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DCP Series
Communications Delivery Software
Operations Guide

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Product Information Announcement

○ New Release ○ Revision ● Update ○ New Mail Code

Title:

OS 1100/DCP Series Communications Delivery Software Operations Guide Level 5R2

This Product Information Announcement presents the release of the *OS 1100/DCP Series Communications Delivery Software Operations Guide,* Level 5R2 (7831 5777-001).

This software operations guide is for the interactive and batch terminal operator using Communications Delivery level 5R2. It tells you how to use the new Terminal Operator Menu Facility (TOMF).

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Product Information Announcement

● New Release ○ Revision ○ Update ○ New Mail Code

Title:

OS 1100/DCP Series Communications Delivery Software Operations Guide Level 5R1

This Product Information Announcement announces the release of the *OS 1100/DCP Series Communications Delivery Software Operations Guide,* Level 5R1 (7831 5777-000).

This software operations guide is for the interactive and batch terminal operator using Communications Delivery level 5R1. It tells you how to perform these tasks:

- Sign on and off the network
- Open and close sessions
- Send and receive messages
- Use screen bypass mode

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About This Guide

Purpose

This guide is for terminal operators using Communications Delivery level 5R1 software. It explains how to perform daily operational tasks on a terminal within a Telcon network.

Scope

This guide tells you how to:

- Establish sessions through Telcon
- Establish sessions using IBM® 3270 terminals
- Establish sessions to IBM host applications
- Send and receive solicited and unsolicited messages at terminals in a Telcon network
- Terminate paper tape input from a Teletype® terminal
- Use the Terminal Operator Menu Facility (TOMF) to open, close, and switch sessions, and to route transactions.

In addition, this guide contains messages and interpretations of these messages for users of terminals in the Telcon network.

Audience

This guide is intended for use by any terminal operator using a terminal in a Telcon network.

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Teletype is a registered trademark of Teletype Corporation.

rerequisites

This guide assumes the user has limited knowledge of basic computer and data communications environments.

low to Use This Guide

Use this guide to learn how to perform daily operations tasks on a terminal within a Telcon network and to get detailed information about the following:

- How to use operational commands and routines
- How to interpret messages displayed on an operations console

rganization

This guide is divided into five sections, two appendixes, and a glossary.

Section 1. Interactive Terminal Commands

This section tells the interactive terminal operator how to begin and end a Telcon session, establish Transaction Processing (TIP) and demand sessions for the OS 1100 system, establish sessions with IBM host applications, use general terminal commands, initiate and respond to unsolicited message commands, and use screen bypass commands.

Section 2. IBM SNA Gateway and SNA/net Related Commands

This section describes the network commands you can use to establish a Telcon session from an IBM 3270 interactive terminal using SNA Gateway and SNA/net. It also explains how to establish sessions to IBM host applications using SNA Gateway and SNA/net, and provides commands and a command overview for terminal emulation.

Section 3. Batch Terminal Commands

This section provides an overview of the commands and procedures you need for batch terminals. It also describes how to begin a Telcon session from a batch terminal and discusses general terminal commands.

Section 4. Telcon Messages

This section provides an alphabetized list of Telcon messages that may appear on your video display. Printer errors and undeliverable message conditions are also explained.

Section 5. Terminal Operator Menu Facility (TOMF)

This section provides the procedures and commands you use to open, close, and switch sessions, and to route transactions using TOMF.

Appendix A. Terminating Paper Tape Input

This appendix tells you how to terminate paper tape input punched on a Teletype terminal.

Appendix B. Telcon Command Summary

This appendix lists the form, syntax, and description of the available Telcon terminal commands with a summary of each command.

Command Notation Conventions

This guide uses the conventions that follow to present command formats. It distinguishes between notation conventions, symbols, and required characters in syntax.

The following symbols are used to present syntax in this guide:

UPPERCASE	UPPERCASE letters indicate a command name or a required keyword. Enter these UPPERCASE keywords exactly as shown.
Lowercase italic	*Lowercase italic* represents a value that you must enter as part of a command. This is a name or a number that you define.
{ }	Braces enclose required parameters, of which you must choose one. (No symbols around parameters also means the parameters are required.)
[ ]	Brackets enclose optional parameters. Parameters can appear stacked in command syntax notation.
[{ }]	Braces within brackets enclose two or more optional parameters; you must select one of the parameters.
|	A vertical line (pipe) separates options within brackets.
. . .	Ellipses indicate repeating parameters.

Key caps and other product nomenclature	All markings on key caps, controls, dials, switches, and so on, are shown in UPPERCASE and spelled exactly as they appear on the equipment.

equired Characters

You may need to use the following characters when entering a CMS 1100, Telcon, or DCP/OS command:

< >	Angle brackets are required in some cases for Telcon. Do not use them for any other purpose.
::	Double colons separate some Telcon commands.
;	Semicolons act as a continuation symbol when you continue a command on the next line. CMS 1100 commands almost always require a space before the semicolon; Telcon commands do not.
Spaces	Spaces in commands represent the actual number of spaces you must enter as part of a command.
Numbered lines	Numbered lines used in examples are explained following the example.

Related Product Information

Documents are referenced in text using a shortened version of the title. To make it easy for you to find them here, they are listed alphabetically by the shortened title, followed by the full title. An annotated list of other documents that directly relate to the subject of this document follows:

CMS 1100 Programming Reference Manual
Full title:
OS 1100 Communications Management System (CMS 1100) Programming Reference Manual (7831 5827). Previous document number: UP-9336.

This manual is a reference for writing programs to use in a TIP/CMS 1100 environment. It explains how the Communications Management System (CMS 1100) manages all communications between software that is resident in an OS 1100 host and the communications users outside the host, such as terminals and other hosts.

Communications Delivery Configuration Guide
Full title:
OS 1100/DCP Series Communications Delivery Software Configuration Guide (7831 5678). Previous document number: UP-9957.

This guide tells how to configure Communications Delivery software for a data communications network. It also tells you how to reconfigure these software products as your network evolves.

Communications Delivery Configuration Reference Manual
Full title:
OS 1100/DCP Series Communications Delivery Software Configuration Reference Manual
(7831 5686). Previous document number: UP-11580.

This manual provides reference material for configuring data communications networks with CD software.

Communications Delivery Installation Guide
Full title:
OS 1100/DCP Series Communications Delivery Software Installation Guide (7831 5645). Previous document number: UP-9956.

This guide tells you how to generate, install, and verify Communications Delivery software on an OS 1100 host and its Distributed Communications Processors (DCPs). Generating and installing involves copying the CD software components and related software products from release tapes to mass storage and preparing the software for use with your communications network.

DCP/OS Operations Reference Manual
Full title:
DCP Series Distributed Communications Processor Operating System (DCP/OS) Operations Reference Manual (7831 5702). Previous document number: UP-11541.

This manual is part of the operations subset of the Communications Delivery library. Its purpose is to familiarize the user with DCP/OS procedures and commands.

SNA/net Capabilities Overview
Full title:
DCP Series SNA/net Capabilities Overview (7831 5611). Previous document number: UP-13379.

This overview describes the features and capabilities of SNA/net. It includes software and hardware requirements, network examples, and restrictions.

SNA/net Installation and Configuration Guide
Full title:
DCP Series SNA/net Installation and Configuration Guide (7831 5629). Previous document number: UP-12440.

This guide describes the network definition statements (NDSs) required to configure SNA/net. It also contains information related to the IBM configuration.

SNA/net Operations Reference Manual
Full title:
DCP Series SNA/net Operations Reference Manual (7831 5637). Previous document number: UP-12441.

This manual describes the network management services (NMS) and emulated physical unit Type 2 (EPU2) commands available for controlling an SNA/net network.

Telcon Operations Guide
Full title:
DCP Series Telcon Operations Guide (7831 5785). Previous document number: UP-13431.

This manual is part of the operations subset of the Communications Delivery library. It is a guide to Telcon operations. It explains how a DCP network is organized, how to use NMS consoles and commands, how to use Telcon online configuration, how to transfer files in a DCP network environment, how to turn on instrumentation, how to interpret messages, and how to control console and logged messages.

Telcon Operations Reference Manual
Full title:
DCP Series Telcon Operations Reference Manual (7831 5728). Previous document number: UP-9256.

This manual is part of the operations subset of the Communications Delivery library. It is a reference to the full range of options on NMS commands and online configuration commands. It lists online hardware verification operations, RFS commands used to transfer files, hardware instrumentation parameters on the TRON command, general NMS console messages, and CENL console messages.

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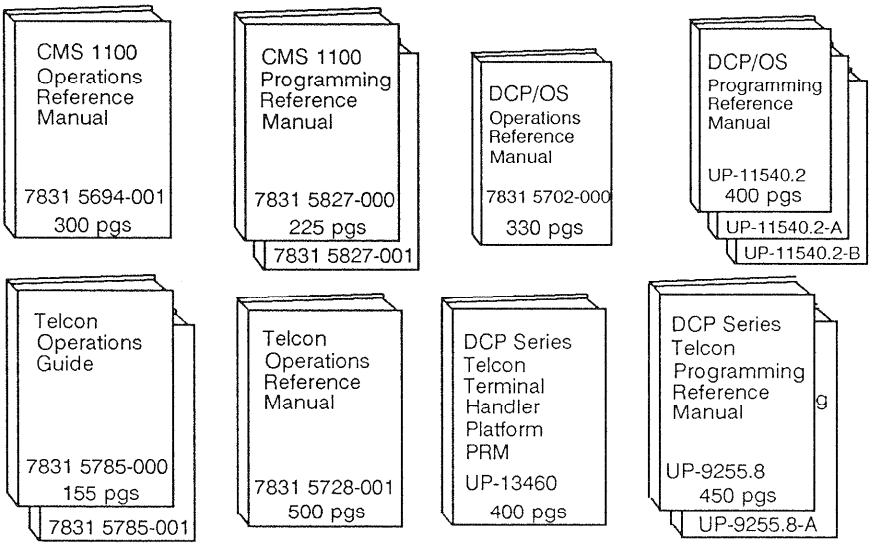

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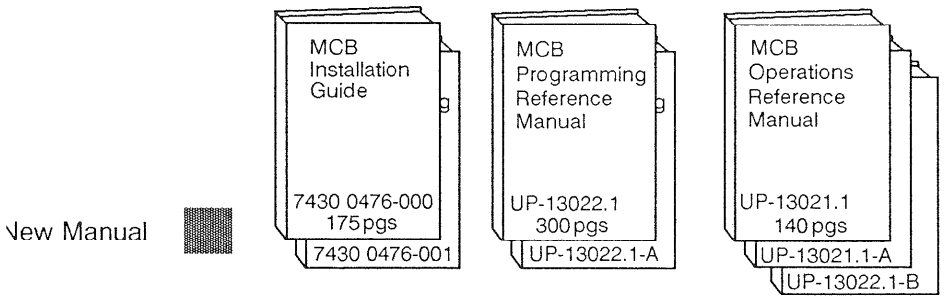

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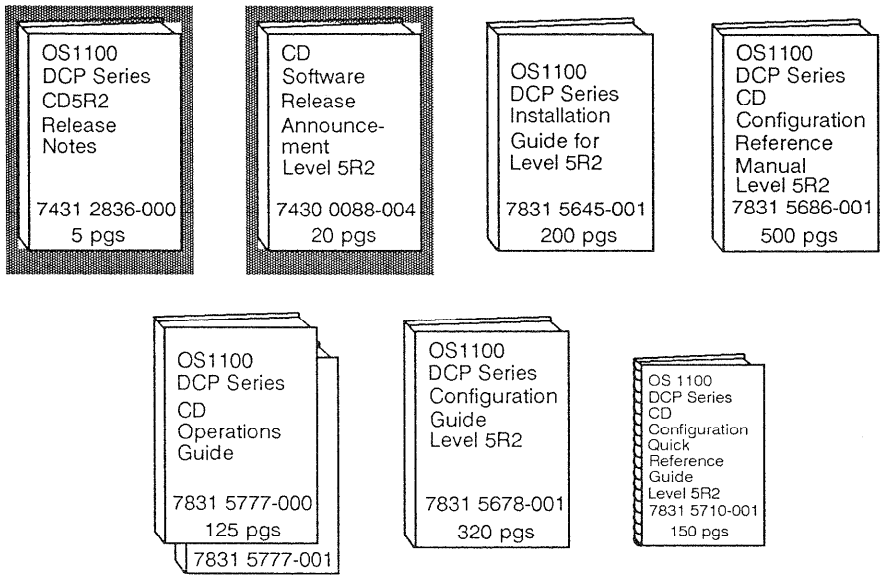

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Section 1
Interactive Terminal Commands

This section describes for interactive terminal operators how to do the following operations:

- Begin and end a Telcon session
- Establish sessions using Distributed Data Processing (DDP) 4000 workstations
- Establish Transaction Processing (TIP) and demand sessions for the OS 1100 system
- Use general terminal commands
- Initiate and respond to unsolicited message commands
- Use screen bypass commands

1.1. What Is Telcon?

The Unisys Telcon communications system is a software communications networking product based on Distributed Communications Architecture (DCA). It resides and executes in a Distributed Communications Processor (DCP). Together they provide a set of networking functions that support a wide variety of requirements and applications. The DCP and the Telcon software constitute a node that can be incorporated into a network of multiple nodes.

A Telcon configuration can logically connect any terminal to any host in the network. The software provides dynamic routing between the source and the destination.

1.1.1. Beginning a Telcon Session

You can start a Telcon session in any of five ways, depending on whether your interactive terminal is set up for manual or automatic sign-on and session establishment. Your system administrator determines which procedure applies to your terminal. Table 1-1 summarizes the procedures.

Table 1-1. Terminal Sign-On and Session Establishment Procedures

Terminal Setup	Terminal Operator Action: To Sign On	Terminal Operator Action: To Establish Session
1. Manual sign-on and session establishment.	Enter $$SON command and transmit.	Enter $$OPEN command and transmit.
2. Manual sign-on with automatic session establishment.	Enter $$SON command and transmit.	Session automatically established to the default application program. Enter $$OPEN command and transmit only when you want to change sessions or establish a a new session. Otherwise transmit only.
3. Automatic sign-on with manual session establishment.	Transmit.	Enter $$OPEN command and transmit.
4. Automatic sign-on and session establishment.	Transmit.	Session automatically established to the default application program. Enter $$OPEN command and transmit only when you want to change sessions or establish a new session.
5. Immediate sign-on.	Sign-on occurs at initialization time.	Session automatically established to the configured application program. Enter $$OPEN command and transmit only when you have configured the application program.

Note: *Your network administrator can select the network control characters ($$) at network generation time. If you are using different network control characters, substitute what you are using for the $$ characters throughout this guide. The default is $$.*

For a list of operations and error messages issued during Telcon session establishment, see Section 4.

1.1.2. Signing Your Terminal On and Off ($$SON and $$SOFF)

To sign on your terminal to the Telcon network, enter:

```
$$SON terminal ID
```

where:

terminal ID is a 1- to 8-character alphanumeric terminal identifier.

