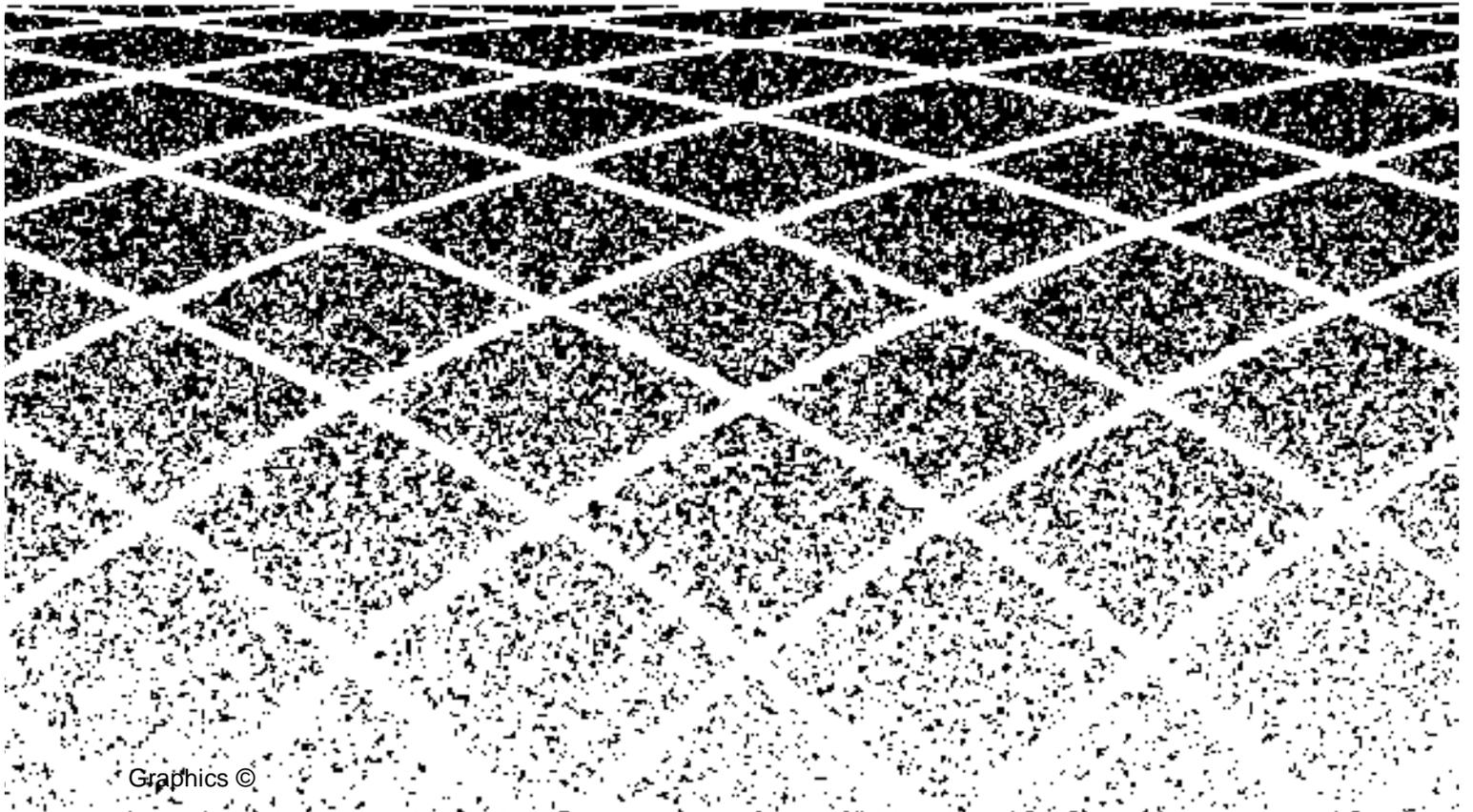




555-027-725
Issue 1
November, 1993

MultiPoint Control Unit Reservations Agent Manual



Contents

	About this Document	vii
	■ Related Information	vii
	■ Organization	viii
	■ Typographic Conventions	ix
<hr/>		
1	MultiPoint Conferencing	1-1
	■ Overview	1-1
	Standard vs. Proprietary	1-1
	Multipoint Conferencing Standards	1-2
	Meet-Me Numbers, Meet-Me Extensions, and Bandwidth	1-2
	Joining a Conference	1-3
	■ MCU Features	1-3
	Number of MCU Ports	1-3
	Conference Modes	1-4
	Voice-Activated (Automatic Mode)	1-4
	Presentation Mode (Advanced Mode)	1-4
	Broadcast Mode with Auto Scan (Advanced Mode)	1-5
	Video Quality	1-5
	Notification Tones	1-6
	Entry and Exit Tones	1-6
	Warning Tone	1-6
	Billing Information	1-6
	■ Conference Scheduling Methods	1-7
<hr/>		
2	Reservation Agent Tasks	2-1
	■ Overview	2-1
	■ Conference Scheduling Methods	2-1
	PC-Based Scheduling System	2-1
	Paper-Based Scheduling System	2-2

Contents

■ Using the MCU-ST	2-2
Keys and Functions	2-3
Logging In	2-3
Changing Your Password	2-4
Commands and Actions	2-5
Conference Record Screen	2-5
Availability of Ports Screen	2-8
Availability of 2B Ports Screen	2-8
Availability of 384k Ports Screen	2-9
■ Troubleshooting	2-10

3	PC-Based Scheduling	3-1
■	Introduction to CRS	3-1

4	Paper-Based Scheduling	4-1
■	Overview	4-1
■	Advance Scheduling	4-2
	Meet-Me Extensions/Numbers to Dial Form	4-3
	Site Profile	4-4
	Conference Appointment Form	4-5
	Port and Extension Usage Chart	4-9
■	Reserved Conferences	4-10
	Scheduling a Conference	4-10
	Reserving a Conference	4-13
	Changing a Conference Before the Start Time	4-15
	Changing a Conference After the Start Time	4-16
	Extending the Time for a Conference	4-17
	Ending a Conference Early	4-18
	Cancelling a Reserved Conference	4-18
■	Dedicated Conferences	4-19
	Scheduling a Dedicated Conference	4-19
	Reserving a Dedicated Conference	4-20

Contents

Changing a Dedicated Conference	4-21
Removing a Dedicated Conference	4-22
■ File Conferences	4-23
Recurring Conferences	4-23
Deleting Conference Records	4-24

5	Diagnosing and Solving Problems	5-1
■	Overview	5-1
■	Status of Conference Screen	5-1
■	Conferee Can't Join a Conference	5-3
■	Conferee Cannot Get Video	5-6
■	Conferee Dropped from Conference	5-7
■	Video Quality Decreased	5-8
■	Conferee Lost Audio or Video	5-9
■	All Conferees Were Dropped	5-9
■	When All Else Fails	5-10

A	P x 64 Interoperability	A-1
----------	--------------------------------	-----

B	Conference Scheduling Commands	B-1
----------	---------------------------------------	-----

C	Paper-Based Scheduling Forms	C-1
----------	-------------------------------------	-----

IN	Index	IN-1
-----------	--------------	------

Contents

About this Document

This manual describes the AT&T MultiPoint Control Unit (MCU) Release 1.0 conference scheduling and reservation functions available to a reservation agent or telecommunications manager.

Related Information

Use this manual in conjunction with the following AT&T MCU documents and information sources:

- *AT&T MultiPoint Control Unit Installation Quick Reference, 555-027-723*
Provides brief instructions on adding an AT&T MCU and components to enable you to do video conferencing.
- *AT&T MultiPoint Control Unit Maintenance, 555-027-724*
Provides information about tests, alarms, and the actions you need to take to maintain your AT&T MCU.
- *AT&T MultiPoint Control Unit System Administration and Reports, 555-027-727*
Provides detailed instructions an AT&T MCU telecommunications manager can use for ongoing administration and reports using the MCU Management Terminal (MCU-MT).
- *AT&T MultiPoint Control Unit Seminar, BM1068U*
A course offered by AT&T to provide you with an overview of the AT&T MCU administration and scheduling functions.

-
- *AT&T Conference Reservation System User's Manual, 555-230-520*

Provided with the optional AT&T Conference Reservation System, this manual gives detailed information and procedures an AT&T CRS administrator and/or reservation agent can use to install CRS, set up and manage CRS databases, reserve conferences and perform CRS system administration.

Organization

This manual contains five chapters and three appendices. They are:

- Appendix 1, "MultiPoint Conferencing" provides an overview of the technology that led to the development of the AT&T MCU. It also gives a description of the features of the MCU.
- Appendix 2, "Reservation Agent Tasks" explains the conference scheduling options and how to use the MCU Scheduling Terminal (MCU-ST).
- Appendix 3, "PC-Based Scheduling" provides an introduction to the AT&T Conference Reservation System (CRS).
- Appendix 4, "Paper-Based Scheduling" explains the 24-hour internal reservation system, including how to develop a paper tracking system for scheduling conferences in advance of the planned date.
- Appendix 5, "Diagnosing and Solving Problems" provides potential problems and solutions.
- Appendix A, "P x 64 Interoperability" presents a list of the video endpoints that are supported by the MCU, along with any limitations in features or functionality.
- Appendix B, "Conference Scheduling Commands" offers a quick reference of the commands a reservation agent can use to schedule, reserve and troubleshoot conferences.
- Appendix C, "Paper-Based Scheduling Forms" provides blank copies of the forms described in Appendix 4, "Paper-Based Scheduling"4.

This manual also has a glossary and index.

Typographic Conventions

Several conventions are used to quickly convey information. These conventions are as follows:

- This *typeface* is used for references of titles of other documents and when referring to fields on screens.
- This **typeface** is used to identify commands and values for fields.
- This `typeface` is used when a word or phrase must be written on a paper form and when a message is returned by the MCU.
- The following icon:

 **WARNING:**

emphasizes information that is important to your safety.

- The following icon:

 **CAUTION:**

indicates information you need to prevent equipment damage.

- The following icon:

 **NOTE:**

identifies additional information pertinent to the text preceding it.

Overview

The AT&T MultiPoint Control Unit (MCU) Release 1.0 bridges multiple remote video endpoints onto a single video conference call. It is a multimedia product since it combines audio, data and video. This chapter gives background information on video conferencing and the tasks you'll be performing.

Standard vs. Proprietary

Until recently, video endpoints, like the original fax machines, could only make contact with other video endpoints developed by the same manufacturer. This was due to the fact that the technology, both video telephony and video conferencing, was built upon a manufacturer's private protocol, known as proprietary algorithms.

In 1990, an international group (ITU-T) adopted a set of standards or rules that allow video product manufacturers to develop products with the ability to communicate with each other. This internetworking standard, known as H-series, Px64, will have the same interconnection effect for video as the Group 3 standard did for fax machines in the late 1980s.

Multipoint Conferencing Standards

Multipoint video conferencing takes Px64 standards a step beyond two video endpoints communicating with each other (known as point-to-point). Video conferencing brings together multiple video endpoints at geographically dispersed locations into a single conference call. This requires tracking of video images, sound, and data from multiple sites for a simultaneous multimedia presentation.

Meet-Me Numbers, Meet-Me Extensions, and Bandwidth

As with any endpoint on a network (such as a telephone, computer, and video codec), the MCU is assigned network numbers, known as Meet-Me numbers. These numbers are used by conferees to dial into the MCU to participate in a multipoint conference. Each MCU is assigned multiple Meet-Me numbers, thus allowing multiple video endpoints to connect to the MCU simultaneously.

Each Meet-Me number is mapped to a Meet-Me extension on the MCU. Confer-ees will not be aware of the Meet-Me extension being reached since they are dialing a Meet-Me number. However, you must be aware of the mapping of Meet-Me numbers to Meet-Me extensions in order to reserve conferences on the MCU.

When you reserve a conference, a Meet-Me extension is added for each conferee. This process tells the MCU to reserve a video port for the duration of the conference and label it with a given MCU extension. Once the conference is over, the video port is put back into the pool and the MCU extension is again available for use.

Each conference is assigned a bandwidth which can be 56k, 64k, or 384k. This bandwidth is assigned by you based on the network connections and video endpoint capabilities. For example, if two conferees are capable of originating 56k or 64k calls, but a third conferee can only originate 56k calls, the conference bandwidth must be set to 56k and all conferees should be instructed to originate 56k calls.

Further, the Meet-Me extensions assigned to each conferee in a conference must be capable of supporting the conference bandwidth. The rules to follow are: a Meet-Me extension with a 56k bandwidth can only be assigned to a conference with a 56k bandwidth; a Meet-Me extension of 64k/384k bandwidth can join any conference (that is, a conference with a 56k, 64k or 384k bandwidth).

The relationship between Meet-Me numbers and Meet-Me extensions and their related bandwidths is discussed further in Chapter 4, "Paper-Based Scheduling-MultiPoint Conferencing."

Joining a Conference

Conferees join a multipoint video conference by dialing into the MCU using Meet-Me numbers. Meet-Me numbers are usually a standard 10-digit phone number (often with 700 as the area code), a 7-digit PBX number or a 4- to 5-digit extension number that is part of a private dial plan.

