03	2	0	00	sn2701	3	1	0
03	2	0	01	sn2701	2	2	0
03	2	0	02	+free			
03	2	0	03	sn270t	4	0	0
03	2	0	05	*sn2701	0	4	0
03	2	0	06	sn230	3	1	0
03	2	0	07	sn228	7	1	0
03	2	0	08	*sn229	0	8	0

page 1 + free slot * spare pack

Sample Cabinet Report: Traditional DS-1 Carrier

CABINET REPORT								
Mod	Cab	Car	slot	Pack Type	Assigned Circuits	Available Circuits	Reserved Circuits	Application Type
03	2	0	00	isdn	3	1	0	ISDN
03	2	0	01	isdn	2	2	0	ISDN
03	2	0	02	isdn	4	0	0	ISDN
03	2	0	03	sn2701	4	0	0	
03	2	0	05	ann35	0	4	0	ISDN
03	2	0	06	isdn	3	1	0	ISDN
03	2	0	07	isdn	2	2	0	ISDN
03	2	0	08	*sn229	0	8	0	
page 1			+ free slot		* spare pack			

Sample Cabinet Report: Universal Common Port Carrier

CABINET REPORT								
Mod	Cab	Car	slot	Pack Type	Assigned Circuits	Available Circuits	Reserved Circuits	Application Type
05	0	C	11	tn754	3	1	0	
05	0	C	12	tn754	0	16	0	
05	0	C	13	*tn754	4	12	0	
05	0	C	14	tn754	8	0	0	
05	0	C	15	tn747	6	2	0	
05	0	C	16	tn747	0	8	0	
05	0	C	17	*tn747	4	4	0	
05	0	C	18	tn767	0	8	0	
05	0	C	19	tn767	8	4	0	ISDN
05	0	C	20	isdn	7	5	0	ISDN
page 1			+ free slot		* spare pack			

CALL COVERAGE REPORT

PATH: tcm report-admin call-coverage report

PURPOSE: Five completely unique call coverage reports can be produced, depending on your selection.

1. CALL COVERAGE PATH DETAIL, BY CCG:
 - Prints CCG and its path points.
2. CALL COVERAGE PATH DETAIL, BY EXTENSION:
 - Given extension, identifies every CCG, where this extension appears as coverage point; identifies points, where this extension is a supervisory extension of ACD/UCD group; also identifies points that are vectors by vector number.
3. CALL COVERAGE PRINCIPAL DETAIL, BY CCG:
 - Given CCG, lists all principals (members) of this CCG.
4. CALL COVERAGE PRINCIPAL DETAIL, BY EXTENSION:
 - Given extension, shows the CCG of which this extension is the principal (member).
5. COMPLETE CALL COVERAGE GROUP DETAIL:
 - Lists detailed coverage criteria for specified CCG.

**SELECTION
OPTIONS:**

- Each report can be generated for:
 - [one CCG, or one extension]
 - [list of CCGs, or list of extensions]
 - [range of CCGs, or range of extensions]
 - [all CCGs, or all extensions]

Note: Following pages give details and show samples of the five available reports.

CALL COVERAGE PATH DETAIL - DATA RETRIEVED BY CCG

PURPOSE: Print CCG and its path points.

If the point of the path is extension, list extension. If the point is ACD/UCD group, print ACD/UCD group number, and its supervisory extension. If the point is a vector, the vector number is also printed.

If CCG is a part of dual coverage group, both groups should show, even if only one of them was specified in the selection. Example: For range selected as 2001 - 2020, produced output will show 2000 - 2021.

SORT

ORDER: Output is sorted by CCG in ascending order.

**SAMPLE
OUTPUT:**

CALL COVERAGE PATH DETAIL			
CCG No.	Point 1 Extension, VDN or ACD Group#	Point 2 Extension, VDN or ACD Group#	Point 3 Extension, VDN or ACD Group#
----	-----	-----	-----
100	42005	20009	
990	42001	46000 (Group 12)	
1212	46000 (Group 12)		
2020	42001	42002	46000 (Group 12)
2021	42003	42004	42005
2100	42001		
2101	42009 (vector 255)	42005	12342

CALL COVERAGE PATH DETAIL - DATA RETRIEVED BY EXTENSION

PURPOSE: Given extension, identify every CCG, where this CCG appears as coverage point. Mark, if the extension appears as point 1, 2, or 3. If the endpoint is ACD/UCD group, and the given extension is a supervisory extension of this ACD/UCD group, print the ACD/UCD group number next to the identifying mark.

SORT ORDER: Output is sorted by extension in ascending order.

SAMPLE OUTPUT:

EXTENSION: 42005		Used as Coverage Point in:		
CCG No.	Point 1 Extension or ACD/UCD Group#	Point 2 Extension or ACD/UCD Group#	Point 3 Extension or ACD/UCD Group#	
----	-----	-----	-----	
100	X			
2021			X	
2101		X		
EXTENSION: 46000		Used as Coverage Point in:		
CCG No.	Point 1 Extension or ACD/UCD Group#	Point 2 Extension or ACD/UCD Group#	Point 3 Extension or ACD/UCD Group#	
----	-----	-----	-----	
990		X (Group 12)		
1212	X (Group 12)			
2020			X (Group 12)	

CALL COVERAGE PRINCIPAL DETAIL - DATA RETRIEVED BY CCG

PURPOSE: Given CCG, list all principals (members) of this CCG. If there are no principals for this CCG, print "No principals".

SORT ORDER: Output is sorted by CCG in ascending order.

SAMPLE OUTPUT:

```

                Principals In CCG 41
                -----
20007   20012   20015

                Principals In CCG 1217
                -----
20002  20008  20009  20016  20017  20018  20020  20021  20022  20023
20024  42001  42002  42003  42006

                Principals In CCG 1219
                -----

                No principals

```

CALL COVERAGE PRINCIPAL DETAIL - DATA RETRIEVED BY EXTENSION

PURPOSE: Given extension, show CCG of which this extension is the principal (member).

SORT ORDER: Output is sorted by extension in ascending order.

SAMPLE OUTPUT:

Principal Extension -----	Call Coverage Group -----
20002	1217
20007	41
20008	1217
20009	1217
20012	41
20015	41
20016	1217
20017	1217
20018	1217
20020	1217
20021	1217
20022	1217
20023	1217
20024	1217
42001	1217
42002	1217
42003	1217
42005	2100
42006	1217
42043	2004
45004	287
45008	321

COMPLETE CALL COVERAGE GROUP DETAIL

PURPOSE: List detailed coverage criteria for each specified CCG.

SORT ORDER: Output is sorted by CCG in ascending order.

SAMPLE OUTPUT:

CCG: 5									

Coverage Criteria:									
	Inside				Outside				
Active	n				n				
Always	n				n				
Busy	y				y				
No Answer	y				y				
No Answer - Calls Go To Coverage After 3 Rings									
Coverage Path:									
Point 1			Point 2			Point 3			
42001			42002			46000 (Group 12)			
Principals In CCG:									
No Principals									
CCG: 1217									

Coverage Criteria:									
	Inside				Outside				
Active	n				n				
Always	n				n				
Busy	y				y				
No Answer	y				y				
No Answer - Calls Go To Coverage After 3 Rings									
Coverage Path:									
Point 1			Point 2			Point 3			
41110			21110			46000 (Group 12)			
Principals In CCG:									
20002	20008	20009	20016	20017	20018	20020	20021	20022	20023
20024	42001	42002	42003	42006					

CALL PICKUP GROUP (CPG) REPORT

PATH: tcm report-admin call-pickup-group report

PURPOSE: The Call Pickup Group report lists either the CPG for each extension number or the extension number assigned to each specified CPG.

**SELECTION
OPTIONS:**

- One CPG or one extension
- A list of CPGs or extensions
- A range of CPGs or extensions
- All CPGs or extensions

**SORT
ORDER:** Output is organized by the CPG number or the extension number in ascending order.

**SAMPLE
OUTPUT:**

EXTENSIONS	

CPG: 1	
---	-
10035	10037
CPG: 20	
---	--
10053	10056
CPG: 872	
---	---
10089	

CIRCUIT INVENTORY REPORT

PATH: tcm report-admin circuit-inventory report

PURPOSE: This report provides totals of assigned circuits, available circuits, and reserved circuits for pack types within a specified hardware range.

**SELECTION
OPTIONS:**

For each of the following selections, you may enter a specific Locale, "ALL" for all Locales, or leave this field blank by pressing **RETURN** to get a report for NULL Locales:

- Modules, cabinets (system inventory)
- All modules, all cabinets (locale inventory)
- One module, all cabinets (module inventory)
- One module, one cabinet (cabinet inventory)

SORT

ORDER: Output is arranged in ascending order by pack type.

**SAMPLE
OUTPUT:**

CIRCUIT INVENTORY REPORT				
INVENTORY RANGE				
Locale(s)	Module(s)	Cabinet(s)	Carrier(s)	Slot(s)
ALL	ALL	ALL	ALL	ALL
CIRCUIT SUMMARY BY PACK TYPE				
<----- Totals ----->				
Pack Type	Assigned Circuits	Available Circuits	Reserved Circuits	
ann11	8	16	0	
ann17	4	8	0	
ann35	8	8	0	
ds1	60	44	0	
isdn	60	60	0	
sn224	1	3	0	
sn229	107	20	0	
sn2701	496	80	16	

CIRCUIT STATUS REPORT

PATH: tcm report-admin circuit-status report

PURPOSE: This report will provide inventory on customer selected hardware. For each selected Equipment Location, the report will print Locale, Module, Cabinet, Carrier, Slot, pack type occupying this slot, and the state of each circuit. The report will also identify free Slots and spare packs. Circuit states are:

- a - available
- r - reserved
- w - working (assigned).

**SELECTION
OPTIONS:**

- For each of the following selections, you may enter a specific Locale, "ALL" for all Locales, or leave this field blank by pressing **RETURN** to get a report for NULL Locales:
 - You may enter a specific Module, or "all" for all Modules.
 - You may enter a specific Cabinet, or "all" for all Cabinets.
 - You may enter a specific Carrier, or "all" for all Carriers.

SORT

ORDER: Output is sorted by Locale, Module, Cabinet, Carrier, and Slot in ascending order.

**SAMPLE
INPUT:**

```
AT&T Mgr IV 2.2          DEFINITY G2.2          <target>
tcm report-admin circuit-status report          Page 1 of 1

          CIRCUIT STATUS REPORT

          Enter Locale(s): ___
          Enter Module(s): ___
          Enter Cabinet(s): ___
          Enter Carrier(s): ___
          Enter Slot(s): ALL
```


CLASS OF SERVICE (COS) REPORT

PATH: tcm report-admin class-of-service report

PURPOSE: This report allows you to list the extensions assigned to each COS or to list the COS for each specified extension number, depending on how you specify data retrieval.

**SELECTION
OPTIONS:**

- One COS or extension
- A list of COSs or extensions
- A range of COSs or extensions
- All COSs or extensions

**SORT
ORDER:**

Output is organized either by COS numbers or extension numbers in ascending numerical order.

EXTENSIONS -----									
COS: 17									
--- --									
66767	66768	66769	66770	66771	66772	66773	66774	66775	66776
66777	66778	66779	66780	66781	66782	66783	66784	66785	66786
COS: 18									
--- --									
44101	44102	44103	44104	44105	44106	44107	44108	44109	44110
44111	44112	44113	44114	44115	44116	44117	44118	44119	44120
44121	44122	44123	44124	44125	44126	44127	44128	44129	44130
44131	44132	66101	66102	66103	66104	66105	66106	66107	66108
66109	66110	66111	66112	66113	66114	66115	66116	66117	66118
66119	66120	66121	66122						
COS: 25									
--- --									
44000	44314	44320	66324	66328					

CLASS OF SERVICE (COS) PROFILE REPORT

PATH: tcm report-admin cos-profile report

PURPOSE: This report list the features and restrictions associated with each specified Class of Service (COS). You can retrieve data by Extension or Class of Service.

**SELECTION
OPTIONS:**

- One COS
- A Range of COSs
- A List of COS
- All COSs

**SORT
ORDER:** Output is organized by COS number in ascending order.

**SAMPLE
OUTPUT:** A sample COS Profile Report is on the following page.

Class of Service: 1

Features:

ACD (UCD) Member		Malicious Call Trace Control
ACD (UCD) Override	x	Leave Word Calling-Orig.
x Automatic Callback	x	Leave Word Calling-Term.
x Call Forward-Busy Don't Answer	x	Override
Call Forward-Don't Answer	x	Priority Calling
x Call Forward-Follow me	x	Priority Paging/Call Park
x Call Forward-Off Network	x	Send All Calls
Call Hold		SMDR Account Code Required
x Calling Number Display		Stop Hunt
x Call Waiting		Timed Recall Exempt
Data Protection	x	Touch Tone
Ring Ping Immediate	x	Transfer/Conf-Three Way
ACD Queue Status Display		

page 1

Class of Service: 1

Restrictions:

APLT Off Net		Misc. Trunk Restriction Group 1
DID/APLT Restriction		Misc. Trunk Restriction Group 2
Inward		Misc. Trunk Restriction Group 3
Manual Line Termination		Misc. Trunk Restriction Group 4
Origination		Misc. Trunk Restriction Group 5
Outward		Misc. Trunk Restriction Group 6
Terminal To Terminal		Misc. Trunk Restriction Group 7
Termination		Misc. Trunk Restriction Group 8
Toll Restriction		All
WCR Toll Restriction		
	Code Restriction Level	0
	Facility Restriction Level	5
	Maximum Precedence Level	

page 2

Notes:

- In the above screen, the Ring Ping Immediate field appears only for DEFINITY Generic 2 and System 85 R2V4.
- The WCR Toll Restriction field appears only for Generic 2.2.
- For Generic 2.1 and System 85 switches, the ARS Toll Restricted field is displayed.

CONTROLLED RESTRICTION GROUP (CRG) REPORT

PATH: tcm report-admin control-restriction-group report

PURPOSE: The Control Restriction Group (CRG) report lists either the extensions assigned to each specified CRG or the CRG for each specified extension.

**SELECTION
OPTIONS:**

- One CRG or extension
- A list of CRGs or extensions
- A Range of CRGs or extensions
- All CRGS or extensions

SORT

ORDER: Output is arranged by GRG number in ascending numerical order.

**SAMPLE
OUTPUT:**

		EXTENSIONS

CRG:	1	
---	-	
10035		
CRG:	2	
---	-	
10054		

DB EXTENSION ELL REPORT

PATH: tcm report-admin db-extension-ell report

PURPOSE: This command reports extension numbers that have an equipment line location (ELL) from the database.

CAUTIONS: This command does not access the product for information. It goes directly to the database for information. This command takes a while to run, so please be patient. Do not run this command at peak hours.

SELECTION

OPTIONS:

- A range of extension numbers from first to last extension.

SORT

ORDER: Output is arranged in ascending numerical order of extension numbers.

SAMPLE

OUTPUT:

ENTN	EQUIP
20003	00/0/1/07/2

DB MODULE TYPE REPORT

RELEASE: DEFINITY Generic 2 only

PATH: tcm-report-admin db-module-type report

PURPOSE: This report displays the corresponding module type for each module.

SELECTION

OPTIONS:

- There are no options to select for this report. All thirty-one (31) modules will be displayed.

SORT

ORDER: Output is arranged by module type in ascending numerical order.

**SAMPLE
OUTPUT:**

DATABASE MODULE TYPE REPORT			
MODULE	TYPE	MODULE	TYPE
0	Universal	16	Unassigned
1	Universal	17	Unassigned
2	Traditional	18	Unassigned
3	XE Module	19	Unassigned
4	XE Module	20	Unassigned
5	XE Module	21	Unassigned
6	Traditional	22	Unassigned
7	Traditional	23	Unassigned
8	XE Module	24	Unassigned
9	Unassigned	25	Unassigned
10	Unassigned	26	Unassigned
11	Unassigned	27	Unassigned
12	Unassigned	28	Unassigned
13	Unassigned	29	Unassigned
14	Unassigned	30	Unassigned
15	Unassigned		

DIAL INTERCOM GROUP REPORT

PATH: tcm report-admin dial-intercom-group report

PURPOSE: This report lists the group number, dial access code, and assigned extensions for each specified dial intercom group.

SELECTION

- OPTIONS:**
- One dial intercom group number
 - A list of dial intercom group numbers
 - A range of dial intercom group numbers
 - All dial intercom group numbers

SORT

ORDER: Output is arranged in ascending numerical order by Dial Group number.

**SAMPLE
OUTPUT:**

Intercom Group Number:	0				
Setid: 2252		Dial Code:			
Intercom Group Number:	1				
Setid: 2253		Dial Code:	1		
Setid: 2254		Dial Code:	1		
Setid: 2255		Dial Code:	1	Setid: 2256	Dial Code: 1
Setid: 2257		Dial Code:	1	Setid: 2258	Dial Code: 1
Intercom Group Number:	4				
Setid: 2251		Dial Code:	4		
Intercom Group Number:	20				
Setid: 12001		Dial Code:	10	Setid: 12002	Dial Code: 20

ECTS CONTROLLER REPORT

RELEASE: DIMENSION System only

PATH: tcm-report-admin ects-controller repot

PURPOSE: This report lists the Set ID, Electronic Custom Telephone Set (ECTS), and the equipment for a specified ECTS Controller. The report can be generated by specifying one, a range, a list, or all for a specified ECTS Controller.

**SELECTION
OPTIONS:**

- One ECTS Controller
- A list of ECTS Controllers
- A range of ECTS Controllers
- All ECTS Controllers

SORT

ORDER: Output is arranged in ascending order of Set ID numbers.

**SAMPLE
OUTPUT:**

SETID	ECTS	EQUIP
-----	----	-----
2014	01051	0101051

ECTS PACK REPORT

RELEASE: DIMENSION System only

PATH: tcm report-admin ects-pack report

PURPOSE: This report lists the Set IDs, ECTS, and equipment for a specified ECTS Controller and slot.

SELECTION

- OPTIONS:**
- One slot in a specified ECTS Controller
 - A range of slots in a specified ECTS Controller
 - A list of slots in a specified ECTS Controller
 - All slots in a specified ECTS Controller

SORT

ORDER: Output is sorted by ECTS.

SAMPLE

OUTPUT:

SETID	ECTS	EQUIP
-----	----	-----
10	10000	0000000

EQUIPMENT REPORT

PATH: tcm report-admin equipment report

PURPOSE: This report displays the Account ID, extension number, set type, name, equipment adjuncts, and price elements (1,2,3 and 4) for each specified extension number.

**SELECTION
OPTIONS:**

- One extension
- A list of extension numbers
- A range of extension numbers
- All extension numbers

SORT

ORDER: Output is arranged in ascending order by extension number.

**SAMPLE
OUTPUT:**

```

ACCOUNT ID:  1
-----  -  -
Extn No.:    00019                      Price Element: 1:
Set Type:    2500                        Price Element: 2:
Name:        James Taylor                Price Element: 3:
Equip. Adjuncts: f d s h                 Price Element: 4:

```

EQUIPMENT SUMMARY REPORT

PATH: tcm rpt-admin equip-summary report

PURPOSE: This report gives a summary of the number of terminals for each set type.

**SELECTION
OPTIONS:**

- One Set ID
- A list of Set IDs
- A range of Set IDs
- All Set IDs

SORT

ORDER: Output is organized by set type.

**SAMPLE
OUTPUT:**

SET TYPE	QUANTITY
-----	-----
2500	960
7403d	124
DTDM	109
7405d	73

EXTENSION REPORT

PATH: tcm report-admin extension report

PURPOSE: This report lists the assigned features and attributes for each specified extension. These features include the following: Class of Service, Hunt-to-Extension, Call Pickup Group Number, Call Coverage Group Number, Controlled Restriction Group Number, Automatic Message Waiting Indicator, Auxiliary Automatic Number Identification, Message Retrieval Indicator, Applications Processor number, VDN, and Name.

**SELECTION
OPTIONS:**

- One Extension
- A list of extension numbers
- A range of extension numbers
- All extension numbers

SORT

ORDER: Output is organized by extension number in ascending order.

**SAMPLE
OUTPUT:**

ACCOUNT ID: NULL (unassigned)												
EXTN			HUNTS AUX.					CPG	CCG	MSG	CRG	
NO.	COS	BCCOS	TO	ANI	AMW	AAMW	AP#	NO.	NO.	RTV.	NO.	VDN
----	---	-----	-----	---	---	-----	---	----	----	-----	----	-----
44000	25											
Call Forward Off-Net via Toll activated for extension 44000.												
44001	1				y		1					
44002	1				y		1					
44003	1						1					
Call Forward Off-Net via Toll activated for extension 44003.												
44004	1						1					

Notes:

- The VDN field appears for System 85 R2V4 and Generic 2 only.
- [Generic 2.2 only] The line of data "Call Forward Off-Net via Toll activated for extension #" is included on any extension assigned the Call Forward Off-Net via a toll route feature.

EXTENSION-TO-NODE REPORT

Note: Target must be a member of a number portability network.

RELEASE: System 85 and Generic 2

PATH: tcm report-admin extn-to-node report

PURPOSE: This report lists all extensions on a given node. An **a** in the NODE NUMBER field indicates that the extension is available to the network.

This report also has a header that maps target to node number.

SELECTION

OPTIONS: All extensions.

SORT

ORDER: Output is organized in descending order by extension.

SAMPLE

OUTPUT:

TARGET TO NODE NUMBER MAPPING			

9992233		1	
9994444		2	
EXTN	NODE NUMBER	EXTN	NODE NUMBER
----	-----	----	-----
23109	0	02000	2
23108	1	23107	0
23106	0	23105	0
23104	1	23103	0

FREE SLOT INVENTORY

PATH: tcm report-admin free-slot-inventory report

PURPOSE: This report identifies Equipment Locations that currently do not contain an associated circuit pack (i.e. free slots). For each free slot identified, the report displays the associated Locale, Module, Cabinet, Carrier, and Slot number.

SELECTION

OPTIONS: For all of the following selections, you may enter a specific Locale, "ALL" for all Locales, or leave this field blank by pressing **RETURN** to get a report for NULL Locales:

- You may enter a specific Module, or "all" for all Modules. For a specific Module selected, you may enter a specific Cabinet, or "all" for all Cabinets.

SORT

ORDER: Output is sorted by Locale, Module, Cabinet, Carrier, and Slot in ascending order.

SAMPLE

INPUT:

```

AT&T Mgr IV 2.2          DEFINITY G2.2          <target>
tcm report-admin free-slot-inventory report

      FREE SLOT INVENTORY REPORT

      Enter Locale(s): ____
      Enter Module(s): ____
      Enter Cabinet(s): ____
      Enter Carrier(s): ALL
      Enter Slot(s): ALL

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```

**SAMPLE
OUTPUT:**

FREE SLOT INVENTORY REPORT				
INVENTORY RANGE				
Locale(s)	Module(s)	Cabinet(s)	Carrier(s)	Slot(s)
-----	-----	-----	-----	-----
ALL	ALL	ALL	ALL	ALL
FREE SLOTS				
Locale	Module	Cabinet	Carrier	Slot
-----	-----	-----	-----	-----
02	01	1	2	03
02	01	3	1	18
02	02	2	3	02
04	10	0	0	07
04	10	1	2	20
15	22	0	c	11

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GROUP LIST REPORT

RELEASE: System 85 and DEFINITY Generic 2 only

PATH: tcm report-admin group-list report

PURPOSE: This report lists the extension number owner of the group list and all sets that have access to each specified group list.

**SELECTION
OPTIONS:**

- One group number
- A list of group numbers
- A range of group numbers
- All group numbers

**SORT
ORDER:** Output is arranged in ascending numerical order by group list number.

**SAMPLE
OUTPUT:**

Group List No.	Owner Set	Sets with Access to the Group List		
-----	-----	-----	-----	-----
1	00000	00000	00001	00005
10	00008	00008	00003	

HUNT GROUP REPORT

PATH: tcm report-admin hunt-group report

PURPOSE: The report identifies the Hunt-to Extension for each specified extension number.

**SELECTION
OPTIONS:**

- One extension number
- A list of extension numbers
- A range of extension numbers
- All extension numbers

SORT

ORDER: Output is in ascending numerical order by extension.

**SAMPLE
OUTPUT:**

EXTN NO.	HUNT TO EXTENSION NUMBERS			
-----	-----			
11111				
20001				
20002	20003			
20003				
20004	20005	20006	20007	
page 1				

INSTALLATION REPORT

PATH: tcm report-admin installation report

PURPOSE: The Installation Report allows you to access installation information either by Set ID or Equipment Line Location (ELL).

If data is retrieved by Set ID, these fields will appear: Set ID, Extension, Name, ELL, Set Type, Adjuncts, Location, Room Number, Mount, Color, Terminal Endpoint Identifier (TEI), and Service Profile Identification (SPID).

If data is retrieved by the Equipment Line Location (ELL), these are the fields that will appear: ELL, Set ID, Name, Extension, Set Type, Adjuncts, Location, Room Number, Mount, Color, TEI and SPID.

The following is a list of adjuncts and their respective character symbols which may be displayed in the report:

- D - data module
- d - display
- f - feature
- c - coverage module
- s - speakerphone
- h - headset

**SELECTION
OPTIONS:**

- One ELL or Set ID
- A list of ELLS or Set IDs
- A range of ELLS or Set IDs
- All ELLS or Set IDs

SORT

ORDER: Output is arranged by ELL or Set ID in ascending numerical order.

SAMPLE

OUTPUT: A sample of both the SET ID and the ELL report is on the following page.

INSTALLATION REPORT BY ELL							
ELL	Set ID Name	Extn	Set Type	Adjuncts	Location Room No.	Mount Color	TEI SPID
-----	-----	-----	-----	-----	-----	-----	-----
	000c0810 66420	66421	7507b	D d			128 66420
	000c1700 66450 66450 Bell, Pamela	66450	7505b	BLX10	Bldg. 1 3C-234	desk black	128 66450

Sample: Report by ELL

INSTALLATION REPORT BY SET ID							
SET ID	Extn Name	ELL	Set Type	Adjuncts	Location Room No.	Mount Color	TEI SPID
-----	-----	-----	-----	-----	-----	-----	-----
44172	44172	0611192	7507b	d			
44301	44301 44301 Abernathy, Al R.	0602005	sls	BLX10	Bldg. 1 1-B220	desk red	

Sample: Report by SETID

Note: When obtaining output for the Installation ELL Report, if the EXTN field is blank for a particular set, then that set is not homed to any extension.

INTERCOM SET ID REPORT

PATH: tcm report-admin intercom-set-id report

PURPOSE: This report lists the intercom group type, intercom group number, and the Set IDs that belong to the group.

**SELECTION
OPTIONS:**

- One Set ID
- A list of Set IDs
- A range of Set IDs
- All Set IDs

**SORT
ORDER:** Output is sorted in ascending order by Set ID number.

**SAMPLE
OUTPUT:**