When Telcon accepts your sign-on, you get the following message:

```
Unisys Telcon Level-xRx (software-level) DCP-dcp-name
ENTER SESSION ESTABLISHMENT REQUEST:
```

where:

software-level is the 3-digit internal level of the software.

dcp-name is the name of the DCP to which your terminal is physically connected.

If you enter the $$SON command incorrectly, or if the terminal ID is invalid for the terminal you are using, a sign-on error message displays. Refer to Section 4 of this guide for a description of each error and its remedy.

With automatic sign-on, you do not need to enter a $$SON command to connect your terminal to the Telcon network. The terminal is signed on at line connection time or as a result of a blank transmit, with the message:

```
ENTER SESSION ESTABLISHMENT REQUEST:
```

Note: If you are using a UTS 400/4000 screen bypass terminal that has been signed on by a proxy terminal using the $$BYPS command, you must sign on by entering the following:

```
$$SON terminal ID
```

If you attempt a blank transmit, you receive the following message:

```
NETWORK SIGN-ON FAILED: SIGN-ON COMMAND EXPECTED
```

If you enter the $$SON command when your terminal is already signed on, you get the following message:

```
TERMINAL/SESSION - ALREADY ACTIVE
```

To sign off your terminal from the Telcon network, enter:

```
$$SOFF
```

This terminates any active session and signs off your terminal. You then get the message:

```
*INACTIVE TERMINAL*
```

The following example shows the procedure used to sign on to the Telcon network if your terminal is set up for manual sign-on and session establishment. You can also use this procedure if your terminal is set up for automatic sign-on. Once you sign off the terminal, you can either transmit or use the $$SON command to sign on to the Telcon network again. In this example and throughout the guide, text highlighted in color represents user input; numbered lines are explained after the examples.

Example

```
$$SON T001                              (1)
Unisys Telcon Level-xRx (xxx)DCP=ABC
ENTER SESSION ESTABLISHMENT REQUEST:    (2)
$$OPEN TIP
SESSION PATH OPEN TO:
.                                       (3)
.
$$SOFF                                  (4)
*INACTIVE TERMINAL*
```

(1) Signs on terminal T001

(2) Session establishment response

(3) Your application input

(4) Signs off your terminal

Note: *See 1.4 for details on signing a screen bypass device on and off.*

1.1.3. Opening, Closing, and Changing a Session ($$OPEN and $$CLOSE)

Use the $$OPEN and the $$CLOSE commands to open, close, and change sessions.

Opening a Session

To open a session with an application such as MAPPER® software or a site-developed program, enter the following:

```
$$OPEN application-name
```

where:

application-name	is a 1- to 8-character alphanumeric application identifier.

Example

```
$$OPEN APPL
```

This opens a session to application APPL.

Enter the $$OPEN command when you get the ENTER SESSION ESTABLISHMENT REQUEST message. When Telcon establishes your session, you get one of the following messages, depending on whether the application returns the application name in the confirmation message:

```
SESSION PATH OPEN TO: application-name
```

or

```
SESSION PATH OPEN
```

If Telcon rejects the session establishment, you may get one of the error messages described in Section 4. The terminal remains signed on to the Telcon network, and you can do one of the following:

- Correct the error
- Establish a session with a different application
- Sign off the terminal by using the $$SOFF command

MAPPER is a registered trademark of Unisys Corporation.

Closing a Session

To close a session, enter the following:

```
$$CLOSE
```

When Telcon closes your session, you get the following message:

```
*SESSION PATH CLOSED*
```

To sign off your terminal, enter the following:

```
$$SOFF
```

Here is an example of closing a session:

```
$$SOFF
*INACTIVE TERMINAL*
```

Changing a Session

It is not necessary to issue a $$CLOSE command when you want to change sessions. To establish a session with another application, simply enter another $$OPEN command. This closes the current session and opens a new one. Use this procedure even when your system administrator specifies automatic session establishment for your terminal.

Example

```
$$OPEN APP1                    (1)
SESSION PATH OPEN TO: APP1
.
.                              (2)
.
$$OPEN APP2                    (3)
SESSION PATH CLOSED
SESSION PATH OPEN TO: APP2
.
.
.
```

(1) Opens session to application APP1

(2) Your application input

(3) Closes session to APP1 and opens session to APP2

1.1.4. Establishing Sessions Using DDP Workstations

If you use a workstation, such as a Universal Video Terminal-1224 (UVT-1224) or a Personal Workstation[2] (PW[2]), you will not use the $$SON and $$OPEN commands to sign on your workstation and establish a session. Instead, press the command key to enter command mode and enter:

```
LOGON=host-name
```

or

```
LOGON,,host-name
```

where:

host-name is the 1- to 4-character name of the host processor.

This command both signs on your workstation and establishes a Telcon session.

Examples

```
1. LOGON=HST1
2. LOGON,,HST1
```

Both examples sign on your workstation and establish a session through host processor HST1.

1.1.5. Establishing Interactive Sessions Using Interactive Services

If you use a Unisys Personal Workstation[2] or Universal Video Terminal-1224 (UVT-1224) with Information Services (IS-CS, IS-PC, IS-5000, IS-6000, or IS-7000) installed on your system, refer to your Information Services operations guide for procedures on how to use the Information Services menus to establish interactive sessions.

Personal Workstation[2] is a trademark of Unisys Corporation.

2. Establishing TIP and Demand Sessions for an OS 1100 System

Communications Management Systems (CMS) 1100 treats Transaction Processing (TIP) and demand operations as different applications. Therefore, to use your terminal for both TIP and demand applications, you must establish separate, but not simultaneous, sessions for them.

Once you sign on, you can issue a series of $$OPEN commands to open and close TIP and demand sessions. For instance, if your terminal is in a demand session, you close the demand session and open the TIP session using the $$OPEN command.

Example

```
$$SON T001                                    (1)
Unisys Telcon Level-xRx (xxx) DCP=ABC
>ENTER SESSION ESTABLISHMENT REQUEST:
$$OPEN TRANS                                  (2)
SESSION PATH OPEN TO:  TRANS
.
.                                             (3)
.
$$OPEN DEMAND                                 (4)
SESSION PATH CLOSED
SESSION PATH OPEN TO: DEMAND
.
.
.
$$CLOSE                                       (5)
SESSION PATH CLOSED
$$SOFF                                        (6)
*INACTIVE TERMINAL*
```

(1) Signs on terminal T001

(2) Opens TIP session to application TRANS

(3) Your application input

(4) Closes TIP session to TRANS and opens demand session to application DEMAND

(5) Closes demand session to DEMAND

(6) Signs off your terminal

For details on TIP and demand sessions, see the *CMS 1100 Programming Reference Manual.*

1.3. General Terminal Commands

The following subsections contain general terminal commands you can use on an asynchronous terminal.

1.3.1. Echoing Characters Back to the Terminal ($$ECHO)

If you are using an asynchronous terminal, such as a UVT-1224, you can enter a terminal command to echo back each character you enter as input.

To echo back the character, enter the following:

```
$$ECHO ON
```

If you enter the $$ECHO command on a terminal that is not set up for the echoplex feature, you get the following message:

```
*ECHOPLEX CANNOT BE SELECTED*
```

To disable echoplex and terminate the echoing of characters, enter the following:

```
$$ECHO OFF
```

Note: The echoplex feature is provided on two-way simultaneous (full-duplex) terminal connections. However, when you enable echoplex, Telcon holds normal session output to the terminal until you complete the input.

1.3.2. Restarting Terminal Output after an Error Condition ($$CONT)

To restart terminal output halted by an error condition, or to check whether the Telcon system is operating, enter the following:

```
$$CONT
```

When you issue the $$CONT command, the Distributed Communications Processor (DCP) performs a carriage return/line feed or scroll (depending on your terminal type and operation mode), allowing terminal operation to continue.

1.3.3. Unsolicited Message Commands

Using the unsolicited message feature, you can send messages to other terminals in your Telcon network. The messages you send are private and only the terminals you specify can receive them.

Table 1-2 shows the terminal types that send or receive unsolicited output messages and the indicators for receiving the messages.

Table 1-2. Terminal Types and Indicators

Terminal Type	Indicator
UTS 4000 display terminal UTS 400 terminal U100/200	Message waiting light and audible alarm
DCT 500 DCT 1000 SVT1210 SVT1220 SVT1224 TTY UTS10 VT100 VT101 VT102 VT131 VT220	Audible alarm

When another terminal operator sends you an unsolicited message, you receive it in one of the following ways:

- If your terminal has an audible alarm, the unsolicited message does not interrupt normal session output because it is not immediately sent to the terminal. Instead, the system sounds the audible alarm and holds the message until you enter a $$SEND command. Once you receive the message, normal terminal operation resumes.
- If your terminal has no audible alarm, the system sends the following notification message:

```
** UNSOLICITED MESSAGE AVAILABLE **
```

If you do not want to be immediately notified of unsolicited messages, enter a $$HOLD command. The system then holds all unsolicited messages until you enter a $$SEND command.

1.3.4. Sending an Unsolicited Message ($$MSG)

To send a message to Telcon terminals in your network, enter:

```
$$MSG message ID destination ID/text
```

where:

message ID	is a 1- to 8-character alphanumeric string that identifies the message.
destination ID	is a list of one or more identifiers of terminals to receive a copy of the unsolicited message. You can specify a 1- to 8-character alphanumeric terminal identifier or send the message to a group of terminals using a 1- to 4-character alphanumeric broadcast code. Terminate the list with a slash (/).
text	is an alphanumeric character message up to five pages long, with each page up to a screen long.

Example

```
$$MSG UNSMSG1 T001,T004/PLEASE ATTEND DEPARTMENTAL MEETING AT
2:00
```

This sends the unsolicited message to terminals T001 and T004.

You can enter message text in two ways:

- Before transmitting the $$MSG command, enter the text after the slash that terminates the destination list. The system takes the message as a single-page-only message, and immediately notifies the destinations when you transmit the command.
- Terminate the $$MSG destination list with a slash, and transmit. You can then enter up to five pages (22 rows, maximum, per page) of message text. The system requests other pages of input, and, with each request, you need to enter only the message text and transmit. The system terminates the message text automatically after you transmit the fifth page of input. In addition, you can terminate the message text by placing the cursor directly after the start-of-entry (SOE) symbol (►) and transmitting when the system requests additional pages of text input.

After you end the $$MSG command, the system notifies each terminal specified in the command of the incoming unsolicited message. If all the destination IDs specified are valid, you get the following message:

```
MESSAGE ACCEPTED
```

Otherwise, you get this message, listing the destination IDs that are not valid:

```
NONCONFIGURED OR NONBROADCAST TERMINAL(S):
destination ID, destination ID, ...
                    .
                    .
                    .
MESSAGE ACCEPTED
```

If none of the destination IDs are valid, you receive the following message:

```
NONCONFIGURED OR NONBROADCAST TERMINAL(S):
destination ID,destination ID,...
                    .
                    .
                    .
*MESSAGE REJECTED*
```

When all the terminals are notified, the system sends you an unsolicited message. Enter the $$SEND command to receive the following unsolicited message from the system:

```
message ID - ALL DESTINATIONS NOTIFIED
```

If one or more of the terminals do not acknowledge notification, the system sends you a different unsolicited message. Enter the $$SEND command to get the following error message:

```
message ID WAS NOT NOTIFIED TO THE FOLLOWING DESTINATIONS
ACTION?
```

You can respond to this error message in one of two ways:

- Use the $$NAKR command to change the message's destination, or to delete the message from the queues of terminals that do not acknowledge notification.
- Continue with the session. Up to seven unacknowledged messages per destination terminal can be queued by the system.

The $$NAKR command also allows you to alter the length of time the message is held in a destination terminal queue. When you enter the $$NAKR command, you get a message that contains a list of up to 20 identifiers of terminals not notified:

```
DESTINATION                          EXISTENCE TIME
destination ID                        hours:minutes
      .                                    .
      .                                    .
      .                                    .
TOTAL NUMBER OF TERMINALS NOT NOTIFIED: total-terms
```

For details on the $$NAKR command, see 1.3.5.

When unsolicited messages are queued, they are held in a central file until one of the following occurs:

- The receiving terminal operator requests their delivery by issuing a $$SEND command.
- The set existence time for the queued messages expires.
- One or more of the specified terminals cannot be notified, and you use the $$NAKR command to delete the messages.
- The console operator deletes the message with an NMS command.

If the central file for unsolicited messages is not cataloged when the $$MSG command is entered, you receive the following message:

```
USM FILE 'M@USMFnn' NOT CATALOGED
```

When you receive this error message, ask your system administrator to catalog the unsolicited message file.

Note: After you issue the $$MSG command, you cannot use the @@PRNT command on your terminal until you transmit the unsolicited message and receive the MESSAGE ACCEPTED message. Until then, the system treats all characters you enter after the $$MSG destination list terminator (/) as message text.

5. Changing Destinations or Deleting Messages from Terminal Queues ($$NAKR)

To change the destination of an unsolicited message, change the length of time the unsolicited message is held for delivery, or delete an unsolicited message for a terminal, enter:

```
$$NAKR MSGID=message ID,DEST=destination ID
[,NEWDEST=new-destination]
[,TIME={hours:minutes}][,DELETE]
```

where:

`$$NAKR SSGID=`*`message ID`*
: is a 1- to 8-character alphanumeric string that identifies the message. This string is the same identifier specified in the $$MSG command.

`DEST=`*`destination ID`*
: is a 1- to 8-character alphanumeric identifier of the terminal:

  - That you remove from the destination list because it does not acknowledge notification of the unsolicited message
  - For which you specify a new length of time the message is held in the terminal's queue.

`NEWDEST=`*`new-destination`*
: is a 1- to 8-character alphanumeric identifier of the terminal to which you redirect the unsolicited message.

`TIME=`*`hours:minutes`*
: is the new length of time the message is to be held for delivery in the specified terminal's queue before the system deletes it. You must specify a value between 1 minute (00:01) and 24 hours (24:00). The default value is 00:00.

`DELETE`
: immediately deletes the message from the specified terminal's queue.

Specify at least one of the optional parameters (NEWDEST, TIME, or DELETE). When you specify the DELETE parameter, the system ignores the NEWDEST and TIME parameter specifications.

Enter the $$NAKR command only after you enter a $$MSG command and get the following unsolicited message:

```
message ID WAS NOT NOTIFIED TO THE FOLLOWING DESTINATIONS
ACTION?
```

Example

```
UNSMSG1 WAS NOT NOTIFIED TO THE FOLLOWING DESTINATIONS
ACTION? $$NAKR MSGID=UNSMSG1,DEST=T004
 NEWDEST=T005,TIME=00:30
DESTINATION EXISTENCE TIME
T004 01:00
TOTAL NUMBER OF TERMINALS NOT NOTIFIED: 1
```

The unsolicited message is sent to terminal T005 instead of terminal T004, and the time the message is held in the queue changes to 30 minutes.

1.3.6. Receiving an Unsolicited Message ($$SEND)

When you are ready to receive any unsolicited messages waiting in your terminal's queue, enter the following:

```
$$SEND
```

When the system receives the $$SEND command, it displays the first page of the message on the terminal screen. This page contains:

- The message text
- An indicator showing the page number of the message and the total number of pages in the message
- The originating terminal identifier
- The date and time for both the input and delivery of the message

The system notifies you whether there are any additional pages or further messages, and you request them by entering more $$SEND commands. The system delivers all pages of one message before delivering the next message.