⇒ NOTE:

Meet-Me numbers may be longer than 10 digits for international calls or for other configurations and access codes.

When a conference is scheduled to begin (and any time before the conference ends), conferees simply dial their Meet-Me number from their video endpoint to join in to the multipoint conference. Conferees do not need to join the conference in any particular order.

MCU Features

To assist conference conveners in configuring multipoint video conferences that maximize their conference experience, it is important to know how many MCU ports are available for conference calls and the features and capabilities offered to conferees. The following section describes the choices available.

⇒ NOTE:

The MCU is offered in different models with various options (see the *Multi-Point Control Unit System Description* for details). Described here is the full-featured EX model. Feature sets vary depending on the MCU model, options selected and capabilities of the participating endpoint.

Number of MCU Ports

An MCU port is a collection of MCU resources that allow a video endpoint using a supported transfer rate (bandwidth) to connect to the MCU and participate in a multipoint conference. It includes trunking resources (trunks), video codec and conferencing resources and Px64 protocol termination resources.

Each MCU port can dynamically support various transfer rates. Transfer rate refers to the number of B (bearer) channels connected to a conference multiplied by the bandwidth of the B-channel. B-channel refers to a full-duplex, switched digital 56k/64k data channel provided by the network from a source (the video endpoint) to a destination (the MCU). A 2B-channel doubles the data channel bandwidth of the conference call from 56k/64k to 112k and 128k respectively. H0 refers to a transfer rate of one B-channel with a 384k bandwidth. The MCU supports video calls comprised of 2B-channel 112k or 128k and 384k (H0).

The MCU is offered in configurations based on MCU port resources and MCU model. The first number in the configuration is the total number of MCU ports; all can be used for 2B conferences. The second number (always equal to or less than the first number) represents the number of MCU ports that can be used for H0 conferences.

In Release 1.0, the smallest configuration is 4/4 with four MCU ports available for 2B or H0 conferences. A four port system accepts a maximum of one four-party conference. The largest configuration is a 24/12 port system. With a maximum single 2B conference size of 12, the 24/12 port configuration can handle many combinations of 2B conferences (such as three 8-party conferences, six 4-party conferences or two 12-party conferences). With a 24/12 configuration, you can use up to 12 MCU ports for H0 conferences. However, there is a five party per conference limit for H0 conferences. With 12 H0 ports you can reserve up to four 3-party conferences, three 4-party conferences, or two 5-party conferences.

Conference Modes

Meetings are conducted in a variety of ways. Some meetings require interaction among all conferees; others focus on one speaker who provides information to other conferees. Conference modes allow you to adjust the MCU to operate according to the type of meeting being held. A mode controls who is being seen at a given moment in a conference. The following conference modes are available:

Voice-Activated (Automatic Mode)

With voice-activated conference mode, the video image of the person speaking is seen by all other conferees except the speaker who continues to see the previous speaker. There is a minimal length of time between when a speaker stops talking and the video switches to the new speaker. When a new speaker becomes a video source, the MCU waits a moment before switching again to prevent a “ping-pong” appearance. A ping-pong appearance is caused by switching the video source too rapidly during a conversation that involves frequent changes of speaker. This conference mode is ideal for meetings where all participants share information. This automatic mode is a part of the MCU functionality and requires no special features from the video endpoint.

Presentation Mode (Advanced Mode)

Presentation mode allows one location to be viewed constantly and unchanging by all conferees, but unlike broadcast mode, all conferees including the presenter have audio from all sites. When anyone at the participating locations asks a question or makes a comment, the presenter hears and views that location. The other conferees hear the question or comment but continue to view the presenter. This conference mode is ideal for classroom training and instructional meetings where there is one primary speaker and limited interaction from the conferees. If the conferees join the conference before the presenter, they are conferenced in but view

nothing until the presenter joins. If applicable, conferees will hear entry tones as other conferees join the conference. This advanced mode is part of the MCU functionality and requires no special features from the video endpoint.

Broadcast Mode with Auto Scan (Advanced Mode)

In this mode, everyone in the video conference sees and hears one location continuously and unchanging. The location being viewed (the broadcaster) does not receive audio from any viewing location. The broadcaster does see video from each of the conferees on a continuous rotating basis (the rotation scan time can be adjusted when the conference is reserved). If the conferees join the conference before the broadcaster, they are added to the conference but view nothing until the broadcaster joins. If applicable, conferees will hear entry tones as other conferees join the conference. The advanced mode is part of the MCU functionality and requires no special features from the video endpoint.

Video Quality

You can adjust the video quality according to the capabilities of the participating endpoints and the network interfaces used by both the endpoints and the MCU. Video quality is controlled by the amount of transfer rate and bandwidth allocated to video and the absolute amount of transfer rate selected for a given conference. As mentioned earlier, the transfer rate is based on the number of B-channels associated with a conference call.

The bandwidth for a video call is factored by the number of B-channels selected for a conference. The broader the bandwidth, the better the video quality. Therefore, for 2B transfer rates, 112k (two 56k channels) is the basic video quality; 128k (two 64k channels) provides better video quality. H0 (384k) provides the maximum bandwidth and thus the finest video image available with the MCU.

The MCU will not allow an endpoint to participate fully (audio and video) in a conference if it does not support the selected (or higher) bandwidth of the conference (112k, 128k or 384k). An endpoint calling with a 112k bandwidth cannot join a conference arranged with a 128k bandwidth. However, an endpoint calling with a 1B 56k bandwidth can join a 2B 112k conference as audio-only.

The best video available for a 112k/128k video conference is achieved using a method of speech compression known as G.728 (LD-CELP). G.728 uses 16k audio. Basically, the MCU and the video endpoints take the total amount of bandwidth on a conference call (regardless of whether it is 112k or 128k) and use a larger percentage of the bandwidth for video. The reduction in the audio bandwidth is indiscernible to most people. With maximum bandwidth for video, video quality is enhanced.

The highest quality audio you can arrange for a video conference is known as G.711 (PCM). G.711 is 56k/64k audio. Essentially, this selection maximizes the bandwidth allocated to audio. Therefore, the video quality is not as good as that which is offered with G.728.

⇒ NOTE:

Not all supported video endpoints offer G.728. For a multipoint conference to operate using G.728, all participating endpoints must support G.728. If one does not, the MCU automatically adjusts the conference to G.711.

Notification Tones

Notification tones are used during a conference to alert conferees about the status of a conference. Each tone has a different length and frequency so it can be distinguished from each other. Tones are selected on a per conference basis at the time a conference is reserved.

Entry and Exit Tones

When a conferee joins a conference, an entry tone alerts other conferees already on the conference that another endpoint has joined. Similarly, when a conferee disconnects from a conference, an exit tone notifies the other conferees that an endpoint has dropped.

Warning Tone

This tone sounds when only 10 minutes remain in a conference. This tone gives advance notice to conferees to either conclude the conference or request to extend the conference.

Billing Information

In cases where the conference convener wants to track the reason for a conference and its duration for billing purposes, you can assign a billing identification number (up to 15 characters). The billing number associates the conference with a particular client, project or whatever is necessary for proper accounting.

Conference Scheduling Methods

There are two ways to schedule and reserve conferences on the MCU:

- **PC-Based Reservation System**

The AT&T Conference Reservation System is an optional PC-based reservation system that automates the scheduling tasks, performs conflict resolution and ensures that selected endpoints have the ability to participate in a conference. It also allows you to reserve time on the MCU in advance of the scheduled conference date and automatically reserves the conference on the day it is scheduled to begin.

- **Paper-Based Scheduling System**

You may arrange conferences from the MCU Scheduling Terminal (MCU-ST) on an as-needed basis or within a 24-hour window using the internal reservation system. On-demand conferencing can be used to dedicate resources of the MCU around-the-clock. You reserve MCU ports so selected locations always have the ability to convene a conference at any time without making a reservation.

You can also create a paper-based scheduling system to track the number of MCU ports available and reserve MCU time in advance (more than 24 hours ahead of the planned start time) of the conference date.

Overview

As the reservation agent, you are responsible for accepting requests for multipoint conferences, ensuring that the resources are available for each conference, distributing the numbers conferees dial to join a conference, and helping to assist conferees who report problems.

Conference Scheduling Methods

There are two ways to schedule and reserve conferences on the MCU. The procedures are different according to the method you choose to use.

PC-Based Scheduling System

This optional PC-based scheduling system, the AT&T Conference Reservation System (CRS), automates the scheduling tasks and performs conflict resolution to ensure MCU resources are available and that selected endpoints have the ability to participate. It also allows you to reserve time on the MCU in advance of the scheduled conference date and automatically activates the conference on the day it is scheduled to begin. See Chapter 1, Chapter 1 for more information.

Paper-Based Scheduling System

The paper-based scheduling system allows you to keep track of concurrent and overlapping conferences. By using this system, you know the number of MCU ports that are available and can reserve MCU time in advance (more than 24 hours ahead of the planned start time) of the conference date.

The paper-based scheduling system requires accurate records of specific conference information, such as conferees' names and contact numbers, conference mode, date of conference, start and stop times. It includes a usage chart to track MCU resource availability and to prevent overbooking. It also requires a way to remind you when to reserve the conference (within 24 hours of the start and stop times). This scheduling method is described in Chapter 1, Chapter 1.

You reserve conferences using the MCU Scheduling Terminal (MCU-ST). If a conference convener calls within 24-hours of the conference, you can reserve the conference while the convener is on the phone (provided the MCU resources and Meet-Me numbers are available for all conferees).

Another option is to dedicate resources of the MCU around-the-clock. This method reserves ports on the MCU so selected locations always have the ability to convene a conference at any time without making a reservation. Both methods are described in Chapter 1, Chapter 1.

Using the MCU-ST

The MCU-ST is used primarily to reserve conferences when you are using the paper-based scheduling system. The personal computer used with the AT&T Conference Reservation System (CRS) replaces the MCU-ST for scheduling and reserving conferences. However, another important function of the MCU-ST is diagnosing problems reported about conferences. So even if you are using the PC-based CRS, you may occasionally need to use the MCU-ST for troubleshooting and perhaps even as a backup for CRS.

Keys and Functions

The keyboard of the MCU-ST is equipped with cursor keys, transaction keys and editing keys to enable you to send and receive data from the MCU. These keys and their functionality are described below:

- **Cursor Keys**

Used to move the cursor between fields and pages on a screen form. The cursor must be positioned in a field on a form before you add or change information in that field.

- **Editing Keys**

BACKSPACE and CLEAR are used to edit data in a field. BACKSPACE erases the character at the current cursor position. CLEAR must be used in combination with SHIFT to clear all data in a field. The cursor must be in the field you want cleared before CLEAR and SHIFT are pressed. You can use TAB to advance from field to field or use SHIFT and TAB together to reverse the direction.

- **Transaction Keys**

CANCEL, ENTER and HELP perform special functions. CANCEL erases a form or command. ENTER stores data from the screen into the system's memory. HELP displays more information about the values or commands that can be entered for a particular field or form.

PAGE UP and PAGE DOWN display the previous page and the next page of screens with more than one page.

Logging In

Perform the following procedure to log in to the MCU-ST:

1. Enter **at**.
2. When the *OK* prompt appears, enter **atdtcode** where **code** is the access code assigned by your telecommunications manager.

⇒ NOTE:

If you do not know the code word or number, ask your telecommunications manager. The code is provided by the AT&T Video Technical Center (VTC) when the MCU is installed.

3. Verify the MCU-ST displays: *Login:*
4. Enter **agent**.

5. Verify the screen displays: *password*:

⇒ **NOTE:**

Ask your telecommunications manager for the current password for the **agent** login.

6. Enter your password.

⇒ **NOTE:**

For security purposes, your password is not displayed as you enter it. The MCU verifies the login and password. If an invalid login or incorrect password name is entered, the screen displays: *login incorrect*:

7. The software version is displayed.
8. When the screen displays: *Terminal Type (Enter 715, 513, 4410, or 4425): [715]*, press RETURN.
9. The screen should now display: *command*:

Changing Your Password

Use the following procedure to change your password after you have logged in:

⇒ **NOTE:**

Check with your telecommunications manager to be sure you are permitted to change the password for this login.

1. From the *command* prompt, enter **change password agent**. The Password Change form is displayed.
2. In the *Your Current Password* field, enter the password you used to log in.
3. In the *New Password For Login Name* field, enter your new password (see **NOTE**).

⇒ **NOTE:**

Valid passwords have four to seven alpha or numeric characters or a combination of both.

4. Reenter your new password in the *New Password (enter again)* field.
5. Verify the screen displays: *command successfully completed* followed by *command*:

Commands and Actions

When you logged in, you entered a command to the MCU and the MCU responded to your action. When you changed the password, the MCU displayed a form, in this case the Change Password Form, with fields for you to complete.

When you make reservations for conferences or check on the status of a conference, the MCU displays conference-related forms for you to view or complete. A list of these commands is provided as a quick-reference in Appendix B, Chapter 1.