```
Setid: 5432
      Non-Dial Intercom Group: 7      Intercom Group Type: Automatic
Setid: 2100
      Non-Dial Intercom Group: 1      Intercom Group Type: Automatic
```

LINE APPEARANCE REPORT

RELEASE: System 85 and DEFINITY Generic 2 only

PATH: tcm report-admin line-appearance report

PURPOSE: This report lists the appearances of an extension number. For each appearance, the Set ID, Set Type, Button Number, Call Appearance Number, Prime Line Indicator, Alert Type, Alerting Transfer Encode, Originating Appearance Flag, Send All Calls Group Number, and an entry for Homed terminal are listed.

**SELECTION
OPTIONS:**

- One extension
- A list of extension numbers
- A range of extension numbers
- All extension numbers

SORT

ORDER: Output is arranged by extension number in ascending numerical order.

**SAMPLE
OUTPUT:**

EXT NO	SET ID	TERM TYPE	BTM NO	APPR NO	LINE TYPE	ALRT TYPE	ALRT XFER	ORIG FLAG	SACG GRP	HOMED
---	---	----	----	----	----	----	----	----	----	-----
2007	2007	TDM	0	01	1	1	0			
3000	3000	7405d	3	01	1	1	0	10	y	

NON-DIAL INTERCOM GROUP REPORT

PATH: tcm report-admin non-dial intercom report

PURPOSE: For each Non-Dial Intercom Group, this report lists the following: type (automatic or manual), group number, and extensions assigned to that particular group.

**SELECTION
OPTIONS:**

- One non-dial intercom group number
- A list of non-dial intercom group numbers
- A range of non-dial intercom group numbers
- All non-dial intercom numbers

SORT

ORDER: Output is sorted by Non-Dial Intercom group number in ascending order.

**SAMPLE
OUTPUT:**

Intercom Group Number:	0	Intercom Group Type:	Manual
Setids:	2233 2234 2235 2236 2237 2238 2239 2240		
	2249 2250 6639		
Intercom Group Number:	20	Intercom Group Type:	Automatic
Setids:	12000		

NPA-NXX DESIGNATOR REPORT

RELEASE: System 85 and DEFINITY Generic 2 only

PATH: tcm report-admin npa-nxx-designator report

PURPOSE: This report lists NPA/NXX designator(s), and the associated area code, local exchange and thousands digit.

SELECTION

- OPTIONS:**
- One NPA/NXX designator
 - A list of NPA/NXX designators
 - A range of NPA/NXX designators
 - All NPA/NXX designators

SORT

ORDER: Output is organized by NPA/NXX designator.

SAMPLE

OUTPUT:

Designator	Thousands	
	NPA-NXX	Digit
1	609-409	9
2	202-202	2

OFFICE EQUIPMENT REPORT

PATH: tcm report-admin office-equipment report

PURPOSE: The Office Equipment Report lists the storage location of office equipment along with the quantity of spare equipment stored at various storage locations.

**SELECTION
OPTIONS:**

Data can be retrieved by Terminal Type and Storage Location.

- One storage location
- A list of storage locations
- All storage locations
- Single equipment type
- A list of equipment types
- All equipment types

SORT

ORDER: Output is arranged by storage location or the quantity of equipment in descending numerical order.

**SAMPLE
OUTPUT:**

Storage Location:	1111		
Equipment Type:	11111	Quantity:	21
Storage Location:	22		
Equipment Type:	21	Quantity:	213

PBX AVAILABLE EXTENSION REPORT

RELEASE: System 85 and DEFINITY Generic 2 only

PATH: tcm report-admin pbx-avail-extn report

PURPOSE: This report lists all the available extensions and their recent disconnect interval in a range (up to 100 numbers) of extensions.

CAUTION: Because this report retrieves data from the switch and not the DEFINITY Manager IV database, there must be no connection to the switch when executing this report.

**SELECTION
OPTIONS:**

A range of up to 100 extension numbers from first to last extension.

**SORT
ORDER:**

Output is arranged in ascending numerical order of extension numbers.

**SAMPLE
OUTPUT:**

EXTENSION	RECENT DISCONNECT INTERVAL
20004	0
20007	0

PBX CALL COVERAGE GROUP (CCG) MEMBERS REPORT

RELEASE: System 85 and DEFINITY Generic 2 only

PATH: tcm report-admin pbx-ccg-members report

PURPOSE: This report lists all the extension numbers belonging to a call coverage group(s). A single call coverage group can be specified as well as a list (up to 5), or a range of groups (up to 100).

CAUTION: Because this report retrieves data from the switch and not the DEFINITY Manager IV database, there must be no connection to the switch when executing this report.

**SELECTION
OPTIONS:**

- One CCG number
- A list of CCG numbers (up to 5)
- A range of CCG numbers (up to 100)

**SORT
ORDER:**

Output is arranged by call coverage group number.

**SAMPLE
OUTPUT:**

CALL COVERAGE GROUP NO.	EXTENSIONS		
-----	-----		
10	10052	10053	10054

PBX CIRCUIT PACK REPORT

PATH: tcm report-admin pbx-circuit-pack report

PURPOSE: This command reports the current status of circuit packs such as, "working", "available", in conjunction with the Equipment Line Location (ELL).

PREREQUISITE: Before reporting circuit packs with ELLs, a connection to the product cannot exist. This command performs its own connection.

CAUTION: This command does not access the database for information. It goes directly to the product for information. This command is resource intensive and should only be used during off-peak hours.

SELECTION OPTIONS: One module number.

SORT ORDER: Output is arranged by slot.

SAMPLE OUTPUT:

PBX CIRCUIT PACK REPORT																												
				<-----Circuit----->																								
Pack				0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	2	2	2							
Mod	Cab	Car	Slot	Type	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3
00	0	c	07	dsl_r	a	a	a	a	a	a	a	a	a	a														
00	0	c	08	dsl_v	a	a	a	a	a	a	a	a	a	a														
00	0	c	09	isdn_r	a	a	a	a	a	a	a	a	a	a														
00	0	c	10	isdn_r	a	a	a	a	a	a	a	a	a	a														
00	0	c	13	dsl_r	a	a	a	a	a	a	a	a	a	a														
00	0	c	14	dsl_v	a	a	a	a	a	a	a	a	a	a														

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PBX CALL PICKUP GROUP (CPG) MEMBERS REPORT

RELEASE: System 85 and DEFINITY Generic 2 only

PATH: tcm report-admin pbx-cpg-members report

PURPOSE: This report lists all the extension numbers belonging to a call pickup group(s). A single call pickup group can be specified as well as a list (up to 5), or range of groups (up to 100).

CONSIDERATIONS: Because this report retrieves data from the switch and not the DEFINITY Manager IV database, there must be no connection to the switch when executing this report.

**SELECTION
OPTIONS:**

- One CPG number
- A list of CPG numbers (up to 5)
- A range of CPG numbers (up to 100)

SORT

ORDER: Output is arranged by call pickup group number.

**SAMPLE
OUTPUT:**

CALL PICKUP GROUP NO.	EXTENSIONS		
-----	-----		
10	10052	10053	10054

PBX EXTENSION ELL REPORT

PATH: tcm report-admin pbx-extension-ell report

PURPOSE: This command reports extension numbers that have an Equipment Line Location (ELL) from the product.

PREREQUISITE: Before reporting extension numbers with ELLs, a connection to the product cannot exist. This command performs its own connection.

CAUTION: This command does not access the database for information. It goes directly to the product for information. This command is resource intensive and should only be used during off-peak hours.

SELECTION OPTIONS: A range of up to 100 extension numbers from first to last extension.

SORT ORDER: Output is arranged in ascending numerical order of extension numbers.

SAMPLE OUTPUT:

EXTN	EQUIP
----	-----
20003	00/0/1/07/2
20008	00/0/1/07/1

PBX MODULE TYPE REPORT

PATH: tcm report-admin pbx-module-type report

PURPOSE: This report identifies the switch module type (*Universal*, *XE* or *Traditional*) associated with the specified module number. If the specified number has not been assigned to the module type at the switch, the *Unassigned* type appears in the MODULE column.

SELECTION

OPTIONS: There are no options to select for this report. All thirty-one (31) modules will be displayed.

SORT

ORDER: Output is arranged by module type in ascending numerical order.

SAMPLE

OUTPUT:

PBX MODULE TYPE REPORT			
MODULE	TYPE	MODULE	TYPE
0	Universal	16	Universal
1	Traditional	17	Unassigned
2	XE Module	18	Traditional
3	Traditional	19	Universal
4	Universal	20	Unassigned
5	XE Module	21	Traditional
6	Universal	22	Universal
7	Traditional	23	Unassigned
8	XE Module	24	Traditional
9	Traditional	25	Universal
10	Universal	26	Unassigned
11	Unassigned	27	Traditional
12	Universal	28	Universal
13	Traditional	29	Unassigned
14	Unassigned	30	Traditional
15	Traditional		

PERSONAL CENTRAL OFFICE (PCO) LINE REPORT

PATH: tcm report-admin pco-line report

PURPOSE: For each specified Equipment Line Location (ELL), this report lists the Personal Central Office (PCO) line, the Set ID of the terminal on which the button to access this feature is located, the button number, and the terminal ELL.

**SELECTION
OPTIONS:**

- One ELL
- A list of ELLs
- A range of ELLs
- All ELLs

**SORT
ORDER:** Output is organized by ELLs in ascending order.

**SAMPLE
OUTPUT:**

PCO LINE REPORT			
TRUNK ELL -----	SET I.D. ----	SET ELL ----	BUTTON NUMBER -----
0000000	11111	270c1204	06
0000000	17	150e0305	17
0000000	22222	010d0608	03
0000000	44444	010d0609	03
0000000	55555	270c0507	03
0000000	66666	170c0204	03
0000000	99999	010c1606	03
2373217	41001	2302021	02
270d2021	45401	270c1400	00
270e2023	45200	270c1000	06

PBX PHYSICAL CIRCUIT PACK REPORT

RELEASE: System 85 and DEFINITY Generic 2 only

PATH: tcm report-admin pbx-physical-circuit-pack report

PURPOSE: This report lists the physical pack type, vintage, equipment location, and the remote board of all the circuit packs in a module. This pack is what is physically plugged into the slot, not what has been translated into the switch as in the PBX-Circuit-Pack report.

CAUTION: Before running this report, make sure no connection to the product exists because this report performs its own connection. This command is resource intensive and should only be used during off-peak hours.

**SELECTION
OPTIONS:** You must specify a module.

**SORT
ORDER:** Output is organized by Equip-Loc number in ascending numerical order.

**SAMPLE
OUTPUT:**

EQUIP-LOC	PACK	VINTAGE	REMOTE-BOARD
00/0/0/03	TN460	3	N/A
00/0/0/06	TN440	3	N/A
00/0/0/07	TN440B	2	N/A
00/0/0/08	TN440B	4	N/A
00/0/0/13	TN445	4	N/A
00/0/0/14	TN444	3	N/A
00/0/0/19	TN400	2	N/A
00/0/0/20	TN400	1	N/A
00/0/2/03	TN460	1	N/A
00/0/2/06	TN440	2	N/A
00/0/2/07	TN440B	3	N/A
00/0/2/08	TN445	6	N/A
00/0/2/13	SN222B	3	N/A
00/0/2/14	SN222	3	N/A

Note: The Manager IV database does not store any information for circuit packs in the Module Control carriers or for the control slots (4, 9—12, 17) in the Ports/DS1 carriers.

SET-TYPE REPORT

PATH: tcm report-admin set-type report

PURPOSE: This report identifies voice terminals by Set-Type, and displays the data administered for each of the Set-Types.

**SELECTION
OPTIONS:**

- One Set Type
- A list of up to five Set Types
- All Set Types

SORT

ORDER: Output is arranged by Set Type Encode in ascending numerical order.

**SAMPLE
OUTPUT:**

SET TYPE REPORT												
Set Type	Enc	Terminal	Options	Equip	Dat	Dsp	MIM	Buttons	BS	DM	FM	CM
				Type	Type	Cap	Cap	Cap				
pdm	1	0			6	3		0				
tdm	2	0			6	3		0				
dpd	3	0			6	4		0				
adftc	5	0			7	6		0				
eia	7	0			8	3		0				
sls	10	1			1			0				
ects10	15	1			9			7				
ects20	16	1			9			17				
ects30	17	1			9			27				
7203h	23	1			2			12				
7205h	25	1	2 3 4		2			36		24	20	
7303s	33	1			3			12				
7305s	35	1			3			36				
7434d	40	1	3 5 6	9 10	4	1	1	36	7		20	
7401d	41	1	6	10	4	1	1	11	7			

SPARE PACK INVENTORY REPORT

PATH: tcm report-admin spare-pack-inventory report

PURPOSE: This report will list spare packs ("regular" and "special")* and their associated Locale and Equipment Locations (Module, Cabinet, Carrier, Slot numbers). Application Type will be provided for DS1-ISDN packs only.

SELECTION OPTIONS: For each of the following selections, you may enter a specific Locale, "ALL" for all Locales, or leave this field blank by pressing **(Return)** to get a report for NULL Locales:

- You may enter a specific Module, or "all" for all Modules.
- You may enter a specific Cabinet, or "all" for all Cabinets.

SORT ORDER: Output is arranged in ascending order by pack type, then by locale, and then by Equipment Location.

SAMPLE INPUT:

```

AT&T Mgr IV 2.2                DEFINITY G2.2                <target>
tcm report-admin spare-pack-inventory report

      SPARE PACK INVENTORY REPORT

      Enter Locale(s) : _____
      Enter Module(s) : _____
      Enter Cabinet(s) : _____
      Enter Carrier(s) : ___ALL___
      Enter Slot(s)  : ___ALL___

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```

* Please see the procedure on identifying Spare Packs following the Spare Pack Inventory Report Sample Outputs.

**SAMPLE
OUTPUTS:**

SPARE PACK INVENTORY REPORT

INVENTORY RANGE

Locale(s)	Module(s)	Cabinet(s)	Carrier(s)	Slot(s)
----- ALL	----- ALL	----- ALL	----- ALL	----- ALL

SPARE PACKS

Pack Type	Locale	Module	Cabinet	Carrier	Slot	Appl.Type
ann11	02	02	0	2	05	1
ds1	02	02	0	2	00	1
ds1	02	02	0	2	01	1
ds1	02	02	0	2	06	1
ds1	02	02	0	2	07	1
ds1	15	27	0	c	20	5
sn2701	02	01	1	2	03	
sn2701	02	01	3	1	18	
sn2701	04	10	0	0	07	
sn2701	04	10	1	2	20	

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SPARE PACK INVENTORY REPORT

Pack Type	Locale	Module	Cabinet	Carrier	Slot	Appl.Type
tn754	13	22	0	c	11	
tn767	13	22	0	e	15	2
tn754	13	22	0	e	19	
tn754	13	24	0	d	14	
tn767	15	27	0	c	19	5

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How to Identify Spare Packs

This report lists spare regular and "special" packs (including DS1/ISDN pack types, see Table 9-2).

Regular Packs

A regular pack is classified as spare if all circuits are available (not assigned or reserved) in the slot that the pack physically occupies. Each regular pack included in the report is "truly" spare.

For example, if you look at the previous page (**SAMPLE OUTPUTS:**, page 1 of 1), the sn2701 pack (Locale 2, Module 1, Cabinet 3, Carrier 1, Slot 18) is reported as spare because all circuits are available in physical slot 18.

Special Packs

With a particular application, "special" packs span over multiple slots (virtual). For a "special" pack to be classified as spare, all circuits must be available both in the slot that the pack physically occupies and in all associated virtual slots. The reported "special" pack is "truly" spare if, both physical and all associated virtual packs are listed on the report.

To verify if a reported "special" pack is "truly" spare, consult Table 9-2, "Physical/Virtual Slot Associations for Special Packs". This table provides a list of "special" packs, Application Types that may apply and the physical/virtual slot associations for each Application Type of a particular pack.

For any "special" pack shown on the report, you need to check which physical/virtual slot associations exist for the specified Application Type and then verify if all these associations are listed as spare on the report. The procedure is as follows:

- Determine the type of the reported pack; see if the pack is included in the table. If the pack is not listed, then it is a regular "truly" spare pack.
- If the pack is in the table, check which physical/virtual associations exist for this particular Application Type as specified on the report.
- Verify that all these associations are listed as spare on the report.
- If any association is missing, then the "special" pack is not spare. Otherwise, this pack is "truly" spare.

Following are examples of how to double-check the spare packs listed on the report:

- The tn767 pack (Application Type 5) in slot 19 and the DS1 virtual pack in slot 20 are reported as spare. For the tn767 pack (Application Type 5), the table provides the following information: both the physical pack in slot **n** (which is 19 on this report) and the associated virtual DS1 pack in slot **n+1** (which is 20 on this report) must be spare. Therefore, the tn767 pack is "truly" spare.
- For the ann11 pack (Application Type 1), the table provides the following information: the ann11 physical pack in slot **5** and the associated DS1 virtual packs in slots 0, 1, 2, 6, and 7 must be spare. The report lists the ann11 pack (Application Type 1) in slot **5** and the DS1 virtual packs only for slots 0, 1, 6, and 7. For Slot 2 (Locale 2, Module 2, Cabinet 0, Carrier 2, and Slot 2), the DS1 virtual pack is not reported. Therefore, the ann11 pack is not "truly" spare.

Table 9-2. Physical/Virtual Slot Associations For Special Packs

PHYSICAL/VIRTUAL SLOT ASSOCIATIONS FOR SPECIAL PACKS		
Pack Type	Application Type	Slots Used
tn767	0 1 2 5	n , n+1 n , n+1 virtuals = "ds1" n n , n+1 virtuals = "ds1"
tn762	NULL	n - MFAT
ann35	5	0, 1, 2, 5 , 6, 7 13, 14, 15, 18 , 19, 20 virtuals = "ds1"
ann11	0, 1 2	0, 1, 2, 5 , 6, 7 13, 14, 15, 18 , 19, 20 virtuals = "ds1" 0 , 1, 2 5 , 6, 7 13 , 14, 15 18 , 19, 20 virtuals = "ds1"
ann15 ann16 any pack	- - 3	CONTROL PACK NOT STORED IN DATABASE CONTROL PACK NOT STORED IN DATABASE 0 , 1, 2 5 , 6, 7 13 , 14, 15 18 , 19, 20
ann17	NULL	n - MFAT

Note: Physical slot locations are marked in bold; "n" stands for a valid slot selection.

TENANT REPORT

RELEASE: System 85 and DEFINITY Generic 2.1 only

PATH: tcm report-admin tenant report

PURPOSE: This report lists tenant information in specified extension extensions are listed.

**SELECTION
OPTIONS:**

- One extension partition
- A range of extension partitions
- All extension partitions

SORT

ORDER: Output is organized numerically by extension partition.

**SAMPLE
OUTPUT:**

```
EXTENSION PARTITION: 0

  TENANT NAME: Jane Roberts
    ADDRESS: 100 Main Street
              Camden, NJ 08104
  CALL CATEGORY: 0

  EXTENSIONS: 10020
                10021
                10022
                30010
                30011
```

UNIFORM CALL DISTRIBUTION (UCD) GROUP REPORT

RELEASE: DIMENSION System

PATH: tcm report-admin ucd-grp report

PURPOSE: This report allows you to compare the attributes of one or more of the assigned Uniform Call Distribution (UCD) groups. All field values are presented in the same format as you have entered them.

**SELECTION
OPTIONS:**

- One UCD group
- A list of UCD groups
- A range of UCD groups
- All UCD groups

SORT

ORDER: Output is arranged by UCD Group in ascending numerical order.

**SAMPLE
OUTPUT:**

UCD Grp	AP No.	ICI Msg	Queueing Trunk Grp	Warning Level	Lamp Board Ckt	Control Extn	Assoc Extn	Delay Announce
-----	---	---	-----	-----	-----	-----	-----	-----
17	1	1	18	1	0 0	55555	4444	y
28	7	63	255	31	1 7	222	3333	n

UNASSIGNED CIRCUIT REPORT

PATH: tcm report-admin unassigned-ckt report

PURPOSE: This report provides the locations of unassigned or spare circuits identified by circuit pack type. The report may be requested by stating pack type. (See expanded help for a list of supported pack types.)

Enter the module number to be reported. The report output is arranged by pack type and sorted in ascending order by equipment location.

**SELECTION
OPTIONS:**

- One pack type
- A list of pack types
- A range of pack types
- All pack types

Select the module number to be reported.

**SORT
ORDER:**

Output is arranged by pack type in ascending numerical order. Within a given pack type, the module, cabinet, carrier, slot, and circuits are arranged in ascending numerical order.

**SAMPLE
OUTPUT:**

Pack Type: ann11				
Module	Cabinet	Carrier	Slot	Circuit
-----	-----	-----	-----	-----
00	0	3	05	6
00	0	3	05	7

USER REPORT

PATH: tcm report-admin user report

PURPOSE: The User report lists the name, organization number, location and room number for each specified extension. It also lists the extension number, organization number, location and room number for each specified user.

**SELECTION
OPTION:**

- One extension
- A range of extension numbers
- A list of extension numbers
- All extension numbers
- All user names only

SORT

ORDER: Output is arranged by user name in alphabetical order or by extension number in ascending numerical order.

**SAMPLE
OUTPUT:**

EXTN. NO.	NAME	ORG. NO.	LOC.	ROOM
-----	----	-----	----	----
00101	D. Byrnes	2005-2351	LZ	3L310
00102	M. Coman	2005-2351	LZ	3L311
00103	M. Fox	2005-2351	LZ	3L312
00104	S. Hurnard	2005-2351	LZ	3L313
00105	T. Leonard	2005-2351	LZ	3L314
00106	F. Mannes	2005-2351	LZ	3L315
00107	D. Muniz	2005-2351	LZ	3L316
00108	J. Owens	2005-2351	LZ	3L317
00109	A. Tudda	2005-2351	LZ	3L318

VECTOR DIRECTORY NUMBERS (VDN) REPORT

RELEASE: System 85 and DEFINITY Generic 2 only

PATH: tcm report-admin vdn report

PURPOSE: This report allows you to display the Vector Directory Number(s) (VDNs) with their associated vector number, a measured flag for a particular target, and a return call indicator.

**SELECTION
OPTIONS:**

- A single VDN
- A list of VDN numbers
- A range of VDN numbers
- All VDN numbers.

SORT

ORDER: Output is organized in ascending order by VDN number.

**SAMPLE
OUTPUT:**

VECTOR DIRECTORY NUMBER		
VDN	MEASURED FLAG	RETURN CALL INDICATOR
Vector Number: 21		
3232	Y	1

WIRE REPORT

PATH: tcm report-admin wire report

PURPOSE: The Wire Report lists the jack number and location, cable ID and set ID for each specified Equipment Line Location (ELL) along with the jack location, cable ID, ELL and set ID for each specified jack number.

**SELECTION
OPTIONS:**

- One ELL or jack number
- A list of ELLs or jack numbers
- A range of ELLs or jack numbers
- All ELLs or jack numbers

SORT

ORDER: Output is organized by ELL or jack number in ascending numerical order.

**SAMPLE
OUTPUT:**

Retrieved by ELL:				
ELL (PURPLE)	JACK NO. (BLUE)	JACK LOCATION	CABLE I.D. (WHITE)	SET I.D.
-----	-----	-----	-----	-----
0002130	200	11-2154	1234567	20000
Retrieved by Jack Number:				
JACK NO. (BLUE)	JACK LOCATION	CABLE I.D. (WHITE)	ELL (PURPLE)	SET I.D.
-----	-----	-----	-----	-----
200	11-2154	1234567	0002130	20000

10. TROUBLESHOOTING

Because DEFINITY Manager IV has been developed as a user-friendly system, the administration of errors has been devised to assist you in a variety of ways. The consequences of making an error in Terminal Change Management (TCM) may be potentially serious. For this reason, great care has gone into providing on-line error messages, offering help messages as often as possible, and documenting commands and procedures in a way that will aid you in avoiding errors.

Nevertheless, errors do occur. The first type of error is a simple error. Since even a simple error may have wide-ranging and complex effects, the first part of this chapter is provided to give you a clearer understanding of how and why these may occur. Specific examples of such errors are provided for illustration. In addition, there are suggestions on how to detect, correct, and avoid them.

The next part examines a more complex type of error, database/switch errors. These errors also have wide-ranging effects. Therefore, some discussion on the interaction between the Manager IV database and switch has been included, with particular emphasis on how possible discrepancies between them may lead to errors. Again, examples as well as suggestions on detection, correction, and prevention, are included.

It should be made clear that errors can occur in the three main areas of TCM: administration, database administration, and product administration. Although a large portion of this chapter focuses on resolving error conditions in the service request mode in the administration area, information on how errors occur in the database administration and product-administration areas is also provided with possible solutions.

In addition, a discussion on messages from the system to you explains and clarifies the different types of error messages, those that indicate a critical (or "fatal") error and those that signal a warning that, due to an error, part (rather than all) of your transaction has failed to execute successfully.

It is not the object of this chapter to give a definitive account of every possible error. Instead, knowing how Manager IV and the TCM application work, you will be prepared to understand Manager IV's capacity to deal with the kinds of errors that occur within TCM and to work more confidently within the system. The discussion here, along with concrete examples drawn from this application, will help you formulate strategies for coping with any problem that arises due to errors.

SIMPLE ERRORS

Many errors occur either because you have entered incorrect data (whether inadvertently, or due to misinformation) or because a communications problem interrupts the connection between the Manager IV database and the switch, preventing what you have entered from executing successfully. Such simple errors fall into three broad categories:

- Mistyped information
- Incorrect information
- Communications problems.

Mistyped Information

- Definition:** A typographical error or "typo" is perhaps the easiest error to make (and to avoid). Such accidents may prompt an error message or cause the failure of a transaction which you are attempting to execute.
- Example:** A typical typographical error is when adding an extension, you type in extension 2455 rather than 2545. Extension 2455 has already been assigned.
- To Detect:**
- Typographical errors can often be detected through a short help message (which lists the legal parameters when a typo has been made) or through a system response after execution (like the one you would encounter in the example).
 - If the command executes, some mistyped information may go undetected in spite of the typo, until a user complains about service, or a later transaction dependent upon your flawed transaction fails.
- To Correct:**
- Retype correctly what you have input in the field indicated by the error message.
 - If you detect the error immediately after executing the command, reenter the verb and use **(ESC) i** to recover the input you have already typed; then, advance the cursor to the field in which you typed the error, clear the field, and reenter the correct information.
- To Avoid:** Such errors may be eradicated by proofreading. Check your entries in each field of the screen before going on to the next page of fields or before executing the command.

Incorrect Information

- Definition:** These errors are caused by entering information which you believe to be correct but which in fact is inaccurate.
- Example:** An Informational Error. You are in the process of changing the button assignments for a terminal but have been given the wrong set ID. In entering the information, you accurately type in the wrong information which you have been given.
- To Detect:**
- Errors based on incorrect information may be detected through the failure of dependent transactions or through user complaints (which in the example would prompt you to check the source of the persistent reorder tone).
 - You may also receive an immediate error message. This will prompt you to check the information in question.

To Correct:

- If an error message has indicated that you have input incorrect data into a specific field or fields, such as typing in a past due time rather than a future due time for a service request (SR), go back to that field, retype the correct information, and then execute the command again. To return to the field or fields in error after you have executed a command, reenter the verb, press **ESC** and then enter the field or fields you want to correct.
- If you have detected through another method that an error has been made (user complaint, failed transaction, or failed subsequent transaction), go back to the initial transaction and verify any information which could possibly be incorrect. Do a display of related information to be sure that all data is accurate.

To Avoid:

- Double-check any information that the system is unable to verify for you. For example, Manager IV can *logically* check the Equipment Line Locations (ELLS) available, but you may need to find out whether or not the actual hardware has been installed.
- If a transaction changes an object, the transaction screen will be displayed automatically before any data is entered. This allows you to verify the data already assigned. If, however, a transaction removes an object, you should request a display before removing it. (If you are removing an object, you can use Clipboard to carry the data forward to the remove screen.)

Communications Problems

Definition:

A communications problem is a failure in data communications between Manager IV and the switch. These problems do not indicate a user error; rather, they are caused by various hardware conditions. A Manager IV transaction that has been successfully applied to the Manager IV database may fail to be successfully downloaded to the target switch due to communications problems, which are normally infrequent. Data communications software can detect and correct most errors (such as those caused by telephone line noise) and can recover from many others (such as telephone connection interruptions or "line drops") through repeated attempts or "retries."

Example:

A Line drop. You have scheduled an SR to add an extension to an already existing group. In the downloading of that SR, there is an interruption—a line drop. Manager IV software repeatedly attempts to reestablish the telephone connection to the switch. Since it is unable to, it automatically schedules an SR for a short time later.

To Detect:

- Communications problems related to requests made in the immediate mode are reported in the log files. They also appear on the user screen in messages, such as "No answer/port busy."
- Communications errors related to requests made in the service-request mode are reported in both the log files and the results file.

To Correct:

- Run the transaction again (using **service-request run**) or reschedule it (using **service-request change**). Repeated errors due to communications problems should be reported to the Manager IV System Administrator.
- If an immediate mode request fails, that transaction may be re-run with **service-request run** or scheduled with **service-request change**. Immediate mode requests have service request numbers starting with an asterisk (such as *log0803a9).
- Scheduled SRs are automatically rescheduled (maximum 3 retries) if a communications problem prevents the SR from executing successfully. To check the status of a particular SR, use **scheduled-entry display** and **service-request display**. For summary information, use **sr-status display**.
- To obtain a summary of all failed transactions within a given Service Request, use the **service-request error-report** command. The error report includes the information derived from the Manager IV database and the associated results file. If the same Service Request has been used multiple times, the error report will provide switch errors for the last time the Service Request was scheduled to run.

To Avoid:

These problems are largely avoided by Manager IV software error recovery. Due to the hardware-induced nature of these problems, they cannot be totally avoided. Persistent or consistent problems of this type should be reported to the Manager IV System Administrator; they may indicate a correctable hardware problem.

DATABASE/SWITCH ERRORS

Database/switch errors occur because of a discrepancy between the information contained in the Manager IV database and the information contained in the switch's own database. Such discrepancies require some type of adjustment so that both are consistent.

How TCM Commands Work

Before reviewing how such errors occur and how to detect, correct, and avoid them, it is necessary to review how TCM commands work, both in the immediate and service request modes. For a detailed discussion of how service requests work and how you can create and use them, please refer to *Getting Started with DEFINITY® Manager IV*.

There are four areas in TCM. One is reserved exclusively for reports. Aside from reports, TCM commands may exist in as many as three areas: administration, database administration, and product administration, and most exist in administration (used for normal transactions) and in at least one other area. Many commands are also available in both database and product administration because they affect both the database and the switch. The database-administration area and the product-administration area are needed to correct discrepancies between the Manager IV database and the switch.

Most TCM commands work in two distinct stages: first the command changes information stored in the Manager IV database; second, the command changes information stored in the database of the switch itself. Commands that you enter proceed as follows:

Your command:

1. makes a change in the Manager IV database
2. makes a change in the switch.

The change in the database is immediate. The change in the switch can occur either directly after the change in the database (if the request is made in the immediate mode) or at a later scheduled time (if the request is made in the service request mode). For example, when you add a new extension, you use the command **extension add**. In this case, first the Manager IV database is changed to record that the extension has been added, and then the Manager IV database downloads this command to the switch — communicating your command in the way that the switch can understand it:

Your command, **extension add**:

1. makes a change to extension records in the Manager IV database
2. makes a change to extension records in the switch.

Manager IV regards *all* administration commands as service requests, so all commands proceed in the same two stages, whether executed immediately or at a future time: they download to the Manager IV database, then they update the switch. The immediate request downloads from the Manager IV database to the switch *immediately*. The service request that is executed at a future time effects an immediate change in the Manager IV database, but does not update the switch *until the time for which the SR is scheduled*. Remember that when you make an immediate request, Manager IV automatically schedules it for you — immediately—and automatically gives it an SR number that begins with an asterisk (*). You see the number only when an immediate mode command fails to execute, at which time that number appears on your screen. You must then treat the failed immediate request the same as you would a failed SR.

A TCM Command at the Switch

When a command is downloaded to the switch, that is, when it attempts to apply the transaction you have requested at the switch, it sometimes breaks down into more than one part. For example, if you look more closely at the TCM command mentioned previously, **extension add**, you find that at the switch level the command may break into several individual commands which the switch can decipher and to which it can respond.

Your command, **extension add**:

1. makes a change in the extension records in the Manager IV database
2. makes a change in the extension records in the switch:
 - a. adds the extension
 - b. adds the extension's name (if applicable)
 - c. adds abbreviated dialing (if applicable).

After the change is successful in the switch, the database records are made available for further changes. The message, "Changing Status of Database. Please Wait," appears while this is happening. Table 10-1, "Administration to Product Administration Mapping," maps the TCM commands in administration (and database administration, where applicable) to their equivalents in product administration.

Appendix E lists TCM commands and their corresponding switch procedures ("procs").

An Example

In the TCM application, cases in which there are discrepancies like the one cited in the example that follows are comparatively rare. Still, you should keep in mind that it is possible for such errors to occur and therefore important that the switch information conform to the information stored in the database. Human error can throw the database out of synchronization with the switch and vice versa, and unexpected "crashes" of the system can result in conflicts between the database and switch, although Manager IV is designed to protect its own system from such disturbances.

Let's go back to the command referred to earlier. The command that allows you to add extensions, **extension add**, is quite singular from your perspective, but once it has been downloaded from the Manager IV database to the switch, the switch regards it as having multiple parts.

If you make an error in adding an extension, you may not receive an error message. In this particular situation, it is possible that the second phase of the command (the download to the switch) begins, but that it does not complete. Thus, you will be informed by the Manager IV database that your command **extension add** failed to execute successfully. Still, at the level of the switch, this has not quite been the case: the first part of the command at the switch *did* execute successfully.

The result becomes apparent when you compare the administration display with the product-administration display. The administration display contains the information in the database. It shows the changed information before download. The product-administration display will not show the information until it actually has downloaded.

This is a concrete example drawn from TCM where checking the contrasting displays informs you of an error. In this case, you must make the product-administration data correspond to that in the database.

How to Detect Errors

A database/switch error can be detected in several ways. You can identify conflicts by comparing displays from the Manager IV database (database administration) and from the switch (product administration) to check individual objects.

You may run the **service-request error-report** command to view all failed switch downloads in a Service Request.

You can also check your results file using **results display** to see if any SRs have succeeded at the Manager IV database but failed at the switch, or to see if an immediate mode transaction has failed at the switch. After an SR attempts to download to the switch, you receive a mail message that indicates the name of the results file to check for the status of the pending queue entries associated with that SR. If the SR fails, the same file will also give you the product error message and the time the error occurred.

Error Conditions in Administration

In the administration area, errors can occur in two places:

1. In the database, while the database is being updated.
2. In the switch, while the switch is being updated.

Errors in either of these two places are resolved differently.

Database Update

After a user's data has been accepted and verified by the system, and the user executes the transaction, Manager IV uses the database files to perform further checks (for example, to see if an extension already exists). If a problem is found, an error message is returned to the user describing the erroneous data, and if the problem is serious enough, no changes are made to the database, or sent to the switch. For example, if a user tried to add extension 4000, but this extension was already assigned, no database changes would be made.

Switch Update

When an SR is complete and is scheduled for download, Manager IV takes each transaction and downloads it to the switch target(s). This is done in transaction order, except that all executions for a particular target are done before any other targets are started to minimize connect time.

If an error occurs during the download, the current transaction is aborted if the error is not recoverable, or retried if the error is recoverable (such as a connection line drop). If after the possible retries it is still not able to complete, Manager IV checks the "Continue on error?" files to find out whether it should download any remaining transactions in the SR. Hopefully, if there is any interdependency between the transactions,

the Continue in error? flag is set to "n," as recommended in Chapter 5, "Using Service Requests," in *Getting Started with DEFINITY® Manager IV*.

The following chapter provides steps on how to recover from error conditions that occur during this switch updating process.

Error Correction Strategies

Follow these guidelines to identify and resolve any error conditions that may have occurred during the download process. All the comments below address the service request mode in the administration area, however, if a transaction in the immediate mode of the administration area fails, the error message gives a Manager IV-generated SR number that starts with an asterisk ("*"). Once this number is known, all the methods below can be used by substituting this Manager IV SR number in place of the user-supplied SR number.

Note: If you forget to jot down the Manager IV-generated SR number, you can display the number again using **service-request display**.

1. Use **service-request display** to find out if any service requests scheduled to download during a particular time interval have failed transactions.
2. If an SR has failed, use **results display** to display the file containing the results of a scheduled SR's attempt to download.