For terminals with sessions open to host applications with their own broadcast message capabilities, it is not necessary to enter $$SEND to receive a Telcon unsolicited message. You can use function keys to receive messages. You can use the same key to receive a host broadcast message and to receive the Telcon unsolicited message.

If both a host broadcast message and a Telcon unsolicited message are available for delivery to your terminal, you receive the Telcon unsolicited messages first, followed by the host broadcast messages. You must press the host broadcast message key once for each message.

You can still use the $$SEND command, but in this case, it only solicits the Telcon messages available.

.7. Holding All Unsolicited Message Notifications ($$HOLD)

To prevent notification of unsolicited messages to your terminal, enter the following:

```
$$HOLD
```

When you enter the $$HOLD command, you get the following message:

```
USM HOLD NOW IN OPERATION
```

To clear the $$HOLD command and receive your unsolicited messages, enter the $$SEND command.

1.3.8. Changing the Blocking Factor (@@BLCK)

The blocking factor command allows several demand outputs to be sent through the network to the terminal in a contiguous block. This improves the terminal line efficiency, reduces network overhead, and introduces more data into the pipeline. The additional data causes a delay in the reaction to the @@ commands (notably @@X O), which may be annoying to you if the value is configured too high.

Specifying a blocking factor greater than the default also affects what happens when you use output interrupts. For CRT-type terminals, more output is displayed before the interrupt takes effect. For asynchronous terminals, part of the output can be redisplayed when output is resumed.

The format of the blocking factor command is:

```
@@BLCK x
```

or

```
@@BLCK
```

where:

x is either a question mark (?) or a number in the range from 1 to 255.

If *x* is a question mark, the current blocking factor is displayed on the screen.

If *x* is a number, *x* becomes the new blocking factor for your terminal. If *x* is not present, the configured value for your terminal becomes the new blocking factor.

4. Screen Bypass Commands

Universal Terminal System (UTS) 400/4000 cluster controllers can be equipped with a screen bypass feature. This feature appears to the system as a terminal station attached to the cluster controller without a visual display or keyboard. The screen bypass feature is used to give application programs access to peripheral equipment (for example, printers, diskettes) without interfering with the use of your terminal.

Through a series of screen bypass commands, you can use your UTS 400/4000 terminal as a proxy input device to enter data on behalf of a screen bypass station. These commands allow you to sign on the screen bypass station to the Telcon network, open sessions between the screen bypass station and application programs, and direct screen bypass output to peripheral equipment.

While these commands allow you to work with a screen bypass station, there are some restrictions:

- UTS 400/4000 display terminals that are defined as both proxy and screen bypass terminals must be part of the same cluster controller.
- When your terminal is being used as the proxy input device for a screen bypass station, output messages you would normally expect to receive are sent to the screen bypass station and are not displayed at your terminal. Because the screen bypass station does not have a visual display, any output sent to the screen bypass station only (that is, is not addressed to the peripheral device assigned to the screen bypass) is lost.
- Because screen bypass stations have no message waiting indicators, the system cannot notify a station that it has received an unsolicited message. The system delivers the unsolicited message to the screen bypass station when you issue a $$SEND command from your proxy terminal, regardless of whether the message was originally directed to your proxy terminal or to the screen bypass station.
- When you enter a break interrupt from your proxy terminal in screen bypass mode, the system does not stop the output to either the screen bypass station or your terminal. However, the system notifies the host processor of the interrupt request.

1.4.1. Assigning a Screen Bypass Station and Entering Screen Bypass Mode ($$BYPS)

To assign a screen bypass station to your UTS 400/4000 terminal and enter screen bypass mode, sign on your terminal and enter:

```
$$BYPS
```

If no other terminal in the cluster is assigned to the screen bypass station, the system puts your terminal in screen bypass mode and you get the following message:

```
SCREEN BYPASS SIGNED ON
```

If you enter $$BYPS from a terminal other than a UTS terminal or if screen bypass is already assigned to another terminal in the cluster, you get one of the error messages described in Section 4.

If the screen bypass station is not already signed on when it receives a screen bypass message, you get the following message:

```
SCREEN BYPASS INACTIVE
```

As the proxy terminal operator, you must enter a $$SON command on behalf of the screen bypass station. Until you enter a valid sign-on for the screen bypass station, the system considers any input sent to the station as a sign-on attempt.

Once the system assigns the screen bypass station and you are in screen bypass mode, your terminal becomes a proxy terminal. You enter input in the same way as you would from a normal terminal, but the system treats that input as if it comes from the screen bypass station.

The system responds to any input by sending the following:

1. An (►)SOE to your proxy terminal
2. Any resulting output to the screen bypass station

4.2. Signing a Screen Bypass Station On and Off ($$SON and $$SOFF)

When a screen bypass station is set up for automatic sign-on, the station is signed on when the line is connected (for dedicated lines) or when the first terminal becomes active (for dialed lines).

When the station is not configured for automatic sign-on, you must sign it on from your proxy terminal after issuing the $$BYPS command.

To sign on a screen bypass station from your proxy terminal, enter the following:

```
$$SON terminal ID
```

where:

terminal ID is a 1- to 8-character alphanumeric terminal identifier of the screen bypass station.

Example

```
$$SON SB1SS1
```

This signs on session with screen bypass station SB1SS1.

Once the screen bypass station is active (signed on) and a session is opened ($$OPEN), the screen bypass station is treated as a normal terminal.

To sign off the screen bypass station, enter the following:

```
$$SOFF
```

This releases the screen bypass station and exits your proxy terminal from screen bypass mode, but it does not disconnect your terminal. To sign off your terminal, you need to enter another $$SOFF command.

When you configure more than one screen bypass station, only one can be active at a time. To allocate a different screen bypass station, you must:

1. Sign off the session with the current screen bypass station ($$SOFF).

2. Reenter screen bypass mode ($$BYPS).
3. Sign on a session with the next screen bypass station ($$SON).

Example

```
$$BYPS              (1)
$$SON SB1SS1        (2)
.
.
.                   (3)
.
$$SOFF              (4)
$$BYPS              (5)
$$SON SB2SS2        (6)
.
.
.                   (7)
.
$$NOBY              (8)
.
.
.                   (9)
.
.
$$FRBY              (10)
$$SOFF              (11)
```

(1) Enters screen bypass mode

(2) Signs on session with first screen bypass station SB1SS1

(3) Establishes your session and accepts your input

(4) Signs off session with first screen bypass station and frees that station

(5) Reenters screen bypass mode

(6) Signs on session with second screen bypass station SB2SS2

(7) Establishes session and accepts your input

(8) Exits screen bypass mode and returns to normal mode

(9) You enter your application input using your terminal in normal mode

(10) Frees the second screen bypass station SB2SS2

(11) Signs off your terminal

When you exit screen bypass mode and sign off the session with the screen bypass station ($$NOBY and $$FRBY commands), another terminal can use the stations. You should not use the screen bypass station to initiate an operation with an auxiliary device because it could cause a conflict in using the screen bypass station. Instead, exit screen bypass mode and sign off the session before the initiated operation is complete.

.3. Exiting from Screen Bypass Mode ($$NOBY)

To exit from screen bypass mode, enter the following:

```
$$NOBY
```

This command returns your terminal to normal input mode, and the system responds as follows:

- No longer treats your input as if it comes from the screen bypass station
- Directs output to your terminal instead of to the screen bypass station

However, the $$NOBY command does not free the screen bypass station, and your terminal is still considered a proxy terminal for the station. Because the station is still assigned to your terminal, no other terminal can use it until you enter a $$FRBY command.

1.4.4. Freeing a Screen Bypass Station ($$FRBY)

To free an assigned screen bypass station, enter:

```
$$FRBY
```

No other terminal can use the screen bypass station until you release it by using the $$FRBY command. If you enter the $$FRBY command without issuing the $$NOBY command, the system automatically exits your terminal from screen bypass mode and then frees the screen bypass station.

The $$FRBY command does not sign off the session with the screen bypass station, nor does it terminate any sessions established for the screen bypass station. You must close the sessions ($$CLOSE) and sign off the screen bypass station ($$SOFF) from your proxy terminal or from another proxy terminal that uses the screen bypass station.

1.4.5. Using an Auxiliary Printer with a Screen Bypass Station

When an auxiliary printer is attached to a screen bypass station, the following considerations apply:

- If a proxy terminal is active when the printer assigned to the screen bypass terminal runs out of paper, the proxy terminal receives the following message:

  ```
  ** AUX PRINTER ON SCREEN BYPASS TERMINAL IS OUT OF PAPER **
  ```

- Once more paper is loaded, any input from an active proxy terminal terminates the recovery in progress for the screen bypass station.

See 4.2 for a discussion on error handling procedures for an auxiliary printer.

Section 2
IBM SNA Gateway and SNA/net Related Commands

This section describes the session initiation and termination procedures for display terminals when using SNA Gateway and SNA/net commands and procedures.

2.1. SNA Gateway Commands and Procedures

The following describes the network commands that establish a Telcon session from an IBM 3270 interactive terminal. It also explains how to establish sessions to IBM host applications. In addition, this section contains information on how to do the following:

- Use IBM 3270 terminal commands
- Establish sessions with IBM host applications
- Use terminal emulation commands

2.1.1. Telcon Commands

You can use the following network commands from an IBM 3270 interactive terminal:

```
$$SON
$$SOFF
$$OPEN
$$CLOSE
$$HOLD
$$CONT
$$SEND
$$MSG
```

2. Establishing Sessions Using IBM 3270 Terminals

To establish a session from an IBM 3270 terminal to a Unisys host application through Telcon, you must use the system request key and then enter the following:

```
$$OPEN application-name
```

Example

```
$$OPEN APPL
```

This opens a session to application APPL.

If the session is established successfully, the 3270 terminal functions as a Universal Terminal System (UTS) terminal communicating with a Unisys application program, and the following message appears:

```
SESSION PATH OPEN
```

3. Establishing Sessions to IBM Host Applications

This section discusses two types of session establishment with an IBM host:

- IBM terminal with IBM host
- UTS terminal with IBM host

IBM 3270 Terminal with IBM Host

To establish an IBM 3270 terminal session through the Distributed Communications Processor (DCP) with an IBM host, sign on to Telcon at the terminal with $$SON and use the $$OPEN command to establish a session. If the terminal is auto-allocated, neither $$SON nor $$OPEN is used. You enter a log-on request that is sent to a default destination (if so configured) in the IBM host.

UTS Terminal with IBM Host Application

To initiate a session from a UTS terminal to an IBM host application, use the $$OPEN command to initiate both the Telcon session and the Systems Network Architecture (SNA) logical unit session. The format for establishing a session with an IBM application is as follows:

```
$$OPEN application-name [logon-request]
```

where:

application-name
: is the name of an SNA Gateway path. You must obtain the SNA Gateway path name from your system administrator. A Telcon session is established with a Gateway destination identified by this name.

logon-request
: is sent to the IBM host to establish an SNA logical unit session. The logon request is sent to Virtual Telecommunications Access Method (VTAM), specifying the application program name. Optional logon mode name and user data may also be sent. VTAM can accept a logon request with the following format:

```
LOGON APPLID name LOGMODE name DATA user-data
```

where:

LOGON
: is the LOGON function.

APPLID *name*
: is the IBM application program with which a session is to be established.

LOGMODE *name*
: is the location in a log-on mode table of the desired session parameters.

DATA *user-data*
: specifies data (if any) to be passed to the application program.

Example

```
$$OPEN SNA1 LOGON APPLID MYAPPL
```

This opens a session with an application called MYAPPL in an IBM host from a terminal using SNA Gateway path SNA1.

I. Commands for Terminal Emulation

Three special option commands let an IBM 3270 terminal appear as a UTS terminal to the OS 1100 system when both are connected to a Telcon network. You can enter these commands only by using the system request key. Use these commands to do the following:

- Emulate screen scroll ($$SCROLL)
- Select a start-of-entry character ($$SOE)
- Select a tab option ($$TAB)

Emulate Screen Scroll

You may use the screen scroll emulation option in demand mode. Screen scroll is entered as either of the following:

```
$$SCROLL WRAP
```

or

```
$$SCROLL PAGE
```

where:

`$$SCROLL WRAP`
: emulates scrolling by filling the screen. When the screen is full, it places the next line at the top of the screen.

`$$SCROLL PAGE`
: emulates scrolling by filling the screen zone and placing three asterisks (***) at the bottom line of the screen. Output is suspended until you press the enter key; then the screen is cleared and output resumes. Any other PA/PF key, except SYS REQ, is ignored and output resumes.

Keyboard input is possible only when the screen is idle and the keyboard is unlocked. You may use the output function interrupt (PA1) key to interrupt continuous output when in WRAP mode.

The default value for this option is $$SCROLL WRAP.

Select a Start-of-Entry Character

The IBM 3270 does not use a start-of-entry (SOE) to indicate start-of-input text. The SOE character is entered as:

```
$$SOE character
```

where:

`$$SOE character`
: allows you to select a character to simulate the SOE where required.

The default value for this option is the greater-than sign (>).

Select a Tab Option

To select a tab option, enter either of the following:

```
$$TAB ATT
```

or

```
$$TAB character
```

where:

`$$TAB ATT`
: specifies tab stops received from a Unisys application. Tab stops are emulated with an IBM 3270 start field order and attribute. The attribute is marked changed so a subsequent entry includes the field even if it is not physically changed. This option allows subsequent tabbing to emulated tab stops.

`$$TAB character`
: specifies the character used to emulate a tab stop character. Subsequent tabbing to the character emulating a tab stop is not possible.

The default value for this option is $$TAB ATT.

Note: Tabbing stops at the next unprotected field on the screen, even if it is not in emulation of a tab stop, with both tab emulation options.

. SNA/net Procedures and Commands

This subsection describes the session initiation and termination procedures for display terminals when using SNA/net.

1. Emulation Considerations

Because of variations in the capabilities of Unisys and IBM terminals, some functions normally available on your terminal may not be available when you are using SNA/net. Whenever possible and practical, SNA/net emulates your terminal's characteristics. What this means is that you may notice a difference in your terminal's operation.

Terminal operation differences occur in the following situations:

- When you access an IBM host application from a UTS/SVT terminal on an SNA/net node.
- When you access an IBM host application from a BSC 3270 terminal on an SNA/net node.
- When you access an OS 1100 application from an SDLC 3270 terminal on an SNA/net node.
- When you access an OS 1100 application from an SDLC 3270 terminal on an IBM node.
- When you access an OS 1100 application from a 3770 terminal (remote batch workstation).

Refer to Appendix D for a description of terminal operation differences.

2. Auto-Logon for SNA Terminals

SNA terminals on SNA/net nodes can establish sessions using the auto-logon method. With this method, automatic session establishment between a terminal and an application occurs during an initial SNA/net load. Automatic session establishment also occurs when you power up the cluster controller or when SNMS activates the cluster controller.If the terminal is off at the time the auto-logon sequence is invoked, session establishment fails and you must enter a logon sequence. To define auto-logon capability for an SNA terminal, specify a logon sequence for the AUTLOGON parameter on the LU statement that defines the terminal.