After you are familiar with the process, you will discover some shortcuts to help you reserve conferences and check on conference status and port availability more quickly. For example, you do not have to type out an entire command for the MCU to recognize it. All that is required is for you to enter enough letters to make the command unique. So to change your password, instead of typing the entire command **change password agent**, you could type **ch pa agent**.

Conference Record Screen

The Conference Record Screen is used to capture the information required by the MCU to reserve a conference.

```
add conference next                                     page 1 of 1
CONFERENCE RECORD
Conference ID: 1                                       Status: _____
Conference Name: _____ Conference Mode: _____
Billing ID: _____ Control Ext: ___ Scn Int:  _
Class: _____ Audio Mode: _____
Start Time: _____ Bandwidth: _____
Stop Time: _____ No. of Channels:  _
Entry/Exit Tones?  _
Warning Tone?  _

CONFEREES
      MEET-ME
EXT  NAME      EXT  MEET-ME  NAME
____
____
____
____
```

Figure 2-1. Conference Record Screen

The following list provides descriptions of the fields on the Conference Record screen and their related values:

- *Conference ID*
Display-only field that shows the number that identifies this conference.
- *Conference Name*
The purpose of the meeting for identification purposes.
- *Billing ID*
If applicable, enter the billing number for this conference.
- *Class*
There are three conference classes: **reserved**, **dedicated**, and **file**. A **reserved** conference is a conference that is scheduled to begin within 24-hours of the current time. A **dedicated** conference is a conference that is always available and can be joined at anytime. A **file** conference is a conference that is filed as a record for future use. The default is **reserved**.
- *Start Time*
If **reserved** is selected in the *Class* field, this field appears so you can enter the time the conference begins. The time is entered in **hhmm** format where **hh** is the hour (00 to 23) and **mm** is the minutes (00 to 59). This field is optional for file conferences.
- *Stop Time*
If **reserved** is selected in the *Class* field, this field appears so you can enter the time the conference ends. The time is entered in **hhmm** format where **hh** is the hour (00 to 23) and **mm** is the minutes (00 to 59). This field is optional for file conferences.
- *Status*
This display-only field reports the current status of a conference as it relates to the *Class* of the conference. A reserved conference can be **active**, **in-use**, **inactive**, or **complete**. **Active** means the conference is available to receive calls. **In-use** means the conference is in-progress and one or more conferees has joined in. **Inactive** means the conference is not available to receive calls (for a reserved conference, the *Start Time* has not been reached). **Complete** means a conference has ended (the *Stop Time* has been reached). A dedicated conference is always **active** (available to receive calls). A file conference is always **inactive** (not available to receive calls).

- *Conference Mode*

Depending on your MCU model, this field offers up to three conference modes. **Voice-activated** allows conferees to view the current speaker. The video source changes when another speaker begins talking. **Presentation** mode allows one location to be viewed constantly by all conferees. If a conferee asks a question or makes a comment, the other conferees hear the speaker but continue to view the presenter. **Broadcastw/scn** mode allows one location to be viewed and heard constantly by all conferees. The broadcaster receives video (not audio) from all conferees on a rotating basis. **Voice-activated** is the default.

- *Control Ext.*

This field appears only when the *Conference Mode* is either **Presentation** or **Broadcastw/scn**. The control extension is the Meet-Me extension of the location that will be the presenter or the broadcaster.

- *Scn Int.*

This field appears only when the *Conference Mode* selected is **Broadcastw/scn**. This is the amount of time (in seconds) that the broadcaster will view each conferee before the MCU switches to the next conferee. The default is **15** seconds.

- *Audio Mode*

This display-only field shows **automatic** which means the MCU will automatically select the audio mode, either G.711 or G.728, depending on the capabilities of the participating video endpoints.

- *Bandwidth*

This field is used to specify the bandwidth selected for the conference. If **56k** is selected, the conference will be a 2B-channel 56k conference (112k bandwidth). If **64k** is selected, the conference will be a 2B-channel 64k conference (128k bandwidth). If **384k** is selected, the conference will be a one channel 384k (H0) conference. **56k** is the default.

- *No. of Channels*

This display-only field shows the number of channels being used for the conference selected. If the *Bandwidth* selected for the conference is 56k or 64k, this field will display a **2** for 2B-channels. If the *Bandwidth* selected for the conference is 384k, this field will display a **1** for one channel.

- *Entry/Exit Tones*

This field appears if your MCU model has the Notification Tones feature. If it does appear, enter **yes** if you want conferees to hear an entry tone whenever a conferee joins the conference and an exit tone whenever a conferee leaves the conference. Enter **no** if you do not want the entry or exit tones for this conference. Tones are enabled or disabled on a per conference basis. The default is **yes**.

- *Warning Tone*

This field appears when your MCU model has the Notification Tones feature. If it does appear, enter **yes** if you want conferees to hear a tone when 10 minutes remain before the scheduled end of the conference. Enter **no** if you do not want the warning tone for this conference. This tone is enabled or disabled on a per conference basis. The default is **yes**.

- *Meet-Me Ext.*

A Meet-Me extension is required for each conferee in a conference. The maximum number of conferees (and Meet-Me extensions) for a 56k or 64k bandwidth conference is 12 (unless you have fewer MCU ports). The maximum number of conferees (and Meet-Me extensions) for a 384k bandwidth conference is 5 (unless you have fewer MCU ports).

- *Meet-Me Name*

When a Meet-Me extension is entered, the MCU automatically displays the associated name, which is generally the number the conferee dials to join a conference or the location of the conferee.

Availability of Ports Screen

The Availability of Ports Screen displays the current day and the number of MCU ports (2B 56k/64k or 384k) that are available over the next 24 hours. This information is vital to prevent overbooking of MCU ports when reserving simultaneous conferences.

Figure 2-2 on page 2-9 shows an MCU with 24 ports available for 2B conference calls (56k or 64k bandwidth). From the example, five of the 24 ports are reserved over the next 24 hours, 19 MCU ports are available at the current time.

Availability of 2B Ports Screen

The following list provides descriptions of the fields on the Availability of 2B Ports screen and their related values:

- *Current Time and Date*

Display-only field shows the current date and time.

- *Administered Max 2B Port Cap*

This display-only field shows the total number of MCU ports that are available for 2B conference calls.

- *Time Avail*

This field shows the time in 15 minute increments over the next 24 hours and the MCU ports that are available during each of the 15 minute time periods.

```

display available-ports 2B                               page 1 of 1
  
```

AVAILABILITY OF 2B PORTS													
2:29 pm THU JUL 1, 1993							Administered Max 2B Port Cap: 24						
Time Avail	Time Avail	Time Avail	Time Avail	Time Avail	Time Avail	Time Avail	Time Avail	Time Avail	Time Avail	Time Avail	Time Avail	Time Avail	Time Avail
14:15 19	18:15 19	22:15 19	02:15 19	06:15 19	10:15 19								
14:30 19	18:30 19	22:30 19	02:30 19	06:30 19	10:30 19								
14:45 19	18:45 19	22:45 19	02:45 19	06:45 19	10:45 19								
15:00 19	19:00 19	23:00 19	03:00 19	07:00 19	11:00 19								
15:15 19	19:15 19	23:15 19	03:15 19	07:15 19	11:15 19								
15:30 19	19:30 19	23:30 19	03:30 19	07:30 19	11:30 19								
15:45 19	19:45 19	23:45 19	03:45 19	07:45 19	11:45 19								
16:00 19	20:00 19	00:00 19	04:00 19	08:00 19	12:00 19								
16:15 19	20:15 19	00:15 19	04:15 19	08:15 19	12:15 19								
16:30 19	20:30 19	00:30 19	04:30 19	08:30 19	12:30 19								
16:45 19	20:45 19	00:45 19	04:45 19	08:45 19	12:45 19								
17:00 19	21:00 19	01:00 19	05:00 19	09:00 19	13:00 19								
17:15 19	21:15 19	01:15 19	05:15 19	09:15 19	13:15 19								
17:30 19	21:30 19	01:30 19	05:30 19	09:30 19	13:30 19								
17:45 19	21:45 19	01:45 19	05:45 19	09:45 19	13:45 19								
18:00 19	22:00 19	02:00 19	06:00 19	10:00 19	14:00 19								

Figure 2-2. Sample Availability of 2B Ports Screen

Availability of 384k Ports Screen

Figure 2-3 on page 2-10 shows an MCU with eight ports available for 384k conference calls. In this example, all eight ports are available for 384k conference calls.

The following list provides descriptions of the fields on the Availability of 384k Ports screen and their related values:

- *Current Time and Date*

Display-only field shows the current date and time.

- *Administered Max 384k Port Cap*

This display-only field shows the total number of MCU ports that are available for 384k conference calls.

- *Time Avail*

This field shows the time in 15 minute increments over the next 24 hours and the MCU ports that are available during each of the 15 minute time periods.

```

display available-ports 384k                               page 1 of 1
  AVAILABILITY OF 384k PORTS

2:31 pm THU JUL 1, 1993                               Administered Max 384k Port Cap: 8

Time Avail  Time Avail  Time Avail  Time Avail  Time Avail  Time Avail
14:30 8      18:30 8      22:30 8      02:30 8      06:30 8      10:30 8
14:45 8      18:45 8      22:45 8      02:45 8      06:45 8      10:45 8
15:00 8      19:00 8      23:00 8      03:00 8      07:00 8      11:00 8
15:15 8      19:15 8      23:15 8      03:15 8      07:15 8      11:15 8
15:30 8      19:30 8      23:30 8      03:30 8      07:30 8      11:30 8
15:45 8      19:45 8      23:45 8      03:45 8      07:45 8      11:45 8
16:00 8      20:00 8      00:00 8      04:00 8      08:00 8      12:00 8
16:15 8      20:15 8      00:15 8      04:15 8      08:15 8      12:15 8
16:30 8      20:30 8      00:30 8      04:30 8      08:30 8      12:30 8
16:45 8      20:45 8      00:45 8      04:45 8      08:45 8      12:45 8
17:00 8      21:00 8      01:00 8      05:00 8      09:00 8      13:00 8
17:15 8      21:15 8      01:15 8      05:15 8      09:15 8      13:15 8
17:30 8      21:30 8      01:30 8      05:30 8      09:30 8      13:30 8
17:45 8      21:45 8      01:45 8      05:45 8      09:45 8      13:45 8
18:00 8      22:00 8      02:00 8      06:00 8      10:00 8      14:00 8
18:15 8      22:15 8      02:15 8      06:15 8      10:15 8      14:15 8
  
```

Figure 2-3. Sample Availability of 384k (H0) Ports Screen

Troubleshooting

You are the person who conference conveners call to make multipoint conference reservations. You are also the person who conferees call to confirm conference times and numbers to dial to join a conference. Therefore, you will most likely be the first person they call if anything goes wrong.

That is the reason for Chapter 1, Chapter 1. The procedures in that chapter are designed to help you solve most problems conferees will encounter. However, there may be problems that you cannot solve (such as network troubles or video endpoint problems), and you will be instructed when to escalate the problem to the AT&T Video Technical Center (VTC).

Multipoint conferencing is a new and exciting technology. There are many concepts and new terminology to learn. Be sure to follow the procedures for each of the scheduling and troubleshooting methods. They will help to remind you of each of the steps required to schedule and reserve multipoint conferences.

Introduction to CRS

The AT&T Conference Reservation System (CRS) offers automated scheduling and reservation capabilities based on a Microsoft® Windows™ 3.1 software platform. The CRS handles all room, point-to-point and multipoint video conference reservation needs. You can automatically reserve the AT&T MultiPoint Control Unit (MCU) for upcoming multipoint conferences, print conference reminders and maintain a database of past, present and future conferences for resource and charge-back management.

As the reservation agent responsible for scheduling a conference, you can supply all the same customized information on easy-to-use CRS screens just as you do with the paper-based scheduling system. The CRS information you input (such as convener name and contact list, company name and conference time) is used to reserve the MCU ports as well as for billing purposes.

CRS can add, query, copy and delete conference details in separate databases for Meet-Me numbers, video endpoint information, convener and contact data and site information. Using the databases, the reservation system can also provide an automatic conference summary.

With CRS, you can easily ensure that all endpoints in a conference are compatible. You can manage site time conflicts, video details, port availability, Meet-Me number assignments, and confirmations. CRS automatically notifies you of any unavailable resources which allows you to identify scheduling conflicts at the time the convener requests a conference.

Scheduling conflicts are presented on a graphical conflict calendar. Based on conference parameters, the conflict calendar allows you to search for the next available time when all resources are free. Once you have completed scheduling, you receive a report confirming your conference reservation.

The following list includes a high-level overview of basic CRS capabilities:

- **Easy Scheduling**

Provides fast conflict resolution.

- **Conference Template Creation**

Speeds up and simplifies the reservation process by allowing you to create conference templates to eliminate incompatibility between endpoints. Checks the participating video endpoints to ensure they meet the selected criteria to join a conference.

- **Graphical Calendar**

Provides a graphical calendar that simplifies the complex task of resolving resource and/or time and date conflicts for conferences being scheduled.

- **Recurring Meeting Support**

Allows flexible repetition of meetings on a daily, weekly, bimonthly, or monthly basis.