You must specify the SR number of the file containing the failed transactions to review the results in that file. For failed transactions, this file gives an error message indicating what the error is and the time the error occurred. Product error messages also display in this file.

3. Look for errors that relate to connection problems.

Note: If, when attempting to download a transaction, the system cannot initially connect to the product, it tries two more consecutive times to connect. If the third attempt is not successful, the system automatically reschedules the transaction to download ten minutes later. At the rescheduled time, the system attempts up to three more tries to connect to the product. If the system still cannot connect to the product, the entire process of rescheduling and attempting to connect is repeated one more time.

If an error is due to a connection problem, you can do either of the following:

- Reschedule the SR.
 - Delete the results file using **results remove** to prevent the next results from appending to the old results. You cannot recall results once they are deleted.
 - Use **service-request change** to reschedule the SR. When the transaction downloads, only the pending queue entries with the status "p" (pending) or "f" (failed) are executed.
 - Rerun the failed transactions immediately.
 - Delete the results file using **results remove** to prevent the next results from appending to the old results. You cannot recall results once they are deleted.
 - Use **service-request run**. This command processes an SR immediately and displays the results on your screen. Transactions that have previously executed successfully are passed over and only the failed and pending transactions are attempted again.
4. Run **service-request error-report** to view all failed transactions within a given Service Request. For each failed transaction, this command provides the following data: the transaction number, target, object, verb, identifier, and switch errors.

5. Check for errors which can be fixed under the product administration and administration areas. You have three error-correction choices.

- Use commands in the product-administration area to remove any blockages on the switch side (for example, to remove an extension that already exists).

Once the problem is resolved, you can then remove the results file using **results remove**, and either reschedule the SR using **service-request change**, or run the SR immediately using **service-request run**. The failing transaction should now succeed, and the SR should complete successfully.

- Use **service-request remove** to remove the SR from the system. This command backs out of the database any transactions that were made, but have not yet been sent to the switch. Transactions in the switch that were successful will not be backed out and will remain in the database and switch.

Keep in mind that an administration command may break into more than one command when it downloads to the switch, and consequently part of a transaction may fail at the switch and part may succeed. Be sure you identify which part(s) of the transaction failed.

Displays in the database-administration and product-administration areas should be used to verify that the data in the database and the switch are in synchronization.

- Use commands in the product-administration area to add transactions that were applied to the database, but not to the product. The **pending-queue cleanup** command *must* be used after the product-administration commands have executed to remove the failed transactions, and any pending transactions, from the pending queue. In essence, the **pending-queue cleanup** command removes the SR by removing all of its failed and pending flags from the queue. Unlike **service-request remove**, however, all changes to the database files are kept.

Care should be taken when using this option to ensure that all the appropriate product administration commands are added to the switch to match the database.

Displays in the database-administration and product-administration areas should be used to verify that the data in the database and the switch are in synchronization.

After fixing a problem and rerunning or rescheduling failed SRs, **service-request display** can be used to check that they have completed successfully.

Error Conditions in Product Administration

This area of TCM causes transaction data to download to the switch. Any changes that are needed as a result of an error will require further product-administration transactions. As in database administration, the system detects simple user errors and corrects them before a command executes. After the command executes, Manager IV performs further error-checking, and may return an error message to the user. These kinds of errors remain trapped in the product-administration area while the Manager IV database verifies the data before sending it to the switch. By using the Scrapbook or model feature, transaction data can be saved until the problem is identified, and then the transaction data can be recalled for modification, if necessary. (See *Getting Started with DEFINITY® Manager IV* for instructions on using the Scrapbook feature.)

Once the data is finally sent to the switch, the switch may also return error messages to the user; error messages from the switch are prefixed "PBX." A user may see an error message such as "data was entered out of limits in a particular field." Users should consult the AT&T switch documentation to interpret and resolve these messages.

Administration to Product Administration Mapping

To work in the product administration area of TCM you must use the appropriate commands. Table 10-1 maps the TCM commands in database administration to their equivalents in product administration. These equivalents are those commands into which the administration commands break down when they are downloaded to the switch. They are the commands you use to change the switch to correct a disagreement between the Manager IV database and the switch. The equivalent commands marked with an asterisk (*) may or may not be necessary, depending on the specific corrections you need to make. For example, if you are removing a VDS terminal, but Abbreviated Dialing has not been assigned to this terminal, then you do not need to run the **abbreviated-dial-lists remove** command in product administration. The command **button add**, which administers only one button at a time, may have to be performed repetitively. (For information that will help you correct specific button errors, see Appendix C, "Button Assignments and Feature Names.")

Note that prior to accessing commands in the product-administration area of TCM, you must create a connection to the switch using the command **connection create**. After you have finished working on that switch, you should end the connection using **connection end**.

The following commands perform tasks that affect only the Manager IV database. Consequently, they have no equivalents in product administration.

- ap add/display/remove
- carrier add/display/remove
- circuit change/display
- ects-controller add/display/remove/repack (DIMENSION FP8)
- ects-pack add/remove (DIMENSION FP8)
- locale display/change
- pack add/remove
- phantoms add (DIMENSION FP8)
- slot display/select
- station-attributes display
- user add/change/display/remove
- wire add/change/display/remove

The following objects do not retain data in the Manager IV database; thus, administration or product administration area displays for these objects are generated by directly accessing the switch. Any information that is not stored in the switch (such as user room and location) will not be shown.

- abbr-list-entries
- acd-members
- attd-extension-partition [System 85 R2V4 and Generic 2.1 with Tenant Services]
- attd-part-attributes [System 85 R2V4 and Generic 2.1 with Tenant Services]
- blf-dxs-group-keys
- btn-template [Generic 2 only]
- console-equipment
- console-features
- console-messages

- control-console
- control-keys
- ects-controller display/repack [DIMENSION FP8]
- custom-intercom-entries [DIMENSION FP8]
- direct-trk-grp-keys
- dxs-extended
- external-adjunct [DIMENSION FP8]
- ldn-attt-partition [System 85 R2V4 and Generic 2.1 with Tenant Services]
- listed-directory-number [DIMENSION and System 85 R2V2/3]
- mnemonic-dialing [System 85 R2V3/R2V4 and Generic 2]
- names-database (memory compaction of) [System 85, Generic 2]
- number-groups
- precedence-digit
- recent-disconnect
- ringing-parameters
- speed-calling-entries [DIMENSION FP8]
- speed-calling-group [DIMENSION FP8]
- total-mnemonics [System 85 R2V3/R2V4, Generic 2]
- ucd-members.
- vector-abbr-list [System 85 R2V4 and Generic 2.1 with Tenant Services]

The following commands exist *only* in product administration, where they are used only to change the switch to correct a conflict between the Manager IV database and the switch. They are *not* used for normal transactions in administration. Table 10-1 lists them in the right column next to their equivalent commands in administration.

- abbreviated-dial-lists add/change/display/remove
- btn-template
- button add/change/display/remove
- carrier-parameters
- custom-intercom-group add/change/display/remove
- dac-to-extension
- dtdm add/change/display/remove
- ects-button add/change/display/remove
- ects-terminal add/change/display/remove
- name add/change/display/remove
- speed-calling-group add/change/display/remove
- terminal add/change/display/remove [System 85 R2V2-R2V4 and Generic 2]

Table 10-1. Administration to Product Administration Mapping

Command in Administration	Equivalent Commands in Product Administration (at the Switch)
bct add [System 85]	terminal add button add abbreviated-dial-lists add* dtm add
bct change [System 85]	terminal change button add* button change* button remove* dtm change* abbreviated-dial-lists add* abbreviated-dial-lists change* abbreviated-dial-lists remove*
bct display [System 85]	terminal display* dtm display* button display* abbreviated-dial-lists display*
bct remove [System 85]	terminal remove button remove abbreviated-dial-lists remove* dtm remove
callmstr	callmstr-add callmstr-change callmstr-display callmstr-remove
cdt add [System 85]	terminal add button add abbreviated-dial-lists add* dtm add
cdt change [System 85]	terminal change button add* button change* button remove* dtm change* abbreviated-dial-lists add* abbreviated-dial-lists change* abbreviated-dial-lists remove*

Table 10-1. Continued

Command in Administration	Equivalent Commands in Product Administration (at the Switch)
cdt display [System 85]	terminal display* dtdm display* button display* abbreviated-dial-lists display*
cdt remove [System 85]	terminal remove button remove abbreviated-dial-lists remove* dtdm remove
coverage-module add [System 85, Generic 2]	terminal change button add
coverage-module change System 85, Generic 2]	button add* button change* button remove*
coverage-module display [System 85, Generic 2]	terminal display button display
coverage-module remove [System 85, Generic 2]	terminal change button remove
data-module add [Generic 2]	extension add data-module add button add
data-module change [Generic 2]	data-module change* extension change*
data-module display [Generic 2]	data-module display* extension display*
data-module remove [Generic 2]	extension remove data-module remove button remove
ects add [DIMENSION only]	terminal add button add abbreviated-dial-lists add*

* These commands may/may not be necessary depending upon the specific corrections you need to make

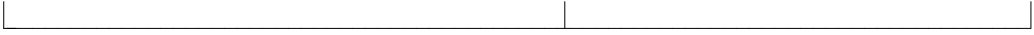


Table 10-1. Continued

Command in Administration	Equivalent Commands in Product Administration (at the Switch)
ects add [DIMENSION/System FP8 only]	ects-terminal add ects-button add
ects change [System 85 only]	terminal change* button add* button change* button remove* abbreviated-dial-lists add* abbreviated-dial-lists change* abbreviated-dial-lists remove* dtm change
ects change [DIMENSION/System FP8 only]	ects-terminal change ects-button change
ects display [System 85 only]	terminal display* button display* abbreviated-dial-lists display*
ects display [DIMENSION/System FP8 only]	ects-terminal display ects-button display
ects remove [System 85 only]	terminal remove button remove abbreviated-dial-lists remove* dtm remove
ects remove [DIMENSION/System FP8 only]	ects-terminal remove ects-button remove
extension add [System 85,Generic 2]	extension add abbreviated-dial-lists add* name add* terminal add*
extension add [DIMENSION/System FP8 only]	extension add custom-intercom-group add* speed-calling-group add* name add terminal add

Table 10-1. Continued

Command in Administration	Equivalent Commands in Product Administration (at the Switch)
extension change [System 85,Generic 2]	extension change* abbreviated-dial-lists add* abbreviated-dial-lists change* abbreviated-dial-lists remove* terminal change* name add* name change* name remove*
extension change [DIMENSION/System FP8 only]	extension change* custom-intercom-group add* custom-intercom-group change* custom-intercom-group remove* speed-calling-group add* speed-calling-group change* speed-calling-group remove* terminal change* name add* name change* name remove*
extension display [System 85,Generic 2]	extension display name display* abbreviated-dial-lists display*
extension display [DIMENSION/System FP8 only]	extension display name display* custom-intercom-group display* speed-calling-group display*
extension remove [System 85,Generic 2]	extension remove name remove* abbreviated-dial-lists remove*
extension remove [DIMENSION/System FP8 only]	extension remove name remove* custom-intercom-group remove* speed-calling-group remove*
feature-module add	terminal change button add

Table 10-1. Continued

Command in Administration	Equivalent Commands in Product Administration (at the Switch)
feature-module change [System 85, Generic 2]	button add* button change* button remove*
feature-module display [System 85, Generic 2]	terminal display* button display*
feature-module remove [System 85, Generic 2]	terminal change button remove
idt add [System 85]	terminal add abbreviated-dial-lists add* dtm add* button add
idt change [System 85]	terminal change* abbreviated-dial-lists add* abbreviated-dial-lists change* abbreviated-dial-lists remove* dtm add* dtm change* dtm remove* button add* button change* button remove*
idt display [System 85]	terminal display* abbreviated-dial-lists display* dtm display* button display*
idt remove [System 85]	terminal remove abbreviated-dial-lists remove* dtm remove* button remove
lcdt add [System 85]	terminal add abbreviated-dial-lists add* dtm add* button add

Table 10-1. Continued

Command in Administration	Equivalent Commands in Product Administration (at the Switch)
lcdt change [System 85]	terminal change* abbreviated-dial-lists add* abbreviated-dial-lists change* abbreviated-dial-lists remove* dtm add* dtm change* dtm remove* button add* button change* button remove*
lcdt display [System 85]	terminal display* abbreviated-dial-lists display* dtm display* button display*
lcdt remove [System 85]	terminal remove abbreviated-dial-lists remove* dtm remove* button remove
pcdcp add [System 85]	terminal add abbreviated-dial-lists add* dtm add* button add
pcdcp change [System 85]	terminal change* abbreviated-dial-lists add* abbreviated-dial-lists change* abbreviated-dial-lists remove* dtm add* dtm change* dtm remove* button add* button change* button remove*
pcdcp display [System 85]	terminal display* abbreviated-dial-lists display* dtm display* button display*

Table 10-1. Continued

Command in Administration	Equivalent Commands in Product Administration (at the Switch)
pcdep remove [System 85]	terminal remove abbreviated-dial-lists remove* dtm remove* button remove
pt510 add [system 85]	terminal add button add abbreviated-dial-lists add* dtm add
pt510 change [System 85]	terminal change button add* button change* button remove* dtm change* abbreviated-dial-lists add* abbreviated-dial-lists change* abbreviated-dial-lists remove* dtm add dtm remove
pt510 display [System 85]	terminal display* dtm display* button display* abbreviated-dial-lists display*
pt510 remove [System 85]	terminal remove button remove abbreviated-dial-lists remove*
sls add [System 85 only]	terminal add abbreviated-dial-list add* button add
sls add [DIMENSION System FP8]	ects-terminal add ects-button add
sls change [System 85 only]	terminal change abbreviated-dial lists add* abbreviated-dial lists change* abbreviated-dial lists remove* button add* button change* button remove*

Table 10-1. Continued

Command in Administration	Equivalent Commands in Product Administration (at the Switch)
sls change [DIMENSION System FP8]	ects-terminal change ects-button add* ects-button change* ects-button remove*
sls display [System 85 only]	terminal display abbreviated-dial-lists display* button display
sls display [DIMENSION System FP8]	ects-terminal display ects-button display
sls remove [System 85 only]	terminal remove abbreviated-dial-lists remove* button remove
sls remove [DIMENSION System FP8]	ects-terminal remove ects-button remove
terminal add [Generic 2]	terminal add button add dtdm add abbreviated-dial-lists add
terminal change [Generic 2]	terminal change button change dtdm change abbreviated-dial-lists change
terminal display [Generic 2]	terminal display button display dtdm display abbreviated-dial-lists display
terminal remove [Generic 2]	terminal remove button remove dtdm remove abbreviated-dial-lists remove
36-button add [System 85]	terminal add button add dtdm add* abbreviated-dial-lists add*

Table 10-1. Continued

Command in Administration	Equivalent Commands in Product Administration (at the Switch)
36-button change [System 85]	terminal change* button add* button change* button remove* dtm add* dtm change* dtm remove* abbreviated-dial-lists add* abbreviated-dial-lists change* abbreviated-dial-lists remove*
36-button display [System 85] 36-button remove [System 85]	terminal display* button display* dtm display* abbreviated-dial-lists display* terminal remove button remove dtm remove* abbreviated-dial-lists remove*
12-button add [System 85]	terminal add button add dtm add* abbreviated-dial-lists add*
12-button change [System 85]	terminal change* button add* button change* button remove* dtm add* dtm change* dtm remove* abbreviated-dial-lists add* abbreviated-dial-lists change* abbreviated-dial-lists remove*
12-button display [System 85]	12-button display* dtm display* abbreviated-dial-lists display* button display*

Table 10-1 Continued

Command in Administration	Equivalent Commands in Product Administration (at the Switch)
12-button remove [System 85]	terminal remove button remove dtm remove* abbreviated-dial-lists remove*
12-button upgrade [System 85]	terminal remove button remove dtm remove* abbreviated-dial-lists remove* terminal add button add dtm add* dtm change* abbreviated-dial-lists add* abbreviated-dial-lists change*
vdn add [System 85 R2V4,Generic 2]	vdn add name add*
vdn change [System 85 R2V4,Generic 2]	vdn change name change*
vdn display [System 85 R2V4,Generic 2]	vdn display name display*
vdn remove [System 85 R2V4,Generic 2]	vdn remove name remove*
vds add [System 85,Generic 2]	terminal add button add abbreviated-dial-lists add* dtm add

Table 10-1 Continued

Command in Administration	Equivalent Commands in Product Administration (at the Switch)
vds change [System 85]	terminal change* button add* button change* button remove* dtm change* abbreviated-dial-lists add* abbreviated-dial-lists change* abbreviated-dial-lists remove* dtm add dtm remove
vds display [System 85]	terminal display* dtm display* button display* abbreviated-dial-lists display*
vds remove [System 85]	terminal remove button remove abbreviated-dial-lists remove* dtm remove

Error Conditions in Database Administration

This area of TCM can only have database errors, as transactions only affect the database and are never sent to the switch. Most user errors, such as invalid data, are caught by the system while a user is entering data, and are corrected before a command executes. Other user errors, which require cross-referencing with database files, are only found after a command is executed. These errors cause error messages to display to the user. In this case, no database changes are made, and the solution for the user is to reenter the correct data. As in the product-administration area, screens that produce errors can be saved using the Scrapbook feature and modified or reused later once a problem is identified. (See *Getting Started with DEFINITY® Manager IV* for instructions on using the Scrapbook feature.)

Changing the DEFINITY Manager IV Database

You may want to correct an error condition in database administration if certain transactions have failed to download, but you determine that the information on the switch side is correct as is. Because transactions cannot stack between SRs, it is not possible to fix discrepancies between the database and the switch in database administration if failed or pending transaction entries associated with the objects to be changed exist in the pending queue. In this case, the database can be changed by first using the **pending-queue cleanup** command to remove the failed and pending data from the queue, and then using commands in the database-administration area to put the database in synchronization with the switch. The pending-queue-cleanup command should be used with extreme caution.

Database-administration commands and procedures are the same as those in administration, so refer to the appropriate procedures and commands for information on commands and procedures in database administration.

Undoing Commands

If for some reason you need to "undo" a successful change that has been made, Table 10-2 may be helpful to you. You can use the commands listed in the right column in the administration or database-administration areas, but if you work in database administration, you will also have to undo related changes in product administration.

Table 10-2. Changing the DEFINITY Manager IV Database

If This Task Succeeded	Then Use This Command to Undo the Change
Terminal Tasks for Generic 2	
Adding AT&T and Non-AT&T terminal types Adding, changing, or removing AT&T and Non-AT&T terminal features and attributes Changing or removing multiple call appearances Removing AT&T and Non-AT&T terminal types	terminal remove terminal change terminal change terminal add
Extension and Terminal Tasks for System 85 & G2	
<i>Analog, Non-Analog and DSC Tasks</i> Activating or deactivating a DSC Adding a DSC Adding a 515BCT Adding a non-analog extension Adding a pt510 Adding a 36-button terminal Adding a 12-button terminal Adding a VDS terminal Adding an analog extension and terminal Adding an ECTS terminal Adding, changing, or removing ECTS terminal features and attributes	terminal change terminal remove terminal remove extension remove terminal remove terminal remove terminal remove terminal remove extension remove terminal remove terminal change

Table 10-2. Continued

If This Task Succeeded	Then Use This Command to Undo the Change
Adding, changing, or removing extension features and attributes	extension change
Adding, changing, or removing 515BCT features and attributes	terminal change
Adding, changing, or removing pt510 features	terminal change
Adding, changing, or removing 7103a terminal features	terminal change
Adding, changing, or removing idt terminal features, attributes or additional terminal equipment.	terminal change
Adding, changing, or removing lcdt terminal features, attributes, or additional terminal equipment.	terminal change
Adding, changing, or removing pc-dcp terminal features, attributes, or terminal equipment.	terminal change
Adding, changing, or removing 36-button terminal features, attributes, or additional terminal equipment	terminal change
Adding, changing, or removing 12-button features, attributes, or additional terminal equipment	terminal change
Adding, changing, or removing a VDS terminal's features and attributes	terminal change
Changing or removing multiple call appearances	terminal change
Removing a DSC	terminal add
Removing a DTDM extension	extension add

Table 10-2. Continued

If This Task Succeeded	Then Use This Command to Undo the Change
Removing an ECTS terminal	terminal add
Removing a 515BCT	terminal add
Removing an idt terminal	terminal add
Removing an lcdt terminal	terminal add
Removing a non-analog extension	extension add
Removing a pc-dcp terminal	terminal add
Removing a pt510	terminal add
Removing a 36-button terminal	terminal add
Removing a 12-button terminal	terminal add
Removing a VDS terminal	terminal add
Removing an analog extension and terminal	extension add
Upgrading an ECTS terminal	terminal remove, terminal add
Upgrading a 12-button terminal to a 36-button terminal	terminal type change
<i>Add-on Module Tasks</i>	
Adding a Call Coverage module	coverage-module remove
Adding a feature key module	feature-module remove
Adding, changing, or removing Call Coverage module features	coverage-module change
Adding, changing, or removing feature key module features	feature-module change
Removing a Call Coverage module	coverage-module add
Removing a Feature Key module	feature-module add

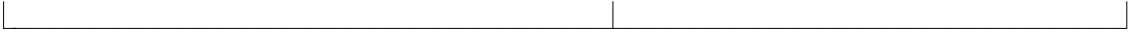


Table 10-2. Continued

If This Task Succeeded	Then Use This Command to Undo the Change
<p><i>Data Module, Circuit, and Interface Tasks</i></p> <p>Adding a data module, ADFTC or DCPI circuit, or EIA interface</p> <p>Changing a data module, ADFTC or DCPI circuit, or EIA interface</p> <p>Removing a data module, ADFTC or DCPI circuit, or EIA interface</p> <p><i>Associated Extension Tasks</i></p> <p>Adding an associated extension to a primary extension</p> <p>Adding a name display to an associated extension</p> <p>Changing the name display on an associated extension</p> <p>Removing an associated extension</p> <p>Removing the name display from an associated extension</p>	<p>data-module remove</p> <p>data-module change</p> <p>data-module add</p> <p>associated-extension remove</p> <p>associated-extension change</p> <p>associated-extension change</p> <p>associated-extension add</p> <p>associated-extension change</p>
<p>Call Distribution Group Tasks</p> <p>Adding an ACD group</p> <p>Adding a Call Coverage path</p> <p>Adding a UCD group</p> <p>Changing a Call Coverage path</p> <p>Removing an ACD group</p> <p>Removing a Call Coverage path</p> <p>Removing a UCD group</p>	<p>acd-group add</p> <p>call-coverage-path remove</p> <p>ucd-group remove</p> <p>call-coverage-path change</p> <p>acd-group remove</p> <p>call-coverage-path add</p> <p>ucd-grp add</p>

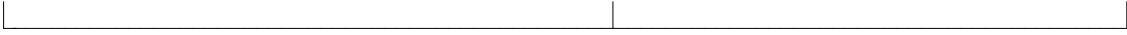


Table 10-2. Continued

If This Task Succeeded	Then Use This Command to Undo the Change
<p>Dialing Plan Tasks</p> <p>Adding an extension number group</p> <p>Adding, changing, or removing a first dialed digit</p> <p>Moving extension number groups</p> <p>Removing an extension number group</p>	<p>number-groups remove</p> <p>first-digit change</p> <p>number-groups remove</p> <p>number-groups add</p>
<p>System-Wide Features Tasks</p> <p>Adding a COS</p> <p>Adding, changing, or removing features or restrictions in a COS</p> <p>Changing the station ringing parameters</p> <p>Changing the system-wide features</p> <p>Removing a COS</p>	<p>class-of-service remove</p> <p>class-of-service change</p> <p>ringing-parameters change</p> <p>sys-cos change</p> <p>class-of-service add</p>

Avoiding Errors

Since database/switch errors are perhaps more difficult to correct than more simple errors, here are several suggestions on how to avoid them.

First, follow up on the outcome of each of your transactions. Keep track of all Service Requests. Correct any SRs that fail as quickly as you possibly can. Similarly, try to correct any immediate mode transactions that fail as soon as possible.

Second, be careful of how you schedule SRs. Do not schedule SRs any further in advance than necessary. The Manager IV database is always updated immediately, automatically creating a conflict between the database and the switch until the SR completes successfully at the switch. Also, keep the number of transactions in the SR small, so that if one transaction fails, there will not be many other dependent transactions that will also fail.

Finally, keep track of what changes to your system depend on any other changes, and schedule your transactions accordingly. Check with the Manager IV System Administrator and the administrators of other applications (especially of FM) to learn if and when changes to the system are scheduled to take place.

An Unremovable Entity

A particular type of database/switch discrepancy may become apparent when you are unable to remove an entity from the switch, such as a set or an extension, because it is either in use or in some other condition that is not maintained in the Manager IV database. For example, if you attempt to remove a set that is in use, you will receive the message, "In use lamp on or feature/service active. [08]" Or, if you try to remove an extension for which Leave Word Calling (LWC) messages have been stored at the switch, you will receive the message, "LWC messages must be retrieved before extension can be removed. [94]" In this event, you should rerun or reschedule the SR. If, however, you try to add an extension in recent disconnect but are unable to, you should either run **recent-disconnect change**, or use **recent-disconnect display** to find out when the recent disconnect interval expires and then schedule an SR to add the extension for a time after that expiration.

MESSAGES FROM THE SYSTEM TO YOU

Up until now, this discussion on error administration has referred to error messages—that is, messages from Manager IV to you which indicate that a mistake has occurred. To list in this guide all such messages which appear in an application as extensive as TCM would be an enormous and unnecessary task. Error messages in TCM are devised to be self-explanatory, to inform and guide you, and to assist you as much as possible in detecting errors, correcting them, and continuing on with the task at hand.

There are different types of messages which are generated by different error conditions. If you are able to recognize the kind of message the system is giving you regarding an error, then you will immediately know something about the error, about the influence it will have, and how to correct the error condition.

Three Types of Error Messages

Generally, an error message is any on-line communication in words that alerts you to a mistake you have made or to something that has, for any number of reasons, gone wrong. Error messages are brief and explicit. For the purposes of this discussion, error messages may be divided into three classes:

- Simple error messages
- Warning error messages
- Critical error messages.

Simple Error Messages

Simple error messages point out simple errors—errors that are easy to comprehend and easy to correct. Such messages may indicate that you have made an incorrect entry or that in order to enter one field, you must first make an entry into a previous one. Such errors do not impair the execution of your transactions. These are essentially errors that you catch before you are ready to execute your command and which you can easily correct.

Warning Error Messages

A warning informs you that an error has been made and that because of the error, part of your transaction has failed. You are warned that not all of your command has executed successfully.

Critical Error Messages

As its name implies, a critical error is one that plays the decisive role in negating an entire transaction. Because of the error, the entire command fails to execute. The error is often referred to as a "fatal" error, because it "kills" the transaction.

Critical messages require that you attempt to execute the entire command once more —this time making sure that you avoid the error that previously undermined the command's successful execution. If it is unclear to you whether the error message is warning you that part of the transaction has failed to execute, or is informing you that an error is critical, then do a display of the appropriate object.

SOME FINAL THOUGHTS

As emphasized throughout this chapter, you must continuously be aware while working in TCM that whatever you do may have a significant impact on a switch within your telecommunications system and that errors may affect not only transactions in TCM but transactions in other applications as well. Nevertheless, TCM offers you assistance through error messages, and these will prove invaluable when you are confronted with an error, whether you have been its direct cause or not.

Furthermore, bear in mind that this application has been devised not only to help you but also to be comprehensible to you: there is throughout TCM a logical methodology which is not only perceptible but is, given your knowledge, easy to follow. Your developing experience with the system will reassure you consistently that—even when mistakes are made—you are in control.

APPENDICES

These appendices provide reference information that you may need while working in TCM. Five appendices follow:

**Appendix A:
TCM Command List**

This appendix contains a table that lists all the TCM commands and the areas where they are applicable.

**Appendix B:
Supporting Documentation**

This appendix lists and describes all the DEFINITY Manager IV documents and also other AT&T publications that pertain to TCM administration.

**Appendix C:
Button Assignments
And Feature Names**

This appendix offers, in table form, a list of button feature descriptions and feature name abbreviations.

**Appendix D:
Dial Tone Transactions
And Reports**

This appendix describes the dial tone transactions and reports available to the user on the system.

**Appendix E:
TCM Command Proc Mappings**

This appendix provides command-to-proc and proc-to-command mappings to help interpret error messages, and results files. These mappings also provide a cross-reference for users who are familiar with using procs to administer Generic 2 and/or System 85.

APPENDIX A. TCM COMMAND LIST

Table A-1 lists all available TCM objects and verbs. An asterisk (*) appears in the "Area" column if the object:verb is available in that area. All objects are listed in alphabetical order.

