Lucent Technologies
Bell Labs Innovations

INTUITY

Integration with System 25

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Part 68: Answer-Supervision Signaling. Allowing this equipment to be operated in a manner that does not provide proper answer-supervision signaling is in violation of Part 68 rules. This equipment returns answer-supervision signals to the public switched network when:

- Answered by the called station
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- Routed to a recorded announcement that can be administered by the CPE user

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- A call is unanswered
- A busy tone is received
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Le Présent Appareil Nomérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la class A préscrites dans le reglement sur le brouillage radioélectrique édicté par le ministére des Communications du Canada.

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Acknowledgment
This document was prepared by the Product Documentation Development group, Lucent Technologies, Denver, CO and Columbus, OH.

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About This Document

Purpose

This book, *Lucent INTUITY™ Integration with System 25,* 585-310-250, contains the planning information, worksheets, and procedures required to integrate a Lucent INTUITY™ Release 3.3 system with a System 25.

Intended Audiences

This book is intended primarily for the on-site technical personnel who are responsible for installing and configuring the System 25 and the Lucent INTUITY system, and for performing initial administration and acceptance testing. Secondary audiences include the following from Lucent:

- Lucent INTUITY system administrator
- Switch administrator
- Field support — Technical Service Organization (TSO)
- Helpline personnel
- Factory assemble, load, and test (ALT) personnel
- Provisioning project managers — Sales and Technical Resource Center (STRC)

This book assumes that the primary users of this book have completed INTUITY Administration and System 25 training courses (see "Training" on page xxv).

Release History

This is the first release of this book.

How to Use This Book

This book is designed to step you through all the planning, implementation, installation, and system administration processes required to successfully integrate a Lucent INTUITY system with a System 25.

This book is organized into the following chapters:

- About This Document

  This preface describes the book's purpose, intended audiences, organization, conventions, trademarks and service marks, and related resources. This preface also invites the reader, and explains how, to make comments about the book.

- Chapter 1, ''System 25 Integration Concepts''

  This chapter describes the operation of the Lucent INTUITY system and the concepts of integration with the System 25.

- Chapter 2, ''Planning the Integration''

  This chapter provides Lucent INTUITY system and System 25 planning and administration worksheets to help record information needed for the integration of the Lucent INTUITY system and the System 25. It also explains how to fill out the worksheets.

- Chapter 3, ''Implementing the Integration''

  This chapter provides a procedural overview and checklists necessary to implement the integration between the System 25 and the Lucent INTUITY system, and describes where to find the information to complete each necessary procedure.

- Chapter 4, ''Connectivity''

  This chapter provides connection diagrams and instructions for physically connecting the Lucent INTUITY system to the System 25 and to other devices as necessary for system operation.

- Chapter 5, ''System 25 Switch Administration''

  This chapter contains instructions for using the Advanced Administration Software to enter the data from the worksheets completed in Chapter 2.

- Chapter 6, ''Lucent INTUITY System Administration''

  This chapter contains instructions for administering the Lucent INTUITY system for use with the System 25 by entering data from the worksheets completed in Chapter 2. Procedures are provided only for System 25 system-specific items.

- Appendix A, ‘‘Implementing Automated Attendants with System 25’’

  This appendix contains information and procedures for administering automated attendants on both the System 25 and in INTUITY AUDIX.

- Appendix B, ‘‘Installing System 25 Software on the Lucent INTUITY System’’

  This appendix contains procedures for installing the System 25 integration software on the Lucent INTUITY system. This appendix is intended only for a recovery or reload situation occurring on a customer site.

- Appendix C, ‘‘System Security and Toll Fraud’’

  This appendix provides important information for securing the system against telecommunications fraud. Review the information in this appendix before starting the switch integration process.

- Appendix D, ‘‘Switch Administration for Lucent INTUITY Lodging’’

  This appendix contains information about installing the System 25 integration with an Lucent INTUITY system operating the INTUITY Lodging application.

- Abbreviations

  This section provides a list of abbreviations and acronyms used in Lucent INTUITY Messaging documentation.

- Glossary

  The glossary provides a definition of terms and acronyms used in Lucent INTUITY Messaging documentation.

- Index

  The index provides an alphabetical listing of principal subjects covered in this book.

Conventions Used in This Book

This section describes the terminology and data-entry conventions used in this book.

Terminology

- The words “subscriber” and “user” are interchangeable terms that describe a person administered on the Lucent INTUITY system. The word “user” is the preferred term in the text; however, “subscriber” appears on most of the screens and is the command word you must type at the AUDIX Administration command line, for example, **change subscriber “Jane Doe”**.
- The word “type” means to press the key or sequence of keys specified. For example, an instruction to type the letter “y” is shown as

  Type **y** to continue.
- The word “enter” means to type a value and then press ENTER. For example, an instruction to type the letter “y” and press ENTER is shown as

  Enter **y** to continue.
- The word “select” means to move the cursor to the desired menu item and then press ENTER. For example, an instruction to move the cursor to the `Start Test` option on the Network Loop-Around Test screen and then press ENTER is shown as

  Select `Start Test`.
- The system displays *windows, screens,* and *menus*. “Windows” show system information (Figure 1). “Screens” request user input. This input is either a value or other specific information you must type into a field (Figure 3) or a command you must enter from the `enter command:` prompt (Figure 3). “Menus” (Figure 4) present options from which you can choose to view another menu, screen, or window.

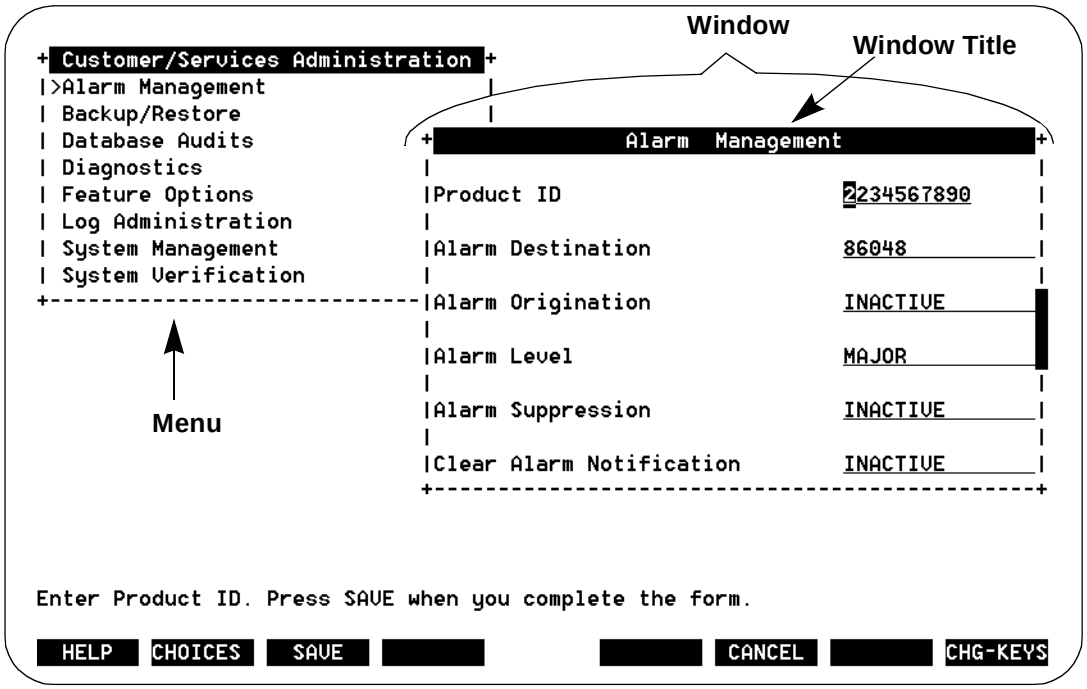


Figure 1. Example of a Lucent INTUITY Window

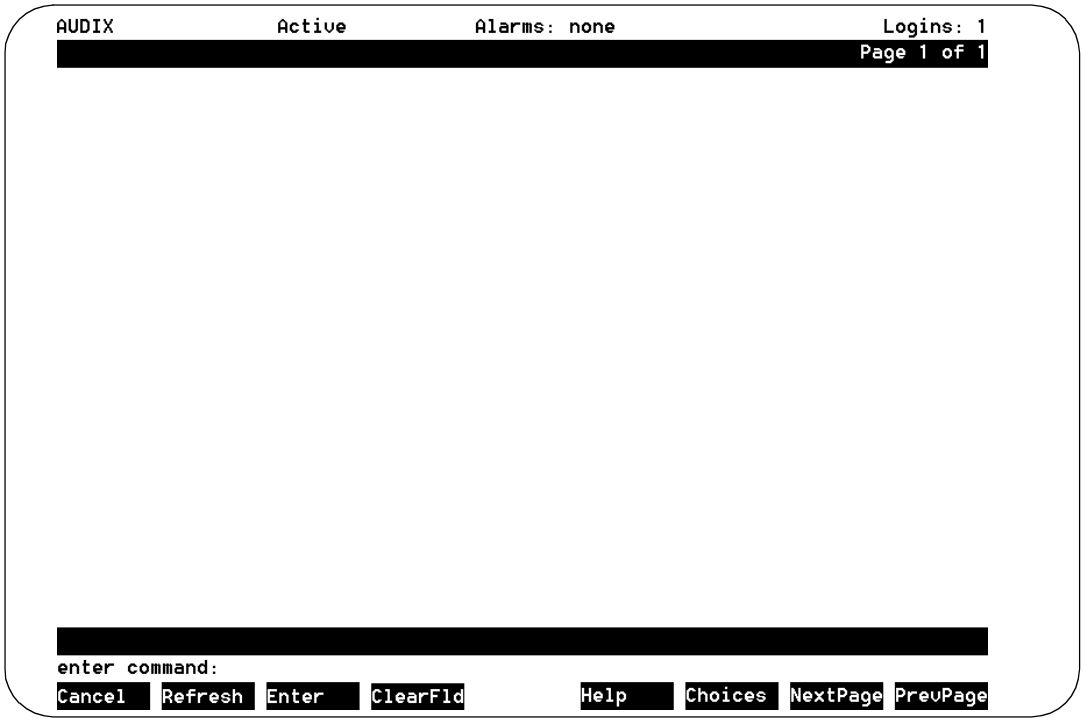


Figure 2. Example of an AUDIX Administration Screen

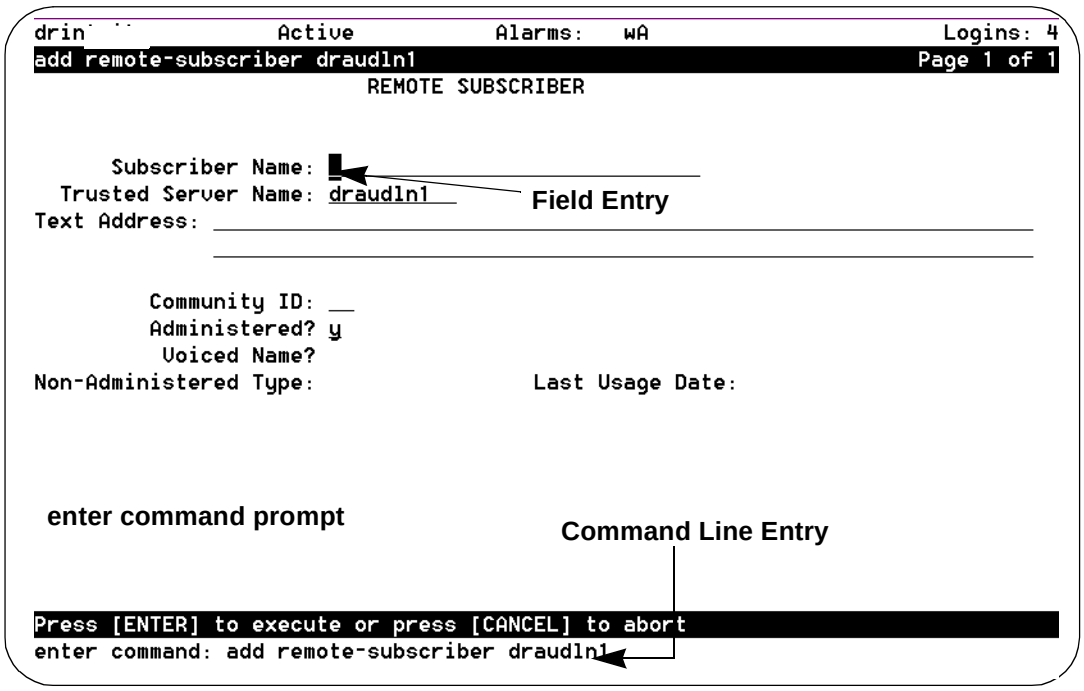


Figure 3. Example of an AUDIX Administration Screen with an Entry in a Field and in the Command Line

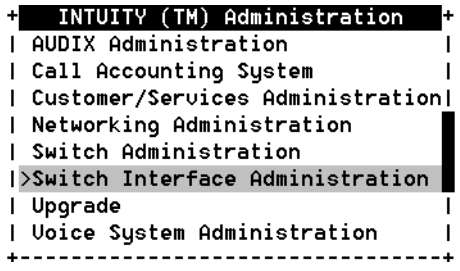


Figure 4. Example of a Lucent INTUITY Menu

Keyboard and Telephone Keypad Representations

- Keys that you press on your *terminal or PC keyboard* are represented as rounded boxes. For example, an instruction to press the enter key is shown as

  Press (ENTER).

- Two keys that you press at the same time on your *terminal or PC keyboard* (that is, you press and hold down the first key and then press the second key) are represented as a series inside a rounded box. For example, an instruction to press and hold (ALT) while typing the letter "d" is shown as

  Press (ALT–D).

- A combination keystroke is a series of keystrokes that combines the two key function described above plus a third key, that is, you press and hold down the first key, then press the second key, then release those keys and press a third key. A combination keystroke is represented as an equation. For example, an instruction to press and hold (ALT) while typing the letter "d" and then typing the number "1" is shown as

  Press (ALT–D) + [1].

- Function keys on your terminal, PC, or system screens, also known as *soft keys*, are represented as square boxes followed by the function or value of that key enclosed in parentheses. For example, an instruction to press function key 3 is shown as

  Press [F3] (Save).

- Keys that you press on your *telephone keypad* are represented as square boxes. For example, an instruction to press the first key on your telephone keypad is shown as

  Press [1] to record a message.

Screen Displays

- Values, system messages, field names, and prompts that appear on the screen are shown in typewriter-style `Courier` type, as shown in the following examples:

  Example 1:

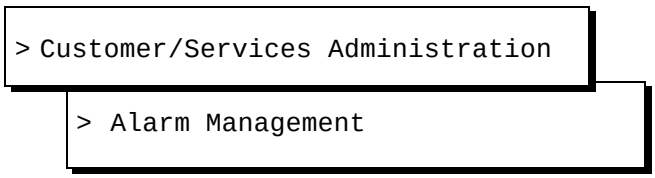
  Enter the number of ports to be dedicated to outbound traffic in the `Maximum Simultaneous Ports:` field.

  Example 2:

  The system displays the message `Alarm Form Update was successful.`

- The sequence of menu options that you must select to display a specific screen or submenu is shown as follows:

  Starting from the Lucent INTUITY Administration menu, select:

  In this example, you would access the Administration menu and select the line item `Customer/Service Administration`. From the Customer/Service Administration menu that then displays, you would select the line item `Alarm Management`.

- Screens shown in this book are examples only. The screens you see on your machine will be similar, but not exactly the same in all cases.

Data Entry Conventions

- Commands and text you type in or enter appear in **bold type**, as in the following examples:

  Example 1:

  Enter **change-switch-time-zone** at the `enter command:` prompt.

  Example 2:

  Type **high** or **low** in the `Speed:` field.

- Command variables are shown in *bold italic* type when they are part of what you must type in and *regular italic* type when they are not, for example:

  Enter **ch ma** *machine_name*, where *machine_name* is the name of the call delivery machine you just created.

Safety and Security Alert Labels

This book uses the following symbols to call your attention to potential problems that could cause personal injury, damage to equipment, loss of data, service interruptions, or breaches of toll fraud security:

⚠ CAUTION:
Indicates the presence of a hazard that if not avoided can or will cause minor personal injury or property damage, including loss of data.

⚠ WARNING:
Indicates the presence of a hazard that if not avoided can cause death or severe personal injury.

⚠ DANGER:
Indicates the presence of a hazard that if not avoided will cause death or severe personal injury.

⚠ SECURITY ALERT:
Indicates the presence of a toll fraud security hazard. Toll fraud is the unauthorized use of a telecommunications system by an unauthorized party.

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The following trademarked products are mentioned in books in the Lucent INTUITY document set:

- AT™ is a trademark of Hayes Microcomputer Products, Inc.
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- VOXEM® is a registered trademark of VOXEM, Inc.
- VT100™ is a trademark of Digital Equipment Corporation.
- Windows™ is a trademark of Microsoft Corporation.

Related Resources

This section describes additional documentation and training available for you to learn more about integration of the Lucent INTUITY product with a System 25.

Documentation

See the inside front cover for information on how to order Lucent INTUITY documentation.