- **Search and Modify Capability**

Allows you to change details about a conference before the conference begins, such as the number of participants, start time, or date. For a conference already in-progress, you can only shorten or extend the end time. Conferences can only be extended if the ports and Meet-Me numbers are available (that is, not allocated to a previously-scheduled conference).

- **Conference Room Scheduling**

Maintains a database of conference rooms, including their locations, contents and endpoint capabilities so you can combine the reservations of rooms with the scheduling of multipoint, point-to-point, or non-video conferences.

- **Person Data Management**

Maintains a database of conference conveners and contacts containing names, company names, addresses, phone numbers, and charge-back information.

- **MCU Control**

Downloads conference data to the MCU automatically for upcoming multipoint conferences. Uploads MCU configuration and options automatically.

- **Charge-Back Information**

Keeps database records of conferences for billing purposes.

- **Data Export for Reports**

Allows the exporting of data in various PC-standard formats for inclusion in external reports.

- **Comprehensive On-Line Help**

Provides context-sensitive help screen at all times.

- **Security Protection**

Offers password entry into the system and restricts access by level.

- **Flexible Configuration**

Configurations allow CRS to be collocated with the MCU or at a remote location.

Overview

The MCU has an internal reservation system that allows you to reserve multipoint conferences within 24 hours of their start and stop times. There are three ways you can use this 24-hour system:

- **Reserved Conferences**

You can create a paper system to track conference information prior to the day of the conference, then on the day of the conference (or within 24-hours of the planned start and stop times), reserve the conference on the MCU. Alternatively, you can require conference conveners call to reserve a conference only on the day of the conference. After you check for MCU port and Meet-Me number availability, you confirm the conference and distribute the Meet-Me numbers to the convener.

- **Dedicated Conferences**

You can reserve three or more MCU ports for a multipoint conference anytime. The MCU dedicates the resources for the conference without requiring a reservation.

- **File Conferences**

You can file a copy of a Conference Record for future use. This allows you to collect the information once for a regularly scheduled video conference.

Advance Scheduling

The paper-based scheduling system is designed to allow you to accept conference reservations up to two months in advance of the date of the conference. On the day of the conference, or within 24 hours of the start and stop times, you enter the conference record into the MCU.

The paper-based scheduling system uses four components to log and verify conference information. These components are offered as suggestions to track important information when making conference reservations. You should design your own forms and charts based on these recommendations according to your size and model MCU. It will take some advance planning and practice to understand all the components of the paper-based scheduling system. It is recommended that you become familiar with the procedure before you begin reserving conferences.

To keep track of the paper-based scheduling system, it is helpful to have a three-ring binder with tabs for a two month time period and dividers for the days of the months (or as far in advance as you are willing to accept conference requests). As you complete the forms, insert them under the divider for the day of the conference. Here are the four components of the paper-based scheduling system:

- **Meet-Me Extensions and Numbers to Dial**

This form shows all the MCU Meet-Me extensions, supported bandwidth, and corresponding Meet-Me numbers conferees dial to join a conference (see Table 4-1).

- **Site Profile**

This list provides valuable information about video endpoints, including their location, time zone, bandwidth capabilities and network type (see Table 4-2).

- **Conference Appointment Form**

This form is used to record all the information necessary to schedule a multipoint video conference and is used as a guide to make the reservation on the day of the conference (see Table 4-3).

- **Port and Extension Usage Chart**

This chart provides a means to record the number of ports and Meet-Me extensions required for a conference and is used to determine the availability of MCU ports and Meet-Me extensions when a conference is requested. It serves as quick visual confirmation of the number of MCU ports in use or available for a range of times for each day. This chart is used to prevent overbooking of the MCU. You refer to it to assist conference conveners in choosing the best time to reserve a conference and when requested to extend the time for a conference (see Table 4-4).

Meet-Me Extensions/Numbers to Dial Form

The Meet-Me Extensions and Numbers to Dial Form should be completed by your telecommunications manager who ordered the trunks and network numbers for the MCU. The form should show the all Meet-Me extensions assigned to the MCU and their corresponding Meet-Me numbers (the numbers conferees dial to join a conference). It should also include the bandwidth per channel for each Meet-Me extension and the Meet-Me numbers listed by network type (either public or private).

⇒ NOTE:

When a Meet-Me extension has a 64k/384k bandwidth it is also capable of originating 56k calls. A video endpoint on a private network can use either a public or private Meet-Me number. A video endpoint on a public network can only use a public Meet-Me number.

Table 4-1. Sample Meet-Me Extensions and Numbers to Dial Form

Meet-Me Extensions and Numbers to Dial Form							
		Number to Dial				Number to Dial	
Ext.	Bandwidth	Public	Private	Ext.	Bandwidth	Public	Private
6000	56/64/384k	(700)7376000	86000	5000	56k	(700)7565000	85000
6001	56/64/384k	(700)7376001	86001	5001	56k	(700)7565001	85001
6002	56/64/384k	(700)7376002	86002	5002	56k	(700)7565002	85002
6003	56/64/384k	(700)7376003	86003	5003	56k	(700)7565003	85003
6004	56/64/384k	(700)7376004	86004	5004	56k	(700)7565004	85004
6005	56/64/384k	(700)7376005	86005	5005	56k	(700)7565005	85005
				5006	56k	(700)7565006	85006
				5007	56k	(700)7565007	85007
				5008	56k	(700)7565008	85008
				5009	56k	(700)7565009	85009
				5010	56k	(700)7565010	85010
				5011	56k	(700)7565011	85011

Site Profile

Your telecommunications manager should create a site profile for all conferees participating in a conference prior to the day of the conference. Check this list before scheduling a conference to ensure that each conferee's video endpoint is capable of joining the conference. The chart also gives you specifics about the type of conference the video endpoint can join.

Table 4-2. Sample Site Profile

Site Profile					
Location Name	Time Zone	Bandwidths Available	Network Type	Room Location	Contact Name/Phone
Allentown	EST	56k	private	G123	J. Gibson/215-555-1200
Andover	EST	56k 64k	private	1B-24	T. Lee/301-555-3231
Denver	MST	56k 64k 384k	private	457	C. Charles/303-555-9872
Holmdel	EST	56k 64k 384k	private	3G-104	D. Gilberg/908-555-7777
Chicago	CST	56k	public	28A	R. Prasad/312-555-1818
San Diego	PST	56k 64k	private	1150	A. Snowdon/619-555-2222

Whenever you receive a request to schedule a conference, check the Site Profile to confirm that each of the conferees has an existing profile. If you do not have a profile for a conferee, ask the conference convener for the conferee's name and phone number. You or your telecommunications manager should call the conferee to obtain a profile for the video endpoint.

The following is a list of information required to complete a Site Profile:

1. Ask the conferee to supply the model name and software version of the video endpoint.

⇒ NOTE:

If the conferee does not have the requested information, ask if there is a telecommunications manager on-site who does have the information and contact that person.

2. Check Appendix A, "P x 64 Interoperability" to see if the model and version of the endpoint are supported by the MCU. If they are, continue with step 3.

3. On the Site Profile, enter a unique name that identifies where the video endpoint is located (such as the city or department) in the *Location Name* field.
4. In the *Time Zone* field, specify in which time zone the video endpoint is located (such as **EST** for eastern standard time, **CST** for central standard time).
5. In the *Bandwidths Available* field, enter *all* the bandwidths supported by the video endpoint (**56k**, **64k** or **384k**).
6. In the *Network Type* field, enter either **private** if the connection is through a PBX or on a private network or **public** if the connection is directly to the network.
7. In the *Room Location* field, enter the conference room or office number where the video endpoint is located.
8. In the *Contact Name* field, enter the name and phone number of the person who should be called about the video endpoint when maintenance or information is needed.

Conference Appointment Form

The Conference Appointment Form (see Table 4-3) captures all the information necessary to schedule and reserve a multipoint video conference. It specifies the conference data, start and stop times, conference mode, and related information.

The Conference Appointment Form is actually a paper duplicate of the Conference Record screen on the MCU with a few additional fields. Use the Conference Record as your guide for creating this paper form.

1. Login as **agent** to the MCU-ST.
2. Enter **add conference 1** to display the Conference Record screen.
3. Make sure **reserved** appears in the *Class* field.
4. Tab to the *Conference Mode* field and try to select **broadcastw/scn**. If you cannot, the Advanced Control feature (includes **presentation** and **broadcastw/scn**) is not available with your MCU model.

5. Using Table 4-3 as your guide, design a paper Conference Appointment Form with the following fields:

- The Conference ID number
- The date of the conference
- The convener's name or contact's name and phone number
- The purpose or name of the conference (up to 20 characters)
- The billing number (up to 15 digits)
- The conference class (**reserved**, **dedicated** or **file**)
- The conference bandwidth (**56k**, **64k** or **384k**)
- The conference mode (**voice-activated**, **presentation** or **broadcastw/scn**). If **broadcastw/scn** or **presentation** are available, enter a field for the Meet-Me extension of the person who will be the broadcaster or presenter. If **broadcastw/scn** is selected, also enter a scan interval.

⇒ **NOTE:**

If you could not enter **broadcastw/scn** in step 4, **presentation** or **broadcastw/scn** are not available with your MCU model. Do not include an entry for these two fields on your paper Conference Appointment form.

- The conference start time and stop time.
- Entry and exit tones.

⇒ **NOTE:**

Check the Conference Record screen. If the *Entry/Exit Tones* field is not positioned below the *Bandwidth* field then your MCU model does not have the Notification Tones feature. You should not include an entry for this on your paper Conference Appointment Form.

- Warning tone.

⇒ **NOTE:**

Check the Conference Record screen. If the *Warning Tone* field is not to the right of the *Start Time* field, then your MCU model does not have the Notification Tones feature. Do not include an entry for this on your Conference Appointment Form.

- A location column with an entry for the maximum number of conferees who can join a conference. If the MCU has fewer than 12 ports, the maximum number of conferees is equal to the number of ports. If the MCU has more than 12 ports, the maximum number of conferees is 12 because that is the maximum number of conferees permitted to join a single conference.
- A *Network Type* column to indicate whether each video endpoint is on a private or public network.

⇒ NOTE:

A video endpoint with a private *Network Type* can use either a private or public Meet-Me number. However a video endpoint with a public *Network Type* cannot use a private Meet-Me number.

- An *Extension* column to enter the assigned Meet-Me extensions for each conferee.
- A *Number to Dial* column to enter the Meet-Me number that corresponds with the assigned Meet-Me extensions for each conferee to dial to join the conference.

Table 4-3. Sample Conference Appointment Form

Conference Appointment Form	
	Conference ID _____
Conference Date: ____/____/____	<i>Circle choices below</i>
	Conference Mode: voice-activated , presentation, broadcastw/scn
Contact Name: _____	If present or broadcast, control ext.: _____
Contact Phone: _____	If broadcast, scan interval: _____seconds (default is 15 seconds)
Conference Name: _____	Bandwidth 56k , 64k, 384k
Billing ID: _____	Entry/Exit Tones: yes , no
Class: reserved , dedicated, file	Warning Tone: yes , no
Start Time: _____:_____	
Stop Time: _____:_____	

Meet-Me			
Location	Network Type	Extension	Number to Dial
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Reserved Conferences

You can schedule conferences in advance using the paper-based scheduling system or you can take reservations only within 24 hours of the conference.

⇒ NOTE:

Conferences can be reserved from the MCU-ST a day in advance provided the *Start Time* and *Stop Time* do not exceed 24 hours from the current time. For example, on Monday at 11:00 a.m., you can reserve conferences for Tuesday as the conference ends before 11:00 a.m.

If you are accepting conference reservations in advance of the day of the conference, start with the procedures in "Scheduling a Conference." If you are only accepting reservations on the day of the conference (or within 24 hours of the conference), skip to "Reserving a Conference."

Scheduling a Conference

When a conference convener calls to schedule a conference, perform the following steps to create a paper-based schedule:

1. Get a blank copy of the Conference Appointment Form. Ask the conference convener for the date of the conference, the contact's name and phone number. Enter the information, except for the date, on the Conference Appointment Form.
2. Ask which video endpoints will be joining the conference. Check the Site Profile and write the location of each endpoint in the *Location* field and the *Network Type* (**public** or **private**) on the Conference Appointment Form.

⇒ NOTE:

If you do not have the endpoint listed on the Site Profile, ask the convener to provide the conferee's name and phone number to create a profile before you schedule the conference.

3. Check the Site Profile again to see what is the highest bandwidth all endpoints have in common. If they all have 384k, circle **384k** in the *Bandwidth* field on the Conference Appointment Form. If they do not, check to see if they all support 64k. If they do, circle **64k** in the *Bandwidth* field. If they do not, circle **56k** in the *Bandwidth* field.

⇒ NOTE:

If 384k is the highest bandwidth, the conference is limited to a maximum number of five conferees. If this is a larger conference, use the 64k bandwidth (assuming the ports are available and the convener agrees) which allows up to 12 conferees.