Table A-1. TCM Command List

Object and Verb(s)		Areas			
		admin	database-admin	product-admin	report-admin
abbr-list-entries [System 85,Generic 2]	change display	* *		* *	
Abbreviated-Dial [System 85,Generic 2]	report				*
abbreviated-dial-lists [System 85,Generic 2]	add change display remove			* * * *	
acd-allocation [Generic 2.2 only]	display	*	*	*	
acd-grp [System 85 R2V3,V4, Generic 2]	add change display remove report	* * * *	* * * *	* * * *	*
acd-members [System 85 R2V3, V4]	add display remove	* * *		* * *	
agent-skills [Generic 2.2 only]	change display	* *		* *	
analog-dialtone (user class "precut") [System 85]	add display remove	* * *	* * *	* * *	
ap	add display remove	* * *	* * *		

(Continued)

Table A-1. Continued

Object and Verb(s)		Areas			
		admin	database-admin	product-admin	report-admin
associated-extension	add	*	*	*	
	change	*	*	*	
	display	*	*	*	
	remove	*	*	*	
attd-extension-partition [System 85 R2V4]	change	*		*	
	display	*		*	
	list	*		*	
attd-part-attributes [System 85 R2V4]	add	*		*	
	change	*		*	
	display	*		*	
	list	*		*	
	remove	*		*	
auth-code [System 85 R2V4]	add	*	*	*	
	change	*	*	*	
	display	*	*	*	
	remove	*	*	*	
automatic-dialing [System 85 R2V4]	change	*			
	display	*			
bearer-capability-cos [Generic 2]	add	*	*	*	
	change	*	*	*	
	display	*	*	*	
	remove report	*	*	*	*
btn-template [Generic 2]	add			*	
	change			*	
	display			*	
	remove			*	
	list			*	
blf-dxs-group-keys	change	*		*	
	display	*		*	
button [System 85]	add			*	
	change			*	
	display			*	
	remove			*	
call-coverage [System 85 R2V4,Generic 2]	report				*
call-coverage-path	add	*	*	*	
	change	*	*	*	
	display	*	*	*	
	remove	*	*	*	

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(Continued)

Table A-1. Continued

Object and Verb(s)		Areas			
		admin	database-admin	product-admin	report-admin
call-pickup-group [System 85 R2V4,Generic 2]	report				*
call-vectoring [System 85 R2V4,Generic 2]	add change display remove move	*	*	*	
carrier	add display remove	*	*		
carrier-parameters	add display remove			*	
cag	report				*
cag-extension	report				*
ccp	report				*
ccp-extension	report				*
circuit	change display	*	*		
class-of-service	add change display remove report	*	*	*	*
cms-extension [System 85 R2V4, Generic 2]	add display remove	*		*	
connection	create display end	*	*	*	
control-console	add change display list remove	*		*	

(Continued)

Table A-1. Continued

Object and Verb(s)		Areas			
		admin	database-admin	product-admin	report-admin
console-equipment	add change display remove	*		*	
console-features	add change display	*		*	
console-messages	add change display remove	*		*	
control-keys	change display	*		*	
control-restriction-group [System 85 R2V4, Generic 2]	report				*
cos	report				*
cos-extension	report				*
cos-profile	report				*
coverage-module [System 85, Generic 2]	add change display remove	*	*		
cpg	report				*
cpg-extension	report				*
crg	report				*
crg-extension	report				*
custom-intercom-entries [DIMENSION]	change display	*		*	
custom-intercom-group [DIMENSION]	add change display remove			*	

(Continued)

Table A-1. Continued

Object and Verb(s)		Areas			
		admin	database-admin	product-admin	report-admin
dac-to-extension	add change display remove			*	
data-module [Generic 2]	add change display remove	*	*	*	
db-extension-ell (user class "precut")	report				*
db-module-type [Generic 2]	report				*
dial-access-code	change display	*	*	*	
dial-intercom-group	report				*
direct-trk-grp-keys	change display	*		*	
dsc	add change display remove	*	*	*	
dtm [System 85]	add change display remove			*	
dxs-extended	add display remove	*		*	
ects-controller [DIMENSION FP8]	add display remove repack report	*	*	*	*
ects-terminal [DIMENSION FP8]	add change display remove			*	

(Continued)

Table A-1. Continued

Object and Verb(s)		Areas			
		admin	database-admin	product-admin	report-admin
equip-summary	report				*
equipment	report				*
errors	display	*	*	*	*
extension	add	*	*	*	
	change	*	*	*	
	display	*	*	*	
	move	*	*	*	
	remove	*	*	*	
	reserve	*	*		
	swap	*	*		
	report				*
	unreserve	*	*		
	external-adjunct [System 85 R2V3/V4 Generic 2]	change	*		*
display		*		*	
extn-to-node [System 85 R2V4 Generic 2]	display	*	*		
	report				*
feature-module [System 85, Generic 2]	add	*	*		
	change	*	*		
	display	*	*		
	remove	*	*		
files	display	*	*	*	*
first-digit	change	*	*	*	
	display	*	*	*	
five-digit-dialing [System 85, Generic 2]	add	*	*	*	
	change	*	*	*	
	display	*	*	*	
	remove	*	*	*	
group-list [System 85, Generic 2]	report				*

(Continued)

Table A-1. Continued

Object and Verb(s)		Areas			
		admin	database-admin	product-admin	report-admin
hunt-group	report				*
installation [R2V4]	report				*
intercom-set-id	report				*
ldn-attd-partition [System 85 R2V4 Generic 2]	change display list	*		*	
line-appearance [System 85]	report				*
listed-directory-number [System 85, Generic 2]	change display	*		*	
locale	change display	*	*		
mnemonic-dialing	add change display list remove	*		*	
name	add change display remove			*	
names-database	compact display	*		*	
name-extension	report				*
nonanalog-dialtone (user class "precut")	add display remove	*	*	*	
non-dial-intercom-group	report				*
npa-nxx-designator [Generic 2 System 85 R2V4]	add change display remove report	*	*	*	*

(Continued)

Table A-1. Continued

Object and Verb(s)		Areas			
		admin	database-admin	product-admin	report-admin
number-group	add display move remove	*	*	*	
office-equipment [System 85 R2V4, Generic 2]	add change display remove report	*	*		*
pack	add remove	*	*		
pbx-avail-extn [System 85 R2V4, Generic 2]	report				*
pbx-ccg-members [System 85 R2V4, Generic 2]	report				*
pbx-circuit-pack (user class "precut")	report				*
pbx-cpg-members [System 85 R2V4, Generic 2]	report				*
pbx-extension-ell (user class "precut")	report				*
pbx-module-type	report				*
physical-circuit-pack [System 85]	report				*
pco-line	report				*
pending-queue	cleanup	*			
phantoms [DIMENSION]	add	*	*		
precedence-digit	change display	*		*	
printer	display	*	*	*	*
recent-disconnect	change display remove	*		*	

(Continued)

Table A-1. Continued

Object and Verb(s)		Areas			
		admin	database-admin	product-admin	report-admin
reservation	display	*	*	*	*
results	display	*	*	*	*
	remove	*	*	*	*
ringing-parameters	change	*		*	
	display	*		*	
scheduled-entry	display	*	*	*	*
	list	*	*	*	*
	remove	*	*	*	*
service-request	append	*			
	change	*			
	create	*			
	display	*			
	end	*			
	error-report	*			
	remove	*			
	run	*			
set-type [Generic 2]	add	*	*	*	
	change	*	*	*	
	display	*	*	*	
	list	*	*	*	
	remove	*	*	*	
	report				*
set-type-name [Generic 2]	create	*			
7103-terminal [System 85]	change	*	*	*	
	display	*	*	*	
slot	display	*	*		
	select	*	*		
	report				*
sls-dialtone (user class "precut")	add	*	*	*	
	display	*	*	*	
	remove	*	*	*	
sm-assignment	add	*		*	
	display	*		*	
	change	*		*	
	remove	*		*	

(Continued)

Table A-1. Continued

Object and Verb(s)		Areas			
		admin	database-admin	product-admin	report-admin
sm-history	display	*		*	
sm-restriction	add change display remove	*		*	
speed-calling-entries [DIMENSION System FP8]	change display	*		*	
speed-calling-group [DIMENSION System FP8]	add change display remove			*	
sr-status	change cleanup display	*	*	*	*
station-attributes	display	*	*		
sys-cos	change display	*	*	*	
tape	run	*		*	
tenant [System 85 R2V4, Generic 2.1]	add change display remove report	*	*	*	*
terminal [Generic 2]	add change display remove swap		*	*	
total-mnemonics	display	*		*	

(Continued)

Table A-1. Continued

Object and Verb(s)		Areas			
		admin	database-admin	product-admin	report-admin
ucd-grp	add change display remove report	*	*	*	*
[DIMENSION]					*
ucd-members	add display remove	*		*	
[DIMENSION]				*	
unassigned-ckt	report				*
unassign-equip-location	report				*
unassign-equip-type	report				*
user	add change display remove report	*	*		*
[R2V4]					*
user-name	report				*
vdn	add change display remove	*	*	*	
[System 85 R2V4]		*	*	*	
vector-abbr-list	change display remove	*		*	
[System 85 R2V4, Generic 2]		*		*	
vector-features	add change display remove	*	*	*	
[System 85 R2V4, Generic 2]		*	*	*	
who	display	*	*	*	*
wire	add change display remove report	*	*		*
[System 85 R2V4, Generic 2]		*	*		*
wiring-ell	report				*
wiring-jack-number	report				*

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APPENDIX B. SUPPORTING DOCUMENTATION

This appendix contains information on documentation for DEFINITY® Manager IV, related products (System 75/DEFINITY Generic 1 and System 85/DEFINITY Generic 2), and the UNIX operating system.

All of the following documentation can be ordered by calling the AT&T Customer Information Center (CIC) at 1-800-432-6600, or by writing to:

AT&T Customer Information Center
ATTN: Customer Service Representative
P.O. Box 19901
Indianapolis, IN 46219

DEFINITY MANAGER IV DOCUMENTATION

Detailed information about specific aspects of Manager IV planning, installation, and day-to-day operation are included in the Manager IV manuals listed below.

Introduction to DEFINITY® Manager IV (585-223-010) presents a general overview of Manager IV. The *Introduction* is designed to help customers become familiar with Manager IV and evaluate its benefits. It contains a description of Manager IV capabilities, a discussion of major benefits, an explanation of AT&T service and support, and a detailed description of each of the Manager IV applications.

Getting Started With DEFINITY® Manager IV (585-223-706) provides the procedural and reference information necessary to use Manager IV. The first part of this guide includes a general overview of Manager IV, a system description, Manager IV application overviews, and instructions for administering the Manager IV user interface. The second part gives you detailed information about service requests.

DEFINITY® Manager IV Planning and Implementation Manual (585-223-610) provides information on planning and implementing Manager IV. The manual helps customers to determine their configuration needs and outlines the activities that must be completed by the customer and AT&T from the initial planning stages to Manager IV cutover.

DEFINITY® Manager IV Installation, Initialization, and Maintenance (585-223-100) provides the installer with procedural and reference information needed to install and initialize Manager IV on its processor. The manual also describes and suggests solutions for possible problems that may arise during the execution of these procedures. Customers may need to refer to some of the initialization procedures if they need to reconfigure Manager IV or if they install new equipment that changes the network configuration.

The manual also provides the service technician or the qualified customer with the procedural and reference information needed for routine software maintenance.

DEFINITY® Manager IV Query and Report Languages (585-223-703) explains the commands used in the Query and Report Languages and provides instructions for using them to supplement standard reports.

Manager IV User Guides

The Manager IV user guides provide detailed procedures for using each Manager IV application. These guides each contain the following information:

- How the application fits into Manager IV's overall structure
- How to access Manager IV and use the commands provided by the application
- Detailed procedures needed to perform the tasks related to the application
- A list of the application's commands

Application administrators should refer to these guides for information about their specific application.

DEFINITY® Manager IV System Administration (585-223-700) provides the Manager IV System Administrator with the reference and procedural information needed to monitor Manager IV and the products it supports. It enables the System Administrator to analyze and improve the overall performance of the system configuration.

DEFINITY® Manager IV Facilities Management Operations (585-223-702) provides the FM user with the procedural and reference information needed to configure and control a telecommunications system. Procedures include configuring trunks and trunk groups, remotely accessing trunk-testing hardware, selecting network routing paths, assigning and changing Facility Restriction Levels (FRLs) and authorization codes.

DEFINITY GENERIC 1 DOCUMENTATION

The documentation in support of DEFINITY® Generic 1 is structured similar to System 75. The following documents are common to System 75 and Generic 1:

DOCUMENT	ORDER NUMBER
<i>Feature Description</i>	555-200-201
<i>Administration and Traffic Measurements</i>	555-200-500
<i>Voice Terminal Operations</i>	555-200-701
<i>Console Operations</i>	555-200-700
<i>Application Notes</i>	555-209-000
<i>Pocket Reference</i>	555-200-202

The following documents are specific to DEFINITY Generic 1:

Introduction	555-200-024
<i>System Description</i>	555-204-200
<i>Installation</i>	555-204-104

SYSTEM 85/DEFINITY GENERIC 2 DOCUMENTATION

DOCUMENT	ORDER NUMBER
<i>Introduction to System 85</i>	555-103-020
<i>Reliability and Maintenance</i>	555-103-102
<i>Feature Facts</i>	555-104-751
<i>Equipment Room Floor Plans and Specification Planning Manual</i>	555-103-603
<i>System Description</i>	555-103-201
<i>Features Reference Manual</i>	555-103-301
<i>System 85 Feature Translations Manual (Release 2, Version 1 and 2)</i>	555-101-107
<i>System 85 Feature Translations Manual (Release 2, Version 3)</i>	555-102-107

UNIX OPERATING SYSTEM DOCUMENTATION

<i>UNIX System V Release 3.2 Release Notes</i>	305-565
<i>UNIX System V Release 3.2 Administration Guide</i>	305-569
<i>UNIX System V Release 3.2 User's Reference Manual</i>	307-012
<i>UNIX System V Release 3.2 System Administrator's Reference Manual</i>	305-570
<i>UNIX System V Release 3.2 System Administrator's Reference Manual Updates</i>	305-571
<i>UNIX System V Release 3.2 User's Guide</i>	307-231
<i>ASSIST Software User's Guide</i>	307-234
<i>Systems Software Development Tools User's Guide</i>	307-235

<i>UNIX System V Release 3.2 Cartridge Tape Utilities Guide</i>	306-006
<i>Network Support Utilities Release Notes</i>	307-233
<i>Release 3 Streams Primer/ Remote Filesharing Utilities Release Notes</i>	307-229

APPENDIX C. BUTTON ASSIGNMENTS AND FEATURE NAMES

Table C-1 associates button feature names with feature descriptions. You can use this table to find the correct feature name when assigning or changing button assignments with **terminal-type object add** or **object change** for System 85, and DIMENSION. Table C-1 also shows the button features which can be changed.

Additionally, if you discover certain inconsistencies in terminal button assignments between the Manager IV database and the switch, you will need to correct the error by first determining the correct button assignment. Use the **terminal-type object display** command in the administration or database administration area, and the **button display** command in the product administration area to compare button assignments. After determining the correct assignment, you can add the correct button assignment to the CSM database with **terminal-type object change**.

For Generic 2, use the **terminal** transaction to administer buttons when assigning terminals. If inconsistencies are suspected between the DEFINITY Manager IV database and the switch, use the **terminal display** transaction to display buttons in the database, and the **button display** transaction to display buttons in the switch. To correct the inconsistency, use the **terminal add, change** or **remove** transaction in the database-admin area, or the **button add, change** or **remove** transaction in the product-admin area.

Table C-1. Button Feature Descriptions and Names

Feature Description	Feature Name	Change
Abbreviated/Delayed Transfer [DIMENSION System FP8]	ADAT	N
Call Appearance	CALL	Y
Call Hold [DIMENSION System FP8]	HOLD	N
Manual Intercom	MICM	N
Automatic Intercom	AICM	N
Dial Intercom	DICM	N
Direct Station Select [DIMENSION System FP8]	DSS	Y
Personal Central Office Line	PCO	N
Manual Signaling	MSIG	N
Manual Exclusion	EXCL	Y
Manual Message Waiting (Send)	MMWS	N
Manual Message Waiting (Receive)	MMWR	N
Alerting Cutoff	ACUT	N
Alerting Transfer	ATRF	Y
Abbreviated/Displayed Alerting Transfer	ADX	N
Call Pickup	CPU	Y
Call Forward—Always [DIMENSION System FP8]	CFA	N
Call Waiting—Answering [DIMENSION System FP8]	CWA	N

Table C-1. Continued

Feature Description	Feature Name	Change
Call Waiting—Originating [DIMENSION System FP8]	CWO	N
Leave Word Calling—Cancel	LWCC	Y
Priority Calling [formerly Call Waiting Originating] [System 85,Generic 2]	PC	Y
Override [DIMENSION System FP8 and System 85]	OVER	Y
Automatic Callback	ACB	
Call Management System—Enhanced Service Observing [System 85 R2V3/4, Generic 2]	SVCO	N
Last Number Dialed [formerly Last Extension Dialed]	LXD	Y
Call Forward—Follow Me [System 85, Generic 2]	CFFM	Y
Call Work Codes [Generic 2.2]	CWC	N
Call Forward—Busy/Don't Answer [System 85, Generic 2]	CFBD	Y
Automatic Dialing [System 85, Generic 2]	AD	N
Send All Calls [DIMENSION FP8 Issue 3.8, System 85, Generic 2]	SAC	N
Send All Calls Extension [DIMENSION FP8 Issue 3.8, System 85, Generic 2]	SACE	N
Consult [System 85,Generic 2]	CONS	N
*Display Module—Normal Mode [System 85, Generic 2]	NORM	Y

Table C-1. Continued

Feature Description	Feature Name	Change
*Display Module—Inspect Mode [System 85, Generic 2]	INSP	Y
*Display Module—DateTime [System 85, Generic 2]	DATE	Y
*Display Module—Message Retrieval [System 85, Generic 2]	RMSG	Y
*Display Module— Coverage Message Retrieval [System 85, Generic 2]	CMSG	Y
*Display Module—Next Message [System 85, Generic 2]	NEXT	Y
*Display Module—Delete Message [System 85, Generic 2]	DEL	Y
*Display Module—Return Call [System 85, Generic 2]	RTRN	Y
Elapsed Time	TIMR	Y
*Display Module—Scrolling [System 85 R2V3/4, Generic 2]	SCRL	N
Leave Word Calling [DIMENSION FP8 Issue 3.8, System 85, Generic 2]	LWC	N
Coverage Callback [DIMENSION FP8 Issue 3.8, System 85, Generic 2]	CVCB	N
Transfer to Data [System 85, Generic 2]	DATA	N
Abbreviated Dialing—Programming [System 85, Generic 2]	PROG	N
Abbreviated Dialing—Special Function Entry [System 85, Generic 2]	FUNC	N

* For System 85 R2V2/4 Display Module Buttons can be assigned only when a Display Module is present on the set.

Table C-1. Continued

Feature Description	Feature Name	Change
Abbreviated Dialing—Pause [System 85, Generic 2]	PAUS	N
Abbreviated Dialing—Wait [System 85, Generic 2]	WAIT	N
Abbreviated Dialing—Mark [System 85, Generic 2]	MARK	N
Manual Digit Entry	MDGT	N
Abbreviated Dialing—End of Dialing [System 85 R2V4, Generic 2]	ED	N
Release [System 85, Generic 2] [DIMENSION FP8 Issue 3.8]	RLS	N
Auto-In [System 85, Generic 2] [DIMENSION FP8 Issue 3.8]	AIN	Y
Manual-In [System 85, Generic 2] [DIMENSION FP8 Issue 3.8]	MIN	Y
Aux-Work [System 85, Generic 2] [DIMENSION FP8 Issue 3.8]	AUX	Y
Staff [System 85, Generic 2] [DIMENSION FP8 Issue 3.8]	STAF	Y
Repeat City of Origin [System 85, Generic 2] [DIMENSION FP8 Issue 3.8]	CITY	N
Call Management System Stroke [System 85, Generic 2] [DIMENSION FP8 Issue 3.8]	CMS	N
Terminal Busy [System 85, Generic 2] [DIMENSION FP8 Issue 3.8]	BUSY	N
Automatic Message Waiting	AMW	N
Abbreviated Dialing List—A list access [System 85, Generic 2]	ALST	N

Table C-1. Continued

Feature Description	Feature Name	Change
System Abbreviated Dialing List—access [System 85, Generic 2]	SLST	N
Abbreviated Dialing List—B List access [System 85, Generic 2]	BLST	N
Terminal Busy [System 85 R2V3/4, Generic 2]	BUSY	N
Recall	RCLL	Y
Suppression [System 85 R2V3/4, Generic 2]	SUPP	N
Wait for Principal [for PC DCP terminals only System 85 R2V4, Generic 2]	WFPR	N
Hold Feature [DIMENSION FP8]	HDFT	N
Speed Calling Select [DIMENSION FP8]	SPC	N
Malicious Call Trace [DIMENSION FP8 Issue 3.8]	MCT	N
Malicious Call Trace [System 85 R2V4, Generic 2]	MCTE	N

Table C-2. Terminal Retrofitting for System 85 Releases

Terminal	R2V2	R2V3	R2V4
7401d	7403d	7403d	7403d
7401p	7405d	7405d	7405d
7406db	7405d	7405d	7406d
7406bn	7405d	7405d	7406d
7406pn	7405d	7405d	7406d
7406dc		7405d*	7405d*
7406bi		7405d*	7405d*
7406pi		7405d*	7405d*
7407p	7407d	7407d	7407d
7410d	7403d	7403d	7403d
7410p	7403d	7403d	7403d
7434d	7405d	7405d	7405d
7444d	7405d**	7405d**	7434d
PCDCP	PT510	PT510	PCDCP
CallMaster	7407d	7407d	CallMaster
ects10	7203L	7203L	7203L
ects20	7205L	7205L	7205L
ects30	7205L	7205L	7205L

* with display module

** Note, when the 7444d is administered as a 7405d, only 10 call appearance buttons may be used.

APPENDIX D. DIAL TONE TRANSACTIONS AND REPORTS

This appendix describes a group of TCM commands and reports designed specifically for use in a precut environment. The precut environment and how it relates to a large switch is discussed, as well as DEFINITY Manager IV improvements for the precut situation.

The Precut Environment

"Precut" refers to the time period from when the switch arrives at the customer site until the time the switch is "cut," that is, prior to the time when users are making and receiving voice and/or data calls through the switch. Typically, this is the time when massive station changes need to be made to the original customer order. Because of the volume of changes, dial tone is provided first, so that the installers can verify that the wiring and cross-connects have been done correctly. Other features are added to the switch at a later time. Changes are made to DEFINITY Manager IV, working sets are verified, and circuit packs are swapped. In short, "precut" is a time when there is a great deal of activity to meet the customer deadline; changes to the switch are being administered around the clock.

As a result of massive changes and on-site troubleshooting that occur in a precut environment, user needs in a precut situation are unique. During precut, changes must be implemented quickly; the DEFINITY Manager IV database and the switch must be in synchronization.

In order to meet unique user needs during precut, a set of TCM transactions have been developed to provide dial tone in a more expedient manner. The dial tone objects for these transactions are: **analog-dialtone**, **nonanalog-dialtone**, and **sls-dialtone**. In addition to these transactions, four TCM reports are provided. These reports list circuit information and extension to Equipment Line Location (ELL) assignments. The reports include two DEFINITY Manager IV Database Reports and two Switch Reports. Used in conjunction with the dial tone transactions, these reports aid in implementing changes and synchronizing data during precut.

Precut User Type

The dial tone transactions omit some features and datachecks available in regular TCM transactions. The DEFINITY Manager IV Database and Switch Reports require connection to the switch for longer periods of time than most DEFINITY Manager IV transactions. Because of these differences, any user requiring access to dial tone transactions and reports must be defined with a user type of "precut."

If several users need access to the dial tone transactions and reports, it is recommended that multiple logins with "precut" permission be created for the duration of precut activity and then be removed.

Users with a "precut" and "tcm" user type have access to all TCM commands, as well as the dial tone transactions and reports.

Dial Tone Transactions

The dial tone transactions provide dial tone to analog and non-analog terminals in a more expedient manner than the TCM extension and terminal transactions. This is accomplished in several ways:

- Only data needed to provide dial tone is requested on the input screen.
- Standard terminal configuration values are defaulted.

- Datachecks are stripped down to the essentials.
- No spare search on extension or ELLs is available.
- On the product download side, only those procedures (procs) which are required to provide dial tone are administered to the switch.
- Only one pending record is created for the entire dial tone transaction.

The dial tone transactions appear under the TCM administration, database-administration, and product-administration areas. Under the administration area, these transactions can be run in both immediate and service request modes.

Dial Tone Reports

Along with the dial tone transactions, four reports have been developed: Two DEFINITY Manager IV Database Reports, which display data directly from the DEFINITY Manager IV database and the two Switch Reports, which display data directly from the switch. Because of the precut situation, swapping circuit packs or updating the product (without immediately updating the DEFINITY Manager IV database) can cause the data in the switch and the DEFINITY Manager IV database to be unsynchronized. These reports can be used to keep the data synchronized, as well as find discrepancies that need correction.

The following reports are discussed later in this chapter:

- DEFINITY Manager IV Database: DB Circuit Pack Report
- DEFINITY Manager IV Database: DB Extension ELL Report
- Switch: PBX Circuit Pack Report
- Switch: PBX Extension ELL Report

These reports are presented in the same format as the TCM reports in Chapter 9, "TCM Reports". Refer to this chapter for information about producing reports and the format conventions used in the Report Directory.

ANALOG-DIALTONE TRANSACTION

VERBS:

add
display
remove

COMMANDS:

analog-dialtone add

PURPOSE:

- Adds dial tone to an analog voice terminal. It is designed to expedite precut changes by providing administration of only the fields required to put the extension in a working state. These fields include: Equipment Line Location (ELL), Class of Service (COS), and Analog Type.

PREREQUISITES:

- Use **carrier add** in the admin or database-admin areas to add a carrier to the system, and to add an analog circuit pack to the carrier. Or if the carrier already exists, use **pack add** to add the pack to the carrier. Use **carrier-parameters** in the product-admin area to enter data in the switch database.
- Define the first digit of the extension number using **first-digit change**.
- Use **number-group add** to open a number group that includes the extension number.
- Use **class-of-service add** to define a valid Class of Service (COS) for the extension number.

CAUTION:

- You cannot administer optional extension features, user information, Abbreviated Dialing capabilities, or set attributes using this command. If you need to administer any of these features immediately, use **extension add** instead.
- The extension number and ELL must be specified by the user. If you want DEFINITY Manager IV to pick spare extensions or ELLs, use the extension:add transaction.

Notes:

- This transaction consists of only one screen. Only the data needed to assign dial tone is provided on the screen.

analog-dialtone display

PURPOSE:

- Displays the following information for an analog terminal: extension number, Class of Service (COS), and Analog Type.

CAUTION:

- Should only be performed on extensions which have been added using **analog-dialtone add**.

analog-dialtone remove

PURPOSE:

- Removes dial tone capability from an analog terminal.

CAUTION:

- Should only be performed on extensions which have been added using **analog-dialtone add**.

PREREQUISITES:

- Before removing dial tone, use **analog-dialtone display** to view data.

Notes:

- The recent disconnect interval is defaulted to **y**. The default can be overwritten if the extension should not be assigned a recent disconnect interval.
- The recent disconnect interval information is not stored in the database. A recent disconnect interval can be displayed directly from the product using **recent-disconnect display** in the administration or product administration areas.

NONANALOG-DIALTONE TRANSACTION

VERBS:

add
display
remove

COMMANDS:

nonanalog-dialtone add

PURPOSE:

- Adds dial tone to a non-analog extension and its associated multifunction voice terminal in a single transaction. (This means you only have to use one command to administer dial tone to non-analog extensions and terminals.) It is designed to expedite precut changes by providing administration of only the fields required to put the extension in a working state. These fields include: Equipment Line Location (ELL), Class of Service (COS), set type, origination preference, termination preference, and up to three call appearance buttons.

PREREQUISITES:

- Use **carrier add** to add a carrier to the system and an appropriate circuit pack to the carrier. If the carrier has already been added, use **pack add** to add the pack.
- Define the first digit of the extension number using **first-digit change**.
- Use **number-group add** to open a number group that includes the extension number.
- Use **class-of-service add** to define a valid Class of Service (COS) for the extension number.

CAUTIONS:

- You cannot administer add-on modules, terminal attributes, Abbreviated Dial capabilities, default terminal dialing, or other button assignments using this command. If you need to administer any of these features immediately, use the **terminal** transaction (Generic 2), or the appropriate terminal-type object:verb transaction (such as **12-button add**) for System 85.
- You cannot administer extension features or user information using this command. If you need to administer these features immediately use **extension add** instead.

Notes:

- This transaction provides only one screen. Only the data needed to assign dial tone is provided.
- Originating preference is defaulted to 2.
- Terminating preference is defaulted to 0.
- Attributes of call buttons are defaulted.

nonanalog-dialtone display

PURPOSE:

- Displays the following for non-analog extension and terminals: extension number, Equipment Location Line (ELL), Class of Service (COS), set type, originating preference, termination preference, and up to three call appearance buttons.

CAUTION:

- Should only be performed on extensions added using **nonanalog-dialtone add**.

nonanalog-dialtone remove

PURPOSE:

- Removes dial tone capabilities from a non-analog extension and terminal in a single transaction.

PREREQUISITE:

- Before removing dial tone use **nonanalog-dialtone display** to view data.

CAUTION:

- Should only be performed on extensions added using **nonanalog-dialtone add**.

Notes:

- The recent disconnect interval is defaulted to **y**. The default can be overwritten if the extension should not be assigned a recent disconnect interval.
- The recent disconnect interval information is not stored in the database. A recent disconnect interval can be displayed directly from the product using recent-disconnect display in the administration or product administration areas.

SLS-DIALTONE TRANSACTION

VERBS:

add
display
remove

COMMANDS:

sls-dialtone add

PURPOSES:

- Adds dial tone capabilities to straight line set (SLS) in a single transaction.
- Designed to expedite precut changes by providing administration of only the fields required to put the SLS in a working state. These fields include: Equipment Line Location (ELL), Class of Service (COS), and Analog Type.
- Originating and terminating preference, as well as attributes of its call appearance button, are automatically assigned and cannot be changed.

PREREQUISITES:

- Use **carrier add** to add a carrier to the system and an appropriate circuit pack to the carrier. If the carrier already exists, use **pack add** to add the pack.
- Define the first digit of the extension number using **first-digit change**.
- Use **number-group add** to open a number group that includes the extension number.
- Use **class-of-service add** to define a valid Class of Service (COS) for the extension number.

Note:

- This transaction provides only one screen. Only the data needed to assign dial tone is provided.

sls-dialtone display

PURPOSE:

- Displays the following for straight line sets: extension number, Equipment Location Line (ELL), Class of Service (COS), Analog Type, origination preference, termination preference, and a call appearance button.

CAUTION:

- Should only be performed on extensions added using **sls-dialtone add**.

sls-dialtone remove

PURPOSE:

- Removes dial tone capabilities from a straight line set in a single transaction.

PREREQUISITE:

- Before removing dial tone use **sls-dialtone display** to view data.

CAUTION:

- Should only be performed on extensions added using **sls-dialtone add**.

Notes:

- The recent disconnect interval is defaulted to **y**. The default can be overwritten if the extension should not be assigned a recent disconnect interval.
- The recent disconnect interval information is not stored in the database. A recent disconnect interval can be displayed directly from the product using recent-disconnect display in the administration or product administration areas.

DEFINITY MANAGER IV DATABASE: DB CIRCUIT PACK REPORT

PATH: tcm report-admin db-circuit-pack report

PURPOSE: This report collects data directly from the database. It lists the following for a specified module: Equipment Line Locations (ELLS), pack type, and the extension's state (available, working, or reserved).

The format for this report is the same as the pbx-circuit-pack Switch Report and can be used to identify database/switch synchronization problems. The output can be displayed on the screen or sent to a printer.

SELECTION

OPTION: A module number.

SORT

ORDER: Output is arranged by circuit pack type in ascending order.

SAMPLE

OUTPUT:

PACK	EQUIP-LOC	STATE
----	-----	-----
sn231	0/0/3/21/1	w
sn231	0/0/3/21/2	w
sn231	0/0/3/21/3	w
sn233	0/0/2/14/0	w
sn233	0/0/2/14/1	w
sn233	0/0/2/14/2	a
sn233	0/0/2/14/3	a
sn233	0/0/2/21/0	w
sn233	0/0/2/21/1	a
sn233	0/0/2/21/2	a
sn233	0/0/2/21/3	a
sn233	0/0/3/07/0	w
sn233	0/0/3/07/1	a
sn233	0/0/3/07/2	a
sn233	0/0/3/07/3	a

DEFINITY MANAGER IV DATABASE: DB EXTENSION ELL REPORT

PATH: tcm report-admin db-extension-ell-report

PURPOSE: This report collects data from the database. It lists Equipment Line Locations (ELLS) for extension numbers. For non-analog extensions, the ELL is that of the home set for the extension.

The format for this report is the same as the pbx-extension-ell Switch Report and can be used to identify database/switch synchronization problems. The output can be displayed or sent to a printer.

SELECTION OPTION A range of extension numbers.

SORT ORDER Output is arranged in ascending order by extension number.

SAMPLE OUTPUT:

Extension	ELL
1000	00/0/1/11/0
1001	00/0/1/12/1
1002	03/0/2/13/4
1003	02/2/2/02/5
1004	00/1/1/11/0
1005	01/0/2/09/1
1006	01/2/2/14/6
1007	07/0/1/13/3
1008	06/0/1/04/2
1009	03/2/2/04/1

SWITCH: PBX CIRCUIT PACK REPORT

PATH: tcm report-admin pbx-circuit-pack report

PURPOSE: This report lists (directly from the switch) the following for a specified module: equipment location, pack type and the extension's state (available, working, reserved).

The format for this report is the same as the db-circuit-pack DEFINITY Manager IV Database Report and can be used to identify database/switch synchronization problems. It can also be used to find available equipment locations when using the dial tone transactions. Output can be displayed on the screen or sent to a printer.

SELECTION

OPTION: A module number.

SORT

ORDER: Output is arranged by circuit pack in ascending order.