2.2.3. General Logon Syntax

SNA/net supports unformatted SSCP-LU logon commands. The logon command can be entered using BAL or PL1 syntax, or a combination of both. The syntax for each is described separately.

BAL Syntax

verb[*p1,p2,...*] [*keyword=value*] [,*keyword=value*]

Parameters

verb	is the command (for example LOGON). It can be followed by one or more blanks.
p1,p2,...	are positional parameters, which are optional. If positional parameters are specified, they must be separated by commas and precede any keyword parameters.
keyword=value	is a keyword parameter, which is optional. If a keyword parameter is specified, the keyword and the value must be separated by an equal sign. Keyword parameters are separated by commas.

PL1 Syntax

verb[(*p1,p2,...*)] [*keyword*(*value*)] [*keyword*(*value*)]

Parameters

verb	is the command (for example LOGON). It can be followed by one or more blanks or by a left parenthesis, which indicates positional parameters.
(*p1,p2,...*)	are positional parameters, which are optional. If positional parameters are specified, they must precede any keyword parameters, be separated by commas, and be enclosed in parentheses.

Syntax Rules

These are the rules that govern the use of the BAL and PL1 syntax:

- You can use both BAL and PL1 syntax within the same command.
- Parenthesis must be paired.
- A left parenthesis and an equal sign are treated the same when they appear after a keyword.
- Blanks that are not within the scope of single quotation marks are treated as white space.
- The single quotation marks that delimit a string (that is, the first and last single quotation marks) are removed. Each occurrence of two adjacent single quotation marks is replaced by a single quotation mark. Quotation marks are processed in this manner for all command parameters. Here is an example:

  'This doesn''t make sense.'

  results in

  This doesn't make sense.

keyword(*value*)
: is a keyword parameter, which is optional. If a keyword parameter is specified, the keyword must be followed by one or more blanks and the value must be enclosed in parentheses.

2.2.4. Logon from UTS/SVT and BSC 3270 Terminals

UTS/SVT and BSC 3270 terminals SNA/net nodes can log on to OS 1100 and IBM applications. BSC 3270 terminals require the BSC 3270 Real Terminal Handler product. Refer to the *3270 BSC 3270 Real Terminal Handler and Inverted Terminal Handler Installation Guide* for information about these devices.

To log on to an OS 1100 or IBM application from a UTS/SVT or BSC 3270 terminal, you must sign on to the DCA network, and log on to the application.

Format

```
$$SON terminal-id

$$OPEN [crossover-name [LOGON]] application-name
```

Parameters

terminal-id
is the terminal ID. It is obtained from the TERM statement.

crossover-name
is required when logging on to IBM applications. It is the XEU statement name that defines the SNA/net crossover path. Do not use *crossover-name* when logging on to OS 1100 applications.

application-name
is the name of an OS 1100 or IBM application. For OS 1100 applications, use the XEU statement name that defines the application. For IBM applications, use the SNA/net CDRSC statement name that defines the IBM application as a cross-domain resource.

Session Termination

Terminate a session by entering an application-defined log off sequence such as LOGOFF. You can also use the $$CLOSE command to terminate a session.

2.5. Logon from SNA 3270 Terminals

SNA 3270 terminals on SNA/net nodes and IBM nodes can log on to OS 1100 and IBM applications.

Note: If your terminal is on an IBM node, the logon format can be different. The format you use depends upon your site's ACF/VTAM USSTAB specifications.

Format

```
LOGON APPLID(application-name) [LOGMODE(log-name)] [DATA(user-data)]
```

Parameters

application-name
is the application name. It is the name of an OS 1100 or an IBM application. The name you use depends on whether your terminal is on an SNA/net node or an IBM node and whether you are logging on to an OS 1100 application or an IBM application.

If your terminal is on an SNA/net node, this is where you obtain the application name. For OS 1100 applications, it is the SNA/net ELU statement name; for IBM applications, it is the SNA/net CDRSC statement name that defines the IBM application as a cross-domain resource to SNA/net.

If your terminal is on an IBM node, this is where you obtain the application name. For OS 1100 applications, it is the ACF/VTAM CDRSC macro name that defines the OS 1100 application as a cross-domain resource to ACF/VTAM; for IBM applications, it is the ACF/VTAM APPL macro name.

log-name is the name of an optional logon mode table.

user-data is optional data to be passed to the application.

Session Termination

To terminate a session, enter an application-defined logoff sequence such as LOGOFF.

2.2.6. Logon from SNA 3770 Terminals

SNA 3770 terminals on SNA/net nodes and IBM nodes can log on to OS 1100 and IBM applications. Two logon formats are presented, one to use when logging on to an OS 1100 application and one to use when logging on to an IBM application.

Note: If your terminal is on an IBM node, the format you use to log on to an IBM application can be different from what is presented here. The format you use depends upon your site's ACF/VTAM USSTAB specifications.

Format for Logon to OS 1100 Applications

```
LOGON APPLID(application-name) [LOGMODE(log-name)] DATA(dlcunit[,,,site)]
```

Format for Logon to IBM Applications

```
LOGON APPLID(application-name) [LOGMODE(log-name)] [DATA(user-data)]
```

Parameters

application-name
: is the application name. It is the name of an OS 1100 or an IBM application. The name you use depends on whether your terminal is in an SNA/net domain or an IBM domain and whether you are logging on to an OS 1100 application or an IBM application.

  If your terminal is in an SNA/net domain, this is where you obtain the application name. For OS 1100 applications, it is the SNA/net ELU statement name; for IBM applications, it is the SNA/net CDRSC statement name that defines the IBM application as a cross-domain resource to SNA/net.

  If your terminal is in an IBM domain, this is where you obtain the application name. For OS 1100 applications, it is the ACF/VTAM CDRSC macro name that defines the OS 1100 application as a cross-domain resource to ACF/VTAM; for IBM applications, it is the ACF/VTAM APPL macro name.

log-name
: is the name of an optional logon mode table.

dlcunit
: is the DLCUNIT to which the remote batch EUs are attached.

,,,site is required for multiple LU mode and is not allowed for single LU mode. It is the site ID. Specify one to eight characters.

user-data is optional data to be passed to the application.

Session Termination

To terminate a session, enter an application-defined logoff sequence such as LOGOFF.

Section 3
Batch Terminal Commands

This section describes the different procedures and commands you need for batch terminals. It discusses the following:

- How to establish and sustain a Telcon session from a batch terminal
- How to use general terminal commands

3.1. Telcon Session Summary—Batch Terminals

To establish a Telcon session from a batch terminal, follow the same general rules that apply to interactive terminals. However, the procedures differ according to whether the terminal has a remote console. Table 3-1 summarizes the procedures.

Table 3-1. Establishing a Telcon Session from a Batch Terminal

Terminal Type	Beginning a Session	Ending a Session
Terminals with a remote console	Enter $$SON and $$OPEN through the console. This begins sessions for all devices on the subsystem.	Varies according to equipment type.
Terminals without a remote console	Enter $$SON and $$OPEN through the card reader.	Varies according to equipment type.

If the terminal has a remote console, the system sends all responses, including contingency messages, to the console. If the system rejects session requests from individual devices on the subsystem, the subsystem continues to operate. However, if the system rejects the session request from the console itself, it aborts the sessions for all other devices on the subsystem.

If the terminal does not have a remote console, the system sends all responses to the printer.

If a binary synchronous communications (BSC) terminal is set up for automatic sign-on, no Telcon-generated canned messages are sent to the site. This includes sign-on/sign-off and open/close messages.

.1. Signing Your Terminal On and Off ($$SON and $$SOFF)

The procedure for signing your terminal on and off depends on the type of batch terminal you are using. Table 3-2 summarizes the procedures.

Table 3-2. Signing your Batch Terminal On and Off

Terminal Type	Sign-On Procedure	Sign-Off Procedure
REM1 terminals	Automatically signed on when you initialize the terminal.	Automatically signed off when you enter the termination sequence.
NTR terminals	Procedure depends on specific terminal you use. For details, see the appropriate operating manual for your terminal.	
BSC terminals	Use same sign-on and sign-off commands as for interactive terminals.	

To connect a terminal using BSC protocol with the Telcon network, enter the following:

```
$$SON group ID
```

where:

group ID is a 1- to 8-character alphanumeric group identifier assigned by your network administrator.

Example

```
$$SON BATCH1
```

This command signs on your terminal (BATCH1).

To disconnect the BSC from the Telcon network, enter the following:

```
$$SOFF
```

For additional information about the sign-on and sign-off commands, see 1.1.1 and 1.1.2.

3.1.2. Opening and Closing a Session ($$OPEN and $$CLOSE)

The commands for starting and ending a session with an application from a batch terminal are the same commands you use from an interactive terminal. To establish a session with another application, enter the following:

```
$$OPEN application-name
```

where:

application-name
is a 1- to 8-character alphanumeric application name.

Example

```
$$OPEN APPL
```

This opens a session to application APPL.

To end a session, enter the following:

```
$$CLOSE
```

For additional information about the open and close commands, see 1.1.3.

2. General Batch Terminal Commands

You can use the $$TFILE, $$RESEND, $$SKIP, and $$RESUME commands on a BSC or REM1 terminal (printers and punches only).

BSC protocol allows only one device active at a time. Therefore, before using any of the terminal commands on a BSC terminal, you must stop the printed or punched output sent to your terminal. The procedure for stopping output depends on the type of BSC terminal you use. To see how to correctly terminate output, see the operating guide for your specific terminal.

Notes:

1. *To ensure that Telcon acts on the terminal command you use, enter only the command and no other data. If you enter other data with the commands, the system may send the commands to the host as text, instead of sending them to Telcon.*
2. *For BSC terminals, if you enter an incorrect terminal command or if you do not enter a terminal command within two minutes of stopping the output to your terminal, the system restarts output to your terminal.*
3. *If you are using a REM1 terminal, you do not need to stop output before using a terminal command. However, the system discards all cards present between the $$ terminal command and the end of the file (usually an @@ or " " statement).*

3.2.1. Terminating a File ($$TFILE)

To terminate a file to a device, enter the following on the card reader:

```
$$TFILE {device-number   }
        {device-mnemonic}
```

where:

device-number
: is a 1- to 6-digit hexadecimal number of the device where you want the file terminated. Your system administrator determines device numbers.

device-mnemonic
: is a 2-character name of the device where you want the file terminated. Specify one of the following:
  CP (card punch)
  PR (line printer)

Examples

1. `$$TFILE PR`
2. `$$TFILE 3`

Both examples terminate the file to the line printer.

2. Backing Up or Requeuing a File ($$RESEND)

To back up or requeue a file so that you can reprint or repunch it, enter the following on the card reader:

```
$$RESEND {device-number   } [,resend-number]
         {device-mnemonic}
```

where:

device-number
: is a 1- to 6-digit hexadecimal number of the device to which you want to back up or requeue the file for reprinting or repunching. Your network supervisor determines the device number.

device-mnemonic
: is a 2-character name of the device to which you want to back up or requeue the file. Specify one of the following:
  CP (card punch)
  PR (line printer)

resend-number
: is the 1- to 2-digit hexadecimal number of pages or cards in the file to be backed up. Specify a maximum value of FF (255 decimal). If you specify 00, or if you do not specify a value, the entire file is backed up or requeued.

If you specify an incorrect device number, the system discards the command. For a BSC terminal, the system restarts output to the terminal.

Example

```
$$RESEND PR
```

This command backs up the entire file to the printer.

3.3. Moving a File Forward ($$SKIP)

To move a file forward by skipping a specified number of pages or cards, enter the following on the card reader:

```
$$SKIP {device-number   } ,skip-number
       {device-mnemonic}
```

where:

device-number
: is a 1- to 6-digit hexadecimal number of the device to which you want to move the file forward. Your network supervisor determines the device number.

device-mnemonic
: is a 2-character name of the device to which you want to move the file forward. Specify one of the following:

  CP (Card punch)
  PR (Line printer)

skip-number
: is a 1- to 2-digit hexadecimal number. It is equal to 1/10 the actual number of pages or cards to be skipped in a file.

If you specify an incorrect device number, the system discards the command. For a BSC terminal, the system restarts output to the terminal.

To determine the hexadecimal number to use, you must:

1. Decide how many pages or cards you actually want to skip.
2. Divide that number by 10.
3. Convert the answer to its hexadecimal equivalent.

For example, to cause the line printer to skip 20 pages in the file, you must do the following:

1. Divide 20 by 10 (20 ÷ 10 = 2).
2. Convert 2 to its hexadecimal equivalent:

   2=2 hexadecimal
3. Enter:

```
$$SKIP PR,2
```

The printer then resumes printing 21 pages ahead.

3.3.1. Restarting Terminal Output after Using a Terminal Command ($$RESUME)

To restart output to a device after you use one of the available terminal commands, enter the following on the card reader:

```
$$RESUME {device-number   }
         {device-mnemonic}
```

where:

device-number
: is a 1- to 6-digit hexadecimal number of the device to which you want to restart printed or punched output. Your network supervisor determines the device number.

device-mnemonic
: is a 2-character name of the device to which you want to restart printed or punched output. Specify one of the following:
  CP (card punch)
  PR (line printer)

Telcon supports the $$RESUME command for BSC terminals only. If you specify an incorrect device number, the system discards the command and automatically restarts output to the terminal.

Example

```
$$RESUME PR
```

This command restarts output to the line printer.

Note: Although you can use the $$RESUME command to restart output to devices any time the devices are stopped, it may cause you to lose cards or lines of output.

Section 4
Telcon Messages

This section includes alphabetized descriptions of the following:

- General Telcon messages
- Auxiliary printer errors
- Undeliverable messages due to session failure

4.1. General Telcon Messages

ECHOPLEX CANNOT BE SELECTED

Explanation

You attempted to invoke echoplex ($$ECHO) on a terminal that is not configured with the echoplex feature.

The $$ECHO command can be used on asynchronous terminals only. Continue with processing.

$$ ERROR-ILLEGAL TYPE

Explanation

You issued an invalid $$ command.

Check the format of the $$ command and retry.

$$ ERROR-SYNTAX

Explanation

One of the following has occurred:

- A syntax error in the destination ID
- No text message followed the unsolicited message header
- No address followed the unsolicited message command

Correct the command and retry.

ILLEGAL NETWORK CONTROL MESSAGE

Explanation

You attempted to use screen bypass from a non-UTS 400/4000 display terminal or from a UTS 400/4000 display terminal on a cluster with no screen bypass configured.

Retry $$BYPS from another terminal.

ILLEGAL USM TERMINAL TYPE

Explanation

You sent an unsolicited message (USM) to an unsupported terminal type. Change the destination ID and retry.

INACTIVE TERMINAL

Explanation

Your terminal is signed off from the Telcon network.

Informational message only.

INPUT ERROR-RESEND MESSAGE

Explanation

There is an input error on a device with no recovery procedure in the communications protocol.

Retry the previously issued command. If the problem continues, contact the supervisory staff.

LAST INPUT MESSAGE DISCARDED

Explanation

The system cannot accept the last input.

Retry the previous input.

MESSAGE ID ALREADY IN USE

Explanation

The message ID specified with the $$MSG command is already being used.