4. Ask the convener what time the conference is scheduled to begin and what time it will end.

 **CAUTION:**

Be sure to ask about any time zone differences. If you are in New York and a conference convener calls from California to request a 10:00 a.m. meeting, you need to know if that's 10:00 a.m. PST (1:00 p.m. EST) or 10:00 a.m. EST (7:00 a.m. PST).

5. Find the Port and Extension Usage Chart for the day of the conference. Check to see if the time slot and ports are available. If you entered a conference bandwidth of **384k** in step 3, then the available ports on the Port and Extension Usage Chart must be **56k/64k/384k**. For conference bandwidths of **56k** or **64k**, the MCU port bandwidth can be either **56k/64k** or **56k/64k/384k**.

 **NOTE:**

If there is a conflict, help the conference convener choose another date or time when the resources are available.

6. Enter the day of the conference in the *Conference Date* field on the Conference Appointment Form.
7. Ask if the convener wants to track the time and purpose of the conference for billing. If so, request a billing number (up to 15 digits) and enter it in the *Billing ID* field on the Conference Appointment Form.
8. Fill in the *Start Time* and *Stop Time* fields on the Conference Appointment Form.
9. If applicable, ask the convener to select a conference mode (**voice activated**, **presentation**, or **broadcastw/auto scan**) then circle the answer in the *Conference Mode* field on the Conference Appointment Form. If either **presentation** or **broadcastw/scn** is selected, determine the location of the presenter or broadcaster and enter it in the *If present or broadcast, control ext.* field. If **broadcastw/scn** is selected, also enter the scan interval in the *If broadcast, scan interval* field.
10. If applicable, ask the convener whether or not to turn on entry and exit tones for the conference and circle the response in the *Entry/Exit Tones* field on the Conference Appointment Form.
11. If applicable, ask the convener whether or not to turn on the warning tone for the conference and circle the response in the *Warning Tones* field on the Conference Appointment Form.

12. From the Meet-Me Extension and Number to Dial Form, select a Meet-Me extension for each conferee. The Meet-Me extensions you select must:

- support the conference bandwidth (selected in step 3)

⇒ NOTE:

For example, a Meet-Me extension that is administered with a 64k/384k bandwidth supports all conference bandwidths, including 56k. A Meet-Me extension with a 56k bandwidth only supports 56k bandwidth.

- be a public number if the video endpoint has a public *Network Type* (see the Site Profile on page 4-4)
- be either a public or a private number if the video endpoint has a private *Network Type* (see the Site Profile on page 4-4)

13. Write each Meet-Me extension and its corresponding Number to Dial (Meet-Me number) for each conferee. You choose the Meet-Me extension and corresponding Meet-Me number from the *Public* or *Private* column depending on the *Network Type* of the endpoint shown on the Site Profile. If the convener selected **presentation** or **broadcastw/scn** conference mode, enter the presenter's or broadcaster's Meet-Me extension in the *control ext.* field.

⇒ NOTE:

If you do not have enough private Meet-Me numbers available, you can distribute public Meet-Me numbers to any video endpoint that has a private *Network Type*. However, a video endpoint with a public *Network Type* can only use a public Meet-Me number.

14. Give the convener the Number to Dial from step 13 for each of the conferees.
15. Conclude your conversation with the conferee.
16. On the Port and Extension Usage Chart for the day of the conference, draw a line from the start time to the stop time of the conference. Repeat this for the number of ports (that is, the number of conferees).
17. On the Port and Extension Usage Chart, enter the Meet-Me extension for each conferee on each line you drew.
18. Open your notebook and insert the Port and Extension Usage Chart and the Conference Appointment Form under the divider for the day of the conference.
19. Be sure to check the Conference Appointment Form each day to see if a conference is scheduled. On the day of the conference, see Reserving a Conference on page 4-13 and perform the steps provided.

Reserving a Conference

When a conference start time and stop time are within 24 hours, perform the following procedure:

1. On the day of the conference or within 24 hours of the conference start time and stop time, go to your paper-based scheduling system and find the Conference Appointment Form for the conference.

NOTE:

You can reserve a conference the day before it is scheduled to begin, provided the conference start time and stop time fall within 24 hours of the current time. For example, if it is 5:00 p.m. and a conference is scheduled for tomorrow from 9:00 a.m. until 11:00 a.m., you can reserve it today. However, if the conference is scheduled from 3:00 p.m. until 5:30 p.m., it cannot be reserved since the stop time exceeds the 24-hour window.

2. Login as **agent** on the MCU-ST. To confirm that MCU resources are available, follow steps 3 and 4. To proceed with reserving the conference, skip to step 5.
3. Enter **display available-ports 2B** (for a 56k or 64k conference) or **display available-ports 384k** (for a 384k conference). This command displays the Availability of Ports screen.
4. Check the number of conferees against the number of available ports to be sure the resources are still available for the conference.

NOTE:

If there is a conflict, notify the conference contact so the conference can be rescheduled. Assuming the conference was scheduled properly, this situation should only arise if maintenance has busied-out the ports. It may also occur if you extend the length of a conference without first checking the Port and Extension Usage Chart for the day of the conference.

5. Enter **add conference next**. The Conference Record screen appears.
6. Note the *Conference ID* field on the top left of the Conference Record screen. Write it into the corresponding *Conference ID* field on your written Conference Appointment Form.
7. Using your written Conference Appointment Form as a guide, on the Conference Record screen enter a name for the conference (up to 20 characters) in the *Conference Name* field (such as sales meeting). This helps to identify this conference for future reference.
8. If applicable, enter a billing number (up to 15 digits) in the *Billing ID* field that cross-references to a client, project, or account being charged for this conference.

9. Enter **reserved** in the *Class* field so this Conference Record is reserved on the MCU.
10. Enter the time to begin the conference (in *hhmm* format) in the *Start Time* field where *hh* is the hour in military time (00 is 12 a.m. and 23 is 11 p.m.) and *mm* is the minutes. Do not type a colon between the hours and the minutes.
11. Enter the time to end the conference (in *hhmm* format) in the *Stop Time* field.
12. Enter the conference mode (**voice-activated**, **presentation**, or **broadcastw/scn**) in the *Conference Mode* field. If your MCU model does not offer Advanced Control features, **voice-activated** is the only allowable entry in this field.
 - If either **presentation** or **broadcastw/scn** is selected, enter the Meet-Me extension in the *Control Ext* field of the person who will be the presenter or the broadcaster. This field does not appear when **voice-activated** is selected.
 - If **broadcastw/scn** is selected, enter the scan interval (the number of seconds from 10 to 240 that the broadcaster will view a location before the video changes to the next location) in the *Scn Int* field. The default is **15** seconds.
13. Enter the conference bandwidth per channel (**56k**, **64k** or **384k**) in the *Bandwidth* field.
14. If applicable, enter **y** in the *Entry/Exit Tones* field if the conference convener wants to hear tones when participants join and leave the conference. If your MCU model does not support Notification Tones, this field does not appear.
15. If applicable, enter **y** in the *Warning Tone* field so conferees hear the warning tone 10 minutes before the conference stop time. If your MCU model does not support Notification Tones, this field does not appear.
16. Enter the Meet-Me extensions in the *Ext* field. The MCU automatically fills in the *Name* associated with these Meet-Me extensions the next time you display it.



NOTE:

The MCU rejects any Meet-Me extension that is invalid (not administered).

17. Submit the Conference Record. The Conference Record will be rejected if:
 - any of the Meet-Me extensions is already assigned to a scheduled (overlapping) conference;
 - there are insufficient ports available for the requested time period;
 - administered ports are unavailable (that is, busied out by maintenance);
 - a Meet-Me extension is the sixth extension entered for a 384k conference;
 - a Meet-Me extension does not support the bandwidth of the conference;
 - the same Meet-Me extension is entered twice.
18. Enter **display conference ID** to redisplay the Conference Record.
19. If this is a recurring conference (such as a weekly project team meeting with the same conferees meeting at the same time), when the conference is over you can file a copy for future use (see Recurring Conferences on page 4-23 for details).

Changing a Conference Before the Start Time

To change a reserved conference scheduled to begin within 24 hours, but before it is in-progress (prior to the *Start Time*), perform the following steps:

NOTE:

Prior to the start time of a reserved conference you can change any of the details of the conference. The only caution is that when changing the start time, length of conference (stop time) or the number of conferees, you must first check to see if the resources are available and there are no conflicts with other scheduled conferences. Check your Port and Extension Usage Chart to be sure the MCU ports and Meet-Me extensions are available before you change the conference.

1. Login as **agent** to the MCU-ST.
2. Check the Conference Appointment Form for the *Conference ID* number.
3. Enter **display conference ID** where **ID** is the number of the conference. The Conference Record screen appears.
4. Check the *Class* field to be sure it displays **reserved**. If it displays **dedicated**, see Changing a Dedicated Conference on page 4-21. If it displays **file**, this conference is not reserved and all fields can be changed.

5. Check the *Status* field on the upper right to make sure it displays **inactive**. If either **active** or **in-use** is displayed, the conference has already begun and you can only extend the length (see Extending the Time for a Conference on page 4-17).
6. Check the Port and Extension Usage chart to make sure the resources are available for the time range and the number of conferees.



CAUTION:

If you are adding another conferee to the conference, check the Site Profile to see if the new conferee's endpoint supports the bandwidth selected for the conference (for example, if the endpoint supports only 56k and the conference bandwidth is 64k, you cannot add this conferee unless you change the conference and instruct all conferees to originate 56k calls).

7. Enter **change conference ID** where **ID** is the number of the conference. The Conference Record appears.
8. Change the appropriate fields to their new values.
9. Submit the Conference Record screen.

You can change a conference before it has been reserved on the MCU-ST by using the following procedure:

1. Find the Conference Appointment Form for the conference being changed.
2. If you are adding another conferee to the conference, check the Site Profile to be sure the conferee's endpoint offers the bandwidth selected for the conference. Also check the Port and Extension Usage Chart to make sure MCU ports and Meet-Me numbers are available.
3. Change the appropriate fields on the Conference Appointment Form to their new values.
4. Insert the Conference Appointment Form in your notebook and update the Port and Extension Usage Chart.

Changing a Conference After the Start Time

Once a reserved conference has begun (displays **active** or **in-use** in the *Status* field), the only change you can make is to extend the length (change the *Stop Time*). See Extending the Time for a Conference on page 4-17 for details.

Extending the Time for a Conference

After a reserved conference begins, you can only extend the length, that is, you can only change the *Stop Time* field on the Conference Record screen. Conferees may want to extend the ending time to finish a meeting that is running over.

NOTE:

Be sure when changing the *Stop Time* field that you check to see if the resources are available and there are no conflicts with other scheduled conferences. Check your Port and Extension Usage Chart to be sure the MCU ports and Meet-Me extensions are available before you change the conference.

1. Login as **agent** on the MCU-ST.
2. Enter **display available-ports 2B** or **display available-ports 384k** to display the Availability of Ports screen. The Availability of Ports screen displays the port allocation in 15 minute increments.
3. Check to see if enough ports are available for all conferees for the additional time added to the conference.
4. Find the *Conference ID* on the Conference Appointment Form for this conference. You can also enter **list conference class reserved** to list the conference and its *Conference ID* number.
5. Enter **change conference ID**. The Conference Record form appears.
6. Tab to the *Stop Time* field and enter the new time.
7. Submit the Conference Record screen.
8. Update your Conference Appointment form and the Port and Extension Usage Chart.

Ending a Conference Early

If a conference ends earlier than scheduled, the conference convener may notify you so you can terminate it on the MCU. To end a conference early, follow the steps below:

1. While the conference convener is on the phone, check your Conference Appointment Form to confirm the name of the conference that has ended early. Note the *Conference ID* number.
2. Login as **agent** on the MCU-ST.

 **NOTE:**

If the *Conference ID* is not entered on the Conference Appointment Form, enter **list conference class reserved** to display a list of the day's conferences. Note the *Conference ID* number of the conference you are terminating.

3. Enter **change conference ID**. The Conference Record appears.
4. Change the *Stop Time* field to the current time.
5. Submit the Conference Record.
6. On the Port and Extension Usage Chart, change the lines for each conferee on the conference to the new stop time. On the Conference Appointment form change the *Stop Time* field.

Cancelling a Reserved Conference

You can cancel a reserved conference that has not begun, that is, has not reached its *Start Time* using the following procedure.

 **NOTE:**

To stop a conference in-progress, see Ending a Conference Early on page 4-18

1. While the conference convener is on the phone, check your Conference Appointment Form to confirm the name of the conference being cancelled. Note the *Conference ID* and write `cancelled` on the top of the form.
2. Login as **agent** on the MCU-ST. If you are not keeping conference records, enter **list conference class reserved** to display the list of conferences. Note the *Conference ID* number of the conference you are terminating.
3. Enter **change conference ID** where **ID** is the conference number. The Conference Record appears.
4. Change the *Class* field from **reserved** to **file**.
5. Submit the Conference Record.

6. Enter **remove conference ID**.

Dedicated Conferences

In circumstances when the MCU has a small number of ports or when there are known conference participants and regular usage times (such as off-site video classrooms), this on-demand method for scheduling conferences may be the best to use. This dedicated conference method allows you to reserve all or a portion of the MCU resources.