Related Lucent INTUITY and System 25 Resources

Document	Document Number	Issue
Lucent INTUITY System Documentation		
Lucent INTUITY™ Release 3.0 System Description	585-310-232	1 or later
Lucent INTUITY™ Documentation Guide	585-310-540	2 or later
Lucent INTUITY™ New System Planning for Release 3.0	585-310-605	2 or later
Lucent INTUITY™ Release 3.0 Planning for Upgrades	585-310-653	1 or later
Lucent INTUITY™ Release 3.0 Planning for Migrations	585-310-652	1 or later
Lucent INTUITY™ Installation Checklist	585-310-161	2 or later
Lucent INTUITY™ MAP/5 Hardware Installation	585-310-146	2 or later
Lucent INTUITY™ MAP/40 Hardware Installation	585-310-138	2 or later
Lucent INTUITY™ MAP/100 Hardware Installation	585-310-139	2 or later
Lucent INTUITY™ Software Installation for Release 3.0	585-310-160	2 or later
Lucent INTUITY™ Platform Administration and Maintenance for Release 3.0	585-310-557	2 or later
Lucent INTUITY™ AUDIX® Release 3.3 Administration and Feature Operations	585-310-552	3 or later
Lucent INTUITY™ FAX Messaging Administration and Addenda	585-310-558	1 or later

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Related Lucent INTUITY and System 25 Resources — *Continued*

Document	Document Number	Issue
Lucent INTUITY™ Messaging Solutions Digital Networking,	585-310-567	2 or later
AMIS Analog Networking	585-300-512	6 or later
Lucent INTUITY™ Integration with System 25	585-310-250	1
Lucent INTUITY™ Call Accounting System User Guide	585-310-728	1 or later
Lucent INTUITY™ Call Accounting System Quick Reference	585-310-729	1 or later
Lucent INTUITY™ Intro Voice Response and Addenda	585-310-716	1 or later
Lucent INTUITY™ Message Manager Release 2.0 User's Guide	585-310-731	1 or later
AUDIX® Administration and Data Acquisition Package	585-310-502	4 or later
Voice Messaging Quick Reference	585-300-702	3 or later
A Portable Guide to Voice Messaging	585-300-701	3 or later
Lucent INTUITY™ Voice/FAX Messaging Quick Reference	585-310-734	1 or later
Lucent INTUITY™ Voice/FAX User Guide	585-310-733	1 or later
Multiple Personal Greetings Quick Reference	585-300-705	5 or later
Voice Messaging Wallet Card	585-304-704	2 or later
Voice Messaging Outcalling Quick Reference	585-300-706	1 or later
Voice Messaging Business Card Stickers	585-304-705	2 or later
Lucent INTUITY™ AUDIX® R3.3 Voice Messaging Subscriber Artwork Package	585-310-735	1 or later
Lucent INTUITY™ AUDIX® R3.3 Voice/Fax Messaging Quick Reference–Canadian French	585-310-734FRC	1 or later
Lucent INTUITY™ AUDIX® R3.3 Voice/Fax Messaging Quick Reference–British English	585-310-734ENB	1 or later
Lucent INTUITY™ AUDIX R3.3® Voice/Fax Messaging Quick Reference–Latin Spanish	585-310-734SPL	1 or later
Lucent INTUITY™ AUDIX R3.3® Voice/Fax Messaging Quick Reference–Greek	585-310-734GK	1 or later
Lucent INTUITY™ AUDIX R3.3® Voice/Fax Messaging Quick Reference–Mandarin	585-310-734CHM	1 or later
Lucent INTUITY™ AUDIX R3.3® Voice Messaging Subscriber Artwork Package British English	585-310-739ENB	1 or later
Lucent INTUITY™ AUDIX® R3.3 Voice Messaging Subscriber Artwork Package Canadian French	585-310-739FRC	1 or later

Continued on next page

Related Lucent INTUITY and System 25 Resources — *Continued*

Document	Document Number	Issue
Lucent INTUITY™ AUDIX® R3.3 Voice Messaging Subscriber Artwork Package Latin Spanish	585-310-739SPL	1 or later
Lucent INTUITY™ AUDIX® R3.3 Voice Messaging Subscriber Artwork Package Greek	585-310-739GK	1 or later
Lucent INTUITY™ AUDIX® R3.3 Voice Messaging Subscriber Artwork Package Mandarin	585-310-739CHM	1 or later
Lucent INTUITY™ AUDIX® R3.3 Voice Messaging Subscriber Artwork Package Japanese	585-310-739JA	1 or later
Lucent INTUITY™ AUDIX® R3.3 Voice Messaging Subscriber Artwork Package U.S. English (A4 Sizing)	585-310-739A4	1 or later
System 25 and Related Documentation		
Installation and Maintenance	555-548-103	1
AT&T System 25 R3 Advanced Administration User Guide (UNIX®) 6386	555-540-511	1
AT&T System 25 R3 Implementation Manual (for Advanced Administration)	555-532-650	1
Administration Manual	555-540-500	1
Direct Trunk Attendant User Guide	555-540-701	1
Single-Line User Guide	555-540-702	1
Multi-Line User Guide	555-540-958	1
Cordless Telephone User Guide	555-540-711	1
Introduction to System 25	555-540-021	1
R3 Reference Manual	555-540-200	1
R3 Terminal Operations Manual	555-540-710	1
Data Features User Guide	555-540-704	1
Switch Loop Attendant Console User Guide	555-540-706	1
System Manual	555-532-110	1
Installation and Start-Up	555-532-504	1
Agent Card	555-532-506	1

Training

The following training classes are recommended as prerequisites to installing and integrating a Lucent INTUITY Release 3.3 system with a System 25:

- Course No. MO 1616A, INTUITY™ Messaging Solutions Installation and Maintenance
- Course No. BC 1004A, INTUITY™ AUDIX® Messaging Solutions Administration

The following training classes are recommended for account teams who interact with customer integrating a Lucent INTUITY Release 3.3 system with a System 25:

- Course No. BM 1492A, Multimedia Sales Seminar
- Course No. BM 9030C, INTUITY™ Multimedia Messaging Solutions R3.0

For more information on Lucent INTUITY and System 25 training, call the BCS Education and Training Center at one of the following numbers:

- Organizations within Lucent: (904) 636-3261
- All other customers: (800) 255-8988

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Lucent INTUITY™ Integration with System 25, 585-310-250

System 25 Integration Concepts

1

Overview

This chapter contains information that describes the Lucent INTUITY system and explains how the Lucent INTUITY system and the System 25 work together.

Purpose

After reading this chapter, you will know about:

- The Lucent INTUITY system features and architecture
- Switch integration concepts
- Lucent INTUITY feature operation
  - — Call Answer
  - — Voice Mail
  - — Automated Attendant
  - — Bulletin Board Service
- INTUITY Intro Voice Response
- Business schedule(s)
- Holiday schedule(s)
- How routing tables handle calls
- Other features of particular interest
- Functionality differences for the System 25

The Lucent INTUITY System

The following section briefly describes the Lucent INTUITY Messaging system. For complete information on the Lucent INTUITY system, its features, capabilities, and capacities, see *Lucent INTUITY™ Release 3.0 System Description*, *585-310-232*.

Lucent INTUITY Features

The Lucent INTUITY system uses 3 messaging packages to provide business-oriented, computerized voice and fax messaging services in support of a telecommunication system:

- INTUITY™ AUDIX® Messaging System

  The INTUITY AUDIX Voice Messaging software application offers the means to record and exchange voice messages with telephone recipients. The application contains stored voice prompts that guide users in creating, sending, retrieving, answering, saving, or forwarding spoken messages. It also answers calls for users who are busy or unavailable. INTUITY AUDIX can be used as a personal answering service, a messenger to individuals or groups, an information service, an office receptionist, and as an automated attendant service.

- INTUITY™ FAX Messaging

  The Lucent INTUITY FAX Messaging application gives the ability to handle faxes using Lucent INTUITY messaging capabilities. Besides sending, receiving, and printing a fax over the telephone, a user can also forward a fax, annotate a fax with a voice message, send a fax, broadcast a fax to multiple telephone users, and otherwise handle a fax message just as they would a voice message.

- Lucent INTUITY™ Intro Voice Response System (INTUITY IVR)

  Lucent INTUITY Intro Voice Response can be used to develop sophisticated voice applications tailored for a specific customer.

Your new Lucent INTUITY system comes with an added standard application that enables you to administer the System 25 using the same administrative interface you use to administer the INTUITY AUDIX system. This application works with the administrative interface and displays as an additional menu option on the main Lucent INTUITY Administration menu. The application is called:

- The INTUITY™ Advanced Administration System

Additionally, there are optional software applications that provide expanded or enhanced feature capability for the end user and the system and switch administrators:

- Lucent INTUITY™ Message Manager 4.0

  Lucent INTUITY Message Manager is a software application that runs on a Windows PC and connects with the INTUITY AUDIX Messaging system through a TCP/IP LAN. The program uses a graphical interface to enable customers to view a list of their messages on the screen of their PC. Users can choose messages in any order and, by selecting icons with a mouse, perform all messaging tasks – everything that can be done with the telephone keypad.

- Lucent INTUITY™ Call Accounting System

  Lucent INTUITY Call Accounting System (CAS) is a comprehensive software package designed to track and report telephone expenses and facility usage.

- Lucent INTUITY™ Lodging

  Lucent INTUITY Lodging is a voice mail system designed especially for lodging establishments such as hotels. It supplies guests with electronic mailboxes that store voice messages. Lodging is like having private answering machines that take messages for each guest when they are unavailable.

Lucent INTUITY System Architecture

INTUITY AUDIX and INTUITY Intro Voice Response are software application packages that build upon the Lucent INTUITY service layer and processing platform layer (Figure 1-1 on page 1-5). The elements of the service layer and processing platform layer are accessible to any application package above them. By putting common elements such as switch integration, digital networking, voice processing, call control, and system administration into the service layer, these facilities can be used by all current and future application packages.

Developing the Lucent INTUITY system with the *processing platform layer* as its base keeps reliability and maintainability as a focus throughout the product. The processing platform layer contains utilities and tools that the layers above it can use, such as alarm processing, backup and restore utilities, activity logs, and the operation, administration, and maintenance interface. The hardware of the processing platform layer includes the Multi-Application Platform (MAP) chassis with the Central Processing Unit (CPU), Random Access Memory (RAM), hard disk drive(s), removable media drives (diskette and tape) and the UNIX operating system.

The *service layer* includes the voice processing platform, INTUITY AUDIX Digital Networking, and switch integration. The service layer is similar to the processing platform layer in that it provides tools and utilities to the applications packages, but it is more specific in its offerings.

The service layer includes hardware and software components integral to the services offered — the IVC6 voice card for processing speech, the AUDIX Communications Controller Card (ACCX) for digital networking, and system administration software for elements that span the platform such as voice port administration.

The *application package layer* contains independent programs that meet a specific business need. The INTUITY AUDIX Voice Mail System relies heavily on the foundation established by the services and processing platform layers.

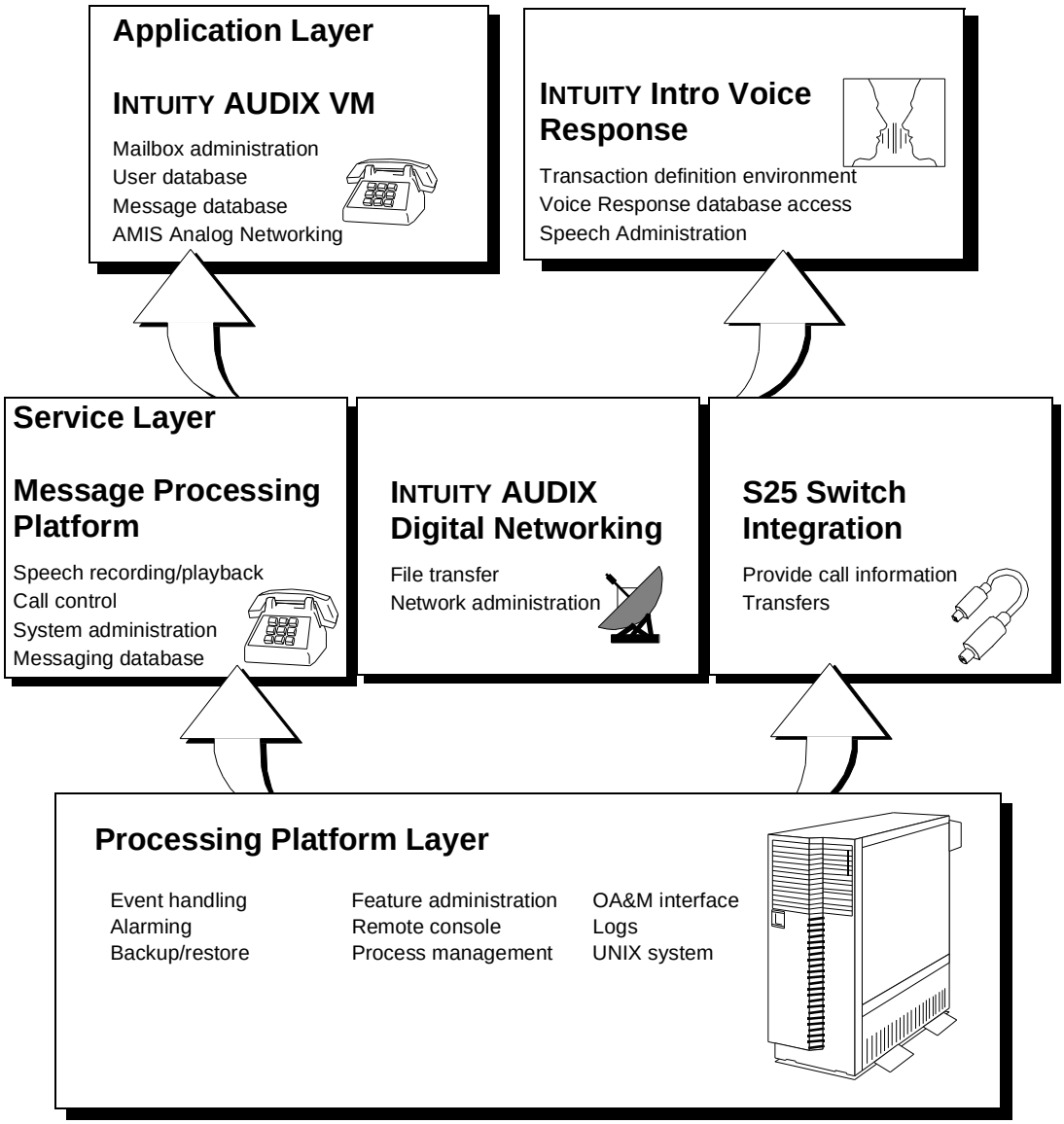


Figure 1-1. Lucent INTUITY System Architecture

Switch Integration Concepts

Switch integration refers to the sharing of information between a messaging system and a switch in order to provide a seamless interface to callers and users. A fully integrated voice messaging system uses information taken directly from the switch to determine how to process each incoming phone call (see Figure 1-2). Integrating the Lucent INTUITY system and a System 25 does not require special equipment — the System 25 sends call information by touch tones over the same voice circuits used for call processing.

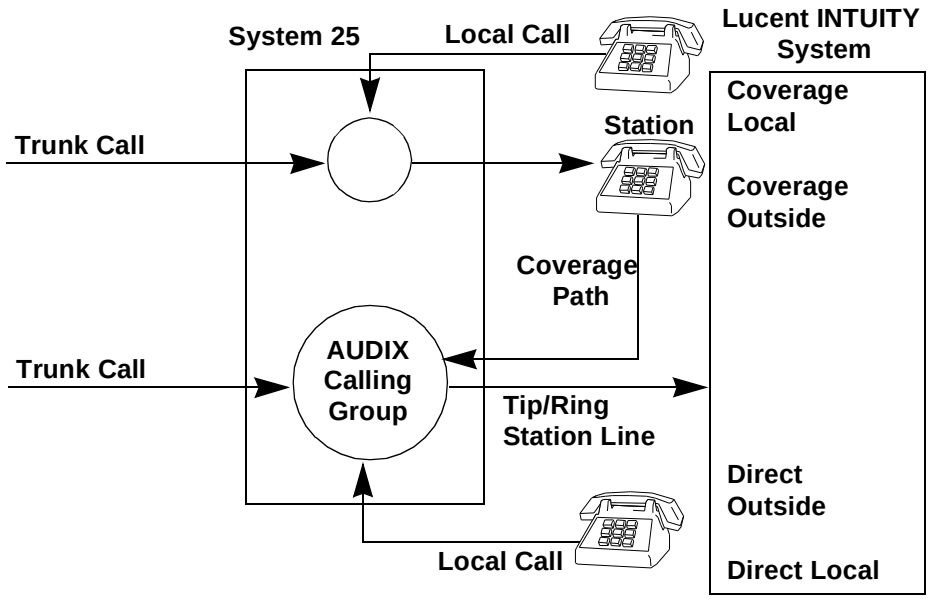


Figure 1-2. Call Routing with Switch Integration

To understand how Lucent INTUITY system applications are integrated with the System 25, the following definitions will be useful (more detailed definitions are available in the System 25 documentation):

- Coverage Path

  When a call is not answered because the called station is busy or because the called station has not answered within a specified number of rings, the call is sent to the next point in the coverage path. This may be a secretary, an attendant, etc. The last, or possibly only, coverage point is a calling group that sends calls to the INTUITY AUDIX system.

- AUDIX calling group:

  An AUDIX calling group has the following characteristics:

  - When calls arrive, the system searches for an available calling group member starting with the station after the last station to receive a call. This is called *circular hunt*.
  - Trunks can be set to “ring in” to the calling group so that an incoming trunk call goes directly to the first available station.
  - Each member of a calling group is administered as a voice messaging port.
  - The calling group can be administered as the receiver for a coverage calls so that unanswered calls automatically go to the first available station for coverage.
  - An AUDIX calling group provides call information to the voice port receiving each call. The call information allows the Lucent INTUITY system to determine:
    - If the call being processed was a direct call or a coverage call
    - If the call was a direct inside call (to the calling group number) or a direct outside call (on one of the trunks assigned to ring into the calling group)
    - If the coverage is for one extension calling another, or for a call made from outside (trunk) to an extension

Coverage for calls is provided by assigning a *direct call calling group* (or AUDIX calling group) as the last point of each extension’s coverage path.

Additional information required for coordination of the Lucent INTUITY system and the System 25 is passed in both directions by touch tones. The Lucent INTUITY system and the System 25 also communicate by switch-hook flashes and call progress tones.

Lucent INTUITY Feature Operation

This section describes the operation of the features of most interest for customers integrating a System 25 with Lucent INTUITY. For complete feature operation information, see *Lucent INTUITY™ AUDIX® Release 3.3 Administration and Feature Operations*, *585-310-552*.

INTUITY AUDIX Voice Mail Services

INTUITY AUDIX is easy for users and callers to operate. Spoken prompts guide them in making choices by pressing the appropriate touch tone button on their telephones.

INTUITY AUDIX can be administered to provide the kinds of services described below.

Call Answer

When a caller dials an extension that is busy or does not answer, INTUITY AUDIX Call Answer allows the him/her to leave a message, transfer to another extension, or transfer to an attendant. The person the caller was trying to reach may record a personal greeting to inform callers that they are unavailable, or select a standard system greeting that callers will hear indicating how to leave a message or transfer to another extension. Users can record up to 9 different greetings (*Multiple Personal Greetings*) to handle greetings for different call types, for example, call received after business hours or when a user is out of the office.

The user sets up a password to protect against unauthorized access to her/his messages. Messages can be picked up from the office or from an outside telephone.

An optional AUDIX feature – *outcalling* – allows INTUITY AUDIX to call a user when a new message arrives. The user can specify the telephone or pager number to be called. Outcalling is administered on the system by the AUDIX system administrator. The system administrator can decide, for security or other reasons, to disable the outcalling feature on a system-wide, or on an individual user, basis.

The call is passed from the System 25 to the Lucent INTUITY system with call information that indicates the covered extension number and whether the call was from an internal station or received on a trunk from outside. Based on this information and on caller actions indicated by pressing touch tone buttons, the Lucent INTUITY system can accept a message for the called extension's voice mailbox or provide other special processing.

Voice Mail

Voice mail services allows users to send voice messages to other users, listen to received messages, forward messages received with comments attached, reply to messages, and return calls to other users who left messages. Users can create and edit group lists and send messages to one or more groups. Voice mail services also allow the system manager to send broadcast messages to everyone on the system.

When users receive voice messages in their mailbox, voice mail turns on the user's message waiting indicator.

Voice mail may be accessed from internal stations by dialing the extension for the calling group that contains the Lucent INTUITY system voice ports or from outside by calling in on a trunk that is administered to ring at the Lucent INTUITY system voice port calling group.

Automated Attendant

An automated attendant (auto-attendant) is an interactive telephone answering system that answers incoming calls with a pre-recorded announcement and routes them based on the caller's response to menus and prompts.

An auto-attendant is set up so that callers hear a menu of options. Callers then press the button on their telephone keypad that corresponds to the menu option they would like and the auto-attendant executes the selected option. Callers who do not have touch tone telephones are typically told that they can hold or call another number to speak with a live attendant.

You can design an auto-attendant menu system, or *menu tree*, to contain subordinate layers of menus or bulletin boards. The sub-menus, or *nested menus*, play additional options that can include a choice leading to another nested menu.

The voiced menu options that callers hear are actually personal greetings that the AUDIX system administrator records for the auto-attendant's extension. The message can changed as easily as would any personal greeting. The Multiple Personal Greetings feature can also be used to provide different menus and options for different types of calls (for example, non-English language menu options).

The auto-attendant feature can be implemented as a single attendant, that is, as a single extension, or a business can use multiple auto-attendants to handle a variety of call destinations (for example, sales department, accounting department, etc.) and call times (for example, during business hours, during lunch, and after hours).

The auto-attendant can be administered to function in a primary call handling mode or a secondary call handling mode:

- In *primary call handling mode*, the incoming calls ring are answered directly by the auto-attendant. A receptionist backs up the auto-attendant by handling overflow calls and calls from people needing assistance (for example, time-outs and dial 0).
- In *secondary call handling mode*, a receptionist answers as many calls as possible and the auto-attendant handles any overflow calls.

For more complete information on planning and implementing auto-attendants with System 25, see Appendix A, "Implementing Automated Attendants with System 25". For information about planning and implementing auto-attendants in general, see *Lucent INTUITY™ New System Planning for Release 3.0*, *585-310-605*.