SAMPLE

OUTPUT:

PACK	EQUIP-LOC	STATE
----	-----	-----
sn231	0/0/3/21/1	w
sn231	0/0/3/21/2	w
sn231	0/0/3/21/3	w
sn233	0/0/2/14/0	w
sn233	0/0/2/14/1	w
sn233	0/0/2/14/2	a
sn233	0/0/2/14/3	a
sn233	0/0/2/21/0	w
sn233	0/0/2/21/1	a
sn233	0/0/2/21/2	a
sn233	0/0/2/21/3	a
sn233	0/0/3/07/0	w
sn233	0/0/3/07/1	a
sn233	0/0/3/07/2	a
sn233	0/0/3/07/3	a

SWITCH: PBX EXTENSION ELL REPORT

PATH: tcm report-admin pbx-extension-ell report

PURPOSE: This report collects data directly from switch. It lists the Equipment Line Locations (ELLS) for assigned extension numbers. For non-analog extensions, the equipment location is that of the home set of the extension. This report has the same format as the db-extension-ell report and can be used to resolve database/switch synchronization problems. This report can also be used to find available extensions when using the dial tone transactions. Output can be displayed or sent to a printer.

SELECTION

OPTION: A range of up to one hundred extension numbers.

SORT

ORDER: Output is arranged in ascending numerical order by extension number.

SAMPLE

OUTPUT:

Extension	ELL
1000	00/0/1/11/0
1001	00/0/1/12/1
1002	03/0/2/13/4
1003	02/2/2/02/5
1004	00/1/1/11/0
1005	01/0/2/09/1
1006	01/2/2/14/6
1007	07/0/1/13/3
1008	06/0/1/04/2
1009	00/0/1/12/1

APPENDIX E. TCM COMMAND AND PROC MAPPINGS

The following command-to-proc and proc-to-command mappings are provided to help interpret error messages and results files. It also provides a cross-reference for users who are familiar with using procs to administer DEFINITY Generic 2 and System 85.

It is important to note that there is not always a one-to-one relationship between Manager IV commands and procs. Manager IV simplifies switch administration by combining several procs into one transaction command. Sometimes, one proc may be represented by more than one Manager IV command. Because of this, it is possible for a Manager IV transaction to be partially downloaded to the switch before it fails. In other words, if a transaction translates into five procs, three of those may download successfully, and the other two may fail. The results file or error message sometimes provides details on which portion of a transaction successfully downloaded and which failed.

Users must determine the best way to correct the error so that the Manager IV database and the switch translations remain synchronized. If users are working with service requests, there are several commands they can use to detect and correct these errors. See *Getting Started with DEFINITY® Manager IV* for more information.

The objects in the command-to-proc tables are presented in alphabetical order. For each object, proc, word and field numbers are provided and are arranged in ascending order by proc number, then by word number, and finally by field number. Screen fields are listed for each object and each proc-word-field combination. The "Notes" column explains how Manager IV field entries map to proc entries. In most cases Manager IV maps mnemonic entries such as, "y" for "yes" to a corresponding digit such as, "0" or "1" in the proc.

The proc-to-command listing is in numerical order by proc number.

TCM COMMAND-TO-PROC MAPPINGS

abbreviated-dial-lists [System 85 R2V2-R2V3]

Screen Field	Proc	Word	Field	Notes
Extension Number/Group List Number	059	1	1	
List Type	059	1	2	group maps to 0; a maps to 1; b maps to 2; system maps to 3
System List Access	059	1	4	Only if List Type = 3
List Size	059	1	3	
Controller of Group List	059	1	5	n maps to 0; y maps to 1
Group List No.	059	1	6	Only if List Type = g

abbreviated-dial-lists [Generic 2, System 85 R2V4]

Screen Field	Proc	Word	Field	Notes
ELL- Module	059	1	1	
ELL- Cabinet	059	1	2	
ELL- Carrier	059	1	3	
ELL- Slot	059	1	4	
ELL- Circuit	059	1	5	
List Type (A and B)	059	1	6	g maps to 0 p maps to 1 or 2
System List Access	059	1	6	y maps to 3
Group List No.	059	1	7	
List Size	059	1	8	
Controller of Group List	059	1	9	
System List Access	059	1	10	

acd-allocation

[Generic 2.2 only]

Screen Field	Proc	Word	Field	Notes
Split Number	026	5	1	
CMS Measured?	026	5	2	
Number of Members Assigned to This Split	026	5	3	
Number of Members That Can Be Added to This Split	026	5	4	
Highest Member Number Assigned in This Split	026	5	5	
Total Number of Members Assigned to All Splits	026	5	6	

acd-grp [System 85 R2V3-V4 and Generic 2]/ucd-grp [System 85 R2V2, DIMENSION]

Screen Field	Proc	Word	Field	Notes
ACD Split No.	026	1,2	1	
Split Size	026	1	2	Generic 2.1, System 85 R2V2-R2V4, DIMENSION
ICI Message Number	026	1	2	
Queuing Trunk Group	026	1	3	
Outflow/Queue Level	026	1	4	
Board Index	026	1	5	
Circuit Index	026	1	6	
Inflow Level	026	1	7	
Hunt Type	026	1	8	
Split Type	026	1	9	
Machine Number	026	1	10	
Supervisor Extension No.	026	2	2	
Queue Directory No.	026	2	3	
Priority Extension No.	026	2	4	
Multiple Call Handling	026	2	5	
Auto Available	026	2	6	
Forced Entry?	026	2	7	Generic 2.2 only
CMS Measurement	026	2	8	Generic 2.2 only

acd-members

Screen Field	Proc	Word	Field	Notes
ACD Split No.	026	3	1	
Member No.	026	3	2	
Member Extn	026	3	3	

acd-status-lamps

Screen Field	Proc	Word	Field	Notes
Display Unit Equip. Location	060	1	1-5	
Column No.	060	1	6	
ACD Grp	060	1	7	System 85 R2V2-R2V4, Generic 2.1
Extension No	060	1	7	Generic 2.2 only
Member No.	060	1	8	Generic 2.1, System 85 R2V2-R2V4

agent-skills

Screen Field	Proc	Word	Field	Notes
Vector Directory Number	031	2	1	
Primary Skill Number	031	2	2	
Secondary Skill Number	031	2	3	
Tertiary Skill Number	031	2	4	

analog-dialtone [Generic 2, System 85]

Screen Field	Proc	Word	Field	Notes
Extension	000	1	1	
Equip. Location	000	1	2-6	
Class of Service	000	1	7	
Analog Type	000	1	8	

automatic-dialing [Generic 2, System 85]

Screen Field	Proc	Word	Field	Notes
Equip. Location	059	4	1-5	
Device Type	059	4	6	
Button Number	059	4	7	

associated-extension

Screen Field	Proc	Word	Field	Notes
Assoc. Extn. No.	001		2	
Name Display	012	2	1-11	
Primary Extn. No.	001		1	
Copy Name from Extension	012	1	5	
Extn Name Shared From	012	1	6	
Priority Assoc. Extn.	001	1	3	DIMENSION only
Partition Group	270	1	3	

attd-extension-partition [Generic 2, System 85 R2V4]

Screen Field	Proc	Word	Field	Notes
Extension Partition	270	1	1	Tenant Services must be on
Attendant Partition	270	1	2	

attd-part-attributes [System 85 R2V4]

Screen Field	Proc	Word	Field	Notes
Attendant Partition	270	2	1	If overflow type not 0 0 maps to disabled
Overflow Partition	270	2	2	
Overflow Type	270	2	3	
Unattended Console	270	3	2	
Controlled Rest. Grps.	270	2	4	

auth-code

Screen Field	Proc	Word	Field	Notes
Auth Code	282	1	1	
Facility Restriction Level (FRL)	282	1	2	
Network Access	282	1	3	

bearer-capability-cos [Generic 2]

Screen Field	Proc	Word	Field	Notes
Bearer Capability Class of Service	014	1	1	Valid entries are 0-255
BEARER CAPABILITY CLASS ACTIONS				For all valid values: 0 = Circuit Switched 1 = Mode 2/Analog Modem Pool 2 = Block the Call
Voice	014	1	4	0-2
Mode 1	014	1	7	0-2
Mode 2	014	1	8	0-2
Mode 3	014	1	9	0-2
Mode 0	014	1	6	0-2
Voice Grade Data	014	1	5	0-2
Unknown Digital	014	1	10	0-2
Unknown Analog	014	1	11	0-2
Mode 3/2	014	1	12	0-2
X.25	014	1	13	0-2
DATA RATES				For all valid values: "n" maps to "0" "y" maps to "1"
64000 bps	014	2	2	Valid entries are "y", "n"
56000 bps	014	2	3	"y", "n"
19200 bps	014	2	4	"y", "n"
9600 bps	014	2	5	"y", "n"
4800 bps	014	2	6	"y", "n"
2400 bps	014	2	7	"y", "n"
1200 bps	014	2	8	"y", "n"
300 bps	014	2	9	"y", "n"
low bps	014	2	10	"y", "n"
FACILITY ATTRIBUTES				
Transport Mode	014	1	2	Valid entries are "c", "p", "b" "c" maps to "0" "p" maps to "1" "b" maps to "2"
Channel Type	014	1	3	"r", "c"; "r" maps to "0" "c" maps to "1"
Async/Sync	014	1	11	"a", "s"; "a" maps to "0" "s" maps to "1"
Duplex	014	1	12	"f", "h"; "f" maps to "0" "h" maps to "1"
Clock	014	1	13	"e", "i"; "e" maps to "0" "i" maps to "1"

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bearer-capability-cos (Continued)

Screen Field	Proc	Word	Field	Notes
DEFAULT ATTRIBUTES				
Default Bearer Capability Class	014	1	16	Valid entries are 0-9 0 = voice 1 = mode 1 2 = mode 2 3 = mode 3 4 = mode 0 5 = voice grade data 6 = unknown digital 7 = unknown analog 8 = mode 3/2 9 = X.25
Default Data Rate	014	2	14	64000 maps to 9 56000 maps to 8 19200 maps to 7 9600 maps to 6 4800 maps to 5 2400 maps to 4 1200 maps to 3 300 maps to 2 low maps to 1 none maps to 0
Default Transport Mode	014	1	14	Valid entries are "c", "p"; "c" maps to "0" "p" maps to "1"
Default Channel Type	014	1	15	Valid entries are "r", "c"; "r" maps to "0" "c" maps to "1"

blf-dxs-group-keys [Generic 2]

Screen Field	Proc	Word	Field	Notes
Console Number	201	1		

btn-template [Generic 2]
 [Product-admin only]

Screen Field	Proc	Word	Field	Notes
Set Type Encode	050	2	1	Valid entries are 1-200
Device Type	050	2	2	0-3
Button Number	050	2	3	1-62, 1-24, 1-20, 1-7; the range of valid values depends on the entered device type
Button Type	050	2	5	u; u -> 0 n; n -> 1 p; p -> 2
Number of Lamps	050	2	4	0-2

call-coverage-path [Generic 2, System 85, DIMENSION FP8 3.8]

Screen Field	Proc	Word	Field	Notes
Call Coverage Group	011	1	1	
Call Coverage Group Criteria:				
Extension Active	011	1	2	
Extension Busy	011	1	3	
All	011	1	4	
D/A (Don't Answer)	011	1	5	
Principal D/A Interval	011	1	6	
Coverage Point Indicator	011	1	7	DIM FP8, 3.8: N/Y maps to 0/1 Sys85 R2V4 without Call Vectoring: n/y maps to 0/1 Sys85 R2V4 with Call Vectoring: n/y maps to 0/2
Coverage Point	011	1	8	Sys85
Coverage Point Extension or ACD Split	011	1	9	Sys85
First Point	011	1	8	DIM FP8, 3.8
Second Point	011	1	9	DIM FP8, 3.8
Third Point	011	1	10	DIM FP8, 3.8

call-vectoring

Screen Field	Proc	Word	Field	Notes
Vector Directory Number	031	1	1	
Vector Number	031	1	2	
CMS Measured	031	1	3	
Console Message	031	1	4-7	
Return Call Indicator	031	1	8	
Display Override	031	1	9	

class-of-service [System 85, Generic 2]

Screen Field	Proc	Word	Field	Notes
Class of Service	010	1,2,3,4	1	
Automatic Callback Calling	010	1	3	Sys85, G2; x=1 enabled, x=0 not enabled
Call Forward-Busy Don't Answer	010	1	4	x = 1 enabled
Call Forward-Don't Answer	010	1	4	x = 2 enabled
Call Forward-Follow Me	010	1	5	x = 1 enabled; Sys85, G2
Call Number Display	010	1	7	x = 1 enabled
Priority Calling	010	1	8	x = 1 enabled; Sys85, G2
Call Waiting	010	1	9	x = 1 enabled; Sys85, G2
Override	010	1	10	x = 1 enabled; Sys85, G2
Priority Paging/Call Park	010	1	13	x = 1 enabled; Sys85, G2
Transfer/Conf-Three Way	010	1	14	x = 1 enabled
Touch Tone	010	1	15	x = 1 touch tone; Sys85, G2
Timed Recall Exempt	010	1	16	Sys85, G2
ACD(UCD) Member	010	1	20	x = 1 a member Sys85, G2
Stop Hunt	010	1	21	x = 1 calls stop ringing forwarded system; Sys85, G2
Send All Calls	010	1	23	x = 1 enabled; Sys85, G2
Leave Word Calling-Orig	010	2	2	x = 1 enabled; Sys85, G2
Leave Word Calling-Term	010	2	3	x = 1 enabled; Sys85, G2
Call Forward-Off Net	010	2	4	x = 1 enabled; Sys85, G2
SMDR Account Code Req.	010	2	5	x = 1 account code required; Sys85 R2V3-R2V4, G2
Malicious Call Trace Control	010	2	6	x = 1 can be used; Sys85 R2V4, G2
Call Hold	010	1	6	x = 1 enabled
Ring Ping Immediate	010	1	17	x = 0 enabled; Sys85 R2V4 and Generic 2
ACD Queue Status	010	1	19	x = 1 enabled; Sys85 R2V4 and Generic 2
Data Protection	010	3	13	Sys85, Generic 2
Maximum Precedence Level	010	4	2	If AUTOVON is administered
Bearer Capability	010	4	3	Sys85 R2V4 only
ISDN Routing	010	4	3	Generic 2 only
ISDN Routing	010	4	4	Sys85 R2V4 only

class-of-service [System 85 R2V2-R2V4]

Screen Field	Proc	Word	Field	Notes
Automatic Callback-Calling	010	1	3	Sys85
Call Forward-All	010	1	5	Sys85
Call Waiting-Orig	010	1	8	Sys85
Call Waiting-Term	010	1	9	Sys85
Exec Override	010	1	10	Sys85
Priority Paging	010	1	13	Sys85
Timed Recall Inactive	010	1	16	Sys85
DDC Member	010	1	20	Sys85
CMS/UCD Agent Override	010	1	23	Sys85
Misc Trunk Restriction Group 1	010	3	2	
Misc Trunk Restriction Group 2	010	3	3	
Misc Trunk Restriction Group 3	010	3	4	
Misc Trunk Restriction Group 4	010	3	5	
Misc Trunk Restriction Group 5	010	3	6	
Misc Trunk Restriction Group 6	010	3	7	
Misc Trunk Restriction Group 7	010	3	8	
Misc Trunk Restriction Group 8	010	3	9	
All	010	3	10	
APLT Off Net	010	3	11	
Code Restriction Level	010	3	12	
Data Protection	010	3	13	
DID/APLT Restriction	010	3	14	
Terminal to Terminal	010	3	15	
Inward	010	3	16	
Manual Line Termination	010	3	17	
Origination	010	3	18	
Outward	010	3	19	
Termination	010	3	20	
Toll Restricted	010	3	21	
Facility Restriction Level	010	3	23	

class-of-service [DIMENSION FP8]

Screen Field	Proc	Word	Field	Notes
Misc Trunk Restriction Group 1	010	2	2	
Misc Trunk Restriction Group 2	010	2	3	
Misc Trunk Restriction Group 3	010	2	4	
Misc Trunk Restriction Group 4	010	2	5	
Misc Trunk Restriction Group 5	010	2	6	
Misc Trunk Restriction Group 6	010	2	7	
Misc Trunk Restriction Group 7	010	2	8	
Misc Trunk Restriction Group 8	010	2	9	
All	010	2	10	
APLT Off Net	010	2	11	
Code Restriction Level	010	2	12	
Data Protection	010	2	13	
DID/APLT Restriction	010	2	14	
Terminal to Terminal	010	2	15	
Inward	010	2	16	
Manual Line Termination	010	2	17	
Origination	010	2	18	
Outward	010	2	19	
Termination	010	2	20	
Toll Restricted	010	2	21	
ARS Toll Restricted	010	2	22	Generic 2.1, System 85
Facility Restriction Level	010	2	23	
WCR Toll Restricted	010	3	22	Generic 2.2 only
Call Forward-Off Net	010	3	2	
Leave Word Calling-Orig	010	3	3	
Leave Word Calling-Term	010	3	4	
Send All Calls	010	3	5	
Data Port	010	3	6	

cms-extension [System 85 R2V3, R2V4, Generic 2]

Screen Field	Proc	Word	Field	Notes
CMS Extension No.	026	3	3	Field 1 = 0; Generic 2.2
	028	1	2	Generic 2.1, System 85 R2V3-R2V4

console-equipment [DIMENSION FP8, System 85, Generic 2]

Screen Field	Proc	Word	Field	Notes
Console Number	210	1	1	
Attendant Interface Equip. Location	210	1	2-6	
Data Channel Equip. Loc	210	1	7-9	
Listed Directory Number	210	2	4	Sys85 R2V4, G2
NPA-NXX Designation	210	2	5	Sys85 R2V4, G2

console-features [DIMENSION FP8, System 85, Generic 2]

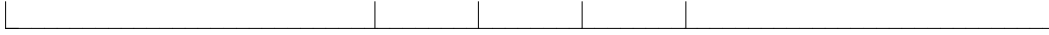
Screen Field	Proc	Word	Field	Notes
Console Type	200	1	1	
Call Waiting Level	200	1	11	
Class of Service Display	200	1	2	
Direct Trk Grp Select Feature	200	1	3	
Don't Answer Timing	200	1	4	
Extended Direct Extn Select Feature	200	1	10	
Facility Restriction Level	200	1	12	
Interposition Calling	200	1	5	
Privacy Feature	200	1	7	
Lockout Feature	200	1	6	
Trunk Test Feature	200	1	8	
Two Party Hold Feature	200	1	9	

console-messages

Screen Field	Proc	Word	Field	Notes
Trunk Group	204	1	1	DIM FP8; range: 18-99 Sys85 R2V2-V3; 18-255 Sys85 R2V4; 18-999
Call Type	204	1	1	DIM FP8; (1-14) maps to (181-184, 190-200) Sys85 R2V2-V3; (1-13) maps to (281-284, 290-299) 14 maps to 320; (15-23) maps to (300-308, 285-289) DIM FP8 Iss 3; (1-13) maps to (281-284, 290-299); 14 maps to 300 Sys85 R2V4; (1001-1999) maps to itself (5-13) maps to (2290-2299) 14 maps to 2320; (15-23) maps to (2300-2308)
ICI Indicator	204	1	2	DIM FP8 only
CAS Branch Number	204	1	2	Used only if Call Type is 14
Message Number	204	1	2	Used only if Trunk Group in Field 1 or if Call Type does not indicate a VDN (see below) or a CAS Branch (14)
Alpha Character: 1 2 3 4	204 204 204 204	1 1 1 1	3 4 5 6	Not used with ICI Indicator. For fields 3-6: (0-9, A-Z) maps to (0-37); blank maps to "-" Either all fields (3-6) are blank, or all are non-blank.
Listed Directory Number	204	1	7	Used only with Call Types as shown: Sys85 R2V3; (1-4, 24-28) maps to (281-284, 285-289) Sys85 R2V4; (1001-1999) maps to itself

control-console [System 85 R2V4, Generic 2]

Screen Field	Proc	Word	Field	Notes
Console Number	210	2	1	
Attendant Partition	210	2	2	
Control Console	210	2	3	y/n maps to 1/0



control-keys [System 85, Generic 2]

Screen Field	Proc	Word	Field	Notes
Row	203	1	1	1-3 rows, each has 6 btns
Button 1	203	1	2	
Button 2	203	1	3	
Button 3	203	1	4	
Button 4	203	1	5	
Button 5	203	1	6	
Button 6	203	1	7	
Button 7	203	1	8	

coverage-module [Generic 2, System 85]

Screen Field	Proc	Word	Field	Notes
	051	1		

custom-intercom-group [DIMENSION FP8]

Screen Field	Proc	Word	Field	Notes
Extension	021	1	1	Dimension FP8
Size	021	1	2	Dimension FP8
Controlling Extension	021	3	1	Dimension FP8
Extension	021	3	2	Dimension FP8

custom-intercom-entries [DIMENSION FP8]

Screen Field	Proc	Word	Field	Notes
Extension	021	2	1	Dimension FP8
Entry	021	2	3	Dimension FP8

data-module [Generic 2 only]

Screen Field	Proc	Word	Field	Notes
Account ID	-	-	-	(up to 15 characters)
Extension	000 052	1 1	1	000-99999
Set Type	051	1	6	pdm; pdm -> 1 tdm; tdm -> 2 dpd; dpd -> 3 adftc; adftc -> 5 eia; eia -> 7 udm; udm -> 7 User-defined types of up to 9 characters are also valid and map to Set Type Encodes 100-200
Equip. Loc. Module	051	1	1	Valid entries are 00-30 (Trad. Module)
Cabinet	051	1	2	0-7
Carrier	051	1	3	0-3
Slot	051	1	4	0-3, 5-8, 13-16, 18-21
Circuit	051	1	5	0-7
Module	051	1	1	00-30 (Universal/XE Module)
Cabinet	051	1	2	NULL
Carrier	051	1	3	A-E
Slot	051	1	4	0-20
Circuit	051	1	5	0-23
				Automatic selection of Equip. Loc. is also available
Locale	-	-	-	0-99
Module Type	-	-	-	u, t, x; (<i>u</i> for Universal, <i>x</i> for XE, <i>t</i> for Traditional)
Class of Service	000	1	7	1-30, 32-63
Bearer Capability COS	000	3	5	0-255
Hunt-To Extension	000	2	2	000-99999
Audible AMW	000	3	4	y, n; y -> 1, n -> 0
Terminal Dialing	051	1	13	y, n; y -> 1, n -> 0
Default Terminal Dialing	059	4	6,7	y, n; y -> 1, n -> 0

data-module (Continued) [Generic 2 only]

Screen Field	Proc	Word	Field	Notes
Terminal Alarming	051	1	15	y, n; y -> 1, n -> 0
Terminal Endpoint ID	051	1	16	0-63, 128
Service Profile ID	051	2	6	0-9999999999
DSC Messages	000	3	3	y, n; y -> 1, n -> 0
Second Port Extension	000 052	1 1	1	000-99999
Second Port Hunt-To Extension	000	2	2	000-99999
A List Type	059	1	6	p, g; p -> 1, g -> 1
Group No.	059	1	7	1-9999
Controller	059	1	9	y, n; y -> 1, n -> 0
List Size	059	1	8	5-95
B List Type	059	1	6	p g; p -> 2, g -> 2
Group No.	059	1	7	1-9999
Controller	059	1	9	y, n; y -> 1, n -> 0
List Size	059	1	8	5-95
System List Access	059	1	10	y, n; y -> 1, n -> 0
Keyboard Dialing	051	3	6	y, n; y -> 1, n -> 0
Configuration	051	3	7	y, n; y -> 1, n -> 0
Auto Answer	051	3	8	y, n; y -> 1, n -> 0
Permit Mismatch	051	3	9	y, n; y -> 1, n -> 0
Dial Echo	051	3	10	y, n; y -> 1, n -> 0
Answer Text	051	3	11	y, n; y -> 1, n -> 0
Disconnect Sequence	051	3	12	l, s; l -> 1, s -> 0
Connection Indicator	051	3	13	y, n; y -> 1, n -> 0
Parity	051	3	14	s; s -> 0 m; m -> 1 e; e -> 1 o; o -> 1
19200 bps	051	3	15	y, n; y -> 1, n -> 0
9600 bps	051	3	16	y, n; y -> 1, n -> 0
4800 bps	051	3	17	y, n; y -> 1, n -> 0
2400 bps	051	3	18	y, n; y -> 1, n -> 0
1200 bps	051	3	19	y, n; y -> 1, n -> 0
300 bps	051	3	20	y, n; y -> 1, n -> 0
Low Data Rate	051	3	21	y, n; y -> 1, n -> 0

dial-access-codes

Screen Field	Proc	Word	Field	Notes
ACD Agents Skills	350	2	2-5	Generic 2.2 only
Feature Name	350	2	1	Screen maps to encodes 101-104 for ERAS/SV
First Digit of DAC	350	2	2	
2nd and 3rd Digits of DAC	350	2	3,4	
4th Digit of DAC	350	2	5	Sys85 R2V4, G2
WCR Network 1 Nontoll Route	350	2	1	G2.2 only
WCR Network 1 Toll Route	350	2	1	G2.2 only
WCR Network 2 Access	350	2	1	G2.2 only
WCR Network 3 Access	350	2	1	G2.2 only
WCR Network 4 Access	350	2	1	G2.2 only
WCR Network 5 Access	350	2	1	G2.2 only
WCR Network 6 Access	350	2	1	G2.2 only
WCR Network 7 Access	350	2	1	G2.2 only
WCR Time of Day Plan Change	350	2	1	G2.2 only

direct-trk-grp-keys [DIMENSION FP8, System 85, Generic 2]

Screen Field	Proc	Word	Field	Notes
Dial Access Code	201	1	3-6	
Trk-Grp-Busy-Warn/Level	201	1	7	
Remote Dial Access Code	201	1	10-12	
Row	202	1	1	Range from 1 - 4
Column	202	1	2	Range from 1 - 4

dsc [System 85 R2V3, R2V4, Generic 2]

Screen Field	Proc	Word	Field	Notes
DSC On	360	1	1	
DSC Number	360	1	2	
ELL 1	360	1	3-7	
Ichan 1	360	1	8	
ELL 2	360	1	10-14	
Ichan 2	360	1	15	

dxs-extended [DIMENSION FP8, System 85, Generic 2]

Screen Field	Proc	Word	Field	Notes
Hundreds-Group-Thousandths Digit	201	2	1	
Hundreds-Group-Hundredth Digit	201	2	2	

ects-controller [DIMENSION FP8]

Screen Field	Proc	Word	Field	Notes
Ects Controller	060	1	1	Dimension FP8
Carrier	060	1	2	Dimension FP8
Slot	060	1	3	Dimension FP8
Circuit	060	1	4	Dimension FP8
Ects Controller	060	2	1	Dimension FP8

extension

Screen Field	Proc	Word	Field	Notes
Analog Type	000	1	8	System 85 only
AP No.	000	2	8 7	Sys85 R2 DIMENSION FP8 Iss. 3
AUDIX No.	000	2	10 9	Sys85 R2V2, R2V3, R2V4 DIMENSION FP8 Iss. 3
Aux ANI	000	2	3	y maps to 1; n maps to 0
Bearer Capability Class of Service	000	3	5	Generic 2
CCG No.	000	2	6	
Call Fwd Off-Net Toll	000	3	7	0 -> n, 1 -> y G2.2
Class of Service	000	1	7	
Control Restrict. Grp	000	2	5	
CPG No.	000	2	4	
Equip. Loc.:				
Module	000	1	2	
Cabinet	000	1	3	
Carrier	000	1	4	
Slot	000	1	5	
Circuit	000	1	6	
Extn. No.	000	1	1	
Extn. No. Copied	012	1	6	System 85 only
Extn. No. Shared	012	1	6	System 85 only
Hunts to	000	2	2	
LWC Destination	000	2	9	Sys85 R2V2, R2V3, R2V4 DIMENSION FP8 Iss. 3
Msg. Retrieval?	000	2	7	y maps to 1; n maps to 0 System 85
Name Display	012	2	1-11	System 85 only
Share/Copy Option	012	1	5	s maps to 1; c maps to 2 System 85
Universal Code Calling ID	000	3	6	
Call Fwd Off-Net Toll	000	3	7	G2.2 only
Extension Partition	000	4	3	System 85 R2V4 when Tenant Services active
NPA-NXX Designator	000	4	4	System 85 R2V4 when ISDN active
Extension	021	1	1	Dimension FP8

extension (Continued)

Screen Field	Proc	Word	Field	Notes
Custom Intercom Group Size	021	1	2	Dimension FP8
Custom Intercom Controlling Extension	021	3	1	Dimension FP8
Extension	021	3	2	Dimension FP8
Extension	023	1	1	Dimension FP8
Speed Calling Group Size	023	1	2	Dimension FP8
Speed Calling Controlling Extension	023	2	1	Dimension FP8
Extension	023	2	2	Dimension FP8

extension (if analog)/12-button/36-button/vds/bct/ects/pc-dcp/lcdt/pt510/idt/callmstr/cdt

The fields listed below are for System 85 only.