Dedicated conferences are conferences that are reserved and active at all times. With a dedicated conference, the MCU reserves the specified number of ports and the same set of preassigned Meet-Me numbers so a conference can begin anytime the participants dial in.

A dedicated conference has no administered start time or stop time. Stopping a conference requires manual intervention (see *Removing a Dedicated Conference* on page 4-22 for details). You should still maintain the paper-based scheduling system to track MCU port and Meet-Me extension usage.

Dedicated conferences work well in classroom environments when off-campus video endpoints join in for regularly scheduled classes. In a business environment, corporate executives or training personnel may need on-demand access to video multipoint conferencing without requesting a reservation. However, a limitation to this method is that even when a conference is not in-progress, the ports are not available to any other conference.

Scheduling a Dedicated Conference

To schedule a dedicated conference, you need the following required information:

- The purpose of the conference (a name up to 20 characters)
- Number of conferees
- The conference mode (**voice-activated**, **broadcastw/scn**, or **presentation**). If **broadcastw/scn** or **presentation** is selected, you also need the Meet-Me extension of the broadcaster or presenter.
- Conference bandwidth per channel (**56k**, **64k** or **384k**)

You can also request this optional information:

- A billing ID number (up to 15 digits)
- Are entry and exit tones being used

Reserving a Dedicated Conference

Perform the following steps to reserve a dedicated conference. You only need to do this once; the conference remains active until you remove it or change it.

1. Login as **agent** to the MCU-ST.
2. Enter **display available-ports 2B** or **display available-ports 384k** to display the Availability of Ports screen to check if the requested number of ports are available.
3. Enter **add conference next**. The Conference Record screen appears.
4. Enter a name for the conference (up to 20 characters) in the *Conference Name* field to identify it for future reference (for example, english101).
5. If applicable, enter a billing number (up to 15 digits) in the *Billing ID* field that cross-references to a client, project or account to be charged for this conference.
6. Enter **dedicated** in the *Class* field.
7. Enter the conference mode (**voice-activated**, **presentation**, or **broadcastw/scn**) in the *Conference Mode* field.

 **NOTE:**

If your MCU model does not offer Advanced Control features, **voice-activated** is the only allowable entry in this field.

- If either **presentation** or **broadcastw/scn** is selected, enter the Meet-Me extension in the *Control Ext* field of the person who will be the presenter or the broadcaster. This field does not appear when **voice-activated** is selected.
 - If **broadcastw/scn** is selected, enter the scan interval (the number of seconds from 10 to 240 that the broadcaster will view a location before the video changes to the next location) in the *Scn Int* field.
8. Enter the conference bandwidth per channel (**56k**, **64k** or **384k**) in the *Bandwidth* field.
 9. If applicable, enter **y** in the *Entry/Exit Tones* field if the conference convener wants to hear tones when conferees join and leave the conference. There is no warning tone for dedicated conferences because they are always active and there is no stop time associated with them.

 **NOTE:**

If your MCU model does not support Notification Tones, this field does not appear.

10. In the *Meet-Me Ext.* field, enter an available Meet-Me extension with the correct bandwidth per channel for each conferee. The MCU automatically fills in the *Name* field (usually with the number to dial to join the conference or the endpoint location) associated with the Meet-Me extension the next time you display this form.

⇒ NOTE:

The MCU will reject a Meet-Me extension if it is invalid (not administered).

11. Submit the completed Conference Record screen. The MCU will reject the Conference Record if:
 - any of the Meet-Me extensions is already assigned to a scheduled (overlapping) conference;
 - a Meet-Me extension is the sixth number on a 384k (H0) conference;
 - a Meet-Me extension is assigned a 56k bandwidth and the conference is set at 64k or 384k;
 - there are not enough ports available;
 - administered ports have been busied out by maintenance;
 - a Meet-Me extension is entered twice.

⇒ NOTE:

You should reserve a separate group of Meet-Me extensions for dedicated conferences so rejections do not occur.

Changing a Dedicated Conference

You may be asked to change the conference mode, bandwidth, notification tones or the number of conferees on a dedicated conference. Since a dedicated conference is always active, you must first cancel the dedicated conference by changing it to a file conference before you can make these changes.

To change a dedicated conference, perform the following steps:

1. Be sure to check your paper-based scheduling system. For example, if you are adding conferees to a dedicated conference, make sure the MCU ports and additional Meet-Me numbers are available.
2. Login as **agent** to the MCU-ST. Check the Conference Appointment Form for the *Conference ID* number.

3. Enter **change conference ID** where **ID** is the number of the conference. The Conference Record screen appears.
4. Check the *Class* field to be sure it displays **dedicated**.
5. Change the *Class* field to **file**.
6. Submit the Conference Record.
7. Enter **change conference ID** again.
8. Tab to the appropriate fields and make the changes.
9. After you make the changes, go to the *Class* field and change it from **file** to **dedicated**.
10. Submit the Conference Record.

Removing a Dedicated Conference

You can remove a dedicated conference from the MCU when it is no longer needed. Alternatively, you may need to borrow the resources reserved for a dedicated conference for use in another conference.

Similarly, you may have a period of time when you do not need the dedicated conference and you want to make the resources available for other conferences until you need to restart the dedicated conference. For example, in an off-site video classroom situation, you may choose to change a dedicated conference to a file conference at the end of a semester then change it back to a dedicated conference when the new semester begins. The intent of this procedure is to be able to save the conference information for future use.

To remove a dedicated conference, use the following procedure:

1. Login as **agent** to the MCU-ST.
2. Enter **list conference class dedicated**. Note the *Conference ID* number.
3. Enter **change conference ID** where **ID** is the *Conference ID* number noted in step 2.
4. Change the *Class* field from **dedicated** to **file**.
5. Submit the Conference Record.
6. To remove the conference permanently after you have changed it from a *Class* of **dedicated** to **file**, enter **remove conference ID**.

If you need to “borrow” the resources reserved for a dedicated conference or want to stop a dedicated conference anticipating that you will restart it in the future, follow the procedure below:

1. Login to **agent** the MCU-ST.
2. Enter **list conference class dedicated**. Note the *Conference ID* number.
3. Enter **change conference ID**. The Conference Record appears.
4. Change the *Class* field from **dedicated** to **file**.
5. Submit the Conference Record.

To restore the dedicated conference, perform the following procedure:

1. Login as **agent** onto the MCU-ST.
2. Enter **change conference ID**. The Conference Record appears.
3. Change the *Class* field from **file** to **dedicated**.
4. Submit the Conference Record.

File Conferences

The file conference is used when you want to save a Conference Record for future use. You may reserve a conference for a convener who tells you that the same people will be participating in this video conference once a week for two months. Likewise, certain locations may regularly plan video conferences.

You can use the file conference capability to store the Conference Record to use so you do not have to create a new record with the same information. You can save up to 200 Conference Records.

Recurring Conferences

If a conference will be held regularly (such as weekly or monthly), you can file a copy of the Conference Record to use over and over. Use the procedure below after a conference has ended and you want to keep a copy for future use:

1. Enter the dates for each recurring conference using the paper-based scheduling system. Make sure the time and resources are available.
2. Login as **agent** onto the MCU-ST.
3. Enter **change conference ID** where **ID** is the conference ID of the recurring conference.
4. Check to ensure that the *Status* field is **complete** and the *Class* field is **reserved**.

5. Tab to the *Class* field and change it from **reserved** to **file**. A copy of the Conference Record is filed for future use.
6. On the day of the next conference (or 24 hours before the stop time), login as **agent** onto the MCU-ST.
7. Enter **change conference ID**.
8. Tab to the *Class* field and change it from **file** to **reserved**. The conference becomes **active** again.

Deleting Conference Records

The MCU stores up to 200 Conference Records. Use the procedure below to clear any records you no longer need:

1. Login as **agent** on the MCU-ST.
2. Enter **list conference class file**. Note the *Conference ID* numbers of all file conference you want to delete.
3. Enter **remove conference ID** where **ID** is the conference number noted in step 2. The Conference Record screen appears.
4. Confirm the screen displays a Conference Record you want to remove, then submit the Conference Record.
5. Repeat steps 3 and 4 for each Conference Record you want to delete.

Overview

Since you are the primary contact for making MCU reservations, conferees and conference conveners will call you first when something goes wrong with their conference. This section describes how to resolve scheduling conflicts and diagnose minor problems.

When conferees call to report a problem, you need to isolate the problem before you attempt to resolve it or escalate it. Since the MCU brings together a variety of video endpoints through the network (sometimes through another telephone system), it may take some investigating to figure out where the trouble lies. This troubleshooting section details some of the most likely possibilities and best actions to take.

Status of Conference Screen

The Status of Conference screen displays information about active, in-use and complete conferences which can be used to diagnose a problem. This screen shows details of the last call only. Also, if you reserve a conference that has not yet begun using the same Conference ID as a completed conference, the Status of Conference screen will show the completed conference until the reserved conference has begun.

To view the Status of Conference screen on the MCU-ST, login and enter **status conference ID** where **ID** is the number of the conference. You can add **print** to the end of the command line (that is, **status conference ID print**) to print a copy of the Status of Conference screen.

```
status conference 2                                     page 1 of 2
                STATUS OF CONFERENCE 2__
Conference Name: AT&T/NCR 1/2/93   _____   Status: in-use__
      Password: 112358_____   Conference Mode: voice-activated
      Class: reserved_
Start Time/Date: 12:00 01/02           Audio Mode: G.711 (PCM-A)
Stop Time/Date: 14:00 01/02           Bandwidth: 64k
                                      No. of Channels: 2

      In  Has_Capability?
      Use Chl Aud Dat Vid
Ext  Meet-me Name
75000 (700)957-5939__ y  Y  Y  Y  Y
75001 (700)957-5938__ n  -  -  -  -
75002 (700)957-5937__ y  Y  Y  Y  Y
75003 (700)957-5936__ -  -  -  -  -
75004 (700)957-5935__ y  Y  c  y  n
-----
-----
-----
-----
-----
-----
-----
-----
```

Figure 5-1. Sample Status of Conference Screen, Page 1

```
status conference 2                                     page 2 of 2
                                     STATUS OF CONFERENCE 2__
Format: CIF      Sum Grp: Group 1  Group2
CMPI? 1         L1: _____
QMPI? 1         L2: _____

Ext  Join   Drop   Drop   -----Ports-----  Sum
Time Time   Time   Reason  Trunk  Video  Audio  Grp  Software
75000 12:01   _____  _____  1a1201 1a0801 1a0901  -   _____
      12:01   _____  _____  1a1202 1a0802  _____  -   _____
75001 12:06   12:07  Password_  _____  _____  _____  -   _____
75002 12:02   _____  _____  1a1203 1a0805 1a0903  -   _____
      12:02   _____  _____  1a1204 1a0806  _____  -   _____
75003 _____  _____  _____  _____  _____  _____  -   _____
75004 12:02   _____  _____  1a1205 1a0803 1a0902  -   _____
      12:03   _____  _____  1a1205 1a0804  _____  -   _____
_____ _____  _____  _____  _____  _____  _____  -   _____
```

Figure 5-2. Sample Status of Conference Screen, Page 2



NOTE:

Page 3 of the Status of Conference screen displays the same information as Page 2 when there are more than six Meet-Me extensions assigned to a conference.

Conferee Can't Join a Conference

If a conferee has tried unsuccessfully to join a conference (conferee may see a visual indication or hear a busy signal, or reorder tone), take the following actions:

1. Ask the conferee which conference was being joined (ask for the day, start time, convener's name, and purpose of the conference).
2. Login as **agent** on the MCU-ST.
3. Find the Conference Appointment Form for the conference and note the *Conference ID*. You can also enter **list conference** for a listing of the day's conferences. Locate the *Conference ID* number for the conference in question.

4. Enter **display conference ID** where ID is the *Conference ID* number found in step 3. The Conference Record screen is displayed (see Figure 5-3 on page 5-4).

```

display conference 2                                     page 1 of 1
CONFERENCE RECORD

Conference ID: 1                                     Status: active
Conference Name: sales __ Conference Mode: broadcastw/scn
Billing ID: _____ Control Ext: 5000 Scn Int: 15
Class: reserved Audio Mode: auto
Start Time: 10:00 Bandwidth: 56k
Stop Time: 12:00 No. of Channels: 2
Entry/Exit Tones? y
Warning Tone? y

CONFEREES
MEET-ME
EXT NAME MEET-ME EXT NAME
5001 700 756 5000 _____
5000 700 756 5001 _____
5007 700 756 5007 _____
5009 700 756 5009 _____
_____
_____

```

Figure 5-3. Sample Conference Record Screen

5. Check the following fields on the Conference Record screen:
 - Check the *Start Time* and *Stop Time* to be sure the conferee has the correct time of the conference. If the conferee is dialing in even one minute early, the call will be rejected. Note also if there is a time zone difference between the scheduled conference time and the location of the endpoint (such as, a 10 a.m. MST conference start time not 10 a.m. EST).
 - Check the *Meet-Me Name* field to see if the conferee has dialed the right Meet-Me number. Make sure the Meet-Me number is assigned to the conference in question.
 - If there is a **2** in the *No. of Channels* field, ask the conferee if the *same* Meet-Me number was dialed *twice*. A 2 channel 56k/64k conference requires dialing the same Meet-Me number twice to connect both channels.