Bulletin Board Service

Bulletin Board service (also called Information service) is a mailbox used as a call-in information facility. The caller hears a pre-recorded, informational message and is then disconnected. As with an auto-attendant, the informational message is the personal greeting that the AUDIX system administrator records for the bulletin board's extension. The message can changed as easily as would any personal greeting.

The call is passed from the System 25 to the Lucent INTUITY system with call information that allows the Lucent INTUITY system to provide information service processing based on the covered extension on which the call is received.

Alternately, bulletin board service can provide multiple messages by using a menu within an auto-attendant.

Lucent INTUITY Intro Voice Response

Lucent INTUITY IVR is an application development environment or toolkit for building customized business applications. Calls are routed to the IVR application based on specific numbers called (within a shared calling group) or by using a dedicated calling group for the application.

Port Considerations

The MAP/5 and the System 25 each impose some limitations on the number and arrangement of voice ports when used with the Lucent INTUITY system. The choice of how to implement these ports may be based, in part, on the following hardware constraints:

- The MAP/5 is limited to a maximum of 18 voice channels with up to 4 digital networking channels. (This is a physical space limitation.)
- Lucent INTUITY hardware considerations aside, System 25 calling groups can contain a maximum of 20 extensions for voice ports. A maximum of 20 voice channels are supported for all applications connected to a single calling group. If more than one calling group is used, a total maximum of 24 voice channels distributed among several groups are supported. *For the MAP/40 and MAP/100 this is the only limiting factor*.

  CAUTION:
  All INTUITY AUDIX voice ports must be in the same calling group.

Because of these constraints, the channel assignment strategy for the Lucent INTUITY system with the System 25 may differ considerably from the strategy that would be used with other switches where these constraints are not present. In particular, the types and volumes of call traffic may allow alternative approaches. The following strategies can be used:

- Single Group of Shared Ports

  A single group of shared ports is the simplest, most flexible and powerful strategy from a traffic handling point of view, but it is limited to one calling group with a maximum of 20 ports. If no INTUITY IVR applications are installed on the system (that is, only INTUITY AUDIX is used), you should use this arrangement.

  NOTE:
  INTUITY AUDIX and INTUITY IVR calls are directed to the same calling group. The calls are then handled based on the called number information.

  A single calling group allows the Lucent INTUITY system to use idle channels to meet the immediate needs of any type of incoming call. The Lucent INTUITY system determines its resource allocation based upon current demand.

All channels may respond to any call by identifying the number that has been called, associating it with the requested service, and providing the requested service. A single calling group must be defined on the System 25 as the AUDIX calling group.

- Shared Ports Group with a Dedicated Ports Group

  A dedicated calling group reserves ports and trunks for specific applications, guaranteeing availability regardless of other traffic. It is useful only for a single INTUITY IVR application.

  NOTE:
  The use of a dedicated ports calling group is the only way that more than 20 ports can be used on a System 25. A maximum of 24 ports total can be used on the MAP/40 or MAP/100. A maximum of 18 ports total can be used on the MAP/5.

Lucent INTUITY Port Administration

Lucent INTUITY port administration consists of 2 steps:

1. Defining the extension associated with a physical port (channel) and the initial service associated with that port (DNIS_SVC or dedicated INTUITY IVR application)
2. Defining the service associated with a specific called number when the initial service is DNIS_SVC (dedicated INTUITY IVR application or AUDIX)

NOTE:
Do not confuse DNIS_SVC (a specific value used in a field for Lucent INTUITY system channel service specification) and DNIS as it relates to T1 trunk service available on the System 25.

Dynamic Allocation or Shared Ports

With dynamic allocation or shared ports, the processing assigned to each call is based on the Dialed Number Information Service (DNIS) information (call information) included with the call. In this case, the calling group must be defined as an AUDIX calling group on the System 25, and each port (channel) must have DNIS_SVC defined as its associated service.

A service assignment table is then defined to associate the called number (or trunk) with its final processing destination. For each specific called number (or trunk), an INTUITY IVR application name can be specified. At the end of the table, the entry ANY in the called number field and the service AUDIX are used to send all calls not otherwise processed to INTUITY AUDIX for processing.

All direct trunk calls on System 25 are identified by the Called ID# 999. To provide different services to incoming calls, phantom extensions must be used.

Dedicated Allocation

With dedicated ports, the processing assigned to each call is based on the port (channel) on which the call is received. To use IVR, a separate calling group must be defined for each IVR application. There is no service assignment table required, and there is no call information passed from the System 25 to the Lucent INTUITY system.

Calling groups that contain only INTUITY IVR ports and trunks for a single INTUITY IVR application must be defined on the System 25 as direct calling groups with members administered as tip/ring stations and not as voice messaging ports.

General Call Handling by the Lucent INTUITY System: Routing Table

As discussed in "Port Considerations" on page 1-11, calls for INTUITY AUDIX are processed through DNIS_SVC. INTUITY AUDIX then processes the call based on the called number as follows:

- If the called number is defined as a regular voice mailbox, call answer service is provided.
- If the called number is defined as a bulletin board extension, bulletin board service is provided.
- If the called number is defined as an auto-attendant mailbox, auto-attendant service is provided.

To expand upon the possibilities for incoming calls, a special table is used. This following discussion describing the process is illustrated in a processing flow chart in Figure 1-3 on page 1-17.

- Routing Table

  The routing table is provided for the following reasons:

  — To specify auto-attendant menus for calls on trunks or specified covered extensions

  — To specify different call handling by auto-attendants based on a business, holiday, or alternate service schedule

  — To provide voice mail login service

  The routing table can have up to 25 entries. Each entry has the following columns:

  - Incoming Called Number (or range)
  - Business Schedule
  - Holiday Schedule
  - Alternate Service Mailbox

Incoming Called Number

Each incoming call is matched to the `Incoming Called Number` column in the routing table. The called number is either the telephone extension of the covered extension number of the auto-attendant, or it is a direct trunk (999). The called number is analyzed as follows:

1. If an incoming call is to one of the numbers in the table, further examination is made of `Business Schedule` and `Holiday Schedule` columns. Otherwise, the call is passed directly to INTUITY AUDIX.
2. If the specific tag, “login” in the `Business Schedule` column is found, the call receives INTUITY AUDIX login service.
3. Next, the current date is matched against the `Date` column of the holiday schedule, if any, specified in the `Holiday Schedule` column of the routing table. If the date matches a holiday, the auto-attendant extension specified in the `Mailbox` column of the holiday schedule is substituted for the original called number and the call is passed to I AUDIX.

   NOTE:
   The substitution is from the holiday schedule.

4. If a holiday match is not found, the current time is matched against the `Alternate Service Hours` columns for the current day of the week in the business schedule, if any, specified in the `Business Schedule` column of the routing table. If the current time is within the specified range, the auto-attendant extension specified in the `Alternate Service Mailbox` column of the routing table is substituted for the original called number, and the call is passed to INTUITY AUDIX.

   NOTE:
   The substitution is based on the business schedule, but is from the routing table, not from the business schedule.

5. Finally, if the current time is during the day service hours specified in the business schedule, if any, specified in the `Business Schedule` column of the routing table, the auto-attendant extension specified in the `Day Service Mailbox` column of the routing table is substituted for the original called number, and the call is passed to INTUITY AUDIX.

   NOTE:
   The substitution is based on the business schedule, but is from the routing table, not from the business schedule.

Business Schedule(s)

A maximum of 4 business schedules may be defined. The name or number of one of these business schedules is placed in the `Business Schedule` column of the routing table to associate the particular business schedule with a called number or range specified in the `Incoming Called Number` column of the routing table.

Each business schedule has the following fields and columns:

- Business Schedule (name)
- Day of Week
- Day Service Hours Start
- Day Service Hours End
- Alternate Service Hours Start
- Alternate Service Hours End

> **NOTE:**
> These fields and columns are used for matching only. The auto-attendant extensions associated with a match are taken from the routing table.

The `Business Schedule` name is arbitrary and can be changed to indicate the use of the specific schedule. It may contain up to eight letters or digits. The default names are “bus1” through “bus4”.

The `Day of Week` column is fixed. To specify night service 24 hours a day, leave the start and end times blank. To specify day service 24 hours a day, use **00:00** as the start time and **23:59** as the end time.

The Alternate Service Hours feature allows the auto-attendant to play a different menu or handle calls slightly differently during lunch time and to accommodate callers from other time zones. Alternate service can also be used to define a different auto-attendant during weekends. Using the routing table, you can identify a specific auto-attendant during alternate service times. This feature can be used independently of the telephone system's night service status. Alternate service hours are also specified on a 24-hour clock.

Holiday Schedule(s)

A maximum of 4 holiday schedules may be defined. Each holiday schedule can have up to 26 entries. The name or number of one of these holiday schedules is placed in the `Holiday Schedule` column of the routing table to associate the particular holiday schedule with a called number or range specified in the `Incoming Called Number` column of the routing table.

Each holiday schedule has the following fields and columns:

- Holiday Schedule (name)
- Holiday Name
- Date
- Mailbox

NOTE:
The `Date` column is used for matching. The auto-attendant extension associated with a match is taken from the `Mailbox` column of this same table. The `Holiday Name` column is for documentation only.

The `Holiday Schedule` name is arbitrary and can be changed to indicate the use of the specific schedule. It may contain up to eight letters or digits. The default names are “hol1” through “hol4”.

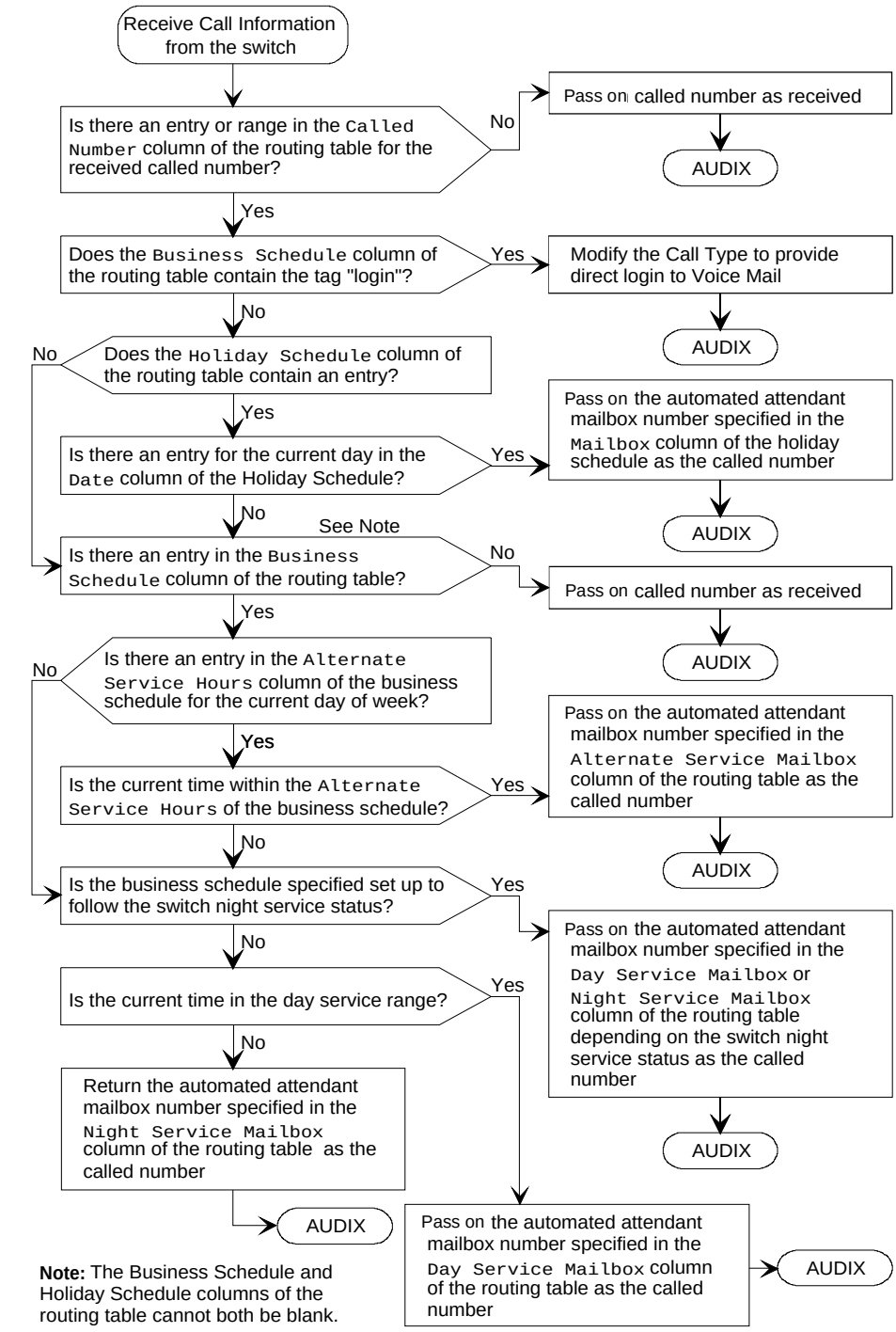


Figure 1-3. Routing Table Processing

Functionality Differences for the System 25

Integrating the Lucent INTUITY system with the System 25 has the following differences from other supported switches:

- System 25 does not differentiate between BUSY and NO ANSWER, it is not possible to play different greetings based on whether the person is not in their office or on another call.
- High-speed digital networking is not supported.
- DCS networking is not supported
- Coverage interval is set on a system-wide basis. This impacts the implementation of station coverage and auto-attendants

Planning the Integration

2

Overview

Before you integrate the System 25 with the Lucent INTUITY system, you must plan the process. This chapter:

- Provides planning information about both the System 25 and Lucent INTUITY system
- Includes System 25 worksheets to help record information needed for integration and switch administration
- Includes Lucent INTUITY system worksheets to help record information needed for integration on both sides

NOTE:
The System 25 does not support out-of-building operation of the Lucent INTUITY system.

For information about using Automated Attendants for Lucent INTUITY FAX Messaging, refer to the section in Chapter 2 in Lucent INTUITY™ New System Planning for Release 3.0*, entitled "Planning for INTUITY AUDIX Automated Attendants".*

Purpose

After reading this chapter and completing the worksheets, you will have the:

- Required System 25 integration information for such things as dial plan, Lucent INTUITY system trunks, and more
- Required Lucent INTUITY system integration for such things as system features, channel information, assigning services to called numbers, and more

System 25 Integration Planning

To plan for the System 25 side of the integration, complete the following System 25 planning worksheets:

- Coverage Options/ Maintenance Access (Worksheet A, page 2-11)
- Voice Messaging Systems (Worksheet B, page 2-13)
- Floating Personal Dial Code List (Worksheet C, page 2-15)
- System Dial Plan (Worksheet D, page 2-17)
- SMDR Parameters (for Call Accounting System) (Worksheet E, page 2-19)
- DGC Groups (Worksheet F, page 2-21)
- Voice Station Records (Worksheet G, page 2-23)
- Voice Stations – Single Line Generic Example (Worksheet H, page 2-25)
- Voice Stations – Multiline Generic Example (Worksheet I, page 2-27)

CAUTION:
Toll Restriction options must also be considered. Planning and administering toll restrictions options, such as Automatic Route Selection (ARS) and allowed/disallowed lists, is beyond the scope of this document. However, to successfully integrate your System 25 with Lucent INTUITY, these items must be addressed. See the AT&T System 25 R3 Implementation Manual (for Advanced Administration), 555-532-650 and AT&T System 25 R3 Advanced Administration User Guide (UNIX®) 6386, 555-532-650 for further information and the appropriate worksheets.

Completing the Worksheets

AT&T System 25 R3 Implementation Manual (for Advanced Administration), 555-532-650, contains detailed information on how to fill out the System 25 worksheets located at the end of this chapter. The following discussion notes exceptions to the information provided in the Administration Records book and provides recommended values and/or settings. With these worksheets in front of you, fill them out using the information provided in this chapter and in AT&T System 25 R3 Implementation Manual (for Advanced Administration).

Coverage Options/ Maintenance Access (Worksheet A)

Normally, *3 or 4 rings* are allowed before a call is sent to coverage. However, write in a number that is compatible with your business needs.

NOTE:
Coverage is set on a system-wide basis. This affects station coverage and auto-attendants.

Typically, coverage ringing on internal calls should be left at its default setting of Yes.

Lucent INTUITY with a System 25 requires a remote maintenance line, either through DID or through loop start. If your site uses DID, also update Worksheet G, Voice Station Records.

Voice Messaging Systems
(Worksheet B)

NOTE:
The Voice Messaging Systems worksheet has been customized (from what is in AT&T System 25 R3 Implementation Manual) to facilitate the integration of System 25 with a Lucent INTUITY system. Therefore, the instructions for filling out this worksheet are more detailed than for other worksheets.

Voice ports used for communication between the System 25 and the Lucent INTUITY system must be assigned on a Tip/Ring or Analog Line Module (ZTN78, TN742, or TN746B). Write in the Carrier/Slot/Port and the PDC in the appropriate columns.

The VMS port is typically dial accessible. Write Yes in the Make VMS Port Dial Accessible? column. Dial accessibility allows the technician to dial a specific port and is useful for testing.

Write No in the Make Port an Extended Station? column.

Typically, the display ID is AUDIX and a port number. Write this in the Display ID column.

Typically, outward toll calls are restricted and you would write Yes in the Toll Outward Call Restriction column. However, if your site has outcalling, AMIS Analog networking, and/or fax messaging, you should write No in the appropriate row.

The toll restriction class depends on how ARS is implemented at your site. Write the applicable class in the Toll Restriction Class column.

Write the ARS facility restriction level in the right-hand column.

⚠ CAUTION:
Toll Restriction options must also be considered. Planning and administering toll restrictions options, such as Automatic Route Selection (ARS) and allowed/disallowed lists, is beyond the scope of this document. However, to successfully integrate your System 25 with Lucent INTUITY, these items must be addressed. See the AT&T System 25 R3 Implementation Manual (for Advanced Administration), 555-532-650 and AT&T System 25 R3 Advanced Administration User Guide (UNIX®) 6386, 555-532-650 for further information.

Floating Personal Dial Code List (Worksheet C)

FPDCs are used primarily to implement Automated Attendants (auto-attendants) on systems that have DID trunks. This is covered in more detail in Appendix A, ‘‘Implementing Automated Attendants with System 25’’. If you do not plan to use auto-attendants, skip the Floating Personal Dial Code List worksheet.

Floating Personal Dial Codes (FPDCs) are virtual extensions that can be logged into any station set. FPDCs can be assigned to DID numbers but cannot terminate trunks. An FPDC does not have it’s own coverage; it follows that of the station to which the FPDC is logged on.

To effectively use FPDCs with AUDIX, the FPDC must be logged onto an unused host extension that covers to AUDIX. The *Send All Calls* feature should also be turned on for that station.

System Dial Plan (Worksheet D)

Fill out the worksheet according to your System 25 parameters, using the following integration-specific discussion.

Write no in the *Send Special Disconnect* field.

SMDR Parameters (for Call Accounting System) (Worksheet E)

Call Accounting System (CAS) is an optional application. If your configuration includes CAS, fill out the worksheet according to your System 25 parameters, using the following integration-specific discussion. If your site does not have CAS, skip this worksheet.

To ensure the System 25 collects the required call information and formats it in a manner that CAS can use:

- Write **yes** to send SMDR records to the SMDR port
- Write **10** as the number of seconds the call must last before incrementing the peg count. This setting will allow System 25 to reject calls to busy numbers or calls resulting from a misdialed number.
- Write **no** in the CAT or non-CAT field to enable System 25 to properly format the records for CAS

Direct Group Calling Groups (DGC Groups) (Worksheet F)

Fill out the worksheets according to your System 25 parameters, using the following integration-specific discussion.