Reenter the $$MSG with a new message ID.

MESSAGE ID WAS NOT NOTIFIED TO THE FOLLOWING DESTINATIONS ACTION?

Explanation

One or more of the terminals you specified in the $$MSG command have not acknowledged notification of the unsolicited message.

Continue with your normal session and wait for the terminal to acknowledge the notification, or use the $$NAKR command to delete the message from the terminal, queues, or change destinations.

NETWORK OPEN REQUEST FAILED CONFIGURATION ERROR

Explanation

Either the session was configured incorrectly, or it was not configured at all.

Contact your system administrator.

NETWORK OPEN REQUEST FAILED-NO RESOURCES

Explanation

The session is unavailable. Either Telcon or the host has insufficient resources. Most likely there are too many users on the system.

Wait for the system to become less congested. If the problem persists, contact your system administrator.

NETWORK OPEN REQUEST FAILED: PATH TO DESTINATION IS DOWN

Explanation

A path to the application you specified on the $$OPEN command does not currently exist.

Check with your system operator and retry the $$OPEN command. If the problem persists, contact your system administrator.

The PATH or FEP on your CONS is probably down.

****NETWORK SIGN-ON FAILED: SIGN-ON COMMAND EXPECTED****

Explanation

You entered an invalid sign-on command from an inactive terminal.

Verify the sign-on command syntax and reenter.

****NETWORK SIGN-ON FAILED: TRY AGAIN****

Explanation

Indicates that a momentary system failure has occurred.

Try again. If the problem persists, contact your system administrator.

****NETWORK SIGN-ON FAILED: SYSTEM HOLD ON TERMINAL****

Explanation

Indicates the system administrator put a hold on your terminal and will not allow it to be signed on to the network.

Check with the system administrator.

NETWORK OPEN REQUEST FAILED: VERIFY OPEN-ID AND REENTER

Explanation

You entered an invalid application name.

Verify the application name and retry.

****NETWORK SIGN-ON FAILED: VERIFY TERMINAL ID AND REENTER****

Explanation

Possible reasons for this message include:

- You entered an invalid terminal ID with the $$SON command.

  Verify the terminal ID and reenter.

- You entered a valid terminal ID at the wrong terminal.

NO MESSAGES WAITING

Explanation

You issued a $$SEND command, but no messages are queued for your terminal.

Informational message only. Continue with processing.

NONCONFIGURED TERMINAL

Explanation

No terminal was found with the specified destination ID.

Check correct identifier and retry.

NONCONFIGURED OR NONBROADCAST TERMINAL(S)-destination ID, destination ID, ...

Explanation

One or more of the terminals you specified in the $$MSG command are not signed on.

When you receive an unsolicited message notification from the system, issue a $$SEND command to get additional information and take further action.

SCREEN BYPASS BUSY

Explanation

You requested screen bypass ($$BYPS), but another terminal in the cluster already has screen bypass assigned.

Retry $$BYPS command at a later time.

SCREEN BYPASS INACTIVE

Explanation

Screen bypass message received, but the screen bypass station is not signed on.

Sign on screen bypass station from your proxy terminal. See 1.4.

SCREEN BYPASS SIGNED ON

Explanation

Your proxy terminal is accepted into screen bypass mode, and the screen bypass session is assigned.

Informational message only.

SECONDARY SESSION ACTIVE

Explanation

The terminal has a secondary session active (that is, USM or BROADCAST is in use).

Wait for the secondary session to terminate before opening a normal session.

SESSION PATH CLOSED

Explanation

The Telcon session is closed in response to a $$CLOSE command, or the application has terminated the session. Informational message only.

SESSION PATH OPEN

Explanation

The Telcon session is open.

Informational message only. Continue with your session.

TERMINAL/SESSION-ALREADY ACTIVE

Explanation

You entered a $$SON command but your session is already active.

Informational message only. Continue with your session.

TOO MANY USMS QUEUED

Explanation

You queued too many unsolicited messages to a terminal.

USM FILE M@USMF*nn* NOT CATALOGED

Explanation

You attempted to send an unsolicited message, and the central USM file M@USMF*nn* is not cataloged.

Ask your network administrator to catalog the unsolicited message file and retry.

USM HOLD NOW IN OPERATION

Explanation

All unsolicited messages to your terminal are held in response to a $$HOLD command.

Informational message only.

USM STORAGE FILE FULL

Explanation

No storage space is available on the central unsolicited message file M@USMF*nn*.

Ask your network administrator to expand the file and retry.

WAIT-SESSION ESTABLISHMENT IN PROGRESS

Explanation

You entered another command before receiving the response to a session establishment request.

Retry the command after receiving the session establishment responses.

****WAIT-SESSION TERMINATION IN PROGRESS****

Explanation

The terminal is still processing the previous session termination request.

Wait for message `SESSION PATH CLOSED` before attempting to open another session.

****WAIT-TERMINAL SIGN OFF IN PROGRESS****

Explanation

The terminal is still processing the previous $$SOFF request.

Wait for message `**TERMINAL INACTIVE**` before attempting another sign-on.

4.2. Auxiliary Printer Errors

There are two types of auxiliary printer errors:

- Out of paper errors
- Device errors

These two types of errors, and the actions resulting from them, are described in the following subsections.

4.2.1. Out of Paper

Telcon does not initially treat an out-of-paper device status as an error unless it is the result of an initial selection attempt. Instead, it allows you time to add paper before an error condition exists. When the out-of-paper status is detected, the following conditions exist:

- A 5-minute timer begins.
- Output stops to the printer.
- An `AUX PRINTER IS OUT OF PAPER` message is sent to your terminal.

You now have five minutes to replace the printer paper and prepare the printer for operation. Once you do this, printing resumes within five seconds, and the following occurs:

- The notification message from your terminal screen is erased.
- The last line of output sent to the terminal before the out-of-paper status was sent is repeated, ensuring that every line of output is printed.

The out-of-paper device status is treated as an error when the following occur:

- The five-minute timer expires before you replace the paper and prepare the printer for operation.
- You continue terminal operation without using the auxiliary printer. To continue, key in the $$CONT command. (See 1.3.2 for more information on the $$CONT command.)

2. Device Error Status

Telcon reports the device status to the host processor. The printer is automatically deselected and all further output is sent to the terminal display only. The errors and procedures described in 4.3 also apply to auxiliary printers attached to screen bypass stations. For additional considerations concerning auxiliary printer use with screen bypass stations, see 1.4.5.

. Undeliverable Messages Due to Session Failure

An undeliverable message condition occurs when a session fails and can no longer pass data between its end users. This session failure can result from a failure in the host processor, the Telcon system, the communications link, or the terminal itself.

If the session failure results from an interactive terminal disconnect or from a batch terminal failure, the Telcon processor does the following:

- Notifies the program originating the message
- Discards the message
- Aborts the session

If the session failure results from an interactive terminal failure other than a disconnect, the Telcon processor notifies the program originating the message. The program then either aborts the session or lets Telcon continue to attempt delivery of the message.

For a session failure other than a terminal failure, the Telcon processor discards all data units in transit and notifies each program about the failure. If session recovery is not possible, you see the following message:

```
*SESSION PATH CLOSED*
```

If session recovery is possible, each program then attempts to recover the session. You get the following message, notifying you about the temporary session failure:

```
*SESSION PATH DOWN: POSSIBLE LOSS OF INPUT*
```

Regardless of what caused the session failure, you can attempt to reestablish the original session or establish another session by issuing an $$OPEN command. Telcon attempts to automatically recover and reestablish the original session when session recovery is possible. You get the following message when the original session is reestablished:

```
*SESSION PATH REOPENED: INPUT ALLOWED*
```

For active sessions configured with autorecovery, the following message appears if system recovery is underway:

```
*NETWORK RECOVERY IN PROGRESS; POSSIBLE LOSS OF INPUT*
```

Section 5
Terminal Operator Menu Facility (TOMF)

The Terminal Operator Menu Facility (TOMF) displays a configurable menu of services that provide interactive terminal operators with a user friendly destination selection and network session establishment service for DCP Telcon networks. TOMF lets you, regardless of your training or experience in DCP Telcon, use a network to establish sessions to a wide range of host systems and services.

This section describes how to use the Terminal Operator Menu Facility (TOMF) and TOMF commands from an interactive terminal. TOMF consists of the following features:

- Menu services
  - User-friendly application selection
  - Single and multiple session establishment in a DCP Telcon network
  - Session switching from one session to another
- TOMF commands
  - Transparent commands
  - Interactive menu commands
- Transaction routing
  - Sends transactions to different applications based on transaction codes

Your Telcon configuration determines the following:

- How you open to TOMF
- The type of TOMF menu that displays on your terminal
- The TOMF functions you can perform

See the *Communications Delivery Configuration Reference Manual* and the *Communications Delivery Configuration Guide* for information about configuration statements.

.1. Opening to TOMF

Your terminal can be configured to display a TOMF menu in one of three ways:

- The TOMF menu automatically displays when you turn your terminal on
- You must press an input key after you turn on your terminal
- You must enter a $$OPEN command, including the menu name

The following example shows how you can use the $$OPEN command to display menu MENU1.

Example

```
$$OPEN MENU1
```

Response

```
                    Terminal Operator Menu Facility          Page   1 of 2
DCP: PRC1                 Terminal:  T101              Act/Max Sessions:  0/8
COMMAND: (C)hange   (E)xit   (F)ast connect  (H)elp   (M)enu   (O)ff   (R)eport
------------------------------------------------------------------------------
  1. APPLICATION XYZ-HOST1              19. DEMAND-HOST9
  2. APPLICATION XYZ-HOST2              20. DEMAND-HOST10
  3. APPLICATION XTZ-HOST3              21. TIP-HOST1
  4. APPLICATION XYZ-HOST4              22. TIP-HOST2
  5. APPLICATION XYZ-HOST5              23. TIP-HOST3
  6. APPLICATION XYZ-HOST6              24. TIP-HOST4
  7. APPLICATION XYZ-HOST7              25. TIP-HOST5
  8. APPLICATION XYZ-HOST8              26. TIP-HOST6
  9. SALT LAKE CITY DEMAND-HOST1        27. TIP-HOST7
 10. SALT LAKE CITY DEMAND-HOST2        28. TIP-HOST8
 11. DEMAND-HOST1                       29. TIP-HOST9
 12. DEMAND-HOST2                       30. TIP-HOST10
 13. DEMAND-HOST3                       31. NETWORK MANAGEMENT SERVICES DCP1
 14. DEMAND-HOST4                       32. NETWORK MANAGEMENT SERVICES DCP2
 15. DEMAND-HOST5                       33. NETWORK MANAGEMENT SERVICES DCP3
 16. DEMAND-HOST6                       34. NETWORK MANAGEMENT SERVICES DCP4
 17. DEMAND-HOST7                       35. NETWORK MANAGEMENT SERVICES DCP5
 18. DEMAND-HOST8                       36. NETWORK MANAGEMENT SERVICES DCP6

    Enter Command or Application number:▷
```

Note: Your Telcon configuration can be configured to display this menu when you turn on your terminal, or when you turn on your terminal and press an input key.

.2. Menu Selection

When you open to TOMF, a menu displays the applications to which you can open sessions. The command line displays the TOMF commands you can use from the TOMF menu. You can execute each command by entering the first character of the command name. The following is a sample TOMF menu:

```
                    Terminal Operator Menu Facility          Page   1 of 2
DCP: PRC1                 Terminal:  T101            Act/Max Sessions:  0/8
COMMAND: (C)hange   (E)xit   (F)ast connect  (H)elp   (M)enu   (O)ff   (R)eport
-------------------------------------------------------------------------------
  1. APPLICATION XYZ-HOST1              19. DEMAND-HOST9
  2. APPLICATION XYZ-HOST2              20. DEMAND-HOST10
  3. APPLICATION XTZ-HOST3              21. TIP-HOST1
  4. APPLICATION XYZ-HOST4              22. TIP-HOST2
  5. APPLICATION XYZ-HOST5              23. TIP-HOST3
  6. APPLICATION XYZ-HOST6              24. TIP-HOST4
  7. APPLICATION XYZ-HOST7              25. TIP-HOST5
  8. APPLICATION XYZ-HOST8              26. TIP-HOST6
  9. SALT LAKE CITY DEMAND-HOST1        27. TIP-HOST7
 10. SALT LAKE CITY DEMAND-HOST2        28. TIP-HOST8
 11. DEMAND-HOST1                       29. TIP-HOST9
 12. DEMAND-HOST2                       30. TIP-HOST10
 13. DEMAND-HOST3                       31. NETWORK MANAGEMENT SERVICES DCP1
 14. DEMAND-HOST4                       32. NETWORK MANAGEMENT SERVICES DCP2
 15. DEMAND-HOST5                       33. NETWORK MANAGEMENT SERVICES DCP3
 16. DEMAND-HOST6                       34. NETWORK MANAGEMENT SERVICES DCP4
 17. DEMAND-HOST7                       35. NETWORK MANAGEMENT SERVICES DCP5
 18. DEMAND-HOST8                       36. NETWORK MANAGEMENT SERVICES DCP6

     Enter Command or Application number:▷
```

Explanation

Page — is the current page number and the total number of pages.

DCP — is the DCP to which you are logically connected.

Terminal — is the terminal id (assigned by your Telcon administrator) for the terminal you are using .

Act/Max Sessions:
is the number of active sessions and the maximum number of sessions to which you are allowed to open.

COMMAND
is the comand header line of the menu. The names of the TOMF commands you can use appear on this line as follows:

(C)hange — is the (C)hange command.

(E)xit — is the (E)xit command.

(F)ast connect
is the (F)ast connect command.

(H)elp — is the (H)elp command.

(M)enu — is the (M)enu command.

(O)ff — is the (O)ff command.

(R)eport — is the (R)eport command.

NOTE: See 5.7 for a description of these TOMF commands.

Numbered Items
indicate the application number to which you can establish a session. An asterisk (*) in front of an application name indicates that you have an active session to this application.

Enter Command or Application number
is the command selection line. Enter your command or application number here.

5.3. Paging

In addition to the commands listed, you can page forward to the next page of a menu that contains more than one page by entering a plus (+) on the command line, as shown in the following example.