6. Enter **display time** to see if there was a time change (for example, daylight savings time) or a power outage that caused the MCU system clock to be incorrect. If the MCU system clock is wrong, notify your telecommunications manager.
7. Enter **status conference ID** where **ID** is the *Conference ID* number found in step 3. The Status of Conference screen is displayed (see Figure 5-1 on page 5-2).

8. Check the *Stop Time/Date* field on the Status of Conference screen. A **blank** means the conference has started and is still in progress.

If there is a time recorded in the *Stop Time/Date* field, the conference is over. Make sure the conference did not end early and that the conferee is calling from the same time zone.

A conference reserved for an earlier time (that is, reached its *Stop Time*) will show **complete** in the *Status* field. If this is the case, make sure the conferee is not calling from a different time zone. However, check the screen to make sure you are displaying data about the right conference.

⇒ NOTE:

A Status of Conference screen is not available for a conference that has not started. However, a Status of Conference screen will appear for any previous conference that used the same *Conference ID*. Be sure you are viewing the right conference.

9. Check the *Ext/Meet-Me Name/In Use* field. There are three possible values for the *In Use* column.

A **y** indicates the Meet-Me extension is being used by a conferee. The convener may have distributed the same number to two conferees. Give the conferee another Meet-Me extension assigned to the conference that has a **blank** in the *In Use* column.

If there is a **blank** in the *In Use* column next to the Meet-Me number the conferee is using, the call never made it to the MCU. This indicates a problem with the endpoint or the network. Escalate the problem (see *When All Else Fails* on page 5-10).

If there is an **n** in the *In Use* column, the endpoint call arrived at the MCU but got dropped. See *Conferee Dropped from Conference* on page 5-7 for the drop reason.

Conferee Cannot Get Video

If a conferee has joined a conference but does not receive video, take the following actions:

1. Ask the conferee which conference was joined (ask for the start time, convener's name and purpose of the conference).
2. Login as **agent** on the MCU-ST.
3. Find the Conference Appointment Form for the conference and note the *Conference ID*. You can also enter **list conference** for a listing of the day's conferences. Locate the *Conference ID* number for the conference in question.
4. Enter **display conference ID** where **ID** is the *Conference ID* number from step 3. The Conference Record screen is displayed (see Figure 5-3 on page 5-4).
5. Check the *Status* field on the Conference Record screen to see if the conference is **in-use**, **active** or **complete**. If the conference is in-progress, the status should be **active** or **in-use**. However, check the screen to make sure you are displaying data about the right conference.
6. Check the *No. of Channels* field. If there is a **2** in the field, ask the conferee if the *same* Meet-Me number was dialed *twice*. A 2B-channel 56k/64k conference requires dialing the same Meet-Me number twice to connect both channels.
7. Enter **status conference ID** where **ID** is the *Conference ID* number from step 3. The Status of Conference screen is displayed (see Figure 5-1 on page 5-2).

 **NOTE:**

A Status of Conference screen is not available for a conference that has not started. A conference that is reserved but has not begun displays **inactive** in the *Status* field.

8. Check the *Has Capability/Chl* field. A **y** in this field means the endpoint has the required number of channels.

An **e** in this field means the video endpoint has not declared support for the correct number of channels and cannot join the conference.

An **n** means the video endpoint has declared the correct number of channels but all channels have not yet joined the conference. Make sure the conferee dialed the *same* Meet-Me number *twice*. If so, this may be a network or video endpoint problem; escalate the problem (see When All Else Fails on page 5-10).

9. Check the *Has Capability/Vid* field. A **y** means the endpoint has the required video capability.

An **e** means the endpoint has not declared any video capability. This may be an endpoint problem.

An **n** means the endpoint is not receiving video but can join as audio-only possibly due to an audio or data problem.

Conferee Dropped from Conference

The MCU records the reason why a video endpoint dropped from a conference on Pages 2 and 3 of the Status of Conference screen.

1. Ask the conferee which conference was joined (ask for the start time, convener's name and/or purpose of the conference).
2. Login as **agent** on the MCU-ST.
3. Find the Conference Appointment Form and note the *Conference ID* number. You can also enter **list conference** for a listing of the day's conferences. Locate the *Conference ID* number for the conference in question.
4. Enter **status conference ID** where **ID** is the *Conference ID* number located in step 3. The Status of Conference screen is displayed.
5. Confirm you are viewing the right conference, then on Page 1 of the Status of Conference screen note the Meet-Me extension of the conferee on the *Ext/Meet-Me Name* line. Check the Meet-Me Extension and Number to Dial Form to match the Meet-Me extension on the Status of Conference screen with the number the conferee dialed to join the conference.
6. If there is an **n** in the *In Use* column for the Meet-Me extension, the video endpoint call arrived at the MCU but got dropped. Make sure the conference *Stop Time* has not been reached.
7. Go to Pages 2 and 3 of the Status of Conference screen to find the drop reason.
8. Press PAGE to display the next page of the Status of Conference screen (see Figure 5-2 on page 5-3).
9. For the Meet-Me extension of the conferee, find the *Drop Reason* column. If there are more than six conferees, check Page 3 for the remaining Meet-Me extensions. The possible values are as follows:
 - **Conf End:** The conference ended at the scheduled time.
 - **Far-End:** The video endpoint itself disconnected from the conference.
 - **Handshake:** The MCU lost communication with the video endpoint or the network connection failed.

- **Resource:** The MCU port being used by the video endpoint failed or was taken out-of-service; and there were no other ports available to replace it.
 - **System:** The MCU failed or was taken out-of-service.
 - **Unknown:** Check for other reasons described in this section.
 - **Bandwidth:** The bandwidth of the conference does not match the bandwidth of the video endpoint.
10. If you are unable to resolve the problem, see *When All Else Fails* on page 5-10 to escalate the problem.

Video Quality Decreased

The MCU attempts to provide the best video quality for a conference. It is possible that as conferees join a conference, the first few video endpoints may support high video quality (G.728) and so those locations initially receive the best video available. However, as other endpoints join that do not support G.728, the MCU adjusts the audio mode in use so all the video endpoints can participate in the conference.

As a result, the original conferees may notice a degradation of the video quality. Even if the non-G.728 video endpoints disconnect from the conference, the conference remains at the lower quality video.

If you receive a report from the conference convener or conferees about reduced video quality, perform the following steps:

1. Ask the conferee which conference was joined (ask for the start time, convener's name and/or purpose of the conference).
2. Login as **agent** to the MCU-ST.
3. Find the *Conference ID* number on the Conference Appointment Form or enter **list conference** and note the Conference ID.
4. Enter **status conference ID** where **ID** is the *Conference ID* located in step 3. The Status of Conference screen is displayed (see Figure 5-1 on page 5-2).
5. On Page 1 of the Status of Conference screen, check the *Vid* column. If there is a **c**, the conference video quality was changed when a video endpoint joined that did not support the higher quality video. When this occurs, the entire conference is adjusted to accommodate the endpoint.
6. Check the *Aud* column. If there is a **c** in the field, the audio quality was changed when a video endpoint joined that did not support the audio capabilities of the other endpoints. When this occurs, the entire conference is adjusted to accommodate the endpoint.

Conferee Lost Audio or Video

Ask the conferee to drop from the conference and attempt to rejoin. If this fails, see *When All Else Fails* on page 5-10 to escalate the problem.

All Conferees Were Dropped

If all conferees are dropped from a conference that was in-progress, use the following procedure:

1. Ask the conferee which conference was joined (ask for the start time, convener's name, and/or purpose of the conference).
2. Login as **agent** on the MCU-ST.
3. Find the *Conference ID* number on the Conference Appointment Form or enter **list conference** and note the *Conference ID*.

⇒ NOTE:

If you are trying to locate a reserved conference, you can enter **list conference class reserved** for a listing of reserved conferences only. Likewise, if you are trying to locate a dedicated conference, you can enter **list conference class dedicated**.

4. Enter **display conference ID** where *ID* is the *Conference ID* number located in step 3. The Conference Record screen is displayed (see Figure 5-3 on page 5-4).
5. Check the *Stop Time* field on the Conference Record screen to make sure the conference has not ended.
6. Check the *Status* field. If the *Status* is **complete**, the *Stop Time* of the conference has been reached and all conferees were dropped.

If the *Status* is **inactive**, check the *Class* field. If **file** appears in the *Class* field, the conference was cancelled when it was changed from **reserved** or **dedicated** to **file**.
7. If you cannot diagnose the problem, see *When All Else Fails* on page 5-10 to escalate the problem.

When All Else Fails

If you have performed the procedures above and you do not have the solution to the problem (or the recommended action is to escalate the problem), the AT&T Video Technical Center (VTC) engineers are available to assist you. Follow the procedure below to contact the VTC:

1. Make sure you have both the Conference Appointment Form and the Port and Extension Usage Chart available.
2. Login as **agent** to the MCU-ST.
3. Enter **status conference ID** to display the Status of Conference screen.
4. Call the Video Technical Center at **800 242-2121**.
5. From the voice menu, select Video. A VTC engineer will assist you.

P x 64 Interoperability



The Px64/H.320 standards have been implemented on the AT&T MultiPoint Control Unit (MCU) in conformance with the ITU-T standards on video teleconferencing. AT&T has and will continue to test interoperability of its Px64 implementation with the video products of other manufacturers. AT&T will disclose the products that are found to be interoperable with the MCU.

The current results on AT&T Px64 interoperability testing are provided in the table below. On-site tests are conducted on purchased or loaned video endpoints in a laboratory environment and the tests will carry the distinction of AT&T certification of results.

⇒ NOTE:

The ITU-T standards are implemented on a self-certification basis. There is no official ITU-T conformance testing body nor is there a guide to arbitrate different interoperations of the standards by manufacturers of video products. Thus, as manufacturers implement the standards and add features or options to their endpoints, their products may change. AT&T will have no knowledge or control of any such changes made by other manufacturers in their Px64 implementation. As such, AT&T cannot guarantee the interoperability of their ITU-T implementation with untested versions of ITU-T compliant endpoints.

Figure E-1 on page A-2 shows the video endpoints supported by the MCU.

Table E-1. MCU Supported Video Endpoints

Endpoint Vendor/Model/ Software Version	G.711 Audio	G.728 Audio	112k (2B- channel 56k)	128k (2B- channel 64k)	384k (H0)
AT&T TeleMedia Personal Video System Model 70	Yes	Yes	Yes	Yes	No
AT&T Group Video S4000 System Models 150E, 200E, 400E, 600E, and 800E	Yes	No	Yes	Yes	Yes
Compression Labs Inc. (CLI®) Rembrandt® II/VP Version 7.94	Yes	No	Yes	Yes	Yes
PictureTel System 4000™ Models 150E, 200E, 400E, 600E, and 800E	Yes	No	Yes	Yes	Yes
CLI Eclipse Version 1.1*	Yes	Yes	Yes	Yes	No

*QCIF only

Conference Scheduling Commands

B

The following tables provide a quick reference of the conference scheduling and troubleshooting commands and actions available from the MCU Scheduling Terminal (MCU-ST).

Table E-2. Conference Scheduling and Troubleshooting Commands

Command	Description
list meet-me	Lists all the Meet-Me extensions that have been administered.
add meet-me xxxxx	Adds a Meet-Me extension. Used by telecommunications managers who should choose Meet-Me extensions that are consistent with the MCU's dial plan and trunks.
remove meet-me xxxxx	Deletes a Meet-Me extension.
change meet-me xxxxx	Changes the characteristics of a Meet-Me extension.
add conference x	Add a dedicated, reserved or file conference.
change conference x	Change the characteristics of a conference.
display conference x	Displays the conference record.
remove conference x	Remove a conference (file or reserved/completed only).
list conference	Lists the conferences administered on the MCU.
display available-ports 2B	Displays the number of ports available for 2B-channel 56k or 64k conferences over the next 24 hours.
display available-ports 384k	Displays the number of ports available for 384k conferences over the next 24 hours.
status conference x	Displays details about a conference that is active, in-use, or complete.

Table E-3. Conference Class

Class	Description
dedicated	Conference is available continuously until it is changed to file.
reserved	Conference is scheduled to be available for a specified time period within the next 24 hours.
file	Conference is ignored by the MCU. Use this for recurring conferences and for recordkeeping.

Table E-4. Conference Status

Status	Description
active	Conference is available to receive calls.
inactive	Conference is not available to receive calls.
in-use	One or more conferees has joined the conference.
complete	A reserved conference has passed its stop time.

Table E-5. Conference Record Procedures

Action	On the Conference Record Screen
Stopping a dedicated or reserved conference	Change the <i>Class</i> to file . This stops the conference immediately.
Extending a reserved conference	Change the <i>Stop Time</i> .
Removing a dedicated or reserved conference	Change the <i>Class</i> to file then remove it.