As discussed under ''Port Considerations'' on page 1-11, you must have at least one calling group and possibly several calling groups that contain the voice ports that connect the System 25 to the Lucent INTUITY system. To define each calling group, assign available numbers.

Typically, DGC group *10* is used for the AUDIX calling group. Write the number for the calling group in the *Group #* field. (If using DGC group 10, *110* would be the group coverage number for extensions covered by AUDIX.)

The *AUDIX Access #* should be defined by the AUDIX system administrator.

Typically, the *Name* of this DGC group is *AUDIX*.

The members of this group should be the ports defined on the Worksheet B, *Voice Messaging Systems*.

Voice Station Records (Worksheet G)

NOTE:
The Voice Station Records worksheet has been customized (from what is in *AT&T System 25 R3 Implementation Manual*) to facilitate the integration of System 25 with a Lucent INTUITY system.

Fill out the worksheet according to your System 25 parameters, using the following integration-specific discussion.

PDCs must be *3 or 4 digits*, but not both. Write this in the *PDC/DDC* column.

If this station is to be covered by AUDIX, write Yes in the *Covered by AUDIX* column.

NOTE:
Write the telephone extension of the Remote Maintenance Modem on this worksheet.

Voice Stations – Single Line Generic Example (Worksheet H)

Fill out the worksheet according to your System 25 parameters, using the following integration-specific discussion.

Write:

- 100 + the DGC Group Number for AUDIX (typically 10) for the Group Coverage Number
- Yes to allow call coverage ring on no answer
- No to allow call coverage ring on busy

Voice Stations – Multiline Generic Example (Worksheet I)

One generic multiline worksheet is included with this book. If your site has more than one type of multiline set, make copies of this worksheet and fill out as required.

Fill out the worksheets according to your System 25 parameters, using the following integration-specific discussion.

Write:

- 100 + the DGC Group Number for AUDIX (typically 10) for the Group Coverage Number
- Yes to allow call coverage ring on no answer
- No to allow call coverage ring on busy

Lucent INTUITY System Integration Planning

To plan for the Lucent INTUITY system side of the integration, complete the following Lucent INTUITY system planning worksheets:

- INTUITY AUDIX System Parameter Features: Transfer Considerations (Worksheet J, page 2-29)
- Assigning Extension Ranges on the Lucent INTUITY (Worksheet K, page 2-31)
- Channel Information for Installation (Worksheet L, page 2-33)
- Assign Services to Called Numbers (Worksheet M, page 2-35)

> **NOTE:**
> Worksheets *Channel Information for Installation* and *Services for Assign Services to Called Number* are numbered in the order that the information must be entered into the Lucent INTUITY system. They are discussed in reverse order because it makes the explanation easier.

The remaining 3 worksheets deal with planning for (auto-attendants) on systems that have DID trunks. This is covered in more detail in Appendix A, ''Implementing Automated Attendants with System 25''. If you do not plan to use auto-attendants, skip these worksheets.

- Business Schedule (Worksheet N, page 2-37)
- Holiday Schedule (Worksheet O, page 2-39)
- Routing Table (Worksheet P, page 2-41)

Completing the Worksheets

With these worksheets in front of you, fill them out using the information provided in this section.

INTUITY AUDIX System Parameter Features: Transfer Considerations (Worksheet J)

The Lucent INTUITY system features required for the System 25 are recorded on Worksheet J, page 2-29. The following parameters should be set:

- Digits in Dial Plan – The Lucent INTUITY system requires a fixed length dial plan. You can use either a 3-digit or 4-digit dial plan, *but not both*.
- Transfer Type = basic
- Transfer Restriction = subscribers
- Covering Extension = system console or operator extension

Assigning Extension Ranges on the Lucent INTUITY (Worksheet K)

You will have to administer the extension ranges on the Lucent INTUITY that are valid extensions for your site. Use the following guidelines when filling out Worksheet K on page 2-31.

- Prefix

  Prefixes can be used on the local machine, but they limit the functionality and are not recommended.

- Starting Extension

  The starting extensions for the ranges of telephone numbers used on the local system (a block of switch extensions that can be used at the local system when assigning users). For example, if your system uses extensions between 2000 and 3000, enter 2000 in the `Start Ext.` field.

  Up to 10 different ranges can be specified to pinpoint the exact set of extension blocks used by the local system. The length of the start and end extension must agree with the `Extension Length` field.

- Ending Extension

  The ending extensions for the ranges of telephone numbers used on the local system. For example, if your system uses extensions between 2000 and 3000, enter 3000 in the `End Ext.` field.

Channel Information for Installation (Worksheet L)

For Lucent INTUITY to operate properly, it must know what extension has been assigned to each of its channels (voice ports) and how incoming calls on that channel are to be processed. Worksheet L, page 2-33 provides columns for *Channel Number*, *Extension*, *Initial Service*, and *Optional Dedicated Service*.

For each channel, you must fill in the extension number. All channels that are part of an AUDIX calling group should be assigned DNIS_SVC.

For those channels dedicated to a specific INTUITY IVR application, defined in a *separate* calling group, write the application name in the *Optional Dedicated Service* column.

Assign Services to Called Numbers (Worksheet K)

All calls not assigned to a specific INTUITY IVR application directly are processed by the *DNIS_SVC. In order for *DNIS_SVC to function with both INTUITY AUDIX and INTUITY IVR applications defined in a shared port group, the installer must fill out a table in the system that will tell the DNIS_SVC which called number should receive a particular service.

Worksheet M, page 2-35 provides a *Service Name* column and a *Called Number* column. The worksheet should contain an initial entry with AUDIX in the *Service Name* column and ANY in the *Called Number* column.

Any additional entries in the table are used to associate specific called numbers with INTUITY IVR applications. Calls not specifically routed elsewhere are routed to INTUITY AUDIX where the called number is next processed through the Routing Table.

Automated Attendants

An automated attendant (auto-attendant) is an interactive telephone answering system that answers incoming calls with a pre-recorded announcement and routes them based on the caller's response to menus and prompts.

An auto-attendant is set up so that callers hear a menu of options. Callers then press the button on their telephone keypad that corresponds to the menu option they would like and the auto-attendant executes the selected option. Callers who do not have touch tone telephones are typically told that they can hold or call another number to speak with a live attendant.

This is covered in more detail in Appendix A, ''Implementing Automated Attendants with System 25''. If your configuration does not include auto-attendants, skip Worksheets N, O, and P.

Worksheet A: Coverage Options/ Maintenance Access

Customer: _____

Prepared by: _____

Phone Number: _____

Date: _____

Lucent INTUITY Location/Name: _____

	DEFAULT	MODIFY
Allow coverage ringing on internal calls (scroll)?	Yes	_____
Number of rings before calls are sent to coverage (0 – 31)	2	_____

Extension/Telephone Number of maintenance access line:

_____

Worksheet B: Voice Messaging Systems

Customer: _____ Date: _____

Prepared by: _____ Prepared by: _____

Lucent INTUITY Location/Name: _____

C/SS/PP	PDC	Board Type	Make VMS Port Dial Accessible?	Make VMS Port an Extended Station?	Display ID	Toll Outward Call Restriction	Toll Restriction Class	ARS Facility Restriction Level
		Coverage /Auto Attendant		No				
		Coverage /Auto Attendant		No				
		Coverage /Auto Attendant		No				
		Coverage /Auto Attendant		No				
		Coverage /Auto Attendant		No				
		Coverage /Auto Attendant		No				
		Coverage /Auto Attendant		No				
		Coverage /Auto Attendant		No				

Voice Messaging System – *Continued*.

C/SS/PP	PDC	Board Type	Make VMS Port Dial Accessible?	Make VMS Port an Extended Station?	Display ID	Toll Outward Call Restrict	Toll Restriction Class	ARS Facility Restriction Level
		Coverage/Auto Attendant		No				
		Coverage/Auto Attendant		No				
		Coverage/Auto Attendant		No				
		Coverage/Auto Attendant		No				
		Coverage/Auto Attendant		No				
		Coverage/Auto Attendant		No				
		Coverage/Auto Attendant		No				
		Coverage/Auto Attendant		No				
		Coverage/Auto Attendant		No				
		Coverage/Auto Attendant		No				
		Coverage/Auto Attendant		No				
		Coverage/Auto Attendant		No				

Worksheet C: Floating Personal Dial Code List

Customer: _____

Prepared by: _____

Phone Number: _____

Date: _____

Lucent INTUITY Location/Name: _____

FPDC	DISPLAY ID

NOTE:
If DID trunks are used, we recommend that the PDCs should be less than, or equal to, the number of digits sent by the Central Office.

Worksheet D: System Dial Plan

Customer: _____

Prepared by: _____

Phone Number: _____

Date: _____

Lucent INTUITY Location/Name: _____

	DEFAULT	MODIFY
ARS access code (1–9999 or 0 for "None"):	9	_____
Central Office trunk pool access code (0–9999):	100	_____
Night Service access code (0–9999):		_____
Modem request code (0–9999 or 0 for "None"):		_____
Number of DID digits used by PDCs (scroll):	3	_____
Disallow busy of ground start trunks (scroll):	No	_____
Allow incoming LS trunks transferred out (scroll):	No	_____
Name for attendant:	Attendant	_____
Name for DID trunks:	Outside	_____
Name for no DID trunks:	No DID in	_____
Dial tone for incoming tie trunks (scroll):	Yes	_____
Return time (seconds) for parked calls (0 – 240)	120	_____
Send special disconnect code ##99 to VMS port (scroll)	Yes	No

PDCs used to access parked calls (1–9999 or 0 for "None")

DEFAULT:	1:800	2:801	3:802	4:803	5:804	6:805	7:806	8:807
MODIFY:	1:____	2:____	3:____	4:____	5:____	6:____	7:____	8:____

Worksheet E: SMDR Parameters (for Call Accounting System)

Customer: _____

Prepared by: _____

Phone Number: _____

Date: _____

Lucent INTUITY Location/Name: _____

	DEFAULT	MODIFY
Allow SMDR records to be sent to SMDR port (scroll)?	Yes	Yes
Minimum duration of call (in seconds) before recording:	40	15
Number of digits used for account codes (0-15):	15	
CAT or non-CAT (scroll):	Yes	No

Worksheet F: DGC Groups

Customer: _____

Prepared by: _____

Phone Number: _____

Date: _____

Lucent INTUITY Location/Name: _____

Group #	Access #	Name	Location	Disable Q	Msg Waiting
10					

(Use what has been defined on the Voice Messaging Systems worksheet)

GROUP MEMBERS

Extensions Busy

Worksheet G: Voice Station Records

Customer: _____

Prepared by: _____

Phone Number: _____

Date: _____

Lucent INTUITY Location/Name: _____

NOTE: Write the telephone extension of the Remote Maintenance Modem on this Worksheet.

Employee Name	Terminal Location	Terminal Type	PCD/ DDC	Port Assigned[1]	Jack Number [2]	SIP Number[1]	Covered by AUDIX?

Continued on next page

1. From System 25 Installer
2. From Wiring Installer

Employee Name	Terminal Location	Terminal Type	PCD/ DDC	Port Assigned[1]	Jack Number [2]	SIP Number[1]	Covered by AUDIX?

1. From System 25 Installer
2. From Wiring Installer

Worksheet H: Voice Stations – Single Line Generic Example

Customer: _____

Prepared by: _____

Phone Number: _____

Date: _____

Lucent INTUITY Location/Name: _____

PDC (1-9999) PORT # (1-3/1-12/1-8): / /
NAME (LAST, FIRST) LOC
TYPE (scroll): SINGLE LINE

BUTTONS
CLASS OF SERVICE

Class of Service: _____	DEFAULT	MODIFY
Group Coverage Number (1-32, 101-132, 0 for "None")	1	110
Allow call coverage ring on no answer (scroll)?	Yes	Yes
Allow call coverage ring on busy (scroll)?	Yes	No
Extended, out-of-building for off-premises station (scroll)	No	
PDC to hunt to next (1-9999, 0 for "None")	0	
DDCs that can dial for this station (RETURN key)		
Call Waiting (scroll)?	No	

F7 [NEXT]

Restrict access to CO trunk poll (scroll)?	No	
Restrict access to all other trunk pools (scroll)?	No	
Force account code entry administration (scroll)?	0	
Number of internal retries (0-15)	2	
Number of rings per try for internal calls (2-15)	3	
Number of outgoing retries (0-15)	2	
Number of rings per try for outgoing calls (2-15)	3	
Automatic queueing for internal calls (scroll)?	No	
Automatic queueing for outgoing calls (scroll)?	Yes	
Member of call pickup group number (1-16, 0 for none)	0	
Total outward call restriction (scroll)	No	
Toll restriction class (scroll)	None	
ARS facility restriction level (scroll)	0,1,2,3	
Allow personal speed dialing (scroll)?	Yes	
Answer these directed night service trunks (RETURN key)		
Remote call forwarding for this station (scroll)?	No	

Worksheet I: Voice Stations – Multiline Generic Example

Customer: _____

Prepared by: _____

Phone Number: _____

Date: _____

Make copies of this form if you have more than one type of multiline set at your site.

Lucent INTUITY Location/Name: _____

PDC (1-9999)
NAME (LAST, FIRST)
TYPE (scroll): MULTI-LINE

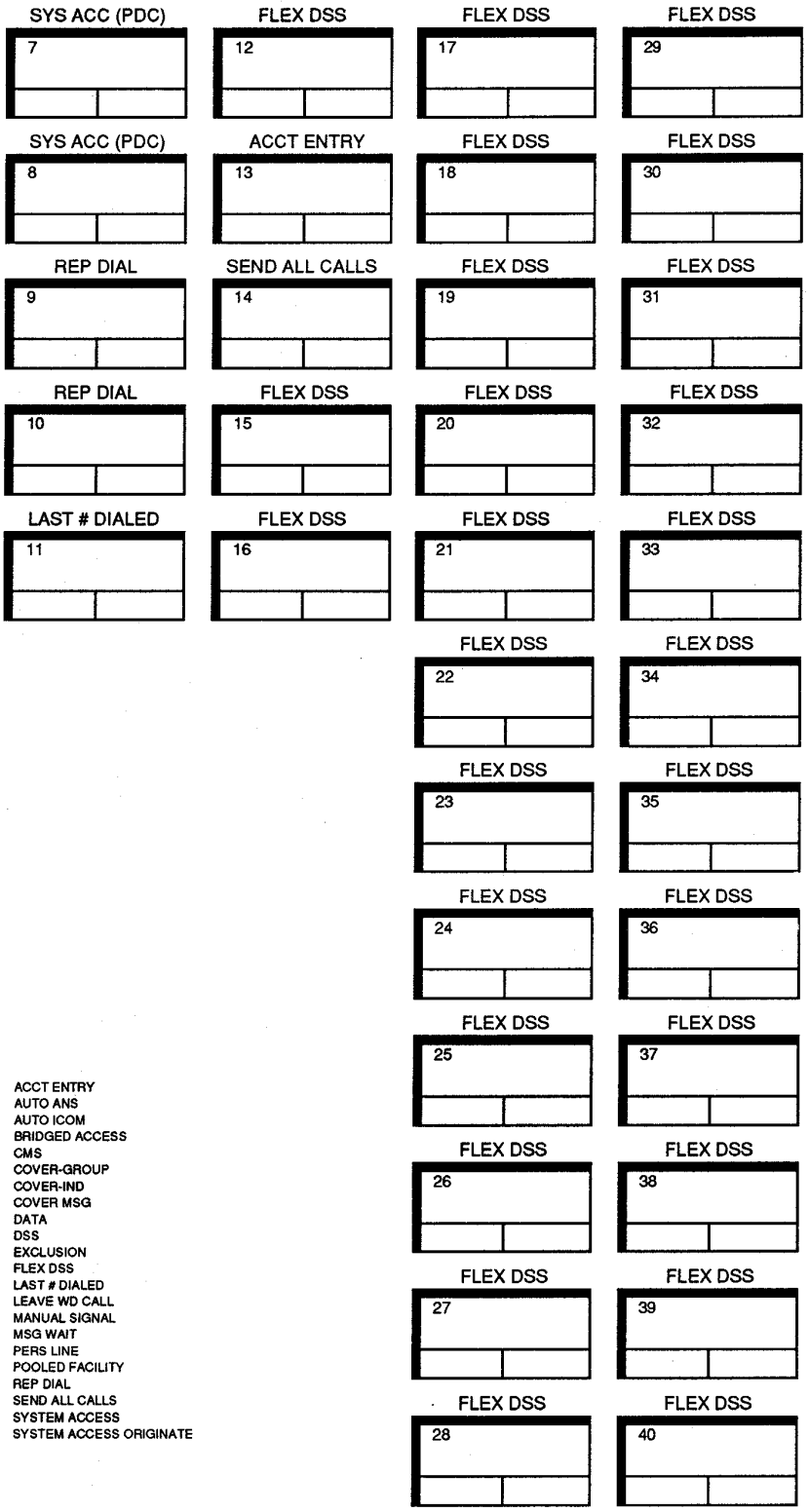
PORT # (1-3/1-12/1-8): / /
LOC

BUTTONS
CLASS OF SERVICE

Class of Service:	DEFAULT	MODIFY
Group Coverage Number (1-32, 101-132, 0 for "None")	1	110
Allow call coverage ring on no answer (scroll)?	Yes	Yes
Allow call coverage ring on busy (scroll)?	Yes	No
Extended, out-of-building for off-premises station (scroll)	No	
PDC to hunt to next (1-9999, 0 for "None")	0	
DDCs that can dial for this station (RETURN key)		
Call Waiting (scroll)?	No	

F7 [NEXT]

Restrict access to CO trunk poll (scroll)?	No	
Restrict access to all other trunk pools (scroll)?	No	
Force account code entry administration (scroll)?	0	
Number of internal retries (0-15)	2	
Number of rings per try for internal calls (2-15)	3	
Number of outgoing retries (0-15)	2	
Number of rings per try for outgoing calls (2-15)	3	
Automatic queueing for internal calls (scroll)?	No	
Automatic queueing for outgoing calls (scroll)?	Yes	
Member of call pickup group number (1-16, 0 for none)	0	
Total outward call restriction (scroll)	No	
Toll restriction class (scroll)	None	
ARS facility restriction level (scroll)	0,1,2,3	
Allow personal speed dialing (scroll)?	Yes	
Answer these directed night service trunks (RETURN key)		
Remote call forwarding for this station (scroll)?	No	


SYS ACC (PDC)
7
FLEX DSS
12
FLEX DSS
17
FLEX DSS
29
SYS ACC (PDC)
8
ACCT ENTRY
13
FLEX DSS
18
FLEX DSS
30
REP DIAL
9
SEND ALL CALLS
14
FLEX DSS
19
FLEX DSS
31
REP DIAL
10
FLEX DSS
15
FLEX DSS
20
FLEX DSS
32
LAST # DIALED
11
FLEX DSS
16
FLEX DSS
21
FLEX DSS
33
FLEX DSS
22
FLEX DSS
34
FLEX DSS
23
FLEX DSS
35
FLEX DSS
24
FLEX DSS
36
FLEX DSS
25
FLEX DSS
37
FLEX DSS
26
FLEX DSS
38
FLEX DSS
27
FLEX DSS
39
FLEX DSS
28
FLEX DSS
40
ACCT ENTRY
AUTO ANS
AUTO ICOM
BRIDGED ACCESS
CMS
COVER-GROUP
COVER-IND
COVER MSG
DATA
DSS
EXCLUSION
FLEX DSS
LAST # DIALED
LEAVE WD CALL
MANUAL SIGNAL
MSG WAIT
PERS LINE
POOLED FACILITY
REP DIAL
SEND ALL CALLS
SYSTEM ACCESS
SYSTEM ACCESS ORIGINATE

Worksheet J: INTUITY AUDIX System Parameter Features: Transfer Considerations

Customer: _____

Prepared by: _____

Phone Number: _____

Date: _____

Lucent INTUITY Location/Name: _____

Parameter	Valid Values	Installer's Entry
Number of Digits in dial plan	3 or 4 (This value is entered in the *extension length* field on the *Switch Interface Administration* screen)	
Transfer considerations:		
Transfer type	none, basic, enhanced_no_cover_0, enhanced_0	basic
Transfer restriction	subscribers, digits	subscribers
Covering extension		system console or operator extension
Announcement sets:		
System		
Administration		

Rescheduling increments:	Days	Hours	Minutes	Days	Hours	Minutes
Increment 1				Default 0	Default 0	Default 5
Increment 2				Default 0	Default 0	Default 15
Increment 3				Default 0	Default 0	Default 30
Increment 4				Default 0	Default 1	Default 0
Increment 5				Default 0	Default 2	Default 0
Increment 6				Default 0	Default 6	Default 0
Increment 7				Default 0	Default 6	Default 0
Increment 8				Default 0	Default 6	Default 0
Increment 9				Default 0	Default 6	Default 0
Increment 10				Default 0	Default 6	Default 0

Worksheet K: Assigning Extension Ranges on the Lucent INTUITY

Customer: _____

Prepared by: _____

Phone Number: _____

Date: _____

Lucent INTUITY Location/Name: _____

Digits in Dial Plan	

Address Ranges			**Notes**
Prefix	**Starting Extension**	**Ending Extension**	
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

Worksheet L: Channel Information for Installation

Customer: _____

Prepared by: _____

Phone Number: _____

Date: _____

Lucent INTUITY Location/Name: _____

Use this worksheet to assign the extension numbers to the channel. The initial service will be *DNIS_SVC.