Screen Field	Proc	Word	Field	Notes
Controller	059	1	5	y/n maps to 1/0
Group List No.	059	1	1	
Group List Size	059	1	3	must populate field 1 with Group List No.
Personal List Size	059	1	3	
System List Access?	059	1	4	y/n maps to 1/0, must populate field 2

12-button/36-button/vds/bct/ects/pc-dcp/lcdt/idt/pt510/vds/callmstr/cdt

Screen Field	Proc	Word	Field	Notes
DTDM? (Sys85)	051	1	6	y maps to 5
Equip. Loc. (Sys85):				
Module	051	1	1	
Cabinet	051	1	2	
Carrier	051	1	3	
Slot	051	1	4	
Circuit	051	1	5	
Equip. Loc. DIMENSION:				
Module	051	1	4	
Cabinet	051	1	5	
Carrier	051	1	6	
Slot	051	1	7	
Circuit	051	1	8	
ECTS Controller				
Controller	051	1	1	
Slot	051	1	2	
Circuit	051	1	3	
Lock/Unlock? (Sys85)	051	1	12	y maps to 1; n to 0
LWC Retrieval?	051	1	14	System 85
Origination	051	1	10 12	System 85 DIMENSION
Set Type: 12-button	051	1	6-7	terminal = 7203h field 6 = 2 field 7 = 1 terminal = 7403d field 6 = 3 field 7 = 1

12-button/36-button/vds/bct/ects/pc-dcp/lcdt/idt/pt510/vds/callmstr/cdt
(Continued)

Screen Field	Proc	Word	Field	Notes
12-button (cont'd)	051	1	6-7	terminal = 7303s field 6 = 9 field 7 = 1
36-button				terminal = 7205h field 6 = 2 field 7 = 2
				terminal = 7405d field 6 = 3 field 7 = 2
				terminal = 7305s field 6 = 9 field 7 = 2
idt				terminal = 7407d field 6 = 3 field 7 = 2
bct				terminal = 515 bct field 6 = 7 field 7 = 1
pt510				terminal = pt510 field 6 = 11 field 7 = 2
vds				terminal = 7404d (VDS) field 6 = 12 field 7 = 3
lcdt				terminal = 7406d field 6 = 16 field 7 = 4
pc/dcp				terminal = pc/dcp field 6 = 17 field 7 = 2
ekt5 (DIMENSION)	051	1	10-11	field 10=1; field 11=5
ekt10 (DIMENSION)	051	1	10-11	field 10=1; field 11=10
ekt20 (DIMENSION)	051	1	10-11	field 10=1; field 11=20
ekt30 (DIMENSION)	051	1	10-11	field 10=1; field 11=30
ects 10 (Sys85)				terminal = 7203h field 6 = 2; field 7 = 1
ects 10 (Dim FP8)				field 10=2; field 11=10

12-button/36-button/vds/bct/ects/pc-dcp/lcdt/idt/pt510/vds/callmstr/idt/lcdt/pc-dcp/cdt
(Continued)

Screen Field	Proc	Word	Field	Notes
ects 20 (Sys85)				terminal = 7205h field 6=2; field 7=2
ects20 (Dim FP8)				field 10=2; field 11=20
ects 30 (Sys85)				terminal = 7205h field 6 = 2; field 7 = 2
ects30 (Dim FP8)				field 10=2; field 11=30
dss (DIMENSION)	051	1	9	y/n maps to 1/-
Term. Dialing?	051	1	13	y/n maps to 1/0
Termination	051	1	11 13	System 85 DIMENSION

12-button/36-button/vds/bct/ects/feature-module/coverage-module

Button Encode	Associated (No Prompt) Field	Proc	Word	Field	Notes
ACB		054	2	8 5	Sys85; maps to 6 DIMENSION; maps to 6
ACUT		054	1 1	9 6	Sys85; maps to 11 DIMENSION; maps to 11
ADX		054	1 2	9	Sys85; maps to 13 DIMENSION; maps to 13
	extn. no.	054	1	8	Sys85
AICM	intercom no.	056	1	2	Sys85 maps to field 1 = 0 field 10 = "--", field 11 = 1 DIMENSION: field 7 = "--", field 8 = 1
ATRF		054	1	9	Sys85; maps to 12
	extn. no.	054	1	8	Sys85
ATRF		054	1	6	DIMENSION map to 12
	extn. no.	054	1	5	DIMENSION
BUSY	set ID	055	1	8-12	Sys85; maps to ELL of signaled terminal
				5-7	DIMENSION
	device type	055	1	6	Sys85
	button no.	055	1	7	
				4	DIMENSION

12-button/36-button/vds/bct/ects/feature-module/coverage-module (Continued)

Button Encode	Associated (No Prompt) Field	Proc	Word	Field	Notes
CALL	extn. no.	052	1	8	Sys85
LD	call appear.	052	1	5 9	DIMENSION Sys85
	line type	052	1	10	2 is only valid for Sys85 R2V2, R2V3, R2V4
	alert type	052	1	6 11	DIMENSION
	home	052	1	7	DIMENSION
	alerting transfer	052	2	12 4	Sys85 Sys85
	orig. call	052	1	8	DIMENSION
	auto appearance	052	1	13 9	Sys85 DIMENSION
CFFM		054	2	8	Sys85; maps to 3
CFBD		054	2	8 5	Sys85 DIMENSION maps to 4
CMSG		054	4	8	Sys85; maps to 4
CONS		054	1	9 6	Sys85;maps to 20 DIM FP8, Iss.3; maps to 28
CPU		054	2	8 5	Sys85; maps to 7 DIMENSION; maps to 7
CVCB		054	1	9 6	Sys85; maps to 23 DIM FP8, Iss. 3; maps to 30
DATA (Sys85)	set ID	055	2	8-12	maps to ELL of DTDM terminal
	return flag	055	2	13	
DATE		054	4	8	Sys85; maps to 2
DEL		054	4	8	Sys85; maps to 6
DFTD	default terminal dialing				
DICM	intercom no.	056	1	2	maps to field 1 = 1, field 11 = "----"
	code	056	1	10 7	System 85 DIMENSION
EXCL		054	1	9	Sys85; maps to 8
	extn. no.	054	1	6 8	DIMENSION; maps to 8 Sys85

				5	DIMENSION
--	--	--	--	---	-----------

12-button/36-button/vds/bct/ects/feature-module/coverage-module (Continued)

Button Encode	Associated (No Prompt) Field	Proc	Word	Field	Notes
FUNC		059	3	8	maps to 13;Sys85 R2
HOLD		054	3	8	Sys85; maps to 0
		054	2	5	DIMENSION; maps to 0
INSP		054	4	8	Sys85; maps to 1
LWC		054	1	9 6	Sys85; maps to 22 DIM FP8 Iss 3; maps to 29
LWCC		054	2	8 5	Sys85; maps to 0 DIM FP8 Iss 3; maps to 9
LXD		054	2	8 5	Sys85; maps to 1 DIM FP8 Iss 3; maps to 8
MARK		059	3	8	Sys85; maps to 16
MICM	intercom no.	056	1	2 8	Sys85; maps to field 1 = 0, field 10 = "---", field 11 = 0 DIMENSION; maps to 0
MMWR	set ID	053	2	1-5 1-3	maps to ELL of signaling terminal DIMENSION
	module no.	053	2	6	Sys85
	button no.	053	2	7 4	Sys85 DIMENSION
MMWS	set ID	053	2	9-13 6-8	Sys85; maps to ELL of signaled terminal DIMENSION
	module No.	053	2	14	Sys85
	button No.	053	2	15 9	Sys85 DIMENSION
MSIG	set ID	053	1	8-12 5-7	Sys85; maps to ELL of signaled terminal DIMENSION
NORM		054	4	8	Sys85; maps to 0
OVER		054	2	8 5	Sys85; maps to 5 DIMENSION; maps to 5
PAUS		059	3	8	Sys85 R2; maps to 14
PC		054	2	8	maps to 2

12-button/36-button/vds/bct/ects/feature-module/coverage-module (Continued)

Button Encode	Associated (No Prompt) Field	Proc	Word	Field	Notes		
PCO	trk ELL Sys85: Module	057	1	8			
	Cabinet	057	1	9			
	Carrier	057	1	10			
	Slot	057	1	11			
	Circuit	057	1	12			
	alert type	057	1	13			
	trk ELL DIMENSION: Module	057	1	5			
	Cabinet	057	1	6			
	Carrier	057	1	7			
	Slot	057	1	8			
	Circuit	057	1	9			
	alert type	057	1	10			
	PROG		059	3		8	Sys85; maps to 7
	RCLL		054	1		9	maps to 27
RMSG		054	4	8	Sys85; maps to 3		
RTRN		054	4	8	Sys85; maps to 7		
SAC		054	1	9	Sys85; maps to 19 DIM FP8 Iss 3; maps to 27		
				6			
SLST	list item no.	059	3	8	Sys85 R2; maps to 6 Sys85 R2V2: 1-99; R2V3, V4: 1-9999		
		059	3	9			
STEP		054	4	8	Sys85; maps to 5		
SUPP		059	3	8	maps to 19		
TIMR		054	4	8	Sys85; maps to 8		
WAIT		059	3	8	Sys85; maps to 15		

The fields listed below are for System 85 R2V2-R2V4 only.

Button Encode	Associated (No Prompt) Field	Proc	Word	Field	Notes
AIN		054	1	9	maps to 26, field 10 = 2
	extn. no.	054	1	5	DIMENSION
AUX		054	1	9	maps to 26, field 10 = 4
CITY		054	1	9 6	maps to 26, 26 (DIMENSION)
MIN		054	1	9	maps to 26, field 10 = 3
	extn. no.	054	1	8 5	DIMENSION
RLS		054	1	9 6	maps to 26, 20 (DIMENSION)
STAF		054	1	9	maps to 26, field 10 = 5
	extn. no.	054	1	8 5	DIMENSION
CMS	extn. no. stroke count	054	1	8	maps to 26
		054	1	10	0-9 maps to 10-19
				6	32 (DIMENSION FP8 3.8) If Field 6=32, Field 7=0-9; If Field 6 not 32, Field 7 = ' '
SCRL		054	4	8	maps to 9
MDGT		059	3	8	maps to 18
SVCO		054	2	8	maps to 8

The fields listed below are for DIMENSION only.

Button Encode	Associated (No Prompt) Field	Proc	Word	Field	Notes
CWO		054	2	5	maps to 2
DSS		054	1	6	maps to 17
HDFT	btn sub type	054	3		maps to field 5
SPC		054	1	6	maps to 18
MCT		054	1	6	maps to 19

external-adjunct [System 85 R2V3-R2V4, Generic 2]

Screen Field	Proc	Word	Field	Notes
Local Adjunct Class	261	1	1	
Local Adjunct Number	261	1	2	
Local Adjunct Type	261	1	3	
Version Number	261	1	4	
N-Digit	261	1	5	
Scrolling	261	1	6	

first-digit

Screen Field	Proc	Word	Field	Notes
First Dialed Digit	350	1	1	
Number of Digits	350	1	2	
Call Type	350	1	3	

ldn-attd-partition [Generic 2, System 85 R2V4]

Screen	Field	Proc	Word	Field
Listed Directory Number	270	4	1	Tenant Services must be on
Attendant Partition	270	4	2	

listed-directory-number [System 85 R2V2, DIMENSION FP8]

Screen Field	Proc	Word	Field	Notes
Listed Directory Number 1	352	1	1	
Listed Directory Number 2	352	1	2	
Listed Directory Number 3	352	1	3	
Listed Directory Number 4	352	1	4	

mnemonic-dialing [System 85 R2V3, V4]

Screen Field	Proc	Word	Field	Notes
Mnemonic Name	013	1	2-11	
Telephone Number	013	2	3-7	f maps to 13 p maps to 14 w maps to 15 m maps to 16 t maps to 17 d maps to 18

npa-nxx-designator [Generic 2, System 85 R2V4]

Screen Field	Proc	Word	Field	Notes
NPA-NXX Designator	354	3	1	
NPA	354	3	2	
NXX	354	3	3	
Thousands Digit	354	3	4	

number-groups

Screen Field	Proc	Word	Field	Notes
First Extn. No	354	1	1	
Last Extn. No	354	1	2	
Destination PBX	354	1	3	Sys85 R2V3, V4
Destination Node	354	1	3	Sys85 R2V3, V4

precedence-digit [System 85 only]

Screen Field	Proc	Word	Field	Notes
Flash Override	356	1	1	
Flash	356	1	2	
Immediate	356	1	3	
Priority	356	1	4	
Routine	356	1	5	

recent-disconnect [System 85]

Screen Field	Proc	Word	Field	Notes
Extn. No.	003	1	1	
Recent Disconnect Interval	003	1	2	

ringing-parameters

Screen Field	Proc	Word	Field	Notes
Intercom Alert Rate	061	1	2	DIM FP8
Intercom Alert Rate	061	1	1	Sys85
Alert Cycles Before Transfer	061	1	2	Sys85
Alert Cycles Before Transfer	061	1	3	DIM FP8
Manual Signal Tone	061	1	1	DIM FP8

set-type [Generic 2 only]

Screen Field	Proc	Word	Field	Notes
Set Type	-	-	-	(Up to 9 characters)
Set Type Encode	050 050	1 2	1 1	Valid entries are 1-200
No. of Terminals Assigned	050	1	12	This is a display only field
Equipment Type	050	1	3	1-9; Equipment Types 7 and 8 are reserved for ADFTC and EIA, respectively
Data Capability	050	1	4	0-4
Display Capability	050	1	5	0-6
ISDN MIM Capability	050	1	6	0, 2-5
(Number of Buttons) Basic Set	050	1	7	1-63
(Number of Buttons) Display Module	050	1	8	(1-7)
(Number of Buttons) Feature Module	050	1	9	(1-24)
(Number of Buttons) Coverage Module	050	1	10	(1-20)
(Terminal Option 0) Assigned	050	1	2	y, n; y -> 0
(Terminal Option 1) Assigned	050	1	2	y, n; y -> 1
(Terminal Option 2) Assigned	050	1	2	y, n; y -> 2
(Terminal Option 3) Assigned	050	1	2	y, n; y -> 3
(Terminal Option 4) Assigned	050	1	2	y, n; y -> 4
(Terminal Option 5) Assigned	050	1	2	y, n; y -> 5
(Terminal Option 6) Assigned	050	1	2	y, n; y -> 6
(Terminal Option 7) Assigned	050	1	2	y, n; y -> 7
(Terminal Option 8) Assigned	050	1	2	y, n; y -> 8
(Terminal Option 9) Assigned	050	1	2	y, n; y -> 9
(Terminal Option 10) Assigned	050	1	2	y, n; y -> 10
(Terminal Option 11) Assigned	050	1	2	y, n; y -> 11
(Terminal Option 12) Assigned	050	1	2	y, n; y -> 12
				Procedure 050, word 1 is repeated for each Terminal Option assigned.
(Button Template) Type	050	2	5	u; u -> 0 n; n -> 1 p; p -> 2
(button Template) Lamps	050	2	4	0-2; NULL -> 0

sm-assignment [System 85 R2V3-R2V4, Generic 2]

Screen Field	Proc	Word	Field	Notes
System Mgmt. Set No.	277	1	1	
System Mgmt. Agent	277	1	2	

sm-history [System 85 R2V3-R2V4, Generic 2]

Screen Field	Proc	Word	Field	Notes
How Many Past Changes Do You Wish to See	277	3		
History Index	277	3	1	Display only

sm-restriction [System 85 R2V3-R2V4, Generic 2]

Screen Field	Proc	Word	Field	Notes
System Mgmt. Set No.	277	2	1	
Type of Application	277	2	2	
Procedure/SMAP Application No.	277	2	3	

7103-terminal [System 85, Generic 2]

Screen Field	Proc	Word	Field	Notes
7103 Button Code 1-8	350	3		Buttons 1-8 correspond to fields 1-8

speed-calling-entries [DIMENSION FP8]

Screen Field	Proc	Word	Field	Notes
Extension	023	3	1	Dimension FP8
Extension	023	4	1	Dimension FP8
Extension	023	5	1	Dimension FP8
Entry	023	3	3-5	Dimension FP8
Entry	023	4	3-18	Dimension FP8
Entry	023	5	3-6	Dimension FP8

speed-calling-group [DIMENSION FP8]

Screen Field	Proc	Word	Field	Notes
Extension	023	1	1	Dimension FP8
Size	023	1	2	Dimension FP8
Controlling Extension	023	2	1	Dimension FP8
Extension	023	2	2	Dimension FP8

sys-cos

Screen Field	Proc	Word	Field	Notes
SYSTEM FEATURES				
Call Waiting Enabled	275	1	5	R2V2-R2V4 and G2
ECTS Enabled	275	1	6	DIMENSION FP8 only
Multi-Function Terminal Enabled	275	1	6	
Deluxe Voice Enabled	275	1	7	DIMENSION FP8 only
Loudspeaker Paging	275	1	7	y/n for R2V2; 0-2 for R2V3-R2V4 and G2
Digits Forwarded	275	1	9	0, 2-5 for R2V2-R2V3; 0, 3-5 for R2V4 and G2
Common Control Duplicated	275	1	10	
Music On Hold Enabled	275	1	11	
Tandem Tie Trunks Enabled	275	1	15	
DCIU Enabled	275	1	17	
Cache Memory Enabled	275	1	18	
Remote Access Shared With LDN	275	2	10	
Dial 1 for Toll	275	3	1	Generic 2.1, System 85 R2V2-R2V4
Home NPA	275	3	2	Generic 2.1, System 85 R2V2-R2V4
Local Prefix Digit	275	3	7	System 85 R2V2 only
Multi-Machine Node Type	275	3	7	
Local Node Number	275	3	8	1-40 for R2V2, 1-999 for R2V3-V4 and G2
CAS Main Node Number	275	3	9	
Call-Control FRL	275	3	10	Generic 2.1, System 85 R2V2-R2V4
Demand Print Password Required	275	3	11	
Info. For Terminal Dialed Calls	275	3	13	
Combined CC/TMS	275	3	15	Generic 2 only
Digits Chimed	275	4	1	
Trunk To Trunk Transfer	275	4	3	
ISDN Enabled	275	4	14	System 85 R2V4 and G2 only
Standard Network Enabled	276	1	1	Generic 2.1, System 85 R2V2-R2V4
WCR Networks 2-7	276	1	1	Generic 2.2 only
Multi-Premises Enabled	276	1	2	
DCS Enabled	276	1	3	
Data Service Enabled	276	1	4	DIMENSION FP8 only
All Services Enabled	276	1	5	DIMENSION FP8 only

sys-cos (Continued)

Screen Field	Proc	Word	Field	Notes
SYSTEM FEATURES				
Call Vectoring Enabled	276	1	5	
Tenant Services Enabled	276	1	6	
Lookahead Interflow	276	1	9	
Integrated Telemarketing Service	276	1	10	
Call Work Codes	276	1	12	Generic 2.2 only
Expert Agent Selection	276	1	11	Generic 2.2 only
AUTOVON INTERFACE				
Switch Interface Number	275	4	10	
Autovon	276	1	4	
AUTOVON PRECEDENCE LEVEL				
All Incoming Calls	275	4	7	
Outgoing Terminal Calls	275	4	8	
Outgoing Attendant Calls	275	4	9	
CUSTOM INTERCOM MIX				
20/30 Member Mix	275	1	1	DIMENSION FP8 only
SPEED CALLING MIX				
20/30 Member Mix	275	1	2	DIMENSION FP8 only
AUTOMATIC CALL DISTRIBUTION (ACD/UCD)				
Supervisor Console Number	026	4	1	0-40 for R2V2 only; 1-40 for R2V4-R2V4 and G2
Warning Tone	026	4	2	
Call Management System Enabled	274	4	13	Field 5 for FP8
Abandoned-Call Search Enabled	275	4	11	Field 2 for FP8
Answer Supervision	275	4	12	Field 7 for FP8
ATTENDED SWITCH FEATURES				
Trunk to Trunk Calling	275	1	16	
Preselected Call Routing	275	2	1	
Call Answer Voice Terminal	275	2	2	
Gong Equipment Location				
Module	275	2	3	0-30
Cabinet	275	2	4	0-7
Carrier	275	2	5	0-3 for Trad. Module; c-e for Universal or XE
Slot	275	2	6	0-3, 5-8, 13-16, 18-21 for Trad., 1-20 for Univ. and 1-18 for XE
Circuit	275	2	7	0-7 for Trad., 0-23 for Univ. or XE
Default Extension	275	2	8	N(number)*4 for R2V2 and FP8 only; N*5 for R2V3-R2V4 and G2
Release Loop Transfer	275	4	4	

sys-cos (Continued)

Screen Field	Proc	Word	Field	Notes
Timed Recall Time	275	4	5	
Remote Access to Attendant	286	1	16	
CALL DETAIL RECORDING (CDR)				
CDR	275	1	12	y/n for R2V2 only; 0-2 for R2V3-R2V4 and G2.1
CDR Enabled	275	1	12	Generic 2.2 only
CDR Account Code No. Length	275	1	13	
Incoming Calls Recorded	275	1	14	
Default Timing Interval	275	3	12	
CDR BLOCKAGE				
CDR Prefix Digit	285	1	6	Generic 2.1, System 85 R2V2-R2V4
AAR/ARS Authorization Code Enabled	285	1	10	Generic 2.1, System 85 R2V2-R2V4
Authorization Code Enabled	285	1	10	Generic 2.2 only
CDR Message Length	285	1	11	1-2 for R2V2-R2V3, DIMENSION
Ineffective Attempts Recorded	286	1	15	
Remote Access Code	286	1	16	
WORLD CLASS ROUTING (WCR)				
Plan Manual Control Mode	286	1	14	Generic 2.2 only
Plan in Effect	286	1	13	Generic 2.2 only
Interdigit Timing Interval Length	286	1	3	Generic 2.2 only
Begin Route Selection ASAP	286	1	?	Generic 2.2 only
AUTOMATIC ROUTE SELECTION (ARS)				
ARS Plan in Effect	286	1	13	Generic 2.1, System 85 R2V2-R2V4
ARS Plan Manual Control Mode	286	1	14	Generic 2.1, System 85 R2V2-R2V4
AUTOMATIC ALTERNATE ROUTING (AAR)				
Digit Reserved for AAR Access	285	1	7	Generic 2.1, System 85 R2V2-R2V4
AAR Dial Tone Suppressed	285	1	12	Generic 2.1, System 85 R2V2-R2V4

sys-cos (Continued)

Screen Field	Proc	Word	Field	Notes
UNIFORM NETWORK NUMBERING PLAN				
Number of Location Code Digits	285	1	2	Generic 2.1, System 85 R2V2-R2V4
Number of Extension Digits	285	1	3	Generic 2.1, System 85 R2V2-R2V4
NETWORK ROUTING				
Symmetrical Routing Depth	285	1	5	Generic 2.1, System 85 R2V2-R2V4
Number Preference	285	1	5	Generic 2.1, System 85 R2V2-R2V4
Pattern Depth	285	1	5	Generic 2.2 only
TRUNK VERIFICATION BY TERMINAL				
Extension Number	285	1	8	N(number)*4 for R2V2 and DIMENSION; N(number)*5 for R2V3-R2V4 and G2
Remote Extension Number	285	1	9	N(number)*4 for R2V2 and DIMENSION; N(number)*5 for R2V3-R2V4 and G2
ABBREVIATED DIAL				
System List Size Range	275	3	5	System 85 R2V3-R2V4 and G2
Universal System List Access	275	3	6	
AUTOMATIC CIRCUIT ASSURANCE (ACA)				
ACA Enabled	285 286	1 1	4 1	
ACA Failure Referred To	286	1	2	y/n for R2V2-R2V3 and DIMENSION; 0-2 for R2V4 and G2
Console Number for ACA Referrals	286	1	3	
CALL COVERAGE				
Caller Response Interval	275	3	3	Field 11 for DIMENSION
No Answer Interval	275	3	4	Field 12 for DIMENSION
Recent Disconnect Interval	275	4	6	
ADMINISTERABLE ALARMS				
Even Port Peripherals Alarm	275 275 275	4 4 4	13 14 15	System 85 R2V2 only R2V3 only System 85 R2V4 and Generic 2
Trunk Software Alarm Disabled	275 275 275	4 4 4	14 15 16	System 85 R2V2 only R2V3 only System 85 R2V4 and Generic 2
Auxiliary Software Alarm Disabled	275 275 275	4 4 4	15 16 17	System 85 R2V2 only R2V3 only System 85 R2V4 and Generic 2

sys-cos (Continued)

Screen Field	Proc	Word	Field	Notes
AUTOMATIC IDENTIFICATION OF OUTWARD DIALING (AIOD) PARAMETERS				
AIOD Enabled	275	1	1	
Prefix Digits Sent to CO	275	1	2	
Delay to 2nd Dial Tone	275	1	3	
Auxiliary ANI Billing Number	275	1	4	

tenant [Generic 2.1, System 85 R2V4]

Screen Field	Proc	Word	Field	Notes
Call Category	320	2	1	
Extension Partition	320	2	3	

terminal [Generic 2, only]

Screen Field	Proc	Word	Field	Notes
Set ID	-	-	-	Valid values are 000-99999[A-Z]
Set Type	051	1	6	sls; sls -> 10 ect510; ect510 -> 15 ect520; ect520 -> 16 ect530; ect530 -> 17 7401p; 7401p -> 21 7203h; 7203h -> 23 7205h; 7205h -> 25 7406bi; 7406bi -> 26 7406bn; 7406bn -> 27 7406pn; 7406pn -> 28 7406pi; 7406pi -> 28 7303s; 7303s -> 33 7305s; 7305s -> 35 7434d; 7434d -> 40 7401d; 7401d -> 41 7403d; 7403d -> 43 7404d; 7404d -> 44 7405d; 7405d -> 45 7406db 7406db-> 46 7406dc 7406dc-> 64 7407d; 7407d -> 47 7407p; 7407p -> 24 7410d; 7410d -> 42 7410p; 7410p -> 22 7434d; 7434d -> 40 7444d; 7444d -> 48 7505b; 7505b -> 55 7506b; 7506b -> 56 7507b; 7507b -> 57 602a1; 602a1 -> 62 pc/isdn; pc/isdn -> 89 pt510; pt510 -> 91 515bct; 515bct -> 95 pc/pbx; pc/pbx -> 99 User-defined types of up to 9 characters are also valid, and

				map to Set Type Encodes 100-200.
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terminal (Continued)

Screen Field	Proc	Word	Field	Notes
Equip. Loc. Module	051	1	1	Valid entries are 00-30 (Trad. Module)
Cabinet	051	1	2	0-7
Carrier	051	1	3	0-3
Slot	051	1	4	0-3, 5-8, 13-16, 18-21
Circuit	051	1	5	0-7
Module	051	1	1	00-30 (Universal/XE Module)
Cabinet	051	1	2	NULL
Carrier	051	1	3	A-E
Slot	051	1	4	0-20
Circuit	051	1	5	0-23
				Automatic selection of Equip. Loc. is also available
Locale	-	-	-	0-99
Module Type	-	-	-	u, t, x; (<i>u</i> for Universal, <i>x</i> for XE, <i>t</i> for Traditional)
Origination Preference	051	1	10	0-3
Termination Preference	051	1	11	0-2
Terminal Alarming	051	1	15	y, n; y -> 1, n -> 0
Terminal Endpoint ID	051	1	16	0-63, 128
Service Profile ID	051	2	6	0-9999999999
6500?	051	1	17	y, n; y -> 1, n -> 0
Data Module	051	1	7	y, n The Terminal Type option is determined internally based on the Modules assigned to the terminal
Display Module	051	1	7	y, n
Coverage Module	051	1	7	y, n
Feature Module	051	1	7	y, n
A List Type	059	1	6	p, g; p -> 1, g -> 1
Group No.	059	1	7	1-9999
Controller	059	1	9	y, n; y -> 1, n -> 0
List Size	059	1	8	5-95
B List Type	059	1	6	p, g; p -> 2, g -> 2
Group No.	059	1	7	1-9999
Controller	059	1	9	y, n; y -> 1, n -> 0
List Size	059	1	8	5-95
System List Access	059	1	10	y, n; y -> 1, n -> 0

terminal (Continued)

Screen Field	Proc	Word	Field	Notes
Physical Data Type	051	1	10	y, n; y -> 0, n -> 1
Terminal Dialing	051	1	13	y, n; y -> 1, n -> 0
Default Terminal Dialing	059	4	6,7	y, n;
Data Module Extension No.	052	1		
Physical Display Type	051	1	9	y, n; y -> 0, n -> 1
Lock/Unlock Messages	051	1	12	y, n; y -> 1, n -> 0
LWC Global Retrieval	051	1	14	y, n; y -> 1, n -> 0
Speakerphone	-	-	-	y, n
Headset	-	-	-	y, n
Price Element 1	-	-	-	(up to 9 characters)
Price Element 2	-	-	-	(up to 9 characters)
Price Element 3	-	-	-	(up to 9 characters)
Price Element 4	-	-	-	(up to 9 characters)
Set Mount	-	-	-	desk wall
Set Color	-	-	-	beige black blue brown burgundy cinnamon gray green ivory orange red teak walnut white yellow Any string of up to 8 characters will be valid for a terminal with a customer-defined Set Type.

Terminal Button Assignments: Button Encode to Proc Field Mapping [Generic 2 only]

Encode	Button	Proc	Word	Field	Notes
ACB	Automatic Callback	054	2	8	Field 8 = 6
ACUT		054	1	9	maps to 11
AD	Automatic Dialing	059	4	-	
ADX	Abbreviated/Delayed Alerting Transfer Extension	054 054	1 1	9 8	Field 9 = 13 000-99999
AICM	Automatic Intercom Group Number	056 056 056	1 1 1	1 11 2	Field 1 = 0 Field 11 = 1 1-299 maps to field 1 = 0 field 10 = "--"
AIN	Auto in Extension	054 054 054	1 1 1	9 10 8	Field 9 = 26 Field 10 = 2 000-99999
ALST	Abbreviated Dial A List Member	059 059	3 3	8 9	Field 8 = 1 1-95
AMW	Automatic Message Waiting Extension	063 063	1 1	 1	 000-99999
ATRF	 extn. no.	054 054	1 1	9 8	maps to 12
AUXW	Auxiliary Work Extension	054 054 054	1 1 1	9 10 8	Field 9 = 26 Field 10 = 4 000-99999
BLST	Abbreviated Dial B List Member	059 059	3 3	8 9	Field 8 = 2 1-95
BUSY	Busy Verification Set ID	055 055	1 1	 1-5	000-99999[A-Z] The entered Set ID is converted to the administered Equipment Location internally
BUSY	Set ID Device Type Button No.	055 055 055	1 1 1	8-12 6 7	maps to ELL of signaled terminal

Terminal Button Assignments: Button Encode to Proc Field Mapping (Continued)

Encode	Button	Proc	Word	Field	Notes
CALL	Call Appearance	052	1,2		
	Extension	052	1	8	000-99999
	Line Appearance	052	1	9	1-12
	Line Type	052	1	10	0-2
	Ring Type	052	1	11	0-3
	Home Terminal	052	1	12	0, 1
	Originate Only	052	1	13	0, 1
	SAC Group	052	1	14	0, 1
	A/D Alerting Type	052	2	3	1, 2
	Ringling Transfer Encode	052	2	4	0-2
CALL LD	Extn. No.	052	1	8	
	Call Appear.	052	1	9	
	line type	052	1	10	
	alert type	052	1	11	
	home	052	1	12	
	alerting transfer	052	2	4	
	orig. call	052	1	13	
CFBD	Call Forward - Busy/Don't Answer	054	2	8	Field 8 = 4
CFFM	Call Forward - Follow Me	054	2	8	Field 8 = 3
CITY	Repeat City of Origin	054	1	9	Field 9 = 26
		054	1	10	Field 10 = 6
CMSG	Coverage Message Retrieval	054	4	8	Field 8 = 4
CMS	extn. no.	054	1	8	maps to 26
	stroke count	054	1	10	0-9 maps to 10-19
CMSS	Call Management System Stroke	054	1	9	Field 8 = 26
	Stroke Count	054	1	10	0-9; 0-9 -> 10-19
CONS	Consult	054	1	9	Field 9 = 20
CPU	Call Pickup	054	2	8	Field 8 = 7
CVCB	Coverage Callback	054	1	9	Field 9 = 23
DATA	One Button Transfer to Data Set ID	055	2	8-12	000-99999[A-Z] The entered Set ID is converted to the administered Equipment Location internally
		055	2		
	Return to Voice	055	2	13	y, n; y -> 1, n -> 0
DATE	Date and Time	054	4	8	Field 8 = 2
DEL	Delete Message	054	4	8	Field 8 = 6
DICM	Dial Intercom	056	1	1	Field 1 = 1
	Group Number	056	1	2	1-299
	Dial Code	056	1	10	0-99

Terminal Button Assignments: Button Encode to Proc Field Mapping (Continued)

Encode	Button	Proc	Word	Field	Notes
EXCL	Manual Exclusion Extension	052	1	9	Field 9 = 8
		052	1	8	000-99999
FUNC	Special Function Entry	059	3	8	Field 8 = 13
HOLD		054	3	8	maps to 0
INSP	Inspect Mode	054	4	8	Field 8 = 1
LND	Last Number Dialed	054	2	8	Field 8 = 1
LXD		054	2	8	maps to 1
LWC	Leave Word Calling	054	1	9	Field 9 = 22
LWCC	Leave Word Calling - Cancel	054	2	8	Field 8 = 0
MARK	Mark	059	3	8	Field 8 = 16
MCT	Malicious Call Trace	054	2	8	Field 8 = 9
MDGT	Manual Digit Entry	059	3	8	Field 8 = 18
MICM	Manual Intercom Group Number	056	1	1	Field 1 = 0
		056	1	11	Field 11 = 0
		056	1	2	1-299
MIN	Manual In Extension	054	1	9	Field 9 = 26
		054	1	10	Field 10 = 3
		054	1	8	000-99999
MMWR	Manual Message Waiting Receive Set ID	053	2		
		053	2	1-5	000-99999[A-Z] The entered Set ID is converted to the administered Equipment Location internally
	Device Type Button	053	2	6	0-4
		053	2	7	0-36
MMWS	Manual Message Waiting Send Set ID	053	2		
		053	2	9-13	000-99999[A-Z] The entered Set ID is converted to the administered Equipment Location internally
	Device Type Button	053	2	14	0-4
		053	2	15	0-36

Terminal Button Assignments: Button Encode to Proc Field Mapping (Continued)