Example

```
                        Terminal Operator Menu Facility          Page   1 of 2
DCP: PRC1                     Terminal:  T101              Act/Max Sessions:  0/8
COMMAND: (C)hange   (E)xit   (F)ast connect  (H)elp   (M)enu   (O)ff   (R)eport
-------------------------------------------------------------------------------
  1. APPLICATION XYZ-HOST1                19. DEMAND-HOST9
  2. APPLICATION XYZ-HOST2                20. DEMAND-HOST10
  3. APPLICATION XTZ-HOST3                21. TIP-HOST1
  4. APPLICATION XYZ-HOST4                22. TIP-HOST2
  5. APPLICATION XYZ-HOST5                23. TIP-HOST3
  6. APPLICATION XYZ-HOST6                24. TIP-HOST4
  7. APPLICATION XYZ-HOST7                25. TIP-HOST5
  8. APPLICATION XYZ-HOST8                26. TIP-HOST6
  9. SALT LAKE CITY DEMAND-HOST1          27. TIP-HOST7
 10. SALT LAKE CITY DEMAND-HOST2          28. TIP-HOST8
 11. DEMAND-HOST1                         29. TIP-HOST9
 12. DEMAND-HOST2                         30. TIP-HOST10
 13. DEMAND-HOST3                         31. NETWORK MANAGEMENT SERVICES DCP1
 14. DEMAND-HOST4                         32. NETWORK MANAGEMENT SERVICES DCP2
 15. DEMAND-HOST5                         33. NETWORK MANAGEMENT SERVICES DCP3
 16. DEMAND-HOST6                         34. NETWORK MANAGEMENT SERVICES DCP4
 17. DEMAND-HOST7                         35. NETWORK MANAGEMENT SERVICES DCP5
 18. DEMAND-HOST8                         36. NETWORK MANAGEMENT SERVICES DCP6

     Enter Command or Application number:▷+
```

Response

```
                        Terminal Operator Menu Facility          Page   2 of 2
DCP: PRC1                       Terminal:  T101              Act/Max Sessions:  0/8
COMMAND: (C)hange   (E)xit   (F)ast connect  (H)elp   (M)enu   (O)ff   (R)eport
-------------------------------------------------------------------------------
 37. NETWORK MANAGEMENT SERVICES DCP7     49. DCP OPERATING SYSTEM-DCP9
 38. NETWORK MANAGEMENT SERVICES DCP8     50. DCP OPERATING SYSTEM-DCP10
 39. NETWORK MANAGEMENT SERVICES DCP9     51. MAPPER-HOST1
 40. NETWORK MANAGEMENT SERVICES DCP10    52. MAPPER-HOST2
 41. DCP OPERATING SYSTEM-DCP1            53. MAPPER-HOST3
 42. DCP OPERATING SYSTEM-DCP2            54. MAPPER-HOST4
 43. DCP OPERATING SYSTEM-DCP3            55. MAPPER-HOST5
 44. DCP OPERATING SYSTEM-DCP4            56. MAPPER-HOST6
 45. DCP OPERATING SYSTEM-DCP5            57. MAPPER-HOST7
 46. DCP OPERATING SYSTEM-DCP6            58. MAPPER-HOST8
 47. DCP OPERATING SYSTEM-DCP7            59. MAPPER-HOST9
 48. DCP OPERATING SYSTEM-DCP8            60. MAPPER-HOST10

     Enter Command or Application number:▷
```

To page backward in a multiple page menu, enter a minus (–) on the command line, as shown in the following exmple.

Example

```
                        Terminal Operator Menu Facility          Page   2 of 2
DCP: PRC1                    Terminal:  T101              Act/Max Sessions:  0/8
COMMAND: (C)hange   (E)xit   (F)ast connect  (H)elp   (M)enu   (O)ff   (R)eport
-------------------------------------------------------------------------------
 37. NETWORK MANAGEMENT SERVICES DCP7     49. DCP OPERATING SYSTEM-DCP9
 38. NETWORK MANAGEMENT SERVICES DCP8     50. DCP OPERATING SYSTEM-DCP10
 39. NETWORK MANAGEMENT SERVICES DCP9     51. MAPPER-HOST1
 40. NETWORK MANAGEMENT SERVICES DCP10    52. MAPPER-HOST2
 41. DCP OPERATING SYSTEM-DCP1            53. MAPPER-HOST3
 42. DCP OPERATING SYSTEM-DCP2            54. MAPPER-HOST4
 43. DCP OPERATING SYSTEM-DCP3            55. MAPPER-HOST5
 44. DCP OPERATING SYSTEM-DCP4            56. MAPPER-HOST6
 45. DCP OPERATING SYSTEM-DCP5            57. MAPPER-HOST7
 46. DCP OPERATING SYSTEM-DCP6            58. MAPPER-HOST8
 47. DCP OPERATING SYSTEM-DCP7            59. MAPPER-HOST9
 48. DCP OPERATING SYSTEM-DCP8            60. MAPPER-HOST10

     Enter Command or Application number:▷-
```

Response

```
                        Terminal Operator Menu Facility          Page   1 of 2
DCP: PRC1                     Terminal:  T101              Act/Max Sessions:  0/8
COMMAND: (C)hange   (E)xit   (F)ast connect  (H)elp   (M)enu   (O)ff   (R)eport
-------------------------------------------------------------------------------
  1. APPLICATION XYZ-HOST1              19. DEMAND-HOST9
  2. APPLICATION XYZ-HOST2              20. DEMAND-HOST10
  3. APPLICATION XTZ-HOST3              21. TIP-HOST1
  4. APPLICATION XYZ-HOST4              22. TIP-HOST2
  5. APPLICATION XYZ-HOST5              23. TIP-HOST3
  6. APPLICATION XYZ-HOST6              24. TIP-HOST4
  7. APPLICATION XYZ-HOST7              25. TIP-HOST5
  8. APPLICATION XYZ-HOST8              26. TIP-HOST6
  9. SALT LAKE CITY DEMAND-HOST1        27. TIP-HOST7
 10. SALT LAKE CITY DEMAND-HOST2        28. TIP-HOST8
 11. DEMAND-HOST1                       29. TIP-HOST9
 12. DEMAND-HOST2                       30. TIP-HOST10
 13. DEMAND-HOST3                       31. NETWORK MANAGEMENT SERVICES DCP1
 14. DEMAND-HOST4                       32. NETWORK MANAGEMENT SERVICES DCP2
 15. DEMAND-HOST5                       33. NETWORK MANAGEMENT SERVICES DCP3
 16. DEMAND-HOST6                       34. NETWORK MANAGEMENT SERVICES DCP4
 17. DEMAND-HOST7                       35. NETWORK MANAGEMENT SERVICES DCP5
 18. DEMAND-HOST8                       36. NETWORK MANAGEMENT SERVICES DCP6

     Enter Command or Application number:▷
```

5.4. Menu Selection Operations

When the menu displays, you can do any of the following:

- Open a session to a specified application
- Open multiple sessions
- Switch to another active session

5.4.1. Opening a Session

You open sessions from the TOMF menu by entering an application selection number on the command line. The command line appears at the bottom of the TOMF display and looks like this:

```
Enter Command or Application number:
```

Selection Number Format

m[,*n*]

Parameters

m is the selection number. Each selection number indicates an application to which you can open a new session or to which you can switch.

n is the optional terminal alias number. You can open only one session from your terminal to a given application. However, you can use the alias to rename your terminal and open another session to the same application. The range of alias numbers is 1-9.

Note: You can use the terminal alias number only if your Telcon administrator has configured your terminal to use this feature. If you attempt to use a terminal alias number and your terminal is not configured for this feature, `Alias Not Allowed` *will display on the command selection line.*

Any alias number you provide is attached to the original terminal name, in the *$n* format, and is used as the terminal name.

The following example shows how to open a session to APPLICATION XYZ-HOST2 (item 2 on the menu):

Example

```
                    Terminal Operator Menu Facility          Page   1 of 2
DCP: PRC1                 Terminal:  T101              Act/Max Sessions:  0/8
COMMAND: (C)hange   (E)xit   (F)ast connect  (H)elp   (M)enu   (O)ff   (R)eport
-------------------------------------------------------------------------------
  1. APPLICATION XYZ-HOST1              19. DEMAND-HOST9
  2. APPLICATION XYZ-HOST2              20. DEMAND-HOST10
  3. APPLICATION XTZ-HOST3              21. TIP-HOST1
  4. APPLICATION XYZ-HOST4              22. TIP-HOST2
  5. APPLICATION XYZ-HOST5              23. TIP-HOST3
  6. APPLICATION XYZ-HOST6              24. TIP-HOST4
  7. APPLICATION XYZ-HOST7              25. TIP-HOST5
  8. APPLICATION XYZ-HOST8              26. TIP-HOST6
  9. SALT LAKE CITY DEMAND-HOST1        27. TIP-HOST7
 10. SALT LAKE CITY DEMAND-HOST2        28. TIP-HOST8
 11. DEMAND-HOST1                       29. TIP-HOST9
 12. DEMAND-HOST2                       30. TIP-HOST10
 13. DEMAND-HOST3                       31. NETWORK MANAGEMENT SERVICES DCP1
 14. DEMAND-HOST4                       32. NETWORK MANAGEMENT SERVICES DCP2
 15. DEMAND-HOST5                       33. NETWORK MANAGEMENT SERVICES DCP3
 16. DEMAND-HOST6                       34. NETWORK MANAGEMENT SERVICES DCP4
 17. DEMAND-HOST7                       35. NETWORK MANAGEMENT SERVICES DCP5
 18. DEMAND-HOST8                       36. NETWORK MANAGEMENT SERVICES DCP6

    Enter Command or Application number:▷2
```

Response

```
Host Session Selected: 2 (APPLICATION XYZ-HOST2)
```

.4.2. Redisplaying the Menu

Enter the %%MENU command or predefined function key at any time to redisplay the TOMF menu.

Format

%%MENU

Example

%%MENU

Response

```
                    Terminal Operator Menu Facility          Page   1 of 2
DCP: PRC1                 Terminal:  T101              Act/Max Sessions:  1/8
COMMAND: (C)hange   (E)xit   (F)ast connect  (H)elp   (M)enu   (O)ff   (R)eport
--------------------------------------------------------------------------------
  1. APPLICATION XYZ-HOST1              19. DEMAND-HOST9
* 2. APPLICATION XYZ-HOST2              20. DEMAND-HOST10
  3. APPLICATION XTZ-HOST3              21. TIP-HOST1
  4. APPLICATION XYZ-HOST4              22. TIP-HOST2
  5. APPLICATION XYZ-HOST5              23. TIP-HOST3
  6. APPLICATION XYZ-HOST6              24. TIP-HOST4
  7. APPLICATION XYZ-HOST7              25. TIP-HOST5
  8. APPLICATION XYZ-HOST8              26. TIP-HOST6
  9. SALT LAKE CITY DEMAND-HOST1        27. TIP-HOST7
 10. SALT LAKE CITY DEMAND-HOST2        28. TIP-HOST8
 11. DEMAND-HOST1                       29. TIP-HOST9
 12. DEMAND-HOST2                       30. TIP-HOST10
 13. DEMAND-HOST3                       31. NETWORK MANAGEMENT SERVICES DCP1
 14. DEMAND-HOST4                       32. NETWORK MANAGEMENT SERVICES DCP2
 15. DEMAND-HOST5                       33. NETWORK MANAGEMENT SERVICES DCP3
 16. DEMAND-HOST6                       34. NETWORK MANAGEMENT SERVICES DCP4
 17. DEMAND-HOST7                       35. NETWORK MANAGEMENT SERVICES DCP5
 18. DEMAND-HOST8                       36. NETWORK MANAGEMENT SERVICES DCP6

    Enter Command or Application number:▷
```

Note: The asterisk (*) at selection number 2 indicates that the session to the application named APPLICATION XYZ-HOST2 is now active.

).4.3. Opening Multiple Sessions

Open new sessions while one or more sessions are active by entering a new application selection number on the command selection line.

For example, you can open a new session to the DEMAND-HOST1 application without terminating your active session to the HOST2 application. To do this, enter 21 (for item number 11, DEMAND-HOST1) on the command selection line, as shown in the following example:

Example

```
                    Terminal Operator Menu Facility          Page   1 of 2
DCP: PRC1                    Terminal:  T101              Act/Max Sessions:  1/8
COMMAND: (C)hange   (E)xit   (F)ast connect  (H)elp   (M)enu   (O)ff   (R)eport
--------------------------------------------------------------------------------
  1. APPLICATION XYZ-HOST1              19. DEMAND-HOST9
* 2. APPLICATION XYZ-HOST2              20. DEMAND-HOST10
  3. APPLICATION XT7-HOST3              21. TIP-HOST1
  4. APPLICATION XYZ-HOST4              22. TIP-HOST2
  5. APPLICATION XYZ-HOST5              23. TIP-HOST3
  6. APPLICATION XYZ-HOST6              24. TIP-HOST4
  7. APPLICATION XYZ-HOST7              25. TIP-HOST5
  8. APPLICATION XYZ-HOST8              26. TIP-HOST6
  9. SALT LAKE CITY DEMAND-HOST1        27. TIP-HOST7
 10. SALT LAKE CITY DEMAND-HOST2        28. TIP-HOST8
 11. DEMAND-HOST1                       29. TIP-HOST9
 12. DEMAND-HOST2                       30. TIP-HOST10
 13. DEMAND-HOST3                       31. NETWORK MANAGEMENT SERVICES DCP1
 14. DEMAND-HOST4                       32. NETWORK MANAGEMENT SERVICES DCP2
 15. DEMAND-HOST5                       33. NETWORK MANAGEMENT SERVICES DCP3
 16. DEMAND-HOST6                       34. NETWORK MANAGEMENT SERVICES DCP4
 17. DEMAND-HOST7                       35. NETWORK MANAGEMENT SERVICES DCP5
 18. DEMAND-HOST8                       36. NETWORK MANAGEMENT SERVICES DCP6

    Enter Command or Application number:▷11
```

Response

```
Host Session Selected:  11  (DEMAND-HOST1)
Enter your user-id/password and clearance level:
```

Note: You must enter your userid/password before you switch to another session.

Enter %%MENU or predefined function key to redisplay the TOMF menu.

The following example shows how you can redisplay the menu using the %%MENU command.

Example

```
%%MENU
```

Response

```
                    Terminal Operator Menu Facility          Page   1 of 2
DCP: PRC1                    Terminal:  T101              Act/Max Sessions:  2/8
COMMAND: (C)hange   (E)xit   (F)ast connect  (H)elp   (M)enu   (O)ff   (R)eport
--------------------------------------------------------------------------------
  1. APPLICATION XYZ-HOST1                19. DEMAND-HOST9
* 2. APPLICATION XYZ-HOST2                20. DEMAND-HOST10
  3. APPLICATION XTZ-HOST3                21. TIP-HOST1
  4. APPLICATION XYZ-HOST4                22. TIP-HOST2
  5. APPLICATION XYZ-HOST5                23. TIP-HOST3
  6. APPLICATION XYZ-HOST6                24. TIP-HOST4
  7. APPLICATION XYZ-HOST7                25. TIP-HOST5
  8. APPLICATION XYZ-HOST8                26. TIP-HOST6
  9. SALT LAKE CITY DEMAND-HOST1          27. TIP-HOST7
 10. SALT LAKE CITY DEMAND-HOST2          28. TIP-HOST8
*11. DEMAND-HOST1                         29. TIP-HOST9
 12. DEMAND-HOST2                         30. TIP-HOST10
 13. DEMAND-HOST3                         31. NETWORK MANAGEMENT SERVICES DCP1
 14. DEMAND-HOST4                         32. NETWORK MANAGEMENT SERVICES DCP2
 15. DEMAND-HOST5                         33. NETWORK MANAGEMENT SERVICES DCP3
 16. DEMAND-HOST6                         34. NETWORK MANAGEMENT SERVICES DCP4
 17. DEMAND-HOST7                         35. NETWORK MANAGEMENT SERVICES DCP5
 18. DEMAND-HOST8                         36. NETWORK MANAGEMENT SERVICES DCP6

    Enter Command or Application number:▷
```

Sessions to APPLICATION XYZ-HOST2 and DEMAND-HOST1 are now active. Enter a new number on the command selection line to open additional sessions to other applications.