Channel Number	Extension	Initial Service	Optional Dedicated Service
1		*DNIS_SVC	
2		*DNIS_SVC	
3		*DNIS_SVC	
4		*DNIS_SVC	
5		*DNIS_SVC	
6		*DNIS_SVC	
7		*DNIS_SVC	
8		*DNIS_SVC	
9		*DNIS_SVC	
10		*DNIS_SVC	
11		*DNIS_SVC	
12		*DNIS_SVC	
13		*DNIS_SVC	

Continued on next page

Worksheet C: Channel Information for Installation - *continued* .

Channel Number	Extension	Initial Service	Optional Dedicated Service
14		*DNIS_SVC	
15		*DNIS_SVC	
16		*DNIS_SVC	
17		*DNIS_SVC	
18		*DNIS_SVC	
19		*DNIS_SVC	
20		*DNIS_SVC	

Worksheet M: Assign Services to Called Numbers

Customer: _____

Prepared by: _____

Phone Number: _____

Date: _____

Lucent INTUITY Location/Name: _____

Instructions:

The **Service Name** is either AUDIX, AUDIX+Ldgn (if Lodging is installed), or a unique INTUITY Intro Voice Response application name. The IVR application names are for planning purposes only. They may not be assigned as a service until after the IVR application is loaded onto the system.

The **Called Number** is either the word ANY or the specific extension number that has been assigned to support a particular service.

Field	Service Name	Called Number
1	AUDIX	ANY
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		

Worksheet N: Business Schedule

Customer: _____

Prepared by: _____

Phone Number: _____

Date: _____

Lucent INTUITY Location/Name: _____

Business Schedule:				
Day of Week	Day Service Hours		Alternate Service Hours	
	Start Time (hh:mm)	End Time (hh:mm)	Start Time (hh:mm)	End Time (hh:mm)
Monday				
Tuesday				
Wednesday				
Thursday				
Friday				
Saturday				
Sunday				

NOTE:
Make 1 copy for each Business Schedule (to a maximum of 4).

Worksheet O: Holiday Schedule

Customer: _____

Prepared by: _____

Phone Number: _____ Date: _____

Lucent INTUITY Location/Name: _____

Holiday Schedule:		
Holiday Name	**Date (mm/dd)**	**Mailbox**

NOTE:
Make 1 copy for each Holiday Schedule (to a maximum of 4).

Worksheet P: Routing Table

Customer: _____

Prepared by: _____

Phone Number: _____

Date: _____

Lucent INTUITY Location/Name: _____

Incoming Called Number	Business Schedule	Holiday Schedule	Day Service Mailbox	Night Service Mailbox	Alternate Service Mailbox

NOTE:
The "Incoming Called Number" is 999 for direct trunk or the telephone number of the covered extension.

Implementing the Integration

3

Overview

This chapter explains how to implement the integration between the System 25 switch and the Lucent INTUITY system. It includes checklists of all steps necessary to get the system up and running for both acceptance testing and cut-to-service.

To proceed with the implementation described in this chapter, you need:

- The planning worksheets from Chapter 2, ''Planning the Integration'' in this book
- The hardware installation book for the platform you're using
- *Lucent INTUITY™ Software Installation for Release 3.0,* 585-310-160
- *Lucent INTUITY™ Installation Checklist,* 585-310-161
- *Lucent INTUITY™ Integration with System 25*, 585-310-250 (this book)

Purpose

After reading this chapter and performing the procedures referenced or described here, the following will be complete:

- The installation of the platform hardware and connectivity to the switch
- The installation of any additional software
- The initial administration of the System 25
- System 25 cut-to-service procedures
- Networking administration

Additionally, this chapter contains the:

- System 25 Initial Administration Checklist
- Lucent INTUITY System Initial Administration Checklist

Complete the Hardware Platform Installation

Before beginning any other task, complete the hardware installation checklist for the hardware platform you are using:

- *Lucent INTUITY™ Installation Checklist,* 585-310-161

The hardware installation checklist will refer you to the appropriate sections in the hardware installation document for the hardware platform you are using.

If you have not performed the tasks in the installation documents, complete the tasks now.

Hardware Platform Connection

When the basic hardware installation tasks are complete, use the information in Chapter 4 of this document to connect the hardware platform to the System 25 and to any adjunct equipment.

Complete the Software Installation

All basic software is installed at the factory before shipment. To complete the software installation and customize the system, refer to the software installation checklist of the *Lucent INTUITY™ Installation Checklist,* 585-310-161.

Complete the Lucent INTUITY software installation checklist up to, *but not including*, the task “Administer the Switch.”

The software installation checklist refers you to the appropriate sections in *Lucent INTUITY™ Software Installation for Release 3.0,* 585-310-160.

System 25 Initial Administration Checklist

Before the System 25 and the Lucent INTUITY system can communicate, you must perform basic initial administration on the System 25. The procedures listed in Table 3-1 should be performed before proceeding with the remainder of the Lucent INTUITY system software configuration or the initial Lucent INTUITY system administration.

NOTE:
These procedures are System 25-specific switch administration steps and substitute for the corresponding "Administer the Switch" steps of the *Lucent INTUITY™ Installation Checklist*.

Table 3-1. System 25 Initial Administration Checklist

Task	Procedure Located in	Comment
Renumber the System 25 for a consistent 3- or 4-digit dial plan.	Chapter 5, ''System 25 Switch Administration'' in this book	Use the values from Worksheet G, ''Voice Station Records''
Set coverage options: ■ Set "Allow Coverage Ringing on Incoming Calls" to **yes** ■ Set number of rings before answer - usually 3 or 4		Use the values on Worksheet A, ''Coverage Options/ Maintenance Access''
Create VMS ports by deleting the applicable ports as Tip/Ring ports and re-assigning them as voice mail ports.		Use the values from Worksheet B, ''Voice Messaging Systems''
Set "Send Special Disconnect Code" to **no**		Worksheet D, ''System Dial Plan''
Set CAS options		Use the values on Worksheet E, ''SMDR Parameters (for Call Accounting System)''
Assign an AUDIX calling group and assign the voice ports to the AUDIX calling group **NOTE:** Do not route the trunks to the AUDIX calling group at this time. The Lucent INTUITY system is not set up to handle the calls yet, and callers will not receive the correct service.		Use the values from Worksheet B, ''Voice Messaging Systems'' and Worksheet F, ''DGC Groups'' **NOTE:** If you are replacing an Integrated Solutions system with a Lucent INTUITY, this switch administration is already complete.

Lucent INTUITY System Initial Administration Checklist

Before the Lucent INTUITY system and the System 25 can communicate, you must perform basic initial administration on the Lucent INTUITY system.

NOTE:
Substitute the procedures in Table 3-2 for the corresponding steps of the appropriate *Lucent INTUITY™ Installation Checklist*.

Table 3-2. Initial Lucent INTUITY Administration Checklist

Task	Procedure Located in	Comment
Administer the Lucent INTUITY Switch Interface on Lucent INTUITY	Chapter 6, ''Lucent INTUITY System Administration'' in this book	Use the values from Worksheet J, ''INTUITY AUDIX System Parameter Features: Transfer Considerations''
Administer INTUITY AUDIX Parameters and Basic Features		Use the values from Worksheet J, ''INTUITY AUDIX System Parameter Features: Transfer Considerations''
Assign Extension Ranges to the Lucent INTUITY machine.		Use the values from Worksheet K, ''Assigning Extension Ranges on the Lucent INTUITY''
Map Channels to Switch Extensions		Use the extension and service information on Worksheet L, ''Channel Information for Installation''
Verify Channel State		
Map Services to Channels for Operation		Use the values from Worksheet L, ''Channel Information for Installation''
Assign Services to Called Numbers		Use the values from Worksheet M, ''Assign Services to Called Numbers''
Assign Service to Channels for Testing		Use the values from Worksheet M, ''Assign Services to Called Numbers''
Test Each Channel	Lucent INTUITY™ Installation Checklist	

Continued on next page

Table 3-2. Initial Lucent INTUITY Administration Checklist — *Continued*

Task	Procedure Located in	Comment
Set up Business/Holiday Schedules	Chapter 6, ''Lucent INTUITY System Administration'' in this book	Use the values from Worksheet N, ''Business Schedule'' and Worksheet O, ''Holiday Schedule''
Set up Routing Table		Use the values from Worksheet P, ''Routing Table''

NOTE:
The following procedures should be performed before proceeding with the remainder of the Lucent INTUITY system software installation:

Perform Acceptance Test

For acceptance testing, you must perform administration on both the System 25 and the Lucent INTUITY system. Then, you make test calls to check functionality. The major difference between acceptance testing and cut-to-service is the smaller number of users and the more limited functionality tested.

NOTE:
Substitute the following procedures for the corresponding steps of the appropriate Lucent INTUITY Installation Checklist.

- Add Test Users 1 and 2
- Test Call Answer and Voice Mail
- Remove Test Users 1 and 3

You must perform the following tasks to administer a System 25 switch for acceptance tests:

1. Select 2 users from among the stations listed on Worksheet G, ''Voice Station Records'' as having INTUITY AUDIX call coverage. If you are working during business hours, request that the System 25 system administrator select the users so that business will not be disturbed.

   Add the selected users to the Lucent INTUITY system. Use the Lucent INTUITY system Add Subscribers procedure described in Chapter 8, "INTUITY AUDIX Cut-to-Service Procedures" of *Lucent INTUITY™ Software Installation for Release 3.0,* 585-310-160.

2. Use the System 25 programming procedure described in Chapter 5, ''System 25 Switch Administration'' in this book to set the coverage of these extensions to AUDIX.

3. Make test calls to each user, but do not answer the calls. The Lucent INTUITY system should provide call answer service for these calls.
4. While listening to the first user's greeting, enter [*], [8], the other user's extension, and [#].

   Verify that the call is transferred to the second user.
5. Make test calls directly from the user stations to the AUDIX calling group. The Lucent INTUITY system should provide voice mail service for these calls.

Administer/Test Optional Lucent INTUITY Packages

Return to the Software Installation Checklist, Chapter 2 at the step marked "Test INTUITY AUDIX Multilingual feature."

Continue with the software installation checklist up to the step marked "Administer Switch for Cut-to-Service."

NOTE:
This section of the Software Installation Checklist includes administration of the INTUITY AUDIX users, outcalling, automated attendant menus, greetings, etc.

Test Automated Attendants

Before final switch administration, test the Routing Table, Business Schedules and Holiday Schedules defined on Worksheets P, N, and O that you filled out following the instructions in Appendix A, ''Implementing Automated Attendants with System 25'' in this book.

NOTE:
The business schedules, holiday schedules, and auto-attendants must be administered before they can be referenced in the routing table. Therefore, the routing table must be entered last.

1. Administer an auto-attendant as described in Appendix A, ''Implementing Automated Attendants with System 25''.
2. Log the FPDC into a selected host station or use the System 25 programming procedure described in Chapter 5, ''System 25 Switch Administration'' in this book to set the coverage of a phantom extension to AUDIX.
3. Generate a test call to that phantom extension or a trunk in the designated group.
4. Verify proper auto-attendant operation.

Administer System 25 for Cut-to-Service

At this time, the Lucent INTUITY system is ready to process calls. The final administration steps on the System 25 route those calls through the voice ports to the Lucent INTUITY system. Perform the following steps to cut-to-service:

1. Add all additional user stations to AUDIX.
2. Use the System 25 programming procedure described in Chapter 5, ''System 25 Switch Administration'' in this book to add the extensions of the remaining stations to the coverage group. The coverage group was defined on the Group Coverage worksheet that you filled out following the instructions in Chapter 2, ''Planning the Integration'' in this book.

   NOTE:
   The coverage group was connected to the AUDIX calling group as part of the acceptance test procedure.

3. Administer AUDIX for any additional auto-attendants and routing tables.
4. Use the System 25 programming procedure described in Appendix A, ''Implementing Automated Attendants with System 25'' in this book to complete the administration of trunk assignments, phantom extensions, and their corresponding auto-attendants.

The integration is now complete with the exception of networking.

Administer Networking

If your system includes analog (AMIS) or digital networking, return to the Software Installation Checklist, Chapter 2, to the step marked “Administer Analog Networking.”

Continue to the end of the software installation checklist.

Connectivity

4

Overview

This chapter contains information that describes the hardware components and connections involved in connecting a Lucent INTUITY system and a System 25:

- Configuration descriptions that explain each of the components required to establish a link between the Lucent INTUITY system and the switch or other adjuncts.
- Wiring diagrams that show you the different hardware, physical connections, and cables used to connect the Lucent INTUITY system, the switch, and other adjuncts.

Read the information in this chapter to understand the basic requirements of connecting the Lucent INTUITY system, switch, and adjuncts *before* you attempt to connect the components.

Purpose

After reading this chapter and completing the procedures referenced or described here, the Lucent INTUITY system connections will be complete, including:

— IVC6 connections

— Serial ports, remote maintenance modem, and switch box

— Connecting CAS via SMDR ports

— Connecting CAS to the first available serial port, if necessary

— Networking

— Remote Access

System 25 Voice Port Requirements

The Lucent INTUITY system voice ports must be connected to specially administered tip/ring ports on a Tip/Ring or Analog Service Pack Module (BTM-012).

Table 4-1 lists the System 25 circuit packs are needed to support INTUITY Messaging System on System 25:

Table 4-1. Required System 25 Circuit Packs

Type	Number	Comments
Processor	ZTN142C	Required: Version 5.46.4 software
Service Circuit	ZTN85 or ZTN131	Required: ZTN131 if using T1
Tone Detector	TN748	Optional: See Table 4-2
Tip/Ring Ports	ZTN78, TN742, or TN746B	Required: Tip/Ring connectivity to the IVC6 board

Additional Tone Detectors may be required, depending on busy hour call volumes as shown in Table 4-2.

Table 4-2. Tone Detector Estimator

Busy Hour Traffic (cph)	Number of TN748s Required
0 – 110	0
110 – 350	1
350+	2

Lucent INTUITY System Connections

Use the information and diagrams in this section to connect or verify the connections for the Lucent INTUITY system with a System 25.

IVC6 Connections

There are 2 methods commonly used to connect IVC6 boards:

- Using an 885A adapter to connect to RJ11C connections
- Connecting to a type 104A connecting block

Connect IVC6 Boards Using 885A Adapter:

To connect IVC6 boards using an 885A adapter, perform the following tasks:

1. Make sure that the line pairs were run individually (RJ11C).
2. Use a type 885A adapter to consolidate the 6 individual line pairs into 3 pairs in each of two cables. (See Figure 4-1.)
3. There is an adhesive strip on the back of the 885A adapter. Remove the protective coating paper, and attach the 885A adapter in a convenient place.
4. Use the supplied 6-conductor modular cables between the IVC6 board and the adapter.
5. Use the supplied 2- or 4-conductor modular cables between the adapter and the RJ11C modular jacks.
6. Label the connections in the space provided on the 885A adapter.

NOTE:
The label on the 885A adapter refers to an IVP6. This should be interpreted as an IVC6.

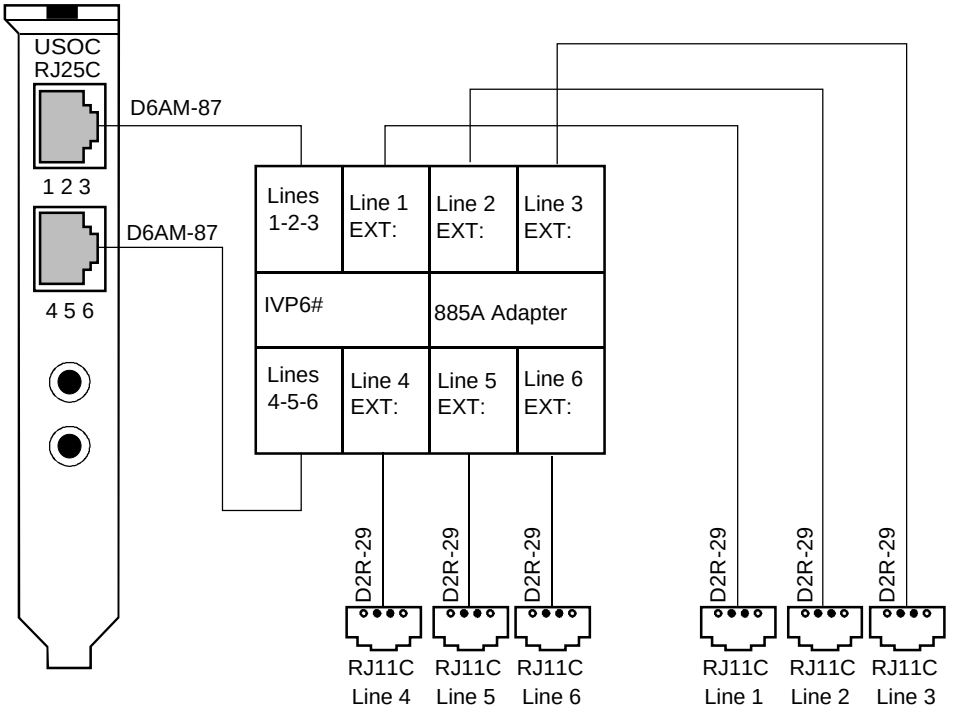


Figure 4-1. Connecting IVC6 Boards Using 885A Adapter

Connect IVC6 Boards Using 104A Connecting Blocks

NOTE:
This is one of many ways to connect IVC6 boards to the System 25 using inside building wire. It is subject to the same distance limitations as stations. The key element is the connection of the T/R circuits to the correct pins on the connecting block jacks.

To connect IVC6 boards using type 104A connecting blocks, perform the following tasks:

1. Make sure that the line pairs were run together to type 104A connecting blocks or equivalent. (See Figure 4-2.)
2. Use the supplied D6AM 6-conductor modular cables between the IVC6 board and the type 104A connecting block.