Encode	Button	Proc	Word	Field	Notes
EXCL	Manual Exclusion	052	1	9	Field 9 = 8
MSIG	Manual Signaling Set ID	053 053	1 1	8-12	000-99999[A-Z] The entered Set ID is converted to the administered Equipment Location internally
NEXT	Next Message	054	4	8	Field 8 = 5
NORM	Normal Mode	054	4	8	Field 8 = 0
OVER	Override	054	2	8	Field 8 = 5
PAUS	059	3	8	Field 8 = 14	
PC	Priority Calling	054	2	8	Field 8 =2
PCO	Personal CO Line Trunk Ring	057 057 057	1 1 1	8-12 13	y, n; y -> 1, n -> 0
PROG	Program	059	3	8	Field 8 = 7
RCLL	Recall	054	1	9	Field 9 = 27
RCUT	Ringin g Cutoff	054	1	9	Field 9 = 11
RLS	Release	054 054	1 1	9 10	Field 9 = 26 Field 10 = 1
RMSG	Message Retrieval Mode	054	4	8	Field 8 = 3
RTRF	Ringin g Transfer Extension	054 054	1 1	9 8	Field 9 = 12 000-99999
RTRN	Return Call	054	4	8	Field 8 = 7
SAC	Send All Calls	054	1	9	Field 9 = 19
SACE	Send All Calls - Extension Extension	054 054	1 1	9 8	Field 9 = 28 000-99999
SCRL	Scrolling	054	4	8	Field 8 = 9
SLST	Abbreviated Dial System List Member	059 059	3 3	8 9	Field 8 = 3 1-9999
STAF	Staff	054 054	1 1	9 10	Field 9 = 26 Field 10 = 5
STEP		054	4	8	maps to 5
SUPP	Suppress Display	059	3	8	Field 8 = 19
SVCO	Service Observing	054	2	8	Field 8 = 8
TIMR	Elapsed Time	054	4	8	Field 8 = 8
WAIT	Wait	059	3	8	Field 8 = 15
WFPR	Wait for Principal	054	1	9	Field 9 = 30

total-mnemonics [Generic 2, System 85 R2V3-R2V4]

Screen Field	Proc	Word	Field	Notes
Number of Mnemonics Available	013	3	1	

vdn [System 85 R2V4]

Screen Field	Proc	Word	Field	Notes
Vector Directory Number	000	1		
Class of Service	000	1	7	
Name	012	2	1-11	
Vector Number	031	1	4	Display only

vector-abbr-list [System 85 R2V4]

Screen Field	Proc	Word	Field	Notes
List Number	030	1	1	Call Vectoring must be on
List 0 Group Number	030	1	1	Generic 2.2 only
List 1 Group Number	030	1	2	Generic 2.2 only
List 2 Group Number	030	1	3	Generic 2.2 only
List 3 Group Number	030	1	4	Generic 2.2 only
List 4 Group Number	030	1	5	Generic 2.2 only

vector-features [System 85 R2V4 and Generic 2]

Screen Field	Proc	Word	Field	Notes
Vector Number	030	3	1	
Step Number	030	3	1	
Step Type	030	3	2	
Destination	030	3	3	
Priority	030	3	4	For Type 1,2, or 6
Condition	030	3	5	For Type 2,5, or 6
Threshold	030	3	6	
Split Skill Number	030	3	7	Generic 2.2 only
ACD No.	030	3	8	
Start Time	030	3	8,9,10	
End Time	030	3	10-12	

TCM PROC-TO-COMMAND MAPPINGS

Proc	Word	Object	Notes
000	1	extension	
000	1	vdn	System 85 R2V4, G2
000	2	extension	
000	3	extension	
000	4	extension	
001	1	associated-extension	
003	1	recent-disconnect	Sys85 R2, G2
010	1	class-of-service	Sys85 R2, G2
010	2	class-of-service	
010	3	class-of-service	
010	4	class-of-service	Sys85, G2
011	1	call-coverage-path	DIMENSION FP8 3.8; Sys85 R2V2
012	1	extension	
012	1	vdn	Sys85 R2V4, G2
012	1	name	
012	2	extension	
012	2	vdn	
012	2	name	
012	3	names-database	
013	1	mnemonic-dialing	Sys85 R2V3, V4, G2
013	2	mnemonic-dialing	Sys85 R2V3, V4, G2
013	3	total-mnemonics	Sys85 R2V3, V4, G2
014	1	bearer-capability-cos	Generic 2
014	2	bearer-capability-cos	Generic 2
021	1	extension	DIMENSION FP8
021	1	extension	DIMENSION FP8
021	2	custom-intercom-entries	DIMENSION FP8
021	3	extension	DIMENSION FP8

Proc	Word	Object	Notes
021	3	extension	DIMENSION FP8
023	1	extension	DIMENSION FP8
023	2	extension	DIMENSION FP8
023	3	speed-calling-entries	DIMENSION FP8
023	4	speed-calling-entries	DIMENSION FP8
023	5	speed-calling-entries	DIMENSION FP8
025	1	ucd-group	DIMENSION FP8 1.16
026	1	ucd-group	Sys85 R2V2; DIM FP8 3.8
026	2	ucd-group	Sys85 R2V2; DIM FP8 3.8
026	3,4	sys-cos	
026	5	acd-allocation	Generic 2.2 only
028	1	cms-extension	Sys85 R2V2-R2V4, Generic 2
030	1,2,3,4,5	vector-abbr-list	Sys85 R2V4, Generic 2
030	3	vector-features	Sys85 R2V4, Generic 2
031	2	agent-skills	Generic 2.2 only
032	1	call vectoring	Sys85 R2V4, Generic 2
050	1	set-type	Generic 2
050	2	set-type	Generic 2
051	1	36-button	7205h, 7405d, 7305s, DTDM
051	1	12-button	DTDM, 7203h, 7403d, 7303s
051	1	bct	515bct, PT510
051	1	vds	7404d
051	1	feature-module	
051	1	coverage-module	
051	1	data-module	TDM, PDM, ADFTC, EIA, DCPI
051	1	terminal (prod-admin)	36 btn, 12 btn, bct, vds, idt, lcdt, pt510, pc-dcp, ect
051	1	idt	7407d
051	1	pt510	
051	1	pt510	pc
051	1	data-module	
052	1, 2	button*	CALL, LD, EXCL
053	1, 2	button*	MMWR, MMWS, MSIG

* Detailed description is provided in the **terminal** command.

Proc	Word	Object	Notes
054	1, 2, 3, 4	button*	ACB, ACUT, ADX, AIN, ATRF, AUXW, CFBD, CFFM, CITY, CMSG, CMS, CMSS, CONS, CPU, CVCB, DATE, DEL, HOLD, INSP, LND, LXD, LWC, LWCC, MCT, MIN, NEXT, NORM, OVER, PAUS, PC, RCLL, RCUT, RLS, RMSG, RTRF, RTRN, SAC, SACE, SCRL, STAF, STEP, SVCO, TIMR, WFPR
054	1	terminal	Generic 2 only
055	1, 2	button*	BUSY, DATA,
056	1	button*	AICM, DICM, MICM,
057	1	button*	PCO
059	1, 4	button*	AD, ALST, BLST, FUNC, MDGT, PROG, SLST, WAIT, SUPP
059	1	abbreviated-dial-list	Sys85
059	4	abbreviated-dial-list	Sys85 R2V3, V4
059	4	automatic dialing	
060	1	ucd-monitor	Sys85 R2V2
060	1	ects-controller	DIMENSION FP8
060	2	ects-controller	DIMENSION FP8
061	1	ringing-parameters	
063	1	button*	AMW
075	1	class of service search report	
075	1	call pickup group search report	
075	1	controlled restriction group search report	
075	1	call coverage group search report	
076	1	hunt group search report	
200	1	console-features	

* Detailed description is provided in the **terminal** command.

Proc	Word	Object	Notes
203	1	control-keys	
204	1	console-messages	
201	1	blf-dxs-group-keys	
201	2	dxs-extended	
202	1	direct-trk-grp-keys	
210	1	console-equipment	
210	2	console-equipment	Sys85 V4 and G2
261	1	extended-adjunct	Sys85 R2V3-R2V4, G2
261	2	extended-adjunct	Sys85 R2V4, G2
270	1	attd-extension-partition	Sys85 V4 and G2
270	2,3	attd-part-attributes	Sys85 V4 and G2
270	4	ldn-attd-partition	Sys85 V4 and G2
275	3	sys-cos	Sys85 R2
275	4	sys-cos	Sys85 R2
277	1	sm-assignment	Sys85 R2V3-R2V4, G2
277	2	sm-restriction	Sys85 R2V3-R2V4, G2
277	3	sm-history	Sys85 R2V3-R2V4, G2
290	1	system inventory report	
290	1	locale inventory report	
290	1	module inventory report	
290	1	cabinet inventory report	
320	2	tenant	Sys85 V4 and G2.1
350	1	first-digit	
350	1,2	dial-access-codes	
350	3	7103-terminal	
352	1	listed-directory-number	
354	1	number-groups	
354	2	dac-to-extension	
354	3	npa-nxx-designator	Sys85 R2V4 and G2
355	1	first-digit-dialed	Sys85 R2
356	1	precedence-digit	Sys85 R2

GLOSSARY

Glossary items that appear in other definitions are italicized to make it easy to find additional information.

A

AAR. See *Automatic Alternate Routing*.

Abbreviated Dialing. A *switch* feature that allows the user to store frequently called telephone numbers or dial access codes in the system memory and use a shortened dialing procedure (or programmed buttons) to access these numbers.

ACA. See *Automatic Circuit Assurance*.

ACB. See *Automatic Callback*.

Account Support Representative (ASR). The liaison between the customer and AT&T who refers the customer to the appropriate technical support.

ACD. See *Automatic Call Distribution*.

ACU. See *Automatic Calling Unit*.

Add-on module. A piece of equipment that attaches to a *voice terminal* to expand its capabilities. Examples include a *Call Coverage Module*, a *Function Key Module*, a *Digital Display Module*, and a *Digital Terminal Data Module (DTDM)*.

Adjunct Administration. A standard Manager IV *application* used to administer *network* adjuncts through an asynchronous link (*cut-through* access) that accesses the adjuncts' system management features.

Advanced Private Line Termination (APLT). A service that provides access to and termination from private-line *networks* such as a *Common Control Switching Arrangement (CCSA)* or an *Enhanced Private Switched Communications Service (EPSCS)* network. APLT provides network inward dialing and direct outward dialing to the private network.

After-image. A picture of an updated file block recorded in the transaction log. The after-images are used during the file recovery process.

Agent. A person operating an *attendant console* or *voice terminal* as a member of an *Automatic Call Distribution* group or *split*.

AICM. See *Automatic Intercom*.

AIN. See *Auto-In*.

AIOD. See *Automatic Identification of Outward Dialing*.

Alert type. The type of alerting (ringing) or status lamp flashing associated with a call appearance on a *voice terminal*.

Alerting Transfer (ATRF). A switch feature that allows alerting (ringing) to be transferred to other voice terminals.

Alternate FRL. A restriction level used to change *network* access controls for periods of other than normal activity such as evenings or weekends. They can be activated/deactivated from the *attendant console*.

Alternate Voice and Data (AVD). A *DSI* interface that provides end-to-end digital connectivity. This interface is especially useful for data calls between switches because modems are not required.

Analog terminal. A single line *voice terminal* that handles analog voice signals over a two-wire tip and ring connection.

ANI. See *Automatic Number Identification*.

AP. See *Applications Processor*.

APLT. See *Advanced Private Line Termination*.

Application. In Manager IV, a set of software administrative capabilities grouped by common purpose. The Manager IV applications are *Terminal Change Management (TCM)*, *Facilities Management (FM)*, *System Administration*, *Adjunct Administration*, and *Utilities*.

Applications Processor (AP). An adjunct minicomputer system that controls many

functions and features not directly associated with call processing.

Area. A level within the Manager IV command hierarchy that groups related *commands*.

Area code. See *Numbering Plan Area (NPA)*.

ARL. See *Attendant Release Loop*.

ARS. See *Automatic Route Selection*.

ASR. See *Account Support Representative*.

Associated extension. A nonworking extension number (sometimes a *Listed Directory Number (LDN)*) that is associated with an existing, previously assigned extension, usually the controller of a group or *split*. For switches with call distribution features, calls to a call distribution group or split are routed to the split's queue using an associated extension number. The system then distributes the calls to an available agent from the queue.

Asynchronous. A method of transmitting data in which time intervals between transmitted characters may be of unequal length. Each character is preceded by a start bit and ends with a stop bit. Asynchronous transmissions are generally lower in cost but less efficient than synchronous transfer of data.

Asynchronous Data Unit (ADU).

A small device that attaches to EIA (RS-232C) equipment allowing the signals to be transmitted over dedicated wiring or standard building wiring for greater distances than standard RS-232C signals. A pair of ADUs plus a special Crossover Cable may connect RS-232C devices together, thus acting as limited-distance modems.

ATMS. See *Automatic Transmission Measurement System*.

ATND. See *Attendant Call*.

ATRF. See *Alerting Transfer*.

Attendant. The operator of an *attendant console*.

Attendant Call (ATND). Identifies the type of call being handled by the *attendant console* operator.

Attendant console. An electronic call-handling unit with pushbutton control used by *attendants* to answer and place calls and monitor some system functions.

Attendant overflow. The function of the *Tenant Services* feature that allows calls directed to a given attendant partition to overflow and terminate to a designated overflow partition.

Attendant partition. A division of a *System 85 R2V4* and *DEFINITY Generic 2* switch that is specified in support of the *Tenant Services* feature. An attendant partition can serve one, several, or all *Extension partitions*. The assignment of attendant partitions to extension partitions allows attendant calls to be routed to different attendants based on the calling or called extension partition.

Attendant Recall (RCL). A *switch* feature that allows a user on a two-party call or a conference call to call the *attendant* for assistance.

Attendant Release Loop (ARL). A *switch* feature that allows an *attendant* to hold an incoming trunk call off the console if completion of the call has to be delayed. This frees the console to handle other incoming calls.

Attributes. The assigned characteristics of *terminals, data modules, extensions, and special calling groups*.

Audio Information Exchange (AUDIX).

Voice-mail feature for *System 85/DEFINITY Generic 2* and *System 75/DEFINITY Generic 1*. AUDIX consists of a Voice Mailbox (VMB), Call Answering (CA), and Leave Word Calling (LWC). In Manager IV, AUDIX is administered through the *Adjunct Administration* application.

Authorization code. A four- to seven-digit code assigned to a user so the user can temporarily override *Facilities Restriction Levels (FRLs)* associated with a line *class of service* or incoming trunk. Authorization codes are assigned through *Facilities Management (FM)*.

Autodialer. See *Automatic Calling Unit*.

Auto-In (AIN). A *Uniform Call Distribution (UCD)* mode that allows an answering station to receive an incoming UCD call immediately upon disconnect from a previous call. This feature is

provided only for *System 85 R2V3* and *DIMENSION FP8*, Issue 3.8.

Automatic Alternate Routing (AAR). A *switch* feature that establishes alternative paths for calls made between two points within a private network based on a predetermined set of routing patterns or preferences. Although AAR manages *on-network* calls, it may route a call using *off-network* facilities if no on-network facilities are available.

Automatic Appearance. A *System 85 R2V2* (and forward) and *DEFINITY Generic 2* button feature that allows a *station* to receive incoming calls while *off-hook*.

Automatic Call Distribution (ACD). A *switch* feature that permits calls to terminate directly to the *agent* in an ACD group whose terminal has been idle the longest. On *System 85 R2V2/V4*, *DIMENSION System FP8*, Issue 3.8, and *DEFINITY Generic 2*, ACD functionality is provided by *Enhanced Uniform Call Distribution (EUCD)*; on *System 85 R1* and *R2V1*, and *DIMENSION System FP8* Issue 1.16, it is provided by *UCD*.

Automatic Callback (ACB). A *switch* feature that allows users who placed a call to a busy internal voice terminal to be called back automatically when the called voice terminal becomes available.

Automatic Calling Unit (ACU). Also referred to as an autodialer. A special device that automatically dials certain outgoing calls. In *Manager IV*, ACUs are connected to *product access ports* for automatic connections to *products*.

Automatic Circuit Assurance (ACA). A *switch* feature that assists in identifying possible *trunk* malfunctions. The switch measures and records the holding time of each call and compares it to predetermined thresholds. Unusually long or short calls that can indicate trunk problems are referred to the *attendant*, who may test the trunk in question.

Automatic Identification of Outward Dialing (AIOD). Provides automatic identification of *extension numbers* on outward calls in conjunction with automatic message accounting facilities at the local *Central Office (CO)*. This

switch feature permits individual extension billing on toll calls and the equivalent on private *network* calls. AIOD is also used with Tie Trunk groups to permit the same capability on a private network.

Automatic Intercom (AICM). A *switch* feature that provides a dedicated voice path between two multi-appearance *voice terminals*.

Automatic Message Waiting. A *switch* feature that automatically lights the message lamp on a *terminal* when a message is left at the *Message Center* or via *Leave Word Calling*.

Automatic Number Identification (ANI). The automatic identification of a calling *terminal's* telephone number.

Automatic Route Selection (ARS). A method of routing *off-network* calls based on preselected preferences, which are usually based on the least expensive path. A *routing pattern* is an ordered list of the trunks or *trunk groups* that can be used to route a call.

Automatic Selection. A *Manager IV* feature that allows the system to automatically select available *extension numbers* or *Equipment Line Locations (ELLS)* when the user does not specify them. On a *TCM screen*, the *fields* with automatic selection are designated with an asterisk (*) as the *default* value.

Automatic Transmission Measurement System (ATMS). A *System 85* and *DEFINITY Generic 2* feature that tests the transmission quality of outgoing and two-way trunks.

Auxiliary Work (AUX). See *Busy-Out Function*.

AVD. See *Alternate Voice and Data*.

B

Back up. To make a copy of a file in case the original file is lost or damaged.

Barrier code. A security code used to allow a remote user to access a *switch* and to prevent unauthorized access to a system. There is one barrier code per *switch*.

Basic Rate Interface (BRI). An internationally standardized terminal interface similar to *Digital*

Communications Protocol (DCP) used by System 85.

Baud rate. The signaling rate at which data flows between communication devices.

BCT. See *Business Communications Terminals*.

Bearer Capability. The type of call a trunk can support. For *ISDN*, five call types are recognized: voice and voice-grade data, and four types of data calls.

BEX. See *Broadband Exchange*.

Bisynchronous. A data communications protocol that interfaces the *AP* to an IBM® host computer.

Blowback. The process of recovering the Manager IV *product image database* by running a tape containing switch translations through the *AT&T Translation, Recovery, Additions, and Conversion System (TRACS)*, which converts the files to Manager IV format.

BMIS. See *Business Maintenance Information System*.

Boot. The method for loading the computer's operating system. In Manager IV, booting the system loads the UNIX operating system into the Manager IV processor.

BRI. See *Basic Rate Interface*.

Bridged call appearances. The appearance of an *extension* on more than one *terminal*. Hybrid and digital (*non-analog*) terminals can have bridged call appearances.

Broadband Exchange (BEX). Public switched communication system of Western Union, featuring various bandwidth connections.

Business Communications Terminals (BCT). A family of AT&T terminals that provide the user with the ability to enter data and message information via a keyboard.

Business Maintenance Information System (BMIS). An internal AT&T system that tracks the progress of customer problems from the first report received to the resolution of the problem.

Busy-Out Function. A *switch* feature that allows a member of a *UCD group* to control the availability of their voice terminal for UCD calls.

BX.25. A *protocol* link that allows Manager IV to remotely access *System 75/DEFINITY Generic 1* and other *network* adjuncts. Also used over *Data Communications Interface Unit (DCIU)* links to other switches or *Applications Processors*.

C

Cabinet. An upright case that houses switching and interface equipment for a *Private Branch Exchange (PBX)*. Cabinets are configured in functional groups known as *modules* and are specified as part of the *Equipment Line Location (ELL)*.

Call Appearance (CALL). A position on a *voice terminal* from which the terminal's extension number can be accessed. A lamp next to the call appearance button shows the status of that appearance. Multi-appearance *voice terminals* can be equipped with several call appearance buttons for the same or different *extensions* to allow a user to handle more than one call at the same time.

Call Coverage. A *switch* feature administered in *Terminal Change Management (TCM)* that provides automatic call redirection to alternate answering points for message taking and call screening.

Call Coverage group. A group of *extensions* that ring simultaneously when a call is redirected by *Call Coverage*. Each group is identified by a number.

Call Coverage module. An *add-on module* that provides 20 additional buttons to which *Call Appearances* or features may be added.

Call Coverage path. An ordered list of alternate answering positions or coverage points, accessed in sequence when a call redirects from a *voice terminal*. Each path is identified by a number.

Call Forward—Busy/Don't Answer (CFBD). A *switch* feature that redirects all calls for a *terminal* to another terminal if the called *extension number* is busy or is not answered after a specified interval. The user designates the

forwarding destination when activating this feature.

Call Forward—Follow Me (CFFM). A *switch* feature that allows calls for a *terminal* to be routed to another terminal or the *attendant*. This feature can be activated or cancelled by the user or the attendant.

Call Pickup (CPU). A *switch* feature that allows a *terminal* user to answer at his or her own voice terminal any call directed to another *extension* within the user's *Call Pickup Group*.

Call Pickup Group. A group of extensions administered so that any user in the group can answer a call directed to any other voice terminal in the group.

Call type. A call type is identified with a *first digit table* that tells the switch how many digits to collect before processing the call. Valid call types include extension numbers, feature access codes, trunk access codes, calls to the *attendant*, and prefixed extensions.

Call Vectoring. A *System 85 R2V4* and *DEFINITY Generic 2* feature that allows the customer to define the processing of incoming calls through a set of predefined call processing steps called a *vector*. The principal application of Call Vectoring is for calls terminating at *Automatic Call Distribution (ACD)* answering positions.

Carrier. Equipment within a *cabinet* that is designed to hold *circuit packs*. The physical location of the carrier and any circuit packs within the carrier are specified as part of an *Equipment Line Location (ELL)*.

CAS. See *Centralized Attendant Service*.

CCSA. See *Common Control Switching Arrangements*.

CDS. See *Customer Directory Service*.

Central Office (CO). The location housing telephone switching equipment that provides local telephone service and access to toll facilities for long distance dialing.

Central Office trunk. A telecommunications channel that provides access from the *PBX* to the

public network through the local *central office*.

Centralized Attendant Service (CAS). A *switch* feature that permits multiple switches to consolidate attendant functions at a defined central location.

CFBD. See *Call Forward—Busy/Don't Answer*.

CFFM. See *Call Forward—Follow Me*.

Channel. A path for electrical transmission between two points without common-carrier provided equipment.

Circuit. Also known as a *port*, the hardware on a *circuit pack* that provides the access point from *terminals* or *trunks* to the *switch*. The *Equipment Line Location (ELL)* refers to the physical location of the circuit and gives the *module*, *cabinet*, *carrier*, and *slot* in which it is located.

Circuit pack. A *switch* subassembly used to provide different switching functions. The *slot* in which the circuit pack is located is specified as part of an *Equipment Line Location (ELL)*.

Class of Restriction (COR). A *System 75/DEFINITY Generic 1* feature used to assign a variety of restrictions to facilities, such as *trunk groups*, *voice terminals*, *data modules*, *Uniform Call Distribution (UCD)* groups, and *attendant consoles*.

Class of Service (COS). Also called line class of service, a designation (number) that defines access to the features and restrictions that can apply to individual *extensions*.

Clone-daemon. A Manager IV software process that runs only when needed. More than one clone daemon can run at one time so that similar requests can process simultaneously.

CO. See *Central Office*.

Code restrictions. The denial of call completion to designated *voice terminal lines* attempting to dial off-network calls to selected *office* and *area codes*. The calls denied are a function of the particular *trunk group* dialed.

Command. An instruction transmitted from the user to the processor to perform a particular

function. In Manager IV, a command is entered in *object:verb* format.

Command path. The sequence of commands used to route a user through the Manager IV hierarchy to a transaction *screen* where data is entered and/or a transaction executed.

Common Control Switching Arrangements (CCSA). A private telecommunications network using dedicated *trunks* and a shared switching center to interconnect company locations.

Compact. A *Terminal Change Management (TCM)* function that compresses switch databases to economize space.

Components file. The Manager IV file that contains information about which system *applications* are present.

Configuration. The arrangement of the software and hardware of a computer system or network. Manager IV's configuration includes either a standard or *custom processor*, requisite peripheral equipment, and software *applications*.

Configuration file. The Manager IV file that allows the installer to verify that the correct software and hardware is present.

Controlled Restriction Group (CRG). A group of *voice terminals* that may have incoming or outgoing calls denied access by the attendant.

Controlled Restriction Level (CRL). A *switch* feature that allows the attendant or other authorized user to control an extension or extension group's access to features or calling privileges.

Controller. A Manager IV *pure daemon* software process that controls other Manager IV software processes.

Controlling Terminal. The terminal within an assigned Call Distribution (*ACD*, *UCD*, or *EUCD*) group that is used to activate or deactivate functions for the group.

Conversion. A system's ability to translate a dialed number to the correct number of digits for routing through *Automatic Route Selection (ARS)* or *Automatic Alternate Routing (AAR)*.

COR. See *Class of Restriction*.

COS. See *Class of Service*.

Coverage. Any *switch* feature that allows calls designated for a particular *terminal* to be redirected to another terminal for handling or for retrieving messages.

Coverage point. The *extension* or *Call Coverage Group* in a *Call Coverage path* to which calls may be redirected from another *terminal*.

CPU. See *Call Pickup*.

CRG. See *Controlled Restriction Group*.

CRL. See *Controlled Restriction Level*.

CRONTAB. A preset schedule or chronological table of automatic system activities.

CSMS. See *Customer Service Manager System*.

Custom intercom. A DIMENSION system feature allowing users to dial *extensions* within the *switch* by pressing one or two buttons on a *voice terminal*.

Custom processor. A computer used to support Manager IV *configurations* for larger telecommunications *networks* when the standard processor does not have enough processing capacity.

Customer Directory Service (CDS). A *System 85/DEFINITY Generic 2* feature that maintains a database of user/extension information on a 3B5 *Applications Processor* (3B5 AP). In Manager IV, *TCM's* Directory Synchronization feature provides updated user/extension information to the CDS administrator. This information can then be applied to the CDS database.

Customer Service Manager System (CSMS). Receives trouble reports from Manager IV customers and relays these reports to the appropriate services support organization.

Cut. The process of turning over a functional Manager IV system to the customer following successful installation by AT&T.

Cut-through. A method of establishing a connection to a distant office or PBX. In

Manager IV, *System 75/DEFINITY Generic 1* and network adjuncts are remotely administered using cut-through access.

D

DAC. See *Feature Dial Access Code* and *Trunk Dial Access Code*.

Daemon. See *clone-daemon* or *pure daemon*.

Data Communications Interface Unit (DCIU). A circuit that provides interprocessor communications between the *switches* in a *Distributed Communications System (DCS)* cluster or between the *switch* and the *Applications Processors (APs)* or *Audio Information Exchange (AUDIX)*.

Data Communications Interface Unit (DCIU) link. A private-line data facility (data link) connecting two *Data Communications Interface Units (DCIUs)*.

Data Communications Interface Unit (DCIU) logical channel. A message slot on a *Data Communications Interface Unit (DCIU) link*. One of the logically independent streams of data that are multiplexed onto a single data link.

Data Communications Interface Unit (DCIU) network channel. The association between two link/logical channel pairs so that the *Data Communications Interface Unit (DCIU) message* received on one link/logical channel pair is transmitted on the other pair.

Data Communications Interface Unit (DCIU) port. A gateway to or from a switch application, such as *Distributed Communications System (DCS)* nodes or *Message Center* on an *Applications Processor (AP)*.

Data line. A link between a *switch* and a data terminal.

Data module. An interface unit between data equipment and the *switch*.

Data terminal. A hardware device that receives and transmits data from the user to the processor.

Database. A structured set of *files* and *records*. See also *Manager IV database*, *Product image database* and *Call Storage Facility*.

Database initialization. The process by which the *Manager IV database* is populated. These processes use the *TRACS* system to load switch translations, manual entry of *precut changes* and *non-switch data*, and entry of *System Administration* data such as user *logins* and user *class* assignments.

DCIU. See *Data Communications Interface Unit*.

DCIU link. See *Data Communications Interface Unit link*.

DCIU logical channel. See *Data Communications Interface Unit logical channel*.

DCIU network channel. See *Data Communications Interface Unit network channel*.

DCIU port. See *Data Communications Interface Unit port*.

DCP. See *Digital Communications Protocol*.

DCS. See *Distributed Communications System*.

DDC. See *Direct Department Calling*.

DDD. See *Direct Distance Dialing*.

Dedicated link. A Manager IV feature that allows the Manager IV host processor to be directly connected to a *System 85 R2V3, R2V4* and *DEFINITY Generic 2* switch.

Dedicated Switch Connection (DSC). A *System 85 (R2V3 forward and DEFINITY Generic 2)* feature that provides a direct link between two *ports* so that the user on one port is automatically connected to the other port when the user's terminal handset is picked up.

Default. An alternative value, attribute, or option that is assumed when none has been specified by the user. In Manager IV, the most common field entries are supplied as defaults so the user does not need to enter a response.

DEFINITY 75/85 Communications System. Name given to AT&T's enhanced premises product line, representing the merger of AT&T's previously distinct *System 75* and *System 85* architectures.

DEFINITY 75/85 Communications System

Generic 1. An enhanced AT&T *Private Branch Exchange (PBX)* based on existing System 75 software, running on the 80286 processor and supporting up to 1,600 lines.

DEFINITY 75/85 Communications System

Generic 2. An enhanced AT&T *Private Branch Exchange (PBX)* based on existing System 85 software, running on the 501CC processor and supporting both single and multi-module configurations.

DEFINITY Manager I. AT&T's system management product that provides administration and maintenance support for *DEFINITY Communications System Generic 1*.

DEFINITY Manager II. AT&T's low-cost administration and maintenance management tool for *DEFINITY 75/85 Communications System Generic 2*.

DEFINITY Manager III. Feature-rich administration management alternative for growing single site or multi-site *DEFINITY 75/85 Communications System Generic 2* customers, also supporting System 85 R1-R2V4, and DIMENSION 2000 and 600.

DEFINITY Manager IV. System management tool for *DEFINITY 75/85 Communications System Generic 2*, *System 85 (R2V2 - R2V4)*, and *DIMENSION FP8*, issues 1.16, 3.7, and 3.8 that provides multi-site, multi-user administration management through forms on the screen.

DEFINITY Monitor I. Performance management tool with a broad range of options for monitoring traffic performance on *DEFINITY 75/85 Communications System Generic 2*, *System 85 R2V2-R2V4*, and *DIMENSION FP8* Issues 1.16 and 3.8. Also provides trunk group performance data on *DEFINITY Generic 1* and *System 75*.

Dial Intercom (DICM). A *switch* feature that allows a *terminal* user to gain rapid access to other internal *voice terminals* by dialing a one- or two-digit code.

Dialing Plan. A *switch's* guide to the digit translation necessary to identify *call types* and process calls. Call types are identified by the first dialed digit. In a Number Portability Network,

the dialing plan shows all extensions available on each switch in the network.

DID. See *Direct Inward Dialing*.

Digital Communications Protocol (DCP). The signaling protocol used by *System 85* to provide simultaneous voice and data communications over the same link to the system via one signaling channel and two information channels.

Digital Display Module. See *Display Module*.

Digital Terminal Data Module (DTDM). An interface that connects a *switch* to a *data terminal* for simultaneous voice/data communication.

Digital voice/data circuit pack (sn270). An interface between the switching *network* and the *Digital Communications Protocol (DCP)* that provides digital access to the system.

Digital Services-1 (DS1) Interface. A communications interface that multiplexes up to 24 voice or data signals onto a single carrier. It can be used as an alternative to analog facilities and provides digital access to remote groups.