.4.4. Switching Sessions

When more that one session is active, switch from one active session to another by entering the number of the active session to which you want to switch.

In the following example, you switch to application 2 (HOST2) by entering 2 on the command line.

Example

```
                    Terminal Operator Menu Facility          Page   1 of 2
DCP: PRC1                 Terminal:  T101              Act/Max Sessions:  2/8
COMMAND: (C)hange   (E)xit   (F)ast connect  (H)elp   (M)enu   (O)ff   (R)eport
--------------------------------------------------------------------------------
  1. APPLICATION XYZ-HOST1              19. DEMAND-HOST9
* 2. APPLICATION XYZ-HOST2              20. DEMAND-HOST10
  3. APPLICATION XTZ-HOST3              21. TIP-HOST1
  4. APPLICATION XYZ-HOST4              22. TIP-HOST2
  5. APPLICATION XYZ-HOST5              23. TIP-HOST3
  6. APPLICATION XYZ-HOST6              24. TIP-HOST4
  7. APPLICATION XYZ-HOST7              25. TIP-HOST5
  8. APPLICATION XYZ-HOST8              26. TIP-HOST6
  9. SALT LAKE CITY DEMAND-HOST1        27. TIP-HOST7
 10. SALT LAKE CITY DEMAND-HOST2        28. TIP-HOST8
*11. DEMAND-HOST1                       29. TIP-HOST9
 12. DEMAND-HOST2                       30. TIP-HOST10
 13. DEMAND-HOST3                       31. NETWORK MANAGEMENT SERVICES DCP1
 14. DEMAND-HOST4                       32. NETWORK MANAGEMENT SERVICES DCP2
 15. DEMAND-HOST5                       33. NETWORK MANAGEMENT SERVICES DCP3
 16. DEMAND-HOST6                       34. NETWORK MANAGEMENT SERVICES DCP4
 17. DEMAND-HOST7                       35. NETWORK MANAGEMENT SERVICES DCP5
 18. DEMAND-HOST8                       36. NETWORK MANAGEMENT SERVICES DCP6

    Enter Command or Application number:▷2
```

Response

```
*MENU: Switched to Appl: 2 (APPLICATION XYZ-HOST2)
```

To switch back to the active session with the TIP-HOST1 application, enter the %%MENU command or the predefined function key to redisplay the menu, and enter 21 on the command line.

5.5. TOMF Commands

TOMF provides two types of commands: transparent commands and menu commands. You can enter transparent TOMF commands at any time during a TOMF session. You must enter menu commands from the command line of the TOMF menu screen.

5.6. Transparent Commands

TOMF transparent commands consist of a prefix command sentinel (%%) and the command name. TOMF provides the following set of transparent commands:

- %%MENU
  - displays the TOMF menu
- %%SW
  - switches from current session to another application
- %%REPORT
  - displays the list of active sesions
- %%
  - switches to the next session in the active session list
- %%CHG
  - changes the command sentinel or the function key
- %%OFF
  - terminates the current session
- %%OFFALL
  - terminates all active sessions
- %%EXIT
  - exits the TOMF program

You can shorten the names of the TOMF transparent commands to the command sentinel (%%) and as few as one letter, with the exception of the %%OFFALL command. The shortest valid form of the %%OFFALL command is %%OFFA. The shortest valid form of each command is shown, in parentheses, in the command descriptions that follow.

.6.1. %%MENU (%%M) Command

Enter the %%MENU command to display the TOMF menu. When the menu displays, you can enter a selection number (and, if desired, an optional alias number) to open a session or to switch from one session to another.

Format

%%MENU [*n*]

Parameters

n is the page number. Use this parameter to display a specific page of the menu. The default is the last page you displayed.

Example

%%MENU

Response

```
                    Terminal Operator Menu Facility          Page   1 of 2
DCP: PRC1                    Terminal:  T101              Act/Max Sessions:  0/8
COMMAND: (C)hange   (E)xit   (F)ast connect  (H)elp   (M)enu   (O)ff   (R)eport
-------------------------------------------------------------------------------
  1. APPLICATION XYZ-HOST1              19. DEMAND-HOST9
  2. APPLICATION XYZ-HOST2              20. DEMAND-HOST10
  3. APPLICATION XTZ-HOST3              21. TIP-HOST1
  4. APPLICATION XYZ-HOST4              22. TIP-HOST2
  5. APPLICATION XYZ-HOST5              23. TIP-HOST3
  6. APPLICATION XYZ-HOST6              24. TIP-HOST4
  7. APPLICATION XYZ-HOST7              25. TIP-HOST5
  8. APPLICATION XYZ-HOST8              26. TIP-HOST6
  9. SALT LAKE CITY DEMAND-HOST1        27. TIP-HOST7
 10. SALT LAKE CITY DEMAND-HOST2        28. TIP-HOST8
 11. DEMAND-HOST1                       29. TIP-HOST9
 12. DEMAND-HOST2                       30. TIP-HOST10
 13. DEMAND-HOST3                       31. NETWORK MANAGEMENT SERVICES DCP1
 14. DEMAND-HOST4                       32. NETWORK MANAGEMENT SERVICES DCP2
 15. DEMAND-HOST5                       33. NETWORK MANAGEMENT SERVICES DCP3
 16. DEMAND-HOST6                       34. NETWORK MANAGEMENT SERVICES DCP4
 17. DEMAND-HOST7                       35. NETWORK MANAGEMENT SERVICES DCP5
 18. DEMAND-HOST8                       36. NETWORK MANAGEMENT SERVICES DCP6

    Enter Command or Application number:▷
```

5.6.2. %%SW (%%S) - Session Switch

Enter the %%SW command to switch from your current sesssion to another application. You can use this command to switch sessions directly without displaying the menu. If the application you select is not active, TOMF will open a new session.

Format

%%SW *m*[,*n*]

Parameters

m is the selection number. The selection number indicates a new session to which you can switch.

n is the optional terminal alias number. You can open only one session from your terminal to a given application. However, if your terminal is configured to use the alias feature, you can use the alias to rename your terminal and open another session to the same application. The range of alias numbers is 1-9.

Note: You can use the terminal alias number only if your Telcon administrator has configured your terminal to use this feature. If you attempt to use a terminal alias number and your terminal is not configured for this feature, Alias Not Allowed *will display on the command selection line.*

Any alias number you provide is attached to the original terminal name, in the *$n* format, and is used as the terminal name.

Example

%%SW 31

Response

```
*MENU: Switched to Appl: 31 (NETWORK MANAGEMENT SERVICES DCP1)
```

.6.3. %%REPORT (%%R) - Display the Active Session List

Enter the %%REPORT command to display a list of currently active TOMF sessions.

Format

%%REPORT

The generated report displays in the following format:

⟨*indicator*()))))⟩⟨*application*: *m*[,*n*]⟩⟨*description* ⟩⟨*output*⟩

Example

%%REPORT

Response

```
   Application: 1   (APPLICATION XYZ-HOST1)                  Output Queued
   Application: 1,1 (APPLICATION XYZ-HOST1)
   Application: 2   (APPLICATION XYZ-HOST2)
))) Application: 13  (DEMAND-HOST3)
   Application: 31  (NETWORK MANAGEMENT SERVICES DCP1)       Output Queued
```

Explanation of Report Format

⟩⟩⟩⟩	is the indicator that indicates the currently selected application.
application	is the name of the active application.
m	is the application selection number.
n	is the optional terminal alias number.
description	is the description of the application.
output	is the output indicator. TOMF displays OUTPUT QUEUED if the output is queued from the application. Switch back to the specified application to receive queued output.

The response shown here indicates that there are five active TOMF sessions. Application 13 is currently selected. Output is queued from applications 1 and 31. Two sessions are open to application 1, one using alias 1.

.6.4. %% (%%) - Switch to Next Session

Enter the %% command to switch to the next application in the session list displayed by the %%REPORT command. If the current session is the last in the list, TOMF switches to the first session listed.

Format

%%

In the following example, use the %% command to switch from from application 13 to application 31.

Example

```
   Application: 1   (APPLICATION XYZ-HOST1)                    Output Queued
   Application: 1,1 (APPLICATION XYZ-HOST1)
   Application: 2   (APPLICATION XYZ-HOST2)                    Output Queued
)))) Application: 13  (DEMAND-HOST3)
   Application: 31  (NETWORK MANAGEMENT SERVICES DCP1)

%%
```

Response

```
*MENU: Switched to Appl: 31 (NETWORK MANAGEMENT SERVICES DCP1)
```

5.6.5. %%CHG (%%C) - Change Session Switch Command Sentinel or Function Key

Enter the %%CHG command to change the TOMF command sentinel or the menu function key value. The command sentinel distinguishes TOMF transparent commands from normal data input. The menu function key is the function key you press to display the menu.

When you use the %%CHG command, you can substitute any one- or two-character sequence for the current command sentinel or function key. If you substitute a numeric value from 0 to 24, you redefine the menu function key. (1 to 24 is equivalent to function key 1 to 24. The menu function key will be disabled if you specify 0.) If you substitute any value other than 0 to 24, you redefine the command sentinel. If you enter the space or no string, the current command sentinel and function key values display.

Do not select a sentinel that conflicts with a Telcon control character (a dollar sign, $, is usually the Telcon control character). If you do assign the Telcon control character, the TOMF command will be disabled.

Format

```
%%CS [string]
```

Parameters

string	is the new value for the command sentinel string or the new function key.

Example

```
%%CS &&
```

Response

```
*MENU: Command Sentinel= &&,Menu Function Key = 04
```

6.6. %%OFF (%%O) - Terminate Current Session

Enter the %%OFF command to terminate the currently selected session and remain in TOMF. (You can enter a Telcon $$CLOSE command to terminate your TOMF session and close all of your active sessions.)

Format

```
%%OFF
```

Example

```
%%OFF
```

Response

```
*MENU: Appl: 13 (DEMAND-HOST3) Closed
```

6.7. %%OFFALL (%%OFFA) - Terminate All Sessions

Enter the %%OFFALL command to terminate all of your currently active sessions. After all active sessions are terminated, you can enter XMIT to redisplay the TOMF menu.

Format

```
%%OFFALL
```

Example

```
%%OFFALL
```

Response

```
*MENU: Disconnect Started
*MENU: Appl: 1 (APPLICATION XYZ-HOST1) Closed
*MENU: Appl: 2 (APPLICATION XYZ-HOST2) Closed
*MENU: Appl: 31 (NETWORK MANAGEMENT SERVICES DCP1) Closed:
Xmit for Menu:
```

5.6.8. %%EXIT (%%E)- Exit from TOMF

Enter the %%EXIT command to terminate all active sessions and close your TOMF session. The %%EXIT command is equivalent to the Telcon $$CLOSE command.

Format

```
%%EXIT
```

Example

```
%%EXIT
```

Response

```
Session Path Closed
```

.7. TOMF Menu Commands

The TOMF menu header line displays the commands you can use from the menu. You can execute each command by entering the first character of the command name (shown in parentheses in the following list) on the command selection line.

The following are the TOMF menu commands you can enter from the command selection line and a brief description of their functions:

- Change (C)
  - changes the command sentinel or function key
- Exit (E)
  - terminates all active sessions and exits the TOMF program
- Fast connect (F)
  - open a specified application after terminating all active sessions and exiting from TOMF
- Help (H)
  - displays the TOMF help screen
- Menu (M)
  - redisplays the TOMF menu
- Off (O)
  - terminates specific session, or all sessions
- Report (R)
  - lists active sessions

5.7.1. Change (C)

Enter the TOMF change command to change the TOMF command sentinel or the menu function key value. The change command is equivalent to the %%CHG transparent command.

Format

C *string*

Parameters

string is the command sentinel string or the menu function key value.

Example

```
C 10
```

Response

```
*MENU: Command Sentinel = %%, Menu Function = 10
```

5.7.2. Exit (E)

Enter the TOMF exit command to terminate all your active sessions and close your TOMF session. The Exit command is equivalent to the %%EXIT transparent command.

Format

E

Example

```
E
```

Response

```
Session Path Closed
```

7.3. Fast Connect (F)

Enter the TOMF fast connect command to open a specified application after terminating all active sessions and exiting from TOMF. (If you have not already terminated all active sessions, you will terminate all active sessions when you enter the fast connect command.) You cannot open multiple sessions, switch to another session, or enter transparent TOMF commands until you close this new session and reenter TOMF.

Format

F *m*

Parameters

m	is the selection number. (You cannot use an alias number when you use the fast connect command.)

Example

```
F 1
```

Response

```
Enter your user-id/password and clearance:▷
```

5.7.4. Help (H)

Enter the help command to display a TOMF help screen. The help screen displays the available command list and a brief explanation of each command.

Format

H

Example

H

Response

```
                Menu Selection and Command Information

Allowed inputs during MENU selection:
n(,a)        - Open or switch to application n (a=optional alias number # 1-9
C (xx)       - Change command sentinel (xx=1 or 2 characters) or Menu key (xx=
               function key # 0-24). Enter C to display current assignment.
E            - Close all active applications and exit MENU facility
F n          - Open session to application n, exits MENU facility
H            - Display this Help information
M (n)        - Display Menu page n (default=current page). +,- to scroll pages
O            - Close all active applications
O n(,a)      - Close application n (a=optional alias # 1 -9)
R            - Report active application list
Transparent Commands:
%%           - Switch to next application in active application list
%%Chg (xx)   - Change command sentinel or Menu Key. Refer C (xx) for options.
%%Exit       - Close all active applications and exit MENU facility
%%Menu (n)   - Display menu page n (default=current page)
%%Off        - Close current application
%%OFFAll     - Close all active applications
%%Report     - Report active application list
%%Sw n(,a)   - Switch to application n (a=optional alias # 1 - 9)

Enter Command or Application number:▷
```

7.5. Menu (M)

Enter the menu command to redisplay the TOMF menu. The menu command is equivalent to the TOMF %%MENU transparent command.

Format

M [*n*]

Parameters

n is the page number. Use this parameter to display a specific page of the menu. The default is the current page.