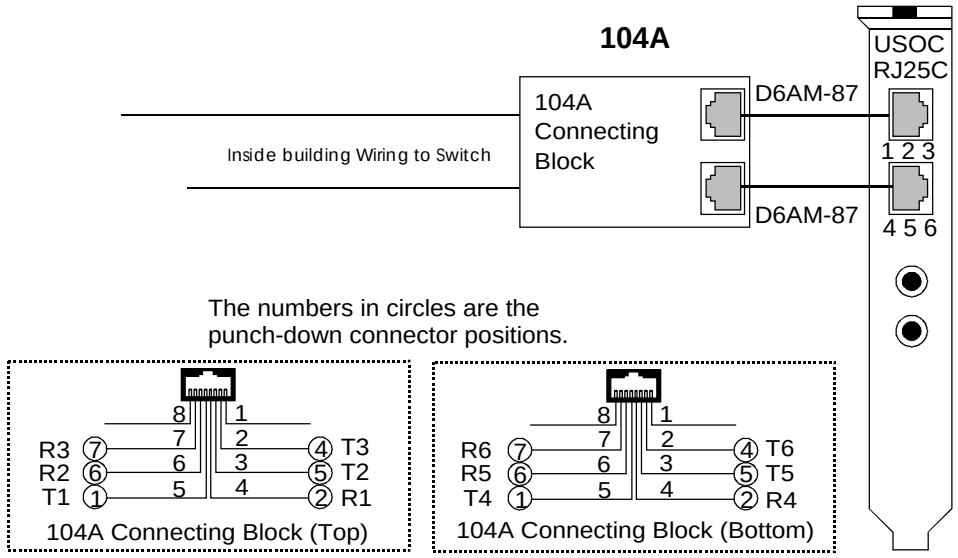


Figure 4-2. Connecting IVC6 Boards Using 104A Connecting Blocks

Connecting Serial (COM/TTY) Ports

The Lucent INTUITY system communicates with various devices through serial (COM/tty) ports. COM ports are required for:

- System 25 administration (AAS)
- Remote Maintenance Modem

These share the same port

- Optional Call Accounting System
- Optional customer administration terminal(s)

System 25 administration and the Remote Maintenance Modem are constrained to the same port. Any other connections are made to available ports. There are 2 built-in ports on the Lucent INTUITY system processors. If 3 or more devices are required, a Multi-Port Serial Card must be included in the configuration, as follows:

- Call Accounting System (CAS) uses COM1/tty00
- System 25 Administration (AAS) shares serial port COM2/tty01 with the Remote Maintenance Modem via a switch box.
- Add-on serial ports (ttyaa through ttyah) on a Multi-Port Serial Card are used for the third and subsequent devices.

The preferred order of connection of the devices is:

- System 25 Administration
- Remote Maintenance Modem (must be co-located with the Lucent INTUITY system processor)
- Optional – Call Accounting System (SMDR)
- Optional – customer remote access terminals or modems

Connectivity Based on Distance Between Machines

If the System 25 is *within 50 feet (15 meters)* of the Lucent INTUITY system, and the System 25 and the Lucent INTUITY system share the same power outlet, a direct connection can be made between the System 25 administration and optional Station Message Detail Reporting (SMDR) ports, the switch box, the modem, and the Lucent INTUITY system ports. *See page 4-7 for procedures.*

If the System 25 is *farther than 50 feet (15 meters)* from the Lucent INTUITY system, or the System 25 and the Lucent INTUITY system do not share the same power outlet, data cables from the System 25 system administration and optional Station Message Detail Reporting (SMDR) ports to the Lucent INTUITY system ports have to be extended with Z3A2 ADU cable drivers. Two Z3A2 ADU interface units are required for each cable, one at each end. *See page 4-12 for procedures.*

NOTE:
The System 25 does not support out-of-building operation of the Lucent INTUITY system.

Optional customer access terminals may be co-located with the Lucent INTUITY system processor and directly connected (or remotely located and connected via ADUs or modems) to the next available serial port after COM2/tty01.

Connecting Serial (COM/TTY) Ports Within 50 feet, Same Power Outlet

This method is used only when the System 25, the switch box/modem, and the Lucent INTUITY system are within 50 feet (15 meters) and share the same power outlet. If the 2 systems are more than 50 feet (15 meters) apart, proceed to "Connecting Serial (COM/TTY) Ports More than 50 Feet, Different Power Outlet" on page 4-12.

The following parts are required:

- DB-9S to DB-25P Adapter (MAP/40 and MAP/100 only)
- 355AF Adapter
- D8W-87 Modular Cord
- WP90780 Octopus Cable
- A/B Parts Kit, including:
  - A/B Switch box
  - EIA DB-25 Male-Female Cable
  - EIA DB-25 Male-Male Cable
  - Male-Male Gender Changer
- Modem (Paradyne COMSPHERE 3820 or compatible – includes modular cord and power supply)

If the System 25 includes Call Accounting System, the following parts are also required:

- 355AF Adapter
- D8W-87 Modular Cord

NOTE:
Set the switch box to the Remote Maintenance setting before proceeding.

To connect the System 25 Admin port and the Lucent INTUITY system COM2/tty01 port, perform the following tasks (Figure 4-3 illustrates this procedure):

1. Connect plug 1 of the D8W-87 modular cord on the octopus cable (from the Admin [first] jack of the CPU module on the System 25) to the 355AF Adapter.
2. Connect the other end of the adapter to the M-M gender changer provided with the switch box kit.
3. Connect the other end of the M-M gender changer to the switch box connector marked PBX Administration Port (A).
4. Connect the M-F DB-25 Cable to the switch box connector marked Master Controller II Port (C).

5. Connect the other end of the M-F BD-25 Cable to the large end of the DB-9S to DB-25P adapter.
6. Connect the small end of the DB-9S to DB-25P adapter to Serial Port 2 on the MAP/5 or COM2 (tty01) on the MAP/40 or MAP/100.

Connecting the Modem.

1. Connect the switch box to the modem using the EIA M-M cable.
2. Connect one end of the modular cord supplied with the modem to the jack marked DIAL on the modem.
3. Depending on whether or not the System 25 is equipped with DID lines (see Worksheet A, *Coverage Options/ Maintenance Access*):
   - — If the system does *not* have DID lines, connect the other end of the modular cord to a RJ11C telephone jack wired to a Loop Start (LS) line from the CO.
   - — If the system has DID lines, connect the other end of the modular cord to a System 25 Tip/Ring port that has an assigned DID number.

   NOTE:
   If building wire is used, it must be type 3 UTP or better. The distance limitation is the same as for a station.

4. Write the telephone number on the label on top of the modem.
5. Connect the power supply connector to the modem.
6. Plug in the power supply.
7. Turn on power for the modem.
8. If Call Accounting System is included in the configuration, and COM1/tty00 is available, proceed to "Connecting CAS via SMDR Ports Within 50 feet, Same Power Outlet" on page 4-10.

   If Call Accounting System is included in the configuration, but COM1/tty00 is unavailable, proceed to "Connecting CAS to the First Available Serial Port on Multi-Port Serial Card Within 50 Feet, Same Power Outlet" on page 4-10.

   If Call Accounting system is not included in the configuration, proceed to "Networking" on page 4-21.

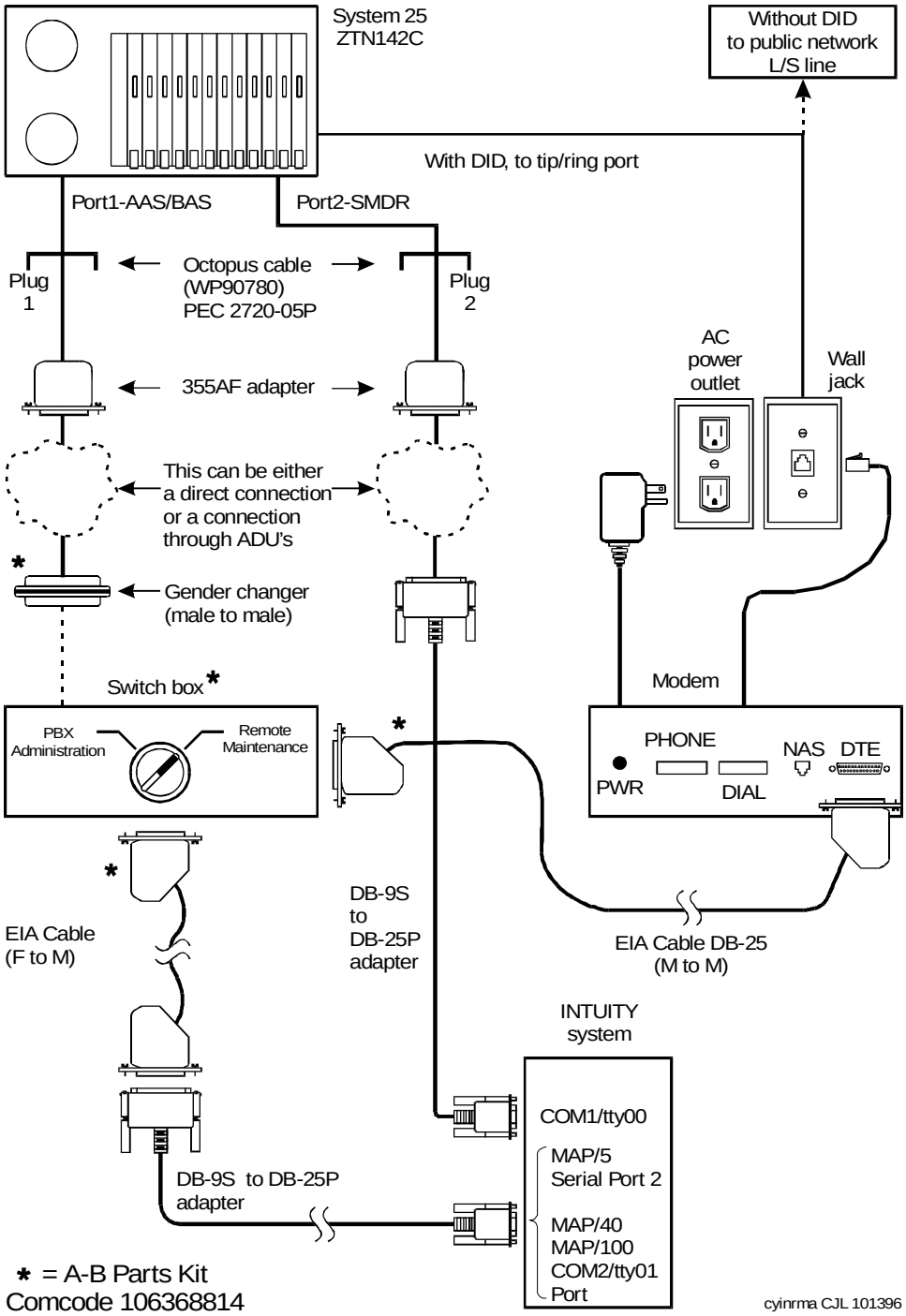


Figure 4-3. Connecting Admin Ports to the Lucent INTUITY

Connecting CAS via SMDR Ports Within 50 feet, Same Power Outlet

This method is used only when the System 25 and the Lucent INTUITY system are within 50 feet (15 meters) and share the same power outlet.

NOTE:
If your configuration does not include CAS, proceed to "Networking" on page 4-21.

The following parts are required:

- DB-9S to DB-25P Adapter (MAP/40 and MAP/100 only)
- 355AF Adapter
- D8W-87 Modular Cord
- WP90780 Octopus Cable

To connect CAS via serial port 1 (COM1/tty00), perform the following tasks (Figure 4-3 on page 4-9 illustrates this procedure):

1. Connect plug 2 of the D8W-87 modular cord of the octopus cable (from the SMDR [second] jack of the CPU module on the System 25) to the 355AF Adapter.
2. For MAP/40 and MAP/100, connect the large end of the DB-9S to DB-25P adapter to the 355AF Adapter (adapter is not required on a MAP/5).
3. Connect the small end of the DB-9S to DB-25P adapter to Serial Port 1 on the MAP/5 or COM1/tty00 on the MAP/40 or MAP/100.
4. Proceed to "Networking" on page 4-21.

Connecting CAS to the First Available Serial Port on Multi-Port Serial Card Within 50 Feet, Same Power Outlet

CAUTION:
This method is used only when COM1/tty00 is not available for use with CAS. In that case, the first available port on a multi-port serial card is used. If this is not the case for your site, proceed to "Networking" on page 4-21.

Use this procedure only when the System 25 and the Lucent INTUITY system are within 50 feet (15 meters) and share the same power outlet. The following parts are required for connection to the Multi-Port Serial Card:

- Multi-Port Serial Card (if needed and not already installed)
- 6-position, 6-conductor straight-through modular cord (for connection to Multi-Port Serial Card only, supplied with Multi-Port Serial Card)

- DTE 4/6-to-DB-25P Adapter (for connection to Multi-Port Serial Card only, supplied with Multi-Port Serial Card)

  NOTE:
  This adapter has slanted sides as shown in Figure 4-6.

- 355AF Adapter

To connect the System 25 SMDR port and the first available port on the Multi-Port Serial Card in the Lucent INTUITY system, perform the following tasks (Figure 4-4 illustrates this procedure):

1. Connect plug 2 of the D8W-87 modular cord of the octopus cable (from the SMDR [second] jack of the CPU module on the System 25) to the 355AF Adapter.
2. Connect the 355AF adapter to the matching end of the DTE 4/6-to-DB-25P Adapter.
3. Plug the 6-position, 6-conductor modular cord into the DTE 4/6-to-DB-25P Adapter.
4. Connect the other end of the 6-position, 6-conductor modular cord into the first available port on the multi-port serial card.
5. Proceed to "Networking" on page 4-21.

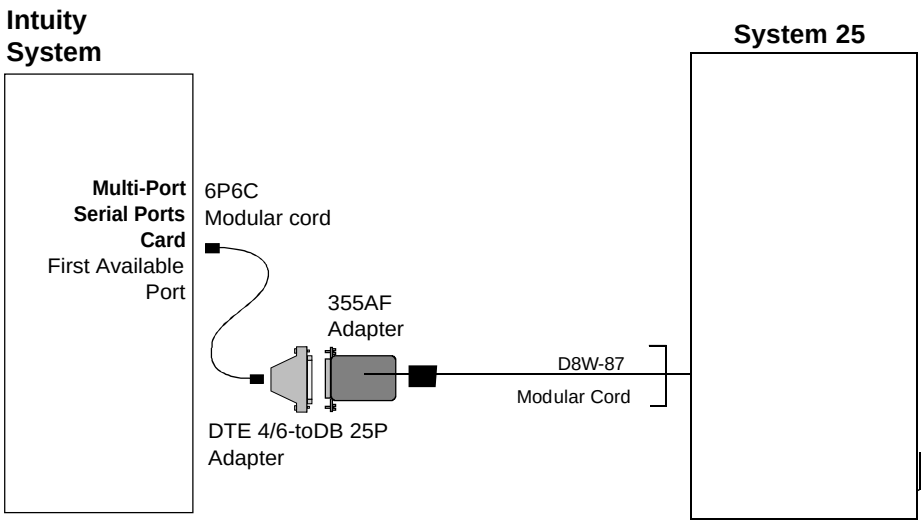


Figure 4-4. Connecting to First Available Port on Multi-Port Serial Card Within 50 Feet and Same Power Outlet

Connecting Serial (COM/TTY) Ports More than 50 Feet, Different Power Outlet

This method is used only when the System 25 and the Lucent INTUITY system are more than 50 feet (15 meters) apart or do not share the same power outlet.

NOTE:
The System 25 does not support out-of-building operation of the Lucent INTUITY system.

The following parts are required:

- DB-9S to DB-25P Adapter (MAP/40 and MAP/100 only)
- 355AF Adapter
- Three (3) D8W-87 Modular Cords
- A/B Parts Kit, including:
  - A/B Switch box
  - EIA DB-25 Male-Female Cable
  - EIA DB-25 Male-Male Cable
  - Male-Male Gender Changer
- M7-U87 Crossover Cable
- Two (2) Z3A2 ADUs
- Two (2) M8AJ-87 Cables
- D8AM-87 Modular Crossover Cable
- Two (2) 248B AD6AP-87 Modular Cords
- Two (2) 400B2 Adapters
- Two (2) 2012D Power Transformers
- WP90780 Octopus Cable
- Modem (Paradyne COMSPHERE 3820 or compatible – includes modular cord and power supply)

NOTE:
The combination of a Z3A2 ADU and a M8AJ-87 cable is equivalent to a Z3A4 ADU. You must order both pieces by ordering the Z3A4.

Additionally, inside wire must be 4-pair, suitable for data; type 3 UTP data cable or better.

To connect the System 25 Admin port and the Lucent INTUITY system COM2/tty01 port, perform the following tasks (Figure 4-3, Figure 4-4, and Figure 4-5 illustrate this procedure):

1. Connect plug 1 of the D8W-87 modular cord on the octopus cable (from the Admin [first] jack of the CPU module on the System 25) to the 355AF Adapter.
2. Connect the 355AF adapter to one end of an M7-U87 crossover cable.
3. Connect the other end of the M7-U87 crossover cable to the matching end of a M8AJ-87 cable.
4. Connect the other end of the M8AJ-87 cable to the matching connector on a Z3A2 ADU.
5. Connect one end of a D8W-87 modular cord to the modular jack marked WALL on the Z3A2 ADU.
6. Connect the other end of the D8W-87 modular cord to the modular jack end of a D8AM-87 crossover cord.
7. Connect the modular plug end of the D8AM-87 crossover cord to the matching modular jack on a 400B2 adapter.
8. Plug the 400B2 adapter into the wall jack leading to the Lucent INTUITY system site.
9. Connect one end of a D6AP-87 modular cord to the 400B2 adapter.
10. Mount a 248B adapter to a 2012D power transformer.
11. Connect the other end of the D6AP-87 modular cord to the 248B adapter.
12. Plug the 2012D power transformer into an AC power outlet.

    Go to the Lucent INTUITY system site to continue the connection (see Figure 4-3).
13. Connect the small end of the DB-9S to DB-25P adapter to Serial Port 2 on the MAP/5 or COM2 (tty01) on the MAP/40 or MAP/100.
14. Connect large end of the DB-9S to DB-25P adapter to the matching end of the M-F BD-25 Cable.
15. Connect the M-F DB-25 Cable to the switch box connector marked Master Controller II Port (C).
16. Connect one end of the M-M gender changer to the switch box connector marked PBX Administration Port (A).
17. Connect the other end of the M-M gender changer to the M8AJ-87 cable.
18. Connect the other end of the M8AJ-87 cable to a Z3A2 ADU.
19. Connect one end of a D8W-87 modular cord to the modular jack marked WALL on the Z3A2 ADU.
20. Connect the other end of the D8W-87 modular cord to a 400B2 adapter.

21. Plug the 400B2 adapter into the wall jack from the Communications System site.
22. Connect one end of a D6AP-87 cord to the 400B2 adapter.
23. Mount a 248B adapter on a 2012D power transformer.
24. Connect the other end of the D6AP-87 cord to the 248B adapter.
25. Plug the 2012D power transformer into an AC outlet.

Connecting the Modem.

1. Connect the switch box to the modem using the EIA M-M cable.
2. Connect one end of the modular cord supplied with the modem to the jack marked DIAL on the modem.
3. Depending on whether or not the System 25 is equipped with DID lines (see Worksheet A, *Coverage Options/ Maintenance Access*):
   - — If the system does *not* have DID lines, connect the other end of the modular cord to a RJ11C telephone jack wired to a Loop Start (LS) line from the CO.
   - — If the system has DID lines, connect the other end of the modular cord to a System 25 Tip/Ring port that has an assigned DID number.

   NOTE:
   If building wire is used, it must be type 3 UTP or better. The distance limitation is the same as for a station.
4. Write the telephone number on the label on top of the modem.
5. Connect the power supply connector to the modem.
6. Plug in the power supply.
7. Turn on power for the modem.
8. If Call Accounting System is included in the configuration, and COM1/tty00 is available, proceed to "Connecting CAS via SMDR Ports More Than 50 Feet, Different Power Outlet" on page 4-15.