Paper-Based Scheduling Forms

C

The blank forms on the following pages can be copied for use with the paper-based scheduling system described in Chapter 4, "Paper-Based Scheduling". Make as many copies as you need for your scheduling notebook.

Included in this appendix are the following forms:

- Site Profile*
- Conference Appointment Form
- Meet-Me Extensions and Numbers to Dial*
- Port and Extension Usage Chart

*Ask your telecommunications manager to complete this form as described in Chapter 4, "Paper-Based Scheduling".

Date:		Port	Bandwidth
		1	
		2	
		3	
		4	
		5	
		6	
		7	
		8	
		9	
		10	
		11	
		12	
		13	
		14	
		15	
		16	
		17	
		18	
		19	
		20	
		21	
		22	
		23	
		24	
			6:00
			6:15
			6:30
			6:45
			7:00
			7:15
			7:30
			7:45
			8:00
			8:15
			8:30
			8:45
			9:00
			9:15
			9:30
			9:45
			10:00
			10:15
			10:30
			10:45
			11:00
			11:15
			11:30
			11:45
			12:00
			12:15
			12:30
			12:45
			13:00
			13:15
			13:30
			13:45
			14:00
			14:15
			14:30
			14:45
			15:00
			15:15
			15:30
			15:45
			16:00
			16:15
			16:30
			16:45
			17:00
			17:15
			17:30
			17:45
			18:00

Index

Numerics

112K, 1-5
112K bandwidth, 2-7
128K, 1-5
128K bandwidth, 2-7
16K audio, 1-6
1B 56K bandwidth, 1-5
24-hour system, 4-1
24-hour window, 1-7
24-hour window., 4-13
2B 112K conference, 1-5
2B channel, 1-3
2B conference size, 1-4
2B transfer rates, 1-5
384K, 1-5
384k, 1-2, 2-8, 2-9
384K bandwidth, 2-7
384K conference, 4-13
384K conference calls, 4-9
384K ports, 4-9
56k, 1-2, 2-7, 2-8
56K conference, 4-9
64k, 1-2, 2-7, 2-8
64K bandwidth, 4-10
64K conference, 4-13
715 BCT, 2-4

A

account, 4-13
accounting, 1-6
active, 2-6, 4-16
adding another conferee, 4-16
Advance Scheduling, 4-2
Advanced Control, 4-14, 4-20
Advanced Mode, 1-4, 1-5
All Conferees Were Dropped, 5-9
AT&T Conference Reservation System, 1-7, 2-1, 3-1
AT&T Group Video System, A-2
AT&T TeleMedia Personal Video System, A-2
AT&T Video Technical Center, 2-3, 2-10
Aud column, 5-8
audio, 1-6, 2-7
Audio Mode, 2-7
audio-only, 1-5
automatic, 2-7

Automatic Mode, 1-4
automatic mode, 1-4
Availability of 384k Ports screen, 2-9
Availability of Ports Screen, 2-8
Availability of Ports screen., 4-13

B

BACKSPACE, 2-3
bandwidth, 1-2, 1-3, 1-5, 1-6, 2-7, 2-8, 4-2, 4-10, 4-11, 4-12, 4-14, 4-16, 4-20, 5-8
bandwidths, 4-5
B-channel, 1-3
B-channels, 1-5
Billing ID, 2-6, 4-13
Billing ID field, 4-20
billing identification number, 1-6
billing number, 1-6, 2-6, 4-6, 4-13, 4-20
blank forms, C-1
Broadcast Mode with Auto Scan, 1-5
broadcaster, 1-5, 2-7, 4-14, 4-19
broadcastw/auto scan, 4-11
broadcastw/scan, 4-6, 4-19
Broadcastw/scn, 2-7
business hours, 4-9
busy signal, 5-3

C

CANCEL, 2-3
Cancelling a Reserved Conference, 4-18
capabilities, 1-3
Change Password Form, 2-5
change your password, 2-4
Changing a Conference, 4-15, 4-16
Changing a Dedicated Conference, 4-21
channels, 5-6
Charge-Back Information, 3-2
charts, 4-2
Class, 2-6
class, 2-6, 4-6
Class field, 2-6, 4-18, 4-24
classroom, 1-4, 4-19, 4-22
CLEAR, 2-3
CLI Eclipse, A-2
CLI Rembrandt II/VP, A-2
code word, 2-3
command, 2-5
complete, 2-6
Conferee Can't Join a Conference, 5-3

Conferee Cannot Get Video, 5-6
Conferee Dropped from Conference, 5-7
Conferee Lost Audio or Video, 5-9
conferees, 1-4, 1-6
Conference Appointment For, 5-3
Conference Appointment Form, 4-2, 4-5, 4-10, 4-12, 4-13, 4-16, 4-18, 5-7, 5-8, C-1
Conference Appointment Form., 4-6
conference calls, 1-3
conference convener, 4-11, 4-18
conference conveners, 4-1
Conference Date field, 4-11
Conference ID, 4-17, 4-18, 5-3, 5-6, 5-8
conference limit, 1-4
conference mode, 4-5, 4-14, 4-19, 4-20
Conference Modes, 1-4
conference modes, 2-7
Conference Name, 4-13
Conference Name field, 4-20
Conference Record, 4-1
Conference Record Screen, 2-5
Conference Record screen, 4-5, 4-6, 4-13, 5-6, 5-9
Conference Record screen., 4-6
conference room, 4-5
Conference Scheduling Commands, B-1
Conference Template, 3-2
conference-related forms, 2-5
configuration, 1-4
Configurations, 3-3
conflict resolution, 1-7, 2-1
Contact Name, 4-5
Control Ext field, 4-14
control extension, 2-7
convener, 1-6
CRS, 3-1
cursor keys, 2-3

D

dedicate resources, 1-7
dedicated, 2-6, 4-6, 4-23
Dedicated Conference, 4-1
dedicated conference, 2-6, 4-20, 4-22
Dedicated conferences, 4-19
dedicated conferences, 4-21
Deleting Conference Record, 4-24
Diagnosing and Solving Problems, 5-1
diagnosing minor problems, 5-1
diagnosing problems, 2-2
Drop Reason, 5-7

E

editing keys, 2-3
Ending a Conference Early, 4-18
ENTER, 2-3
Entry and Exit Tones, 1-6
Entry and exit tones., 4-6
entry tones, 1-5, 2-7, 4-11
EX model, 1-3
exit tone, 1-6
exit tones, 2-7, 4-11, 4-19
Ext field., 4-14
extend the conference, 1-6
extend the length, 4-13, 4-16
extend the time, 4-2
Extending the Time, 4-17

F

features, 1-3, 1-4, 1-5
file, 2-6, 4-6
File Conference, 4-1, 4-23
file conference, 2-6, 4-22
forms, 4-2
future conferences, 4-23
future use, 4-24

G

G.711, 1-6
G.728, 1-6, 5-8
graphical calendar, 3-2

H

H.320 standards, A-1
H0, 1-3, 1-5, 2-7, 4-21
Has Capability/Chl field, 5-6
Has Capability/Vid field, 5-7
he AT&T Video Technical Center, 5-10
HELP, 2-3

I

In Use column, 5-7
inactive, 2-6, 4-16
insufficient ports, 4-15
internal reservation system, 4-1
international call, 1-3
in-us, 2-6
in-use, 4-16
invalid login, 2-4
ITU-T, 1-1, A-1

J

join a conference, 2-1
Joining a Conference, 1-2
joining the conference, 4-4

K

keyboard, 2-3

L

LD-CELP, 1-6
Location column, 4-7
Location field, 4-10
Logging In, 2-3
login, 2-4

M

maximum number of conferees, 2-8, 4-7
MCU Features, 1-3
MCU model, 2-7, 4-14, 4-20
MCU port, 1-3, 2-8
MCU ports, 1-3, 1-4, 1-7, 2-8, 3-1, 4-1, 4-9, 4-21
MCU resources, 2-2
MCU Scheduling Terminal, 1-7, 2-2
MCU- ST, 1-7
MCU-ST, 2-2
Meet- Me numbers, 1-3
Meet-Me Ext. field, 4-21

Meet-Me extension, 1-2, 2-7, 2-8, 4-12, 4-21, 5-7
Meet-Me extensions, 4-2, 4-3, 4-7, 4-9, 4-14
Meet-Me Extensions and Numbers to Dia, C-1
Meet-Me Extensions and Numbers to Dial, 4-2
Meet-Me Extensions and Numbers to Dial Form, 4-3
Meet-Me number, 1-2, 2-2, 4-1, 4-19, 5-6
Meet-Me number., 4-7
Meet-Me numbers, 4-2, 4-3
Microsoft Windows 3.1, 3-1
models, 1-3
multimedia, 1-2
multipoint conference, 1-3, 1-6, 3-1
multipoint conferences, 2-1
multipoint conferences., 2-10
multipoint video conference, 1-3, 4-5
Multipoint video conferencing, 1-2

N

Name field, 4-21
network connection, 5-7
network interfaces, 1-5
network numbers, 1-2
Network Type, 4-5, 4-7, 4-10, 4-12
network type, 4-2, 4-3
next page, 2-3
No. of Channels field, 5-6
Notification Tones, 2-7, 2-8, 4-6, 4-20
Notification tones, 1-6
number of channels, 2-7
Number to Dial, 4-12
number to dial, 4-21
Number to Dial column, 4-7

O

On-Demand Conferences, 4-19
On-demand conferencing, 1-7
out-of-service, 5-8
overbooking, 2-2, 2-8
overlapping, 4-15, 4-21
overlapping conferences, 2-2

P

P x 64 Interoperability, A-1
PAGE DOWN, 2-3
PAGE key, 5-7

PAGE UP, 2-3
Paper-Based Scheduling, 4-1
Paper-Based Scheduling Forms, C-1
Paper-Based Scheduling System, 1-7
paper-based scheduling system, 1-7, 2-2, 3-1, 4-2, 4-10, 4-21
password, 2-4
Password Change form, 2-4
PBX, 1-3
PC-Based Reservation System, 1-7
PC-based scheduling system, 2-1
PCM, 1-6
PC-standard formats, 3-3
PictureTel System 4000, A-2
Port and Extension Usage Chart, 4-2, 4-9, 4-11, 4-13, 4-18
Port and Extension Usage Chart,, 4-12
Port availability, 4-9
Port Usage and Extensions Chart, C-1
Presentation, 2-7
presentation, 4-6, 4-11, 4-14, 4-19
Presentation Mode, 1-4
presenter, 1-4, 2-7, 4-19
previous page, 2-3
print, 5-2
private, 4-5, 4-7
private dial plan, 1-3
private protocol, 1-1
proprietary, 1-1
public, 4-7
public., 4-5
Px64, 1-1, 1-2, 1-3, A-1

R

recurring conference, 4-15
Recurring Conferences, 4-23
Recurring Meeting, 3-2
regularly scheduled conferences, 4-23
Removing a Dedicated Conference, 4-22
reorder tone, 5-3
reserve, 1-7, 2-1, 4-1
reserved, 2-6, 4-6, 4-14, 4-15, 4-18
Reserved Conference, 4-1
reserved conference, 2-6, 4-17
Reserved Conferences, 4-10
Reserving a Conference, 4-13
Reserving a Dedicated Conference, 4-20
resolving scheduling conflicts, 5-1
restoring a dedicated conference, 4-23
restricts access, 3-3
Room Location, 4-5
rotation scan time, 1-5

S

save a Conference Record, 4-23
scan interval, 4-11
schedule, 1-7, 2-1
Scheduling a Conference, 4-10
Scheduling a Dedicated Conference, 4-19
scheduling tasks, 1-7, 2-1
Search and Modify, 3-2
security, 2-4
SHIFT key, 2-3
shortcuts, 2-5
Site Profile, 4-2, 4-4, 4-10, 4-12, 4-16, C-1
software version, 4-4
speech compression, 1-6
standards, 1-1, 1-2
Start Time, 4-11
start time, 4-6
status, 1-6
Status field, 4-23, 5-9
status of a conference, 2-6
Status of Conference screen, 5-1, 5-5, 5-7, 5-8, 5-10
Status of Conference screen., 5-7
Stop Time, 2-6, 4-11, 5-7
stop time, 4-1, 4-6
Stop Time field, 4-17, 5-9
Stopping a conference, 4-19

T

TAB, 2-3
Terminal Type, 2-4
Time slots, 4-9
time zone, 4-2, 4-5
tone, 2-8
Tones, 1-6, 2-7
training, 1-4, 4-19
transaction keys, 2-3
transfer rate, 1-3, 1-5
transfer rates, 1-3
Troubleshooting, 2-10
troubleshooting, 2-2, 5-1
trunking resources, 1-3

V

Vid column, 5-8
video codec, 1-3

video conference, 1-5, 1-6
Video conferencing, 1-2
video endpoint, 1-3, 1-4, 1-5
video quality, 1-5, 5-8
Video Quality Decreased, 5-8
video source, 1-4
voice activated, 4-11
voice menu, 5-10
Voice-activated, 2-7
voice-activated, 1-4, 4-6, 4-14, 4-19
VTC, 5-10

W

Warning Tone, 1-6, 2-8
warning tone, 4-11
Warning tone., 4-6