Example

M

Response

```
                    Terminal Operator Menu Facility          Page   1 of 2
DCP: PRC1                    Terminal:  T101              Act/Max Sessions:  2/8
COMMAND: (C)hange   (E)xit   (F)ast connect  (H)elp   (M)enu   (O)ff   (R)eport
--------------------------------------------------------------------------------
  1. APPLICATION XYZ-HOST1              19. DEMAND-HOST9
  2. APPLICATION XYZ-HOST2              20. DEMAND-HOST10
  3. APPLICATION XTZ-HOST3              21. TIP-HOST1
  4. APPLICATION XYZ-HOST4              22. TIP-HOST2
  5. APPLICATION XYZ-HOST5              23. TIP-HOST3
  6. APPLICATION XYZ-HOST6              24. TIP-HOST4
  7. APPLICATION XYZ-HOST7              25. TIP-HOST5
  8. APPLICATION XYZ-HOST8              26. TIP-HOST6
  9. SALT LAKE CITY DEMAND-HOST1        27. TIP-HOST7
 10. SALT LAKE CITY DEMAND-HOST2        28. TIP-HOST8
 11. DEMAND-HOST1                       29. TIP-HOST9
 12. DEMAND-HOST2                       30. TIP-HOST10
*13. DEMAND-HOST3                     * 31. NETWORK MANAGEMENT SERVICES DCP1
 14. DEMAND-HOST4                       32. NETWORK MANAGEMENT SERVICES DCP2
 15. DEMAND-HOST5                       33. NETWORK MANAGEMENT SERVICES DCP3
 16. DEMAND-HOST6                       34. NETWORK MANAGEMENT SERVICES DCP4
 17. DEMAND-HOST7                       35. NETWORK MANAGEMENT SERVICES DCP5
 18. DEMAND-HOST8                       36. NETWORK MANAGEMENT SERVICES DCP6

     Enter Command or Application number:▷
```

Use the MENU command to display a specific menu page by adding the page number to the command, as follows:

Example

```
M 2
```

Response

```
                    Terminal Operator Menu Facility          Page   2 of 2
DCP: PRC1                 Terminal:  T101              Act/Max Sessions:  2/8
COMMAND: (C)hange   (E)xit   (F)ast connect  (H)elp   (M)enu   (O)ff   (R)eport
-------------------------------------------------------------------------------
 37. NETWORK MANAGEMENT SERVICES DCP7    49. DCP OPERATING SYSTEM-DCP9
 38. NETWORK MANAGEMENT SERVICES DCP8    50. DCP OPERATING SYSTEM-DCP10
 39. NETWORK MANAGEMENT SERVICES DCP9    51. MAPPER-HOST1
 40. NETWORK MANAGEMENT SERVICES DCP10   52. MAPPER-HOST2
 41. DCP OPERATING SYSTEM-DCP1           53. MAPPER-HOST3
 42. DCP OPERATING SYSTEM-DCP2           54. MAPPER-HOST4
 43. DCP OPERATING SYSTEM-DCP3           55. MAPPER-HOST5
 44. DCP OPERATING SYSTEM-DCP4           56. MAPPER-HOST6
 45. DCP OPERATING SYSTEM-DCP5           57. MAPPER-HOST7
 46. DCP OPERATING SYSTEM-DCP6           58. MAPPER-HOST8
 47. DCP OPERATING SYSTEM-DCP7           59. MAPPER-HOST9
 48. DCP OPERATING SYSTEM-DCP8           60. MAPPER-HOST10

    Enter Command or Application number:▷
```

.7.6. Off (O)

Enter the off command to terminate a specific session or all sessions. If you specify a selection number (with an optional alias), the specified session terminates. If you enter the off command without parameters (O, only), TOMF assumes that you have entered the offall command and you terminate all active sessions.

Format

O *m*[,*n*]

Parameters

m is the selection number.

n is the alias number.

Example

```
O 13
```

Response

```
*MENU: Appl: 13 (DEMAND-HOST3) Closed
```

5.7.7. Report (R)

Enter the report command to display the list of currently active TOMF sessions. The report command is equivalent to the %%REPORT TOMF transparent command.

Format

R

Example

R

Response

```
Application: 1   (APPLICATION XYZ-HOST1)                    Output Queued
Application: 1,1 (APPLICATION XYZ-HOST1)
Application: 2   (APPLICATION XYZ-HOST2)
Application: 13  (DEMAND-HOST3)
Application: 31  (NETWORK MANAGEMENT SERVICES DCP1)         Output Queued
```

.8. Basic Menu Service

TOMF basic menu service provides menu selection service only. You cannot establish multiple sessions, switch from one session to another, or use TOMF transparent commands in this environment.

When you are in the TOMF basic menu service environment and you open a session to TOMF, a menu displays as follows:

Example

```
                    Terminal Operator Menu Facility          Page: 1 of 1
DCP: PRC1                Terminal:  T101             COMMAND: (+,-)page (E )xit
-------------------------------------------------------------------------------
  1. OS 1100 Demand                      4. OS 1100 Mapper System
  2. OS 1100 TIP                         5. OS 1100 Foreign Host
  3. Network Management Services         6. DCP Operating System

     Enter Command or Application Number:▷
```

After you enter a selection number on the menu command selection line, the TOMF session closes and the specified session will be opened. You cannot use alias numbers while in basic menu service.

Example

```
                    Terminal Operator Menu Facility          Page: 1 of 1
DCP: PRC1                Terminal:  T101             COMMAND: (+,-)page (E )xit
-------------------------------------------------------------------------------
  1. OS 1100 Demand                      4. OS 1100 Mapper System
  2. OS 1100 TIP                         5. OS 1100 Foreign Host
  3. Network Management Services         6. DCP Operating System

     Enter Command or Application Number:▷1
```

Response

```
Enter your user-id/password and clearance level:
```

5.9. Transaction Routing

The TOMF transaction routing function provides an automatic session switching capability based on the transaction code. The valid transaction codes must be registered in the Telcon configuration.

The TOMF transaction routing capability is enabled when your TOMF is configured with an operational attribute of transaction routing and you open a session from your terminal to TOMF. (Refer to the Communications Delivery Configuration Reference Manual for more information about configuring TOMF.)

In transaction routing mode, TOMF does the following:

- Scans the input message
- Compares the OS 1100 formatted transaction code to the configured transaction code
- Switches the session (if necessary)
- Sends the message to the specified destination
- Opens a new session if none is established to the specified destination

When you open a TOMF session in transaction routing mode, the following message displays:

```
Enter Transaction:▷
```

Now you can enter the transaction codes and related input messages to execute the specific TIP application.

The TOMF menu display is not provided in transaction routing mode. The following limited transparent commands are allowed in transaction routing mode:

- %%Chg
- %%Report
- %%Off
- %%OFFAll
- %%Exit

TOMF allows function key switching. If you use function keys as a transaction, the function keys must be registered in your Telcon configuration with transaction codes.

Appendix A
Terminating Paper Tape Input

To terminate paper tape input punched on a Teletype terminal, issue the following end sequence:

DC3
DEL
DEL

To terminate paper tape input from a Teletype terminal, you must issue a DC3, either punched on the paper tape or keyed in at the terminal.

If you do not terminate paper tape input by using a DC3, you will not receive the output until time-out paper tape termination.

Appendix B
Telcon Command Summary

This appendix contains a table that summarizes the purpose and typical format of the available Telcon terminal commands. You can use this table as a quick reference for Telcon terminal commands.

Table B-1. Telcon Command Summary

Command	Summary
Interactive Terminals	
$$SON terminal ID	Signs on your terminal to the Telcon network.
$$SOFF	Signs off your terminal from the Telcon network.
$$OPEN application-name	Establishes a session with an application.
$$CLOSE	Closes a session.
$$CONT	Restarts terminal output.
Asynchronous Terminals	
$$ECHO	Echoes your input back to your terminal.
$$ECHO OFF	Stops echo.
$$CONT	Restarts terminal output.

continued

Table B-1. Telcon Command Summary (cont.)

Command	Summary
Unsolicited Messages	
$$MSG message-id,destination-id [,destination-id...]/[text]	Sends a message to the Telcon terminals you specify in your network.
$$NAKR MSGID = message-id,DEST = destination-id [,NEWDEST = new destination] [,TIME = {hours:minutes}][,DELETE]	Deletes, changes the destination, or changes the length of time an unsolicited message is held for delivery.
$$SEND	Receives any unsolicited messages sent to your terminal.
$$HOLD	Prevents notification of unsolicited messages sent to your terminal.
Screen Bypass	
$$BYPS	Assigns a station and enter screen bypass mode.
$$SON terminal-id	Signs on a station from your proxy terminal.
$$SOFF	Signs off a station.
$$NOBY	Exits from screen bypass mode.
$$FRBY	Frees a station.

continued

Table B-1. Telcon Command Summary (cont.)

Command	Summary
Batch Terminals	
$$SON group-id	Signs on your terminal to the Telcon network.
$$SOFF	Signs off your terminal from the Telcon network.
$$OPEN application-name	Establishes a session with another application.
$$CLOSE	Ends the session.
BSC or REM1 Terminals	
$$TFILE {device-number / device-mnemonic}	Terminates a file
$$RESEND {device number / device mnemonic} [,resend-number] .	Backs up or requeues a file.
$$SKIP {device number / device mnemonic},skip number	Moves a file forward.
$$RESUME {device number / device mnemonic}	Restarts terminal output.

Note: The host ignores an unrecognized control ($$) command and you receive the following response:

```
$$ERROR - ILLEGAL TYPE
```

Glossary

B

batch processing
A processing method in which transactions or functions are grouped together and processed with no interaction with the initiator of the transaction or function. When a job is submitted from a remote site to the central processor, or data is sent in one stream to a remote installation (printer, terminal, computer), the job or data is said to be batched.

binary synchronous communications (BSC)
A protocol developed by IBM for synchronous transmission of binary coded data. One of the first protocols for transparent text transmission. *Same as* bisync.

broadcast
The simultaneous transmission of data or text to a variety of users over a network such as radio, coaxial cable, or satellite.

broadcast message
A message that is broadcast simultaneously to a variety of users over a network.

BSC
See binary synchronous communications.

C

cluster controller
A hardware component that concentrates communications traffic to and from workstations attached to it, and that centrally manages the memory and peripheral resources of the terminal system or workstation. *Same as* control unit.

CMS 1100
See Communications Management System.

command
An instruction or control signal that initiates a sequence of events.

nunications Management System (CMS 1100)
The software that manages all data communications into and out of OS 1100 host computers. CMS 1100 provides an interface between the OS 1100 and either the Telcon/DCP or the GCS/CTMC network.

guration
The arrangement of a computer system or network, defined by the nature, number, and chief characteristics of its functional units.

le messages
The messages generated in the Telcon environment by Network Management Services (NMS) to inform you of errors, events, and activities that occur.

See Distributed Communications Architecture *or* Defense Communications Agency.

See Distributed Communications Processor.

nd
See interactive.

nd mode
The mode of operation in which a terminal operator can enter a job stream statement-by-statement and have each statement transacted immediately (on demand).

buted Communications Architecture (DCA)
A Unisys proprietary network architecture and set of communications protocols based on the seven-layer Reference Model for Open Systems Interconnection. DCA supports the protocols required for several different network environments to interoperate. The main differences between DCA and OSI architecture are in protocol implementation. DCA software implementations allow integration and concurrent operation of appropriate protocol modules or protocol conversion software that provide functions required in OSI, TCP/IP, and other network environments.

buted Communications Processor (DCP)
A special-purpose computer designed exclusively for communications applications. The DCP is used as a front-end processor for OS 1100 computers, or to interconnect networks of OS 1100 computers and other machines.

Depending on how it is configured, a DCP can function as a remote concentrator, a message-switch (or nodal) processor, or a front-end processor. DCPs are available in several models. *Compare with* communications terminal module controller (CTMC).

E

element

A named grouping of information typically manipulated as a unit based on a primary element, and typically defining a logical program part such as a subroutine. There are four basic types of elements: absolute, omnibus, relocatable, and symbolic (all defined in this glossary).

H

host computer

A computing system attached to a data transmission facility that executes application or system programs.

I

interactive

The mode of operation with a host computer that lets a terminal operator enter a job stream, statement by statement, and have each one transacted immediately. Also known as demand.

M

Message Control Bank (MCB)

A software component of the integrated recovery (version II or III) complex. It interfaces CMS 1100 and the transaction processing system with step control. MCB does not use COMPOOL; it maintains its own message storage area.

N

network

A group of hardware and software components that are physically and logically linked, and that interact according to established protocols. Network functions are determined by the types of cooperating application systems within the network.

ɔn identifier (PID)
A numeric identifier that provides the location of terminals in a network. PIDs ıre known to both APPs and CMS 1100. Through the use of PIDs, APPs dentifies a terminal to CMS 1100 and vice versa.

ım
A series of instructions in a form acceptable to a computer. In the context of ·un processing, a program is an absolute element to be executed as a task. A ɔrogram may be a system utility or a user program.

e batch-1 (RB-1) protocol
A data presentation protocol for the Series 1004 hardware.

e batch terminal (RBT)
An equipment group (such as a printer, card reader, and keyboard) that can start batch jobs at a remote host computer and receive the results. With a remote batch terminal, you can send data and job control images to the host computer, or you can start execution of job control images that are already in the host.

ı bypass
A feature that enables you to use the terminal screen and keyboard while the host is simultaneously accessing a peripheral attached to the terminal. With this feature, the host does not require screen memory.

Abbreviation for start-of-entry. ASCII character code IE, which determines start of input on Uniscope compatible terminals, up to the cursor position.

ɔn
A cooperative relationship between two application entities, characterizing the communication of data between them.

ɔn path
The logical path through the network from one end user to another, including any internal associations within the CSU environment.

T

Telcon
A Unisys distributed communications software system for data communications networks. The software runs in a Distributed Communications Processor (DCP) and is defined by the Distributed Communications Architecture (DCA). Telcon software handles communications connections to CMS 1100, to Telcon software in other DCPs, to various terminal types, and to other DCA-compliant entities.

Teletype terminal
A terminal made by the Teletype Corporation or an emulation of a Teletype terminal. Teletype terminals may incorporate features that allow them to operate as complete communications centers—answering calls, and returning messages automatically—or as input/output devices for computers.

terminal
A device for sending or receiving data over a communications channel.

TIP
See Transaction Processing.

Transaction Processing (TIP)
A Unisys product that executes transaction processing programs. The OS 1100 TIP enables a remote terminal operator to initiate execution of a preregistered program at the central computer site. Once in execution, the transaction program has access to all functions of the OS 1100, as well as the specialized TIP functions and services.

U

unsolicited message (USM)
A message sent from one demand terminal to another demand terminal. No session path is required between the two terminals. USMs are typically short.

Bibliography

OS 1100/DCP Series Communications Delivery Software Configuration Guide (7831 5678). Unisys Corporation.

OS 1100/DCP Series Communications Delivery Software Configuration Quick Reference Guide (7831 5710). Unisys Corporation.

OS 1100/DCP Series Communications Delivery Software Configuration Reference Manual (7831 5686). Unisys Corporation.

OS 1100/DCP Series Communications Delivery Software Installation Guide (7831 5645). Unisys Corporation.

OS 1100/DCP Series Communications Delivery Software Operations Quick Reference Guide (7831 5819). Unisys Corporation.

DCP Series Telcon Operations Guide (7831 5785). Unisys Corporation.

DCP Series Telcon Operations Reference Manual (7831 5728). Unisys Corporation.

DCP Series Distributed Communications Processor Operating System (DCP/OS) Operations Reference Manual (7831 5702). Unisys Corporation.

DCP Series SNA/net Capabilities Overview (7831 5611). Unisys Corporation.

DCP Series SNA/net Installation and Configuration Guide (7831 5629). Unisys Corporation.

DCP Series SNA/net Operations Reference Manual (7831 5637). Unisys Corporation.

DCP Series 3270 BSC Real Terminal Handler and Inverted Terminal Handler Installation Guide (UP-9721). Unisys Corporation.

OS 1100 Communications Management System (CMS 1100) Programming Reference Manual (7831 5827). Unisys Corporation.

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