   If Call Accounting System is included in the configuration, but COM1/tty00 is unavailable, proceed to "Connecting CAS to First Available Serial Port on Multi-Port Serial Card More Than 50 Feet, Different Power Outlet" on page 4-17.

   If Call Accounting system is not included in the configuration, proceed to "Networking" on page 4-21.

Connecting CAS via SMDR Ports More Than 50 Feet, Different Power Outlet

NOTE:
If your configuration does not include CAS, proceed to "Networking" on page 4-21.

This method is used only when the System 25 and the Lucent INTUITY system are more than 50 feet (15 meters) apart or do not share the same power outlet.

NOTE:
The System 25 does not support out-of-building operation of the Lucent INTUITY system.

The following parts are required for connection to the SMDR ports more than 50 feet (15 meters) apart:

- 355AF Adapter
- Three (3) D8W-87 Modular Cords
- M7-U87 Crossover Cable
- Two (2) Z3A2 ADUs
- Two (2) M8AJ-87 Cables
- D8AM-87 Modular Crossover Cable
- Two (2) 400B2 Adapters
- Two (2) D6AP-87 Modular Cords
- Two (2) 248B Adapters
- Two (2) 2012D Power Transformers

NOTE:
The combination of a Z3A2 ADU and a M8AJ-87 cable is equivalent to a Z3A4 ADU. You must order both pieces (one of each for SMDR port).

Additionally, inside wire must be 4-pair, suitable for data; type 3 UTP data cable or better.

To connect CAS via serial port 1 (COM1/tty00), perform the following tasks (Figure 4-3, Figure 4-4, and Figure 4-5 illustrate this procedure):

1. Connect plug 2 of the D8W-87 modular cord of the octopus cable (from the SMDR [second] jack of the CPU module on the System 25) to the 355AF Adapter.
2. Connect the 355AF adapter to one end of an M7-U87 crossover cable.
3. Connect the other end of the M7-U87 crossover cable to the matching end of a M8AJ-87 cable.

4. Connect the other end of the M8AJ-87 cable to the matching connector on a Z3A2 ADU.
5. Connect one end of a D8W-87 modular cord to the modular jack marked **WALL** on the Z3A2 ADU.
6. Connect the other end of the D8W-87 modular cord to the modular jack end of a D8AM-87 crossover cord.
7. Connect the modular plug end of the D8AM-87 crossover cord to the matching modular jack on a 400B2 adapter.
8. Plug the 400B2 adapter into the wall jack leading to the Lucent INTUITY system site.
9. Connect one end of a D6AP-87 modular cord to the 400B2 adapter.
10. Mount a 248B adapter to a 2012D power transformer.
11. Connect the other end of the D6AP-87 modular cord to the 248B adapter.
12. Plug the 2012D power transformer into an AC power outlet.

Go to the Lucent INTUITY System site and continue the connection.

1. Connect the small end of the DB-9S to DB-25P adapter to Serial Port 1 on the MAP/5 or COM1/tty00 on the MAP/40 or MAP/100.
2. Connect the large end of the DB-9S to DB-25P adapter to one end of the M8AJ-87 cable.
3. Connect the other end of the M8AJ-87 cable to the Z3A2 ADU.
4. Connect one end of a D8W-87 modular cord to the modular jack marked **WALL** on a Z3A2 ADU.
5. Connect the other end of the D8W-87 modular cord to a 400B2 adapter.
6. Plug the 400B2 adapter into the wall jack from the System 25 site.
7. Connect one end of a D6AP-87 cord to the 400B2 adapter.
8. Mount a 248B adapter on a 2012D power transformer.
9. Connect the other end of the D6AP-87 cord to the 248B adapter.
10. Plug the 2012D power transformer into an AC outlet.
11. Proceed to "Networking" on page 4-21.

Connecting CAS to First Available Serial Port on Multi-Port Serial Card More Than 50 Feet, Different Power Outlet

CAUTION:

This method is used only when COM1/tty00 is not available for use with CAS. In that case, the first available port on a multi-port serial card is used. If this is not the case for your site, proceed to "Networking" on page 4-21.

This method is used only when the System 25 and the Lucent INTUITY system are more than 50 feet (15 meters) apart or do not share the same power outlet.

NOTE:

The System 25 does not support out-of-building operation of the Lucent INTUITY system.

The following parts are required for connection to the Multi-Port Serical Card:

- Multi-Port Serial Card (if needed and not already installed)
- 6-position, 6-conductor straight-through modular cord (for connection to Multi-Port Serial Card only, supplied with Multi-Port Serial Card)
- DTE 4/6-to-DB-25P Adapter (for connection to Multi-Port Serial Card only, supplied with Multi-Port Serial Card)

  NOTE:

  This adapter has slanted sides as shown in Figure 4-6.

- 355AF Adapter
- Two (2) D8W-87 Modular Cords
- M7-U87 Crossover Cable
- Two (2) Z3A2 ADUs
- Two (2) M8AJ-87 Cables
- D8AM-87 Modular Crossover Cable
- Two (2) 400B2 Adapters
- Two (2) D6AP-87 Modular Cords
- Two (2) 248B Adapters
- Two (2) 2012D Power Transformers

NOTE:

The combination of a Z3A2 ADU and a M8AJ-87 cable is equivalent to a Z3A4 ADU. You must order both pieces (one of each for SMDR port).

Additionally, inside wire must be 4-pair, suitable for data; type 3 UTP data cable or better.

To connect the System 25 SMDR port and the first available port on the Multi-Port Serial Card in the Lucent INTUITY system, perform the following tasks (Figure 4-4, Figure 4-5, and Figure 4-6 illustrate this procedure):

1. Connect plug 2 of the D8W-87 modular cord of the octopus cable (from the SMDR [second] jack of the CPU module on the System 25) to the 355AF Adapter.
2. Connect the 355AF adapter to one end of an M7-U87 crossover cable.
3. Connect the other end of the M7-U87 crossover cable to the matching end of a M8AJ-87 cable.
4. Connect the other end of the M8AJ-87 cable to the matching connector on a Z3A2 ADU.
5. Connect one end of a D8W-87 modular cord to the modular jack marked **WALL** on the Z3A2 ADU.
6. Connect the other end of the D8W-87 modular cord to the modular jack end of a D8AM-87 crossover cord.
7. Connect the modular plug end of the D8AM-87 crossover cord to the matching modular jack on a 400B2 adapter.
8. Plug the 400B2 adapter into the wall jack leading to the Lucent INTUITY system site.
9. Connect one end of a D6AP-87 modular cord to the 400B2 adapter.
10. Mount a 248B adapter to a 2012D power transformer.
11. Connect the other end of the D6AP-87 modular cord to the 248B adapter.
12. Plug the 2012D power transformer into an AC power outlet.

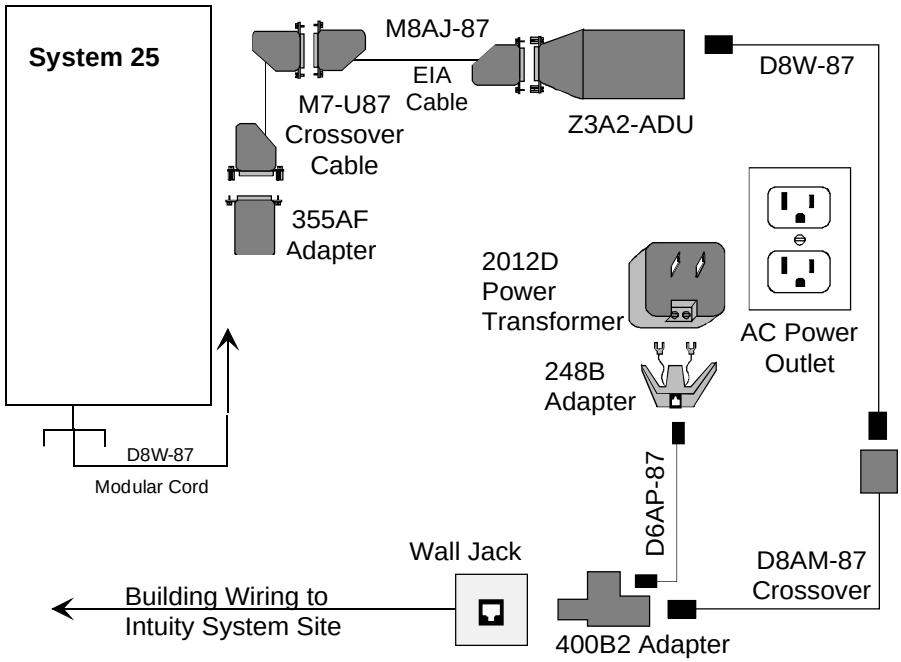


Figure 4-5. Serial Port Connections; More Than 50 Feet/Different Power Outlet

Go to the Lucent INTUITY System site and continue the connection (Figure 4-6 illustrates the procedure).

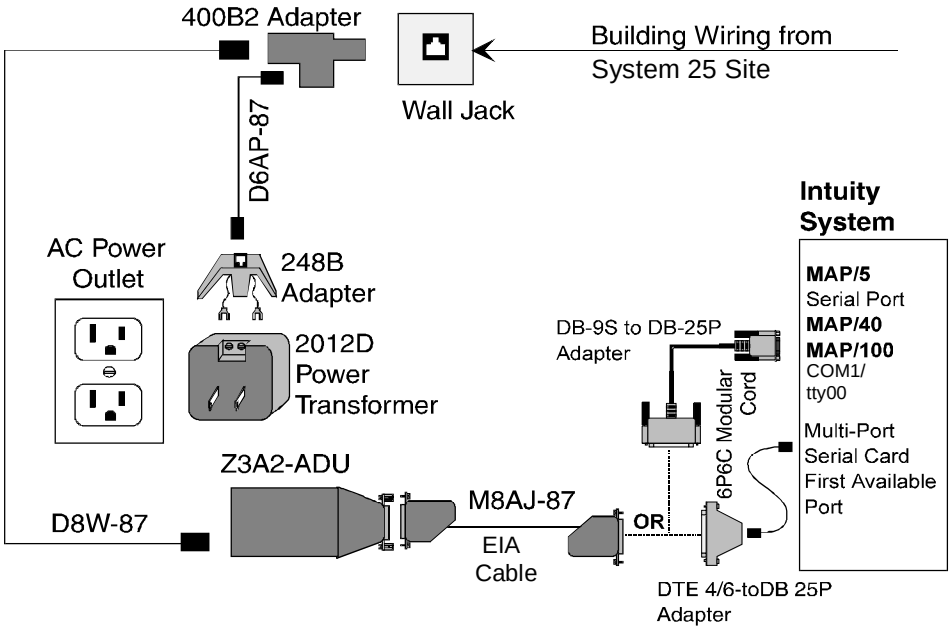


Figure 4-6. Serial Port Connections; More Than 50 Feet/Different Power Outlet

13. Connect the short end of the 6-position, 6-conductor modular cord into the first available port on the multi-port serial card.
14. Plug the long end of the 6-position, 6-conductor modular cord into the DTE 4/6-to-DB-25P Adapter.
15. Connect the DTE 4/6-to-DB-25P Adapter to the matching end of the M8AJ-87 cable.
16. Connect the other end of the M8AJ-87 cable to the small end of the Z3A2 ADU.
17. Connect one end of a D8W-87 modular cord to the modular jack marked **WALL** on a Z3A2 ADU.
18. Connect the other end of the D8W-87 modular cord to a 400B2 adapter.
19. Plug the 400B2 adapter into the wall jack from the System 25 site.
20. Connect one end of a D6AP-87 cord to the 400B2 adapter.
21. Mount a 248B adapter on a 2012D power transformer.
22. Connect the other end of the D6AP-87 cord to the 248B adapter.
23. Plug the 2012D power transformer into an AC outlet.
24. Proceed to "Networking" on page 4-21.

Networking

Networking is an *optional* application on Intuities connected to the System 25. System 25 supports Lucent INTUITY low-speed digital networking and AMIS analog networking. High-speed digital networking is not supported since the System 25 does not support the DCP protocol.

There are 2 methods for configuring low-speed digital networking with the System 25:

- If the System 25 does not have DID lines, the connections use Loop Start (LS) lines from the Central Office (CO) and bypass the switch.
- If the System 25 has DID lines, Lucent INTUITY low-speed digital networking is connected through the System 25.

AMIS Analog Networking requires no special hardware for connectivity since it uses the voice channels already assigned to voice services. (Traffic configuration rules may necessitate the addition of voice channels to absorb the load of AMIS networking.)

In order to support AMIS Analog Networking, the System 25 must be configured to send incoming calls on external lines directly to AUDIX. (Touch tone codes on the incoming calls identify the calls as AMIS networking and cause proper call handling.) Many System 25 customers already do this in order to support an auto-attendant.

In addition, System 25 must be administered to allow AUDIX ports to make outgoing calls.

Connecting Low-Speed Digital Networking

The following parts are required:

- ACCX Board (includes cable and breakout box)
- Modem (Paradyne® COMSPHERE® 3820 or compatible, including modular cord and power supply)
- DB-25 M-M cable

To connect the Lucent INTUITY low speed networking, perform the following tasks (Figure 4-7 illustrates this procedure):

1. Connect one end of the ACCX cable to the connector on the ACCX card.
2. Connect the other end of the ACCX cable to the matching connector on the break-out box.
3. Connect one end of the DB-25 M-M cable to the connector marked RS-232-CH1 (2, 3, or 4) on the break-out box.
4. Connect the other end of the DB-25 M-M cable to the matching connector on the modem.

5. Connect one end of the modular cord to the jack marked **DIAL** on the modem.
6. Depending on whether or not the System 25 is equipped with DID lines:
   — If the system does ***not*** have DID lines, connect the other end of the modular cord to a RJ11C telephone jack wired to a Loop Start (LS) line from the CO.
   — If the system has DID lines, connect the other end of the modular cord to a System 25 Tip/Ring port that has an assigned DID number.

NOTE:
If building wire is used, it must be type 3 UTP or better. The distance limitation is the same as for a station.

7. Connect the power supply connector to the modem.
8. Plug in the power supply.
9. Turn on power for the modem.
10. Repeat steps 3 _ 9 for each networking channel.
11. If you have the optional Multi-User Feature Package and Remote Access, proceed to "Remote Access" on page 4-23

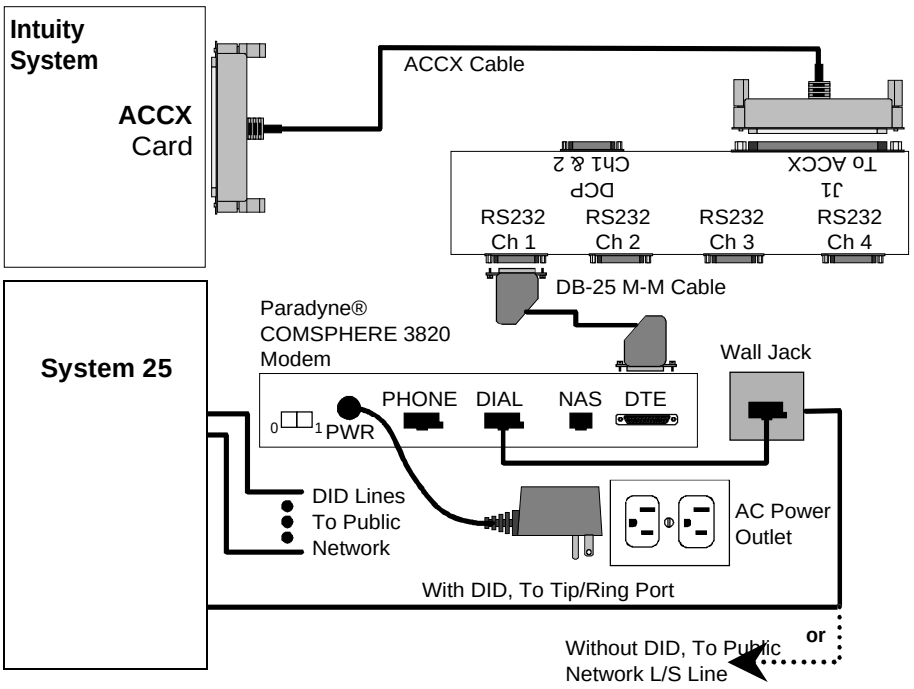


Figure 4-7. Digital Networking Connections

Remote Access

Local Access to the Lucent INTUITY system is provided by the keyboard and monitor of the Lucent INTUITY system. The Multi-User Feature Package and Remote Access is an *optional* application for the System 25 INTUITY system. It is sometimes convenient to have terminals located on the System Administrator's desk or at other locations. Remote administration allows system administrators to perform duties at their desks, saving time and trips when the Lucent INTUITY system is not close by.

NOTE:
Only one user can be logged onto the Lucent INTUITY system at a time unless the Multi-User Feature Package has been installed. With the Multi-User Feature, the Lucent INTUITY system can accommodate up to 4 simultaneous logins.

Because the Multi-User Feature Package allows multiple login sessions, it is possible to delegate Lucent INTUITY system administration duties to several people. This not only divides up the work needed to maintain a Lucent INTUITY system but also gives users and callers several points of contact should a problem occur.

Dedicated Line Access

Dedicated line access can be used when a specific terminal will always be connected to the line, that is, when dial-up access is not required. Dedicated line access is always to the first available port on the Multi-Port Serial Card. Dedicated line access can be accomplished in the following ways:

- If the terminal is within 50 feet (15 meters) of the Lucent INTUITY system, the terminal can be connected directly to the Multi-Port Serial card using either of the methods shown in Figure 4-8.
- If the terminal is more than 50 feet (15 meters) from the Lucent INTUITY system, it can be connected to the Multi-Port Serial card using ADUs as line extenders.

In all other cases, remote access connections (using dial-up modems) should be used.

Connecting Dedicated Lines within 50 Feet

These methods are used only when the Lucent INTUITY system and the terminal are within 50 feet (15 meters).

The following parts are required:

- Multi-Port Serial Card (if not already installed)
- 6-position, 6-conductor straight-through modular cord (supplied with Multi-Port Serial Card)

- DCE 4/6-to-DB-25P Adapter

  NOTE:
  This adapter has slanted sides as shown in Figure 4-4.

- DB-25 M-F cable

To connect the local terminal, perform the following tasks (Figure 4-8 illustrates this procedure):

1. Connect one end of the 6-position, 6-conductor modular cord to the first available port on the Multi-Port Serial Card.
2. Plug the other end of the modular cord to the DTE 4/6-to-DB-25P adapter.
3. Connect the matching end of the DB-25 M-F cable to the DTE 4/6-to-DB-25P adapter.
4. Connect the other end of the DB-25 M-F cable to the Lucent 715 terminal.

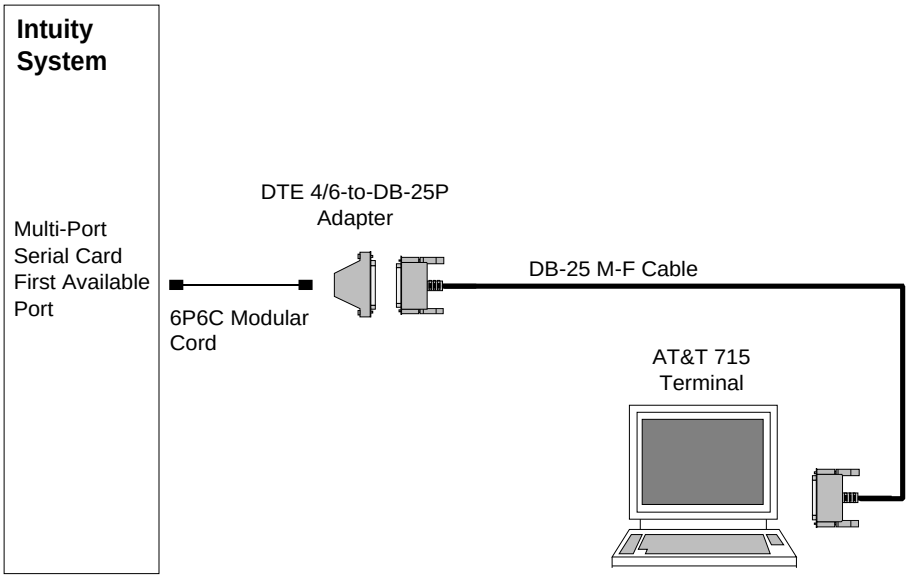


Figure 4-8. Local Dedicated Line Terminal Connections

Connecting Dedicated Lines beyond 50 Feet

This method is used only when the Lucent INTUITY system and the terminal are more than 50 feet apart.