Digital Voice Terminal. A voice terminal that converts acoustic (analog) voice signals into digital electronic signals. Also called *non-analog*.

DIMENSION FP8. A PBX switching system that uses a digital computer to control call switching and signaling. FP8 refers to the Feature Package, or set of features, included with a particular version of the switch.

Direct Department Calling (DDC). A *switch* feature that refers incoming calls to a group of voice terminals. The call is routed to the first available terminal in the administered sequence.

Direct Distance Dialing (DDD). Telephone *exchange* service that allows a person to call outside a local area without operator assistance.

Direct Extension Selection Busy Lamp Field (DXS/BLF). A *switch* feature that allows the *attendant* to place or extend calls to an *extension* by pressing a Group Select button and a Direct Extension selection button instead of dialing the extension number.

Direct Inward Dialing (DID). A *switch* feature that allows an incoming call to reach a specific *extension* without *attendant* assistance.

Disk. A flat, circular plate used as a magnetic medium for reading, writing, and storing data files.

Dispatcher. A *pure daemon* software process that schedules and executes tasks.

Display module. An *add-on module* that displays call-related information on a 40-character display line. It is an adjunct to the 7405D voice terminal and is built-in to the 7406d, 7407d, 515 BCT, and PT510 terminals.

Distributed Communications System (DCS). A private *network* configuration that links two or more switches so that certain features appear to operate as if the network were one switch.

Don't answer timing. A parameter that specifies the number of rings before a call redirects to the next point in a *call coverage path*.

Download. A transfer of data from one system to another. In Manager IV, download refers to the process by which data is transferred from the Manager IV *product image database* to the *switch* database. Changes may be downloaded to the switch immediately or may be scheduled for a later time.

DS-1. A telecommunications channel that allows the efficient processing of voice and data transmission by multiplexing up to 24 channels on two pair of wires.

DSC. See *Dedicated Switch Connection*.

DTDM. See *Digital Terminal Data Module*.

Dummy extensions. *Extensions* that are not assigned to voice terminals.

Dump. Another name for the procedure used to copy or *back up* files from one location to another.

DXS. See *Direct Extension Selection/Busy Lamp Field*.

E

ECTS. See *Electronic Custom Telephone Service*.

EIA. The EIA interface board that provides connectivity between *System 85* and *Generic 2* and EIA terminals and host computers.

EKT. See *Electronic Key Telephone*.

Electronic Custom Telephone Service (ECTS). A service that provides multibutton electronic telephones with stored-program control and electronic controllers for interfacing between users and the *switch*. An ECTS set has only one line, but can have access to many switch features.

Electronic Key Telephone (EKT). A *voice terminal* with buttons or keys that provide multiple extension line pickups and access to switch features. The same extension number cannot appear twice on an EKT.

Electronic Key Telephone System. A telephone system that permits the use of features such as call pickup, hold, call status lamp signals, and multiple extension line pickups.

Electronic Tandem Network (ETN). A *network* of privately owned *trunk* and *switching* facilities that links all system facilities, regardless of location, into a single, fully integrated network. An ETN must have a *uniform numbering plan* and each *node* must have a *location code*.

ELL. See *Equipment Line Location*.

Enhanced Private Switched Communications Service (EPSCS). A private telecommunications network that provides advanced voice and data communications services to companies with many locations.

Enhanced Uniform Call Distribution (EUCD). A System 85 R2V2 and DIMENSION System FP8, Release 3.8 feature that permits incoming trunk calls, local voice terminal calls, and attendant extended calls to terminate to an idle voice terminal in a group of terminals. Replaced by *Automatic Call Distribution* in *System 85 R2V3* and *V4* and *Generic 2*.

EPSCS. See **Enhanced Private Switched Communications Service**.

Equipment Line Location (ELL). The seven-digit number representing the physical location of a port or circuit. The format of the number is: *module* (digits 1 and 2), *cabinet* (digit 3), *carrier* (digit 4), *slot* (digits 5 and 6), and *circuit* (digit 7).

ETN. See *Electronic Tandem Network*.

EUCD. See *Enhanced Uniform Call Distribution*.

Exchange. The code established by a communications common carrier for the administration of communications services in a specified area. Also referred to as *Central Office (CO)* if local or *Foreign Exchange* if not local.

EXCL. See *Manual Exclusion*.

Exclusive-locks. A Manager IV safety feature that restricts a block or share of memory to access only by the process that has been assigned to it.

Execute. In Manager IV, the term that means carrying out a *transaction*.

Extension. A number (usually three to five digits) that logically connects a *terminal* to an *Equipment Line Location (ELL)* within a *switch*. Extensions are assigned to terminals in *Terminal Change Management (TCM)*.

Extension number group. A group of *extension numbers* administered at the same time by a *switch*. The first number in an extension number group must end in 0, and the last in 9.

Extension partition. A division of a *System 85 R2V4* and *DEFINITY Generic 2* switch that supports the *Tenant Services* feature. One or more extensions can be assigned to an extension partition, and each extension must be assigned to only one extension partition. An *Attendant Partition* can also be assigned to an extension partition.

Extractor. A Manager IV *clone daemon* process that manages the execution of *Service Requests (SRs)*.

F

Facilities Management (FM). A standard Manager IV *application* that allows the user to control changes to the transmission facilities and

system-wide features of the telecommunications *network*.

Facility. A general term used for the telecommunications pathway and associated equipment in a network.

Facility Restriction Level (FRL). A value from 0 to 7 assigned to *terminals*, *authorization codes*, and *trunks* that determines if a call attempt is permitted and which routes can be used or denied in the process of routing calls. See *Originating FRL* and *Terminating FRL*.

Feature. A function or capability of a product or an application within Manager IV.

Feature button assignments. The features assigned to the labeled buttons on a *voice terminal* enabling the user to access the *feature* from the terminal.

Feature Dial Access Code (DAC). A one- to three-digit code dialed by a user to access a particular feature. The DAC can also be assigned to a feature button and accessed by pressing the button.

Feature Key Module. An expansion module with up to 24 programmable feature buttons that may be used with the 7205H or 7405D *voice terminals*.

Field. A unit of data on a *screen* or in a database *file*.

File. A collection of *database* records with the same context or meaning.

First Digit Table. See *Dialing Plan*.

FM. See *Facilities Management*.

FNPA. See *Foreign Numbering Plan Area*.

Foreign Exchange (FX). Any *Central Office (CO)* outside of the one that provides local access to the public telephone network.

Foreign Numbering Plan Area (FNPA). The area outside of the one served by the local *Central Office*.

FRL. See *Facility Restriction Level*.

FSAC. See *Field Service Administration Center*.

FX. See *Foreign Exchange*.

G

Generic 1. See *DEFINITY 75/85 Communications System Generic 1*.

Generic 2. See *DEFINITY 75/85 Communications System Generic 2*.

Grade of service. In traffic *networks*, the proportion of calls that receive no service (blocking) or poor service (long delay). Also called a service objective.

H

Hardware bridged analog set. An *analog terminal* that has the same *extension number* and *Equipment Line Location (ELL)* as another analog terminal.

HNPA. See *Home Numbering Plan Area*.

Home Numbering Plan Area (HNPA). The area served by the local *Central Office*.

Home terminal. The *voice terminal* assigned as the primary appearance for a given extension that has bridged *appearances* at other terminals.

Hop. Communication between two *DCIUs* via an intermediate *DCIU*.

Hunt sequence. The order in which the system checks *extension numbers* to find the first idle terminal when routing or redirecting a call.

Hunt-to extension. The *extension* to which a call is directed by a hunting extension.

Hybrid voice terminal. A *voice terminal* that supports *features* permitting the handling of simultaneous calls. Also called *non-analog*.

I

Implementation stage. The period of time between the customer commitment to buy *DEFINITY Manager IV* and *Manager IV* system *cut*.

Implementation Team. The committee responsible for coordinating activities related to the purchase and preparation for installation of *Manager IV*.

Incoming Call (INC). Any call received by the station user or attendant from the public or private *network*.

Incremental backup area. A designated disk slice used to temporarily store updates to the *UNIX operating system* database files so that the files can be reconstructed in case of system problems.

Information Systems Network (ISN). AT&T's high-speed packet-switching local area *network* connecting mainframes, minicomputers, printers, and *data terminals*. *Manager IV* can administer ISN through *adjunct administration*.

Initialization. In *Manager IV*, the process of populating the *Manager IV database* with switch and *non-switch* data and conducting operation performance testing in order to make *Manager IV* operational.

INS. See *Integrated Network Services*.

Integrated database. A database that has been consolidated to eliminate redundant data. In *Manager IV*, the integrated database allows an *application* to use a *file* that is maintained by another application.

Integrated Network Services (INS). A carrier facility over which ISDN calls are placed.

Integrated Services Digital Network (ISDN). A *network* that provides end-to-end digital connectivity to support a wide range of voice and data services. *System 85 R2V4* and *DEFINITY Generic 2's* ISDN capability allows the customer to connect to both public and private networks that use current ISDN standards.

Intercept. A signal given to users to indicate that the system cannot or will not complete the call as dialed.

Interexchange Carrier (IXC) Access. A *System 85* and *DEFINITY Generic 2* feature that allows calls to any IXC vendors (e.g. AT&T, MCI, Sprint etc.) to use the *Automatic Alternate Routing* and *Automatic Route Selection* features.

Inter-lata calling. Calls placed between *Local Access and Transport Areas (LATA)*.

Interoffice trunk. A *trunk* type that directly connects two local *Central Offices (COs)*.

Intertoll trunk. A *trunk* type that connects two *toll offices* in different telephone *exchanges*.

Intra-lata calling. Calls placed within *Local Access and Transport Areas (LATA)*.

ISDN. See *Integrated Services Digital Network*.

ISN. See *Information Systems Network*.

IXC. See *Interexchange Carrier (IXC) Access*.

L

LATA. See *Local Access and Transport Area*.

LDN. See *Listed Directory Number*.

Leave Word Calling (LWC). A *switch* feature that allows callers to leave a message for the called party by pressing a terminal button or dialing a *Feature Dial Access Code (DAC)*.

Line. A communication link between a *switch* and one of its *voice terminals*. Each line is associated with a unique *extension number*.

Line Class of Service. See *Class of Service*.

Linked Universal Data Module (LUDM). A data module that contains two *DCP* ports: one that interfaces to the switch and one for linking the switch port to any *Digital Communications (DCP)* voice terminal or to another LUDM.

Listed Directory Number (LDN). The published local telephone number for a private switching system. LDN calls are usually routed to the *attendant*.

Local Access and Transport Area (LATA). A rating area within which all calls are handled by the local telephone company. Intra-LATA calling is supported by regional operating companies controlled by the Public Utilities Commission. Inter-LATA calling is supported by the interchange companies controlled by the Federal Communications Commission (FCC).

Location code. Also referred to as an RNX, a two- or three-digit number that identifies a *Private Branch Exchange (PBX)* on a private *network*.

Login ID. A unique character string that identifies a user to the system. Login IDs are assigned by the *Manager IV System Administrator*.

LUDM. See *Linked Universal Data Module*.

LWC. See *Leave Word Calling*.

M

MAAP. See *Maintenance and Administration Panel*.

Main location. A centralized area where attendants answer calls routed from branch locations.

Main/satellite. A private *network* with more than one *switch*. Calls are placed and received through the main location. *Satellites* share the same *Listed Directory Number (LDN)* as the main but are generally unattended. The entire configuration appears as one switch to internal and external users.

Maintenance and Administration Panel (MAAP). A control panel used for local administration and maintenance tasks on a *switch*.

Malicious Call Trace. A *System 85 R2V4* and *DEFINITY Generic 2* feature that allows the user to obtain information that may identify the calling party of a malicious call.

Manager IV. See *DEFINITY Manager IV*.

Manager IV database. The main database of the Manager IV system is composed of the *product image database*, which contains a copy of *switch translation information*, user records, equipment inventory, and *non-switch data*.

Manager IV System Administrator. The person assigned to monitor all Manager IV software processing, perform daily system and preventive maintenance, and troubleshoot errors as required.

Manual Exclusion (EXCL). A *switch* feature that prevents other terminal users with a bridged appearance from bridging onto an active call on the appearance.

Manual-In (MIN). [System 85 R2V2-3 and DIMENSION] A *Uniform Call Distribution (UCD)* attribute that allows answering positions to limit incoming calls. When a call disconnects, the *agent* becomes unavailable until the Manual-In button is pressed again.

Manual Intercom (MICM). A *switch* feature that allows a multiappearance *terminal* user to access other terminal users assigned to the same intercom group. Up to three users can be connected to a single call at one time.

Manual signaling. A *switch* feature that allows a user to signal another user by pressing an assigned button.

Materials on Job (MOJ). The date of arrival at the Manager IV installation site of the processor and peripheral equipment ordered by the customer as part of a Manager IV *configuration*.

Message Center. An answering service that allows an *agent* to answer calls and accept and store messages for later retrieval by users.

Message Oriented Signaling (MOS). Call-related signaling over a D (Data) channel that takes the form of a set of standard messages. Used with *ISDN*.

Message retrieval. A *voice terminal* feature that allows a user to retrieve messages at the voice terminal that were taken by the *message center* or *Leave Word Calling* feature.

MET. See *Multibutton Electronic Set*.

MFDT. See *Multi-Function Digital Terminal*.

MFET. See *Multi-Function Electronic Terminal*.

MICM. See *Manual Intercom*.

MIN. See *Manual-In*.

Miscellaneous Trunk Restriction Groups (MTRG). A *switch* feature that denies call access to selected *trunk groups*. Users are denied access to these restricted trunk groups via the *Class of*

Service associated with their *extensions*.

Modem Pooling. A *switch* feature that provides shared conversion resources when a data module accesses, or is accessed by, an analog line or trunk.

Modular TDM. Provides an interface between a *switch* and private line facilities, private line modems, synchronous-to-synchronous multiplexers, and asynchronous-to-synchronous multiplexers.

Module. The part of a *Private Branch Exchange (PBX)* switching system that includes the switching *network* (in the module control *carrier*) and its associated port *circuits* (in port carriers). *Switches* can be single modules or multimodule. The module is the part of the *Equipment Line Location (ELL)* that refers to the physical location of a circuit.

MOJ. See *Materials on Job*.

MTRG. See *Miscellaneous Trunk Restriction Groups*.

Multibutton Electronic Set (MET). DIMENSION *ECTS* and *EKT* sets used on a *System 85* and *DEFINITY Generic 2* switch.

Multi-Function Digital Terminal (MFDT). A *System 85* and *DEFINITY Generic 2* digital voice terminal with multiple line pickup and button access to features. It can have multiple call appearances of one or more extension numbers.

Multi-Function Electronic Terminal (MFET). A *System 85* and *DEFINITY Generic 2* voice terminal with multiple line pickup and button access to features. It can have multiple call appearances of one or more extension numbers.

Multi-node transaction. A Manager IV transaction that updates more than one *target* at a time. It may use a *target group* as a target.

Multiple Call Handling. A function of the *ACD* feature that allows an ACD message center agent to place a call on hold and remain available to receive ACD calls.

Multipoint. Each endpoint in a multipoint link is a terminal, and this *ISDN BRI* feature allows up to eight terminals to share a single multipoint link.

N

Names database. A database for System 85 and DEFINITY Generic 2 that contains the names associated with *extension* and *trunk groups*.

Network. Two or more interconnected switching systems.

NNX. Also referred to as an Office Code or *Exchange*, a number representing a particular *Central Office (CO)*.

No-answer interval. See *Don't Answer Timing*.

Node. A switching or control point for a network. In *Electronic Tandem Networks*, nodes are either tandem (receive signals and pass them on) or terminal (originate or terminate a transmission path).

Non-analog terminal. A *hybrid* or *digital* voice terminal.

Non-switch data. Information, such as set attributes, user information, and trunk identification, which is not accessible from a switch or not available in the *product image database*. The data is manually entered and updated in the *Manager IV database*.

NPA. See *Numbering Plan Area*.

Number group. See *Extension number group*.

Numbering Plan Area (NPA). Synonymous with area code, a three-digit code representing a particular geographical area.

O

Object:verb format. The syntax of Manager IV *commands*. The verb refers to the action, and the object refers to the item that is acted upon.

Off-hook. A term signifying that the *voice terminal* handset has been lifted.

Off-network. The term used to describe calls routed off the private *network* using public facilities.

Off-premises station. A remote station that is connected to the switch through a two-wire line circuit.

Office code. See *NNX*.

On-line help. A Manager IV feature that allows the user to access help information for various *commands* and *screens*.

On-network. The term used to describe calls that are routed via a customer's private *network*.

Originating FRL. The *facility restriction level (FRL)* assigned to a caller's extension, incoming trunk group, or authorization code. FRL values are 0 to 7; 7 is the least restrictive, 0 is the most restrictive.

Originating preference. An *attribute* assigned to a multiappearance *terminal* that determines which *call appearance* will be automatically seized for a call when the user does not manually select one.

Originating Test Line (OTL). The *circuit*, situated at the originating or near-end *switch*, used in testing trunks with *Automatic Transmission Measurement System (ATMS)*.

Overflow Partition. An *attendant partition* that is assigned to receive excess incoming calls from another attendant partition. Used with the *Tenant Services* feature.

Override (OVER). The capability of a user to break into an existing two-party connection. A four-second burst of tone is sounded to advise the other two parties.

P

Pack. See *Circuit pack*.

Password. A word or string of characters used with a user *login ID* that permits user access to Manager IV. Passwords are created by the owner of the login.

PBX. See *Private Branch Exchange*.

PC. See *Priority Calling*.

PCD. See *Programmable Communications Device*.

PCSF. See *Pieced Call Storage Facility*.

PDM. See *Processor Data Module*.

Pending queue. A *Manager IV* database file that stores pending changes.

Peripheral device. Equipment, such as printers or terminals, that is additional to the basic processor.

Planning stage. The period of time between the customer's decision to purchase *Manager IV* and the *Materials on Job (MOJ)* date.

Point-to-Point. A configuration that supports a single terminal for each physical port.

Port. A point of access to a processor using *trunks* or *lines* for transmission of data.

Port Group. A pool of *ports* that share the same protocol, connection, dialer type, and speed.

Pre-cut changes. Changes to *switches* administered by *Manager IV* that are made after the switch tape is sent to *TRACS*, but before *Manager IV* becomes operational. These changes are made through the *Maintenance and Administration Panel (MAAP)*. After *Manager IV* becomes operational, the pre-cut changes must be duplicated in the *Manager IV* database to synchronize it with the switch databases.

Preference. An ordered list of *trunk groups* that defines an *Automatic Alternate Routing (AAR)* or an *Alternate Route Selection (ARS)* pattern. The first preference is usually the most direct or least costly route.

Primary extension number. The first terminal in an *ACD* group from which incoming calls are redirected to other terminals in the group using a specified *hunt sequence*.

Primary rate interface (PRI). The *Integrated Services Digital Network (ISDN)* interface that covers network connections among switches (for both private and public networks), switch-to-host computer connections, and host computer-to-network connections.

Priority Calling (PC). A *switch* feature that directs a priority tone to the called party.

Private Branch Exchange (PBX). A private, customer-based telecommunications switching system. Also referred to as a *switch*.

Proc. Abbreviation used for a procedure that administers *System 85* and *DEFINITY Generic 2*

using the *Maintenance and Administration Panel (MAAP)*.

Processor Data Module (PDM). Provides a DCE-type RS-232C interface for data terminals, AP-16s, host computers, and other devices.

Product. A *switch* or *adjunct* that can be managed by *Manager IV*.

Product access port. An asynchronous link that is used to access *products* managed by *Manager IV*.

Product image database. The portion of the *Manager IV* database that maintains copies of the *switch translation information*.

Programmable Communications Device (PCD). An intelligent device connected between the *Manager IV* processor and the *ports* that interprets Level II *synchronous protocol*.

Prompt. Message on the *screen* indicating that a response is required from the user.

Protocol. A set of conventions that facilitate communication between machines.

Pure daemon. A *Manager IV* software process that is started at system *boot* time and remains running thereafter.

Q

Queue. An ordered sequence of calls waiting for an idle trunk or other resource.

Queuing. The placing of calls (or other events such as messages) in a waiting sequence whenever all *lines*, *trunks*, *agents*, or other limited resources are busy.

R

RCG. See *Remote Group*.

RCL. See *Attendant Recall*.

Reboot. A machine routine that reloads the operating system into the computer.

Recent disconnect interval. The period of time during which a disconnected extension cannot be reassigned to a new user. During this time, a

recorded message gives callers information about the disconnected extension.

Record. A group of related *fields* in a database.

Recovery. The process of using file *backups* to reconstruct *files* that have been lost or damaged.

Release Link Trunk (RLT). A telecommunications channel used with *Centralized Attendant Service (CAS)* to connect attendant-seeking calls from a branch location to a main location.

Remote access. The Manager IV capability that provides AT&T personnel with diagnostic and maintenance access to the Manager IV host processor from a remote location.

Remote Group. Also known as *Remote Carrier Group (RCG)*, a *System 85 (R2V3 forward)* and *DEFINITY Generic 2* feature that allows system port circuit packs to be located up to 100 miles from the main switch. This serves small clusters of distant voice or data terminals with complete feature transparency.

Remote Module. A *System 85 Release 2* switch *module* connected to the switch by a fiber optic link. Each module can serve approximately 900 lines and can be located up to 13,000 feet away from the switch.

Restore. The process of recovering lost or damaged *files* by retrieving them from available *backup* tapes or from another disk *device*.

Restriction. A switch feature that denies access to a specified group of dialed numbers or facilities.

Retrofit terminal. A *terminal* that has been adapted for use with an earlier *product* version than the version for which it was designed.

RJE link. A software communication package that allows the Manager IV processor to communicate with an IBM host system.

RNX. See *Location code*.

Root. In Manager IV, the *login ID* of the system user with access to the UNIX shell. In UNIX, the highest segment in the file path hierarchy.

Route Advance. A *System 85* and *DEFINITY Generic 2* feature that automatically routes outgoing calls over alternative *trunk groups* when the first-choice trunk group is busy.

Routing pattern. See *Preference*.

S

SAC. See *Send All Calls*.

SAM. See *System Access Manager*.

Satellite location. A location in a private *network* that places and receives calls through the main location. A satellite shares the same LDN as the main but is generally unattended.

Scratch disk/tape. Any reusable disk or tape available to record data.

Screen. See *Transaction screen*.

Send All Calls (SAC). A *switch feature* that allows users to temporarily redirect non-priority calls to their coverage path.

Service objective. See *Grade of Service*.

Service Profile Identification. A unique number assigned to an ISDN terminal during terminal initialization to identify it.

Service Request (SR). A Manager IV feature that allows the user to enter one or more transactions and schedule them to be *downloaded* to the *switch* at a later date and time.

Set ID. The name assigned to an individual *voice terminal* when it is added to the network. The *switch* does not use this name.

Set mount. The term used to describe the placement of a *terminal*, for example "wall mount."

Shell. See *UNIX shell*.

Single Line Set. See *Straight Line Set*.

Slot. The location on a *carrier* in which *circuit packs* are inserted.

SMUE. See *System Management User Executive*.

Speed Calling. A DIMENSION system feature that allows users to dial numbers outside the *switch* by pressing one or two buttons on a voice terminal.

Split. A group of *agents* assigned to handle incoming calls at *voice terminals*.

Staffed (STAF). [System 85 R2V2-3 and DIMENSION] A *Uniform Call Distribution (UCD)* answering position mode that indicates when the *agent* is present.

Station. A *voice terminal*, or telephone set.

Station Number Steering. An attribute of the *main-satellite* feature. Main-satellite switches use the initial digits of a dialed extension number to steer the call to the appropriate switch. The call is then routed to its final destination. This attribute requires a *uniform numbering plan*.

Status Lamp. An indicator lamp showing the status of a call appearance by the state of the lamp (lighted, flashing, fluttering, or dark).

Straight-Line Set (SLS). An *analog terminal* described to the *switch* as a multifunction terminal without button assignments so that the terminal can be assigned bridging capabilities or appear on a Terminal Busy button on a multifunction voice terminal.

Subtending. A subtending system is a lower order switching system in the network hierarchy.

Switch. A hardware device that controls and directs voice *traffic*. A customer-based switch is

known as a *Private Branch Exchange (PBX)*. A digital switch also controls data traffic.

Switch translation information. The call processing instructions contained in the *switch databases*. This data is obtained from the switch database and reconfigured for Manager IV by *TRACS* and used to populate the Manager IV *product image database*.

Synchronous. A mode of digital transmission in which discreet signal elements are transmitted at a fixed and continuous rate.

System Access Manager. Replaces the *MAAP* and System Management Terminal as the basic administration vehicle for the *DEFINITY Generic 2 switch*.

System Administration. A standard Manager IV *application* used to issue user *login IDs* and access permissions, administer Manager IV operating characteristics, and log system activity.

System Administrator. See *Manager IV System Administrator*.

System Class of Service. A designation that defines the features and characteristics of a specific *switch* in the network.

System 85. An advanced AT&T digital *Private Branch Exchange (PBX)* switching system supporting up to 30,000 lines that provides voice and data communications for its users. Manager IV access *Generic 2* and System 85 directly to administer their features and related peripheral equipment. Manager IV supports *Generic 2* and System 85 R2V2 and R2V4..

System Management User Executive (SMUE). The Manager IV process that acts as the interface between the user and other Manager IV processes. The SMUE parallels the function of the *UNIX shell*.

System 75. An advanced AT&T digital *Private Branch Exchange (PBX)* switching system supporting up to 800 lines that provides voice and data communications for its users. Manager IV accesses *Generic 1* and System 75 on a cut-through basis.

T

Tandem office. A switching office that is used to complete calls between the local end offices; the tandem office is not directly connected to subscribers.

Tandem switch. A switch that provides electronic tandem switching features and trunk-to-trunk switching functions in an *Electronic Tandem Network (ETN)* environment.

Tape. A tape with a magnetizable surface layer on which data can be stored.

Target. In the Manager IV command hierarchy, the unique name that identifies the entity being administered. It can be a PBX ID, an LDN, or a corporation ID.

Target group. A set or group of product targets established so that one transaction can be used to make changes to more than one target at a time. These transactions are called *multi-node* transactions.

TCM. See *Terminal Change Management*.

TDM. See *Modular Trunk Data Module*.

Tenant Services. A *System 85 R2V4* and *DEFINITY Generic 2* feature that allows a large System 85 to appear to users of the switch as many small, independent switches. This is done by assigning resources to *extension partitions* and *attendant partitions*. It allows the switch to be shared by a wide assortment of user groups, known as "tenants."

Terminal. Voice or data user interface equipment such as a telephone (*voice terminal*), computer workstation (*data terminal*), or *attendant console*.

Terminal Change Management (TCM). A standard Manager IV *application*, used to administer *extension*, *terminal*, and *attendant console features* on an individual and system-wide basis.

Terminal dialing capability. A *data terminal* capability that allows a user to dial a telephone number from the terminal's keyboard.

Terminal emulation. The capability that allows

a *data terminal* to communicate with a system as if it were another type of data terminal.

Terminal/user assignments. The *TCM* capability that assigns *terminals* and their users particular *attributes*, *features*, and access levels.

Terminating FRL. The **facility restriction level (FRL)** assigned to a trunk group within a pattern. FRLs range from 0 to 7; 7 is least restrictive to users, 0 is most restricted.

Terminating preference. An *attribute* assigned to a multiappearance *terminal* that designates the appearance at which an incoming call appears.

Terminating Test Line (TTL). The *circuit*, situated at the terminating or far-end *switch*, used in testing trunks with *Automatic Transmission Measurement Service (ATMS)*.

36-button terminal. A *voice terminal* with 6 fixed-feature buttons and 34 customer-selectable feature buttons. These include the 7205H, 7305S, and 7405D voice terminals.

Threshold. A limit against which a quantity being measured is checked for exception reporting.

Tie trunk/line. A private-line communications *channel* that directly links two *switches*.

Time-coincident value. A *traffic* measurement that is taken at the same time that another selected measurement reaches its *peak value*.

Toll center. A *Central Office (CO)* where *channels* and *toll message circuits* terminate.

Toll message circuit. A circuit connecting two *exchanges* in different localities.

Toll office. An *exchange* with the function of controlling the switching of toll traffic.

TRACS. See *Translations, Recovery, Additions, And Conversions System*.

Traffic. The flow of information or messages through a communications *network* through voice, data, audio, or video services.

Traffic engineering. A *network* planning activity that determines the number and type of

communication paths required between switching points and the call-handling capability of the switching points.

Transaction. A specific task requested by the user to be performed by Manager IV.

Transaction screen. The form that displays at the terminal so the Manager IV user can enter information and execute a *transaction*.

Translation The variable portions of the switch software that can be customized to suit the customer's needs.

Translations, Recovery, Additions, and Conversion System (TRACS). The AT&T system that retrieves *switch* database translations and information and converts it for transmission to the Manager IV processor.

Tributary location. A location in a private *network* that places and receives calls through the main location. A tributary has a unique LDN and is generally attended.

Trunk. A communications channel between two *switches*. Specific trunks are dedicated to specific types of calls.

Trunk Data Module (TDM). See *Modular TDM*.

Trunk Dial Access Code (DAC). A one- to three-digit code used to access *trunks* and *trunk groups*.

Trunk group. A set of *trunks* engineered as a unit to establish connections within or between switching systems. All trunks assigned to the same trunk group have the same features and functions.

Trunk restriction groups. See *Miscellaneous Trunk Restriction Group (MTRG)*.

TTL. See *Terminating Test Line*.

12-button terminal. A *voice terminal* with six fixed-feature buttons and 10 customer-selectable feature buttons. These include the 7203H, 7303S, and 7403D voice terminals.

U

Uniform Call Distribution (UCD). A *System 75/DEFINITY Generic 1*, *DIMENSION* and *System 85* (R1 and R2V1) feature that allows incoming calls to be evenly distributed among a group of voice terminals by routing a call to the terminal that has been idle the longest.

Uniform Call Distribution group (UCD group). A set of *voice terminals* arranged to receive incoming calls using the *UCD* feature.

Uniform Numbering Plan. The plan used to process and route calls on a private *Electronic Tandem Network*. The plan identifies each switch location by a unique *location code* or *RNX*.

Universal Outward Feeds. Manager IV feature that allows Manager IV to output selected switch and non-switch data in a standard format for use by other system management applications.

UNIX operating system. The operating system developed by AT&T Bell Labs and used by the Manager IV processor.

UNIX shell. The command language that provides a user interface to the *UNIX operating system*.

UOF. See *Universal Outward Feeds*.

User class or type. The permissions assigned to *login IDs* that define the specific Manager IV applications and *transactions* to which a user may have access.

Utilities. A standard Manager IV *application* that provides the user with general UNIX operating system capabilities. Utilities *commands* can be accessed from any level in any Manager IV application.

V

Vector. A set of predefined call processing steps used to process incoming calls. Vectors are used with the *System 85 R2V4* and *DEFINITY Generic 2 Call Vectoring* feature.

Vector Directory Number (VDN). A "soft" extension number that is used for dialed access to vectors. Calls cannot be made from this extension, and it is not assigned an Equipment Line Location.

Voice Data Station (VDS). A 7404D terminal with six buttons and an integrated *Digital Terminal Data Module (DTDM)*.

Voice/data terminal. A terminal that provides simultaneous voice/data transmission such as any AT&T Personal Terminal (PT) or a voice terminal with a *DTDM*.

Voice terminal. A telephone set.

W

Wide Area Transmission Service (WATS). Outgoing telephone service that provides dial access to specific calling zones via a direct access line. The customer is charged a flat monthly fee for the line instead of being charged based on the number or length of calls placed. Incoming WATS lines provide 800 service where the called party is charged for the call.

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