If the terminal is in a building outside the main building (where the Lucent INTUITY system is located), an ADU and an additional protector must be installed in each building. The ADUs and protectors provide both the Lucent INTUITY system and the terminal protection against exposure to lightning, inadvertent contact with power lines, and power currents induced by nearby power lines. See the installation notes packed with the ADU for more information.

The following parts are required:

- Multi-Port Serial Card (if needed and not already installed)
- 6 position, 6 conductor straight-through modular cord (for connection to Multi-Port Serial Card only, supplied with Multi-Port Serial Card)
- DTE 4/6-to-DB-25P Adapter (for connection to Multi-Port Serial Card only, supplied with Multi-Port Serial Card)

  NOTE:
  This adapter has slanted sides as shown in Figure 4-4.

- Two (2) D8W-87 Modular Cords
- M7-U87 Crossover Cable
- Two (2) Z3A2 ADUs
- Two (2) M8AJ-87 Cable
- D8AM-87 Modular Crossover Cable
- Two (2) 400B2 Adapters
- Two (2) D6AP-87 Modular Cords
- Two (2) 248B Adapters
- Two (2) 2012D Power Transformers

NOTE:
The combination of a Z3A2 ADU and a M8AJ-87 cable is equivalent to a Z3A4 ADU. You must order both pieces (one of each for Admin port, another of each for SMDR port).

Inside wire must be 4-pair, suitable for data; type 3 UTP data cable or better.

Local powering of the Z3A2 ADU is optional.

To connect the terminal and the Lucent INTUITY system, perform the following tasks (Figure 4-9 illustrates this procedure):

1. Connect one end of the M7U-87 crossover cable to the terminal.
2. Connect the other end of the M7U-87 cable to the matching end of a M8AJ-87 cable.

3. Connect the other end of the M8AJ-87 cable to the matching connector on a Z3A2 ADU.
4. Connect one end of a D8W-87 modular cord to the modular jack marked **WALL** on the Z3A2 ADU.
5. Connect the other end of the D8W-87 modular cord to the modular jack end of a D8AM-87 crossover cord.
6. Connect the modular plug end of the D8AM-87 crossover cord to the matching modular jack on a 400B2 adapter.
7. Plug the 400B2 adapter into the wall jack leading to the Lucent INTUITY system site.
8. Connect one end of a D6AP-87 modular cord to the 400B2 adapter.
9. Mount a 248B adapter to a 2012D power transformer.
10. Connect the other end of the D6AP-87 modular cord to the 248B adapter.
11. Plug the 2012D power transformer into an AC power outlet.

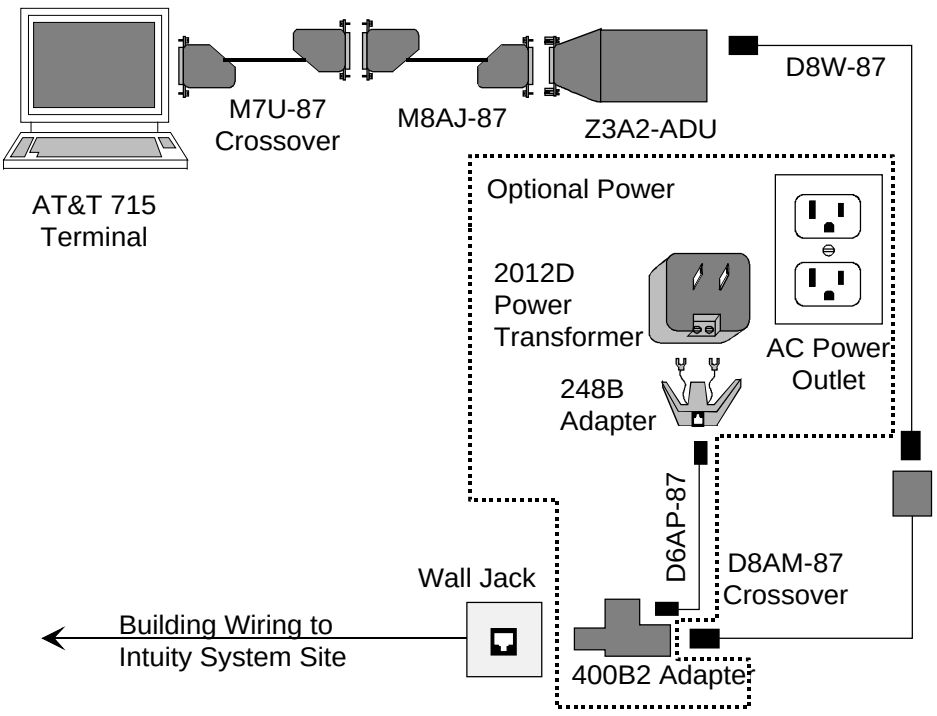


Figure 4-9. Connecting Dedicated Line Terminal More Than 50 Feet (Terminal End)

Go to the Lucent INTUITY system site to continue the connection (Figure 4-10 illustrates this procedure).

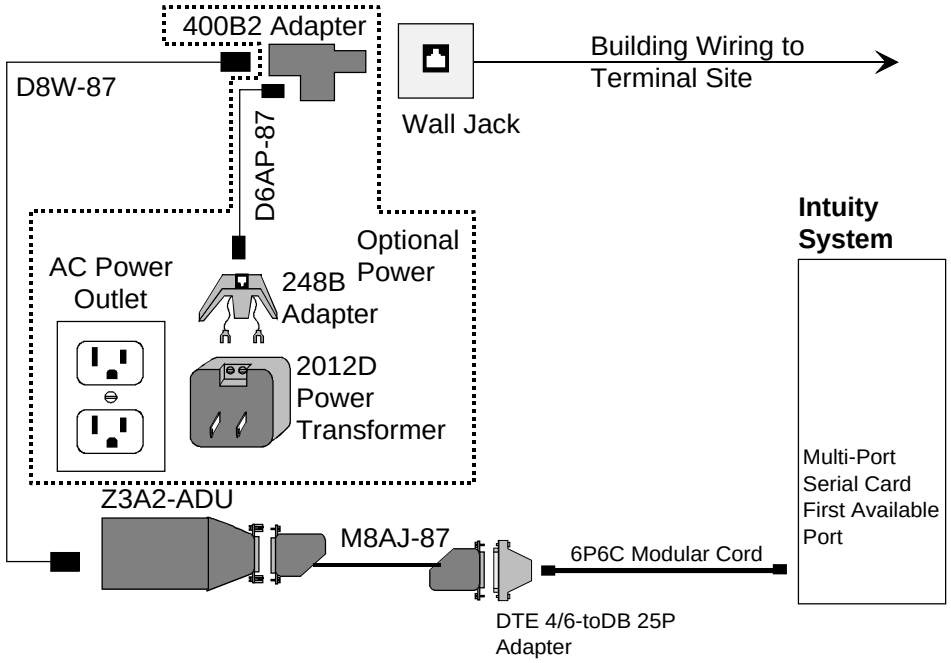


Figure 4-10. Connecting Dedicated Line Terminal More Than 50 Feet (Lucent INTUITY End)

12. Connect one end of the 6-position, 6-conductor modular cord to the first available port on the Multi-Port Serial Card.
13. Connect the other end of the modular cord to the DTE 4/6-to-DB-25P Adapter
14. Connect the matching end of an M8AJ-87 cable to the DTE 4/6-to-DB-25P adapter.
15. Connect the other end of the M8AJ-87 cable to the Z3A2 ADU.
16. Connect one end of a D8W-87 modular cord to the modular jack marked **WALL** on a Z3A2 ADU.
17. Connect the other end of the D8W-87 modular cord to a 400B2 adapter.
18. Plug the 400B2 adapter into the wall jack from the Communications System site.
19. Connect one end of a D6AP-87 cord to the 400B2 adapter.
20. Mount a 248B adapter on a 2012D power transformer.

21. Connect the other end of the D6AP-87 cord to the 248B adapter.
22. Plug the 2012D power transformer into an AC outlet.

Remote Access (Dial-Up) Connections

Connect to Serial Port 2 (COM2/tty01) if it is available. If Serial Port 2 (COM2/tty01) is not available, connect to the first available port on the Multi-Port Serial Card.

The following parts are required:

- Multi-Port Serial Card (if needed and not already installed)
- 6-position, 6-conductor straight-through modular cord (for connection to Multi-Port Serial Card only, supplied with Multi-Port Serial Card)
- DTE 4/6-to-DB-25P Adapter (for connection to Multi-Port Serial Card only, supplied with Multi-Port Serial Card)

  NOTE:
  This adapter has slanted sides as shown in Figure 4-11.

- DB-9S to DB-25P Adapter (for connection to Serial Port 2 on MAP/5 or COM2 on MAP/40 or MAP/100 only)
- RS-232 M-F cable (for connection to Serial Port 2 on MAP/5 or to COM2 on MAP/40 or MAP/100 only)
- Modem (Paradyne COMSPHERE 3820 or compatible, includes modular cord and power supply)

To connect the Lucent INTUITY Remote Maintenance Modem, perform the following tasks (Figure 4-11 illustrates this procedure):

1. To connect to the Lucent INTUITY system:
   - — If connecting to Serial Port 2 (COM2/tty01), connect the small end of the DB-9P to DB-25S adapter to Serial Port 2 on the MAP/5 or COM1/tty00 on the MAP/40 or MAP/100. Then connect one end of the DB-25 M-F cable to the large end of the DB-9P to DB-25S adapter.
   - — If connecting to the first available port on the Multi-Port Serial Card, connect one end of the 6-position, 6-conductor modular cord to the port. Then connect the other end of the modular cord to the DTE 4/6-to-DB-25P adapter.
2. Connect the other end of the DB-25 M-F cable or the DTE 4/6-to-DB-25P adapter to the matching connector on the modem.
3. Connect one end of the modular cord supplied with the modem to the jack marked **DIAL** on the modem.

4. Depending on whether or not the System 25 is equipped with DID lines (see Worksheet A, *Coverage Options/ Maintenance Access*):
   - — If the system does ***not*** have DID lines, connect the other end of the modular cord to a RJ11C telephone jack wired to a Loop Start (LS) line from the CO.
   - — If the system has DID lines, connect the other end of the modular cord to a System 25 Tip/Ring port that has an assigned DID number.

   NOTE:
   If building wire is used, it must be type 3 UTP or better. The distance limitation is the same as for a station.

5. Connect the power supply connector to the modem.
6. Plug in the power supply.
7. Turn on power for the modem.

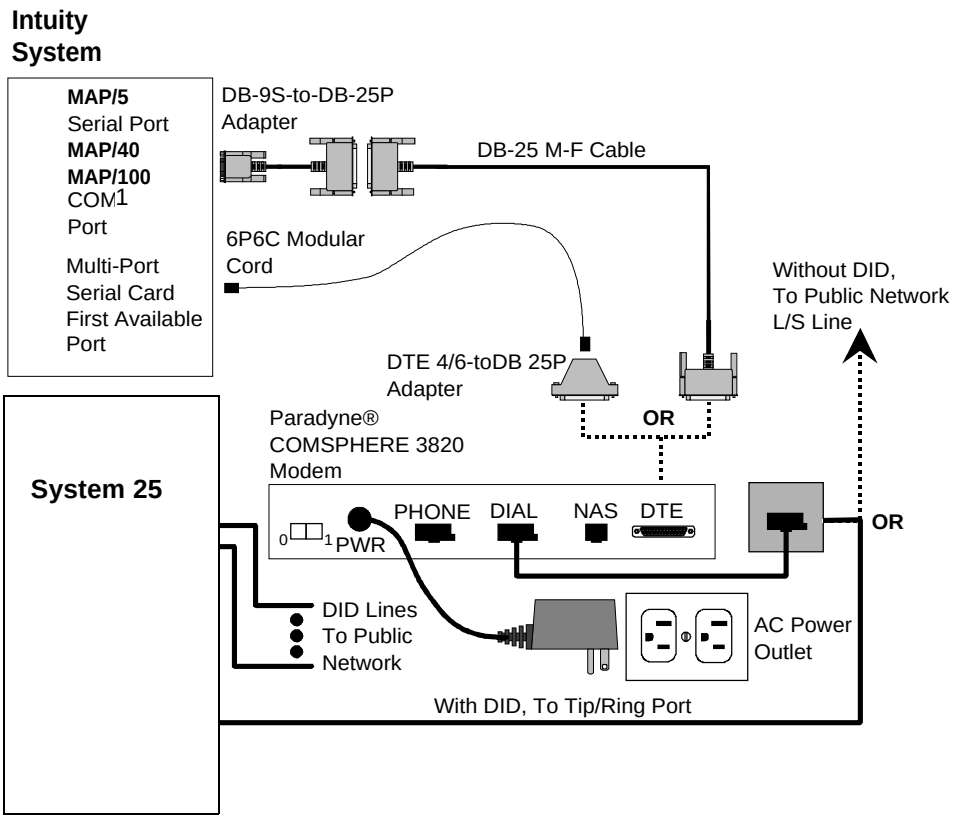


Figure 4-11. Remote Access Dial-Up Connections

System 25 Switch Administration

5

Overview

This chapter describes how to administer the System 25 for integration with the Lucent INTUITY system. Be sure to have the System 25 forms that you completed in *Chapter 2* in this book.

Not all System 25 administration is covered in this section, only the portions relevant to the integration. Other features depend on the needs of the business and are up to the customer to administer.

Purpose

NOTE:
If you are replacing an Integrated Solutions system with a Lucent INTUITY, most of this administration is already complete.

After reading this chapter, you will know how to:

- Modify Extension Numbers (renumber System 25 for consistent 3- or 4-digit dial plan)
- Set coverage options
- Administer tip/ring ports
- Assign personal lines to a phantom extensions
- Send special disconnect code
- Administer SMDR features for CAS
- Create a DGC for INTUITY AUDIX
- Assign members to group coverage
- Assign station coverage
- Administer multi-line features
- Find allowed/disallowed list information

Logging in to System 25

NOTE:
The procedure contained here assumes basic knowledge of System 25 administration, including logging in and out, using the Advanced Administration Software (AAS), and general navigation. For more information, see *System 25 Advanced Administration User Guide*, 555-540-511.

To log in to the System 25, perform the following tasks:

1. Log in to the Lucent INTUITY system as **craft** or **sa**.

   The system displays the Administration Menu (Figure 6-1 on page 6-2).

2. Select:

   ```
   > Switch Administration
   ```

   The system displays the System 25 Administration menu (Figure 5-1).

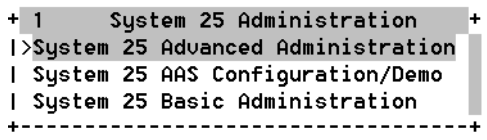


Figure 5-1. System 25 Administration Menu

3. Select:

   ```
   > System 25 Advanced Administration
   ```

   The Confirm Switch Administration Startup message displays (Figure 5-2).

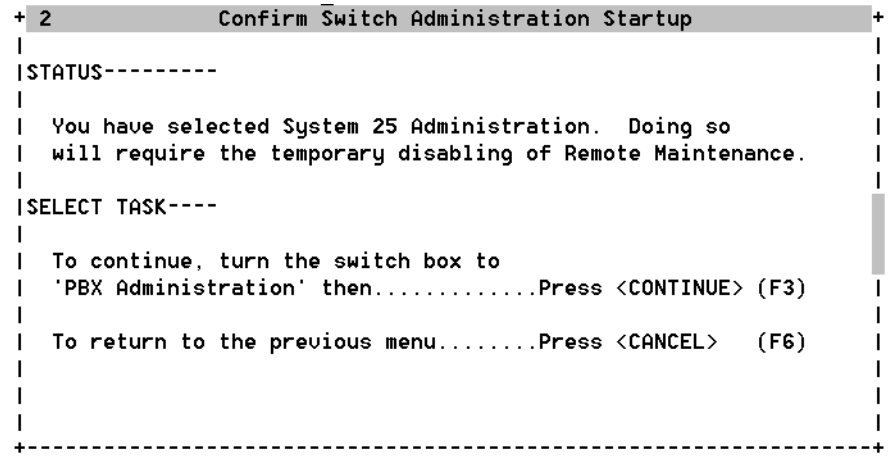


Figure 5-2. Confirm Switch Administration Startup Window

NOTE:
Selecting `System 25 Basic Administration` produces a similar message and requires the same disabling of Remote Maintenance.

If you do not turn the switch box to PBX Administration, AAS cannot execute properly.

NOTE:
If a remote session is active, the system displays a warning message that you cannot continue. Terminate the remote session and begin this procedure again.

4. Set the switch box to `PBX Administration`.
5. Press F3.

   The system displays a connectivity window with a confirmation message asking you to confirm connectivity.
6. Press ENTER.

   The application confirms connectivity between the System 25 and the Lucent INTUITY and adds the following message to the window:

```
SYSTEM 25 ADMINISTRATION
AT&T Copyright 1988
Enter password: -->
```

7. *Do not* enter a password at this time. Continue by pressing ESC.

   The system displays the System 25 Administration Security Screen pop-up window (Figure 5-3).

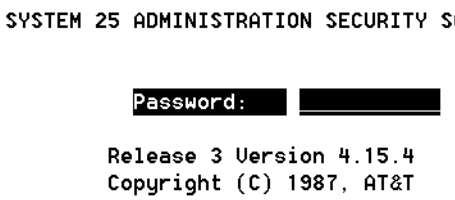


Figure 5-3. System 25 Administration Security Screen

8. Type the System 25 administration password and press ENTER.

   The system displays the System 25 Administration Main Menu (Figure 5-4).

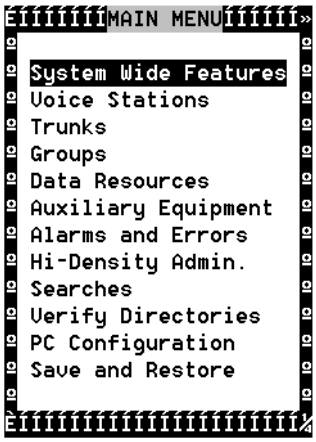


Figure 5-4. System 25 Administration Main Menu

9. Proceed with a System 25 administrative function.

Modifying a User Station to a Consistent Dial Plan

The Lucent INTUITY system requires that the dialing plan be 3 or 4 digits, but not both. The System 25 default is a 3-digit numbering plan, starting with 200. If your System 25 has been administered to allow a mixture of numbering plans, the stations must be renumbered. Use the values you wrote in Worksheet G, *Voice Station Records* for station information.

NOTE:
If you must modify multiple extensions, you can do so from the Voice Station Directory window. See ''Modifying Multiple User Extension Numbers to a Consistent Dial Plan'' on page 5-6.

To number a user station to comply with the dial plan, perform the following tasks:

1. From the System 25 Administration Main Menu, select:

```
> Voice Stations
    > User Stations
        > Modify a Voice Station
```

The system displays the Modify a Voice Station window (Figure 5-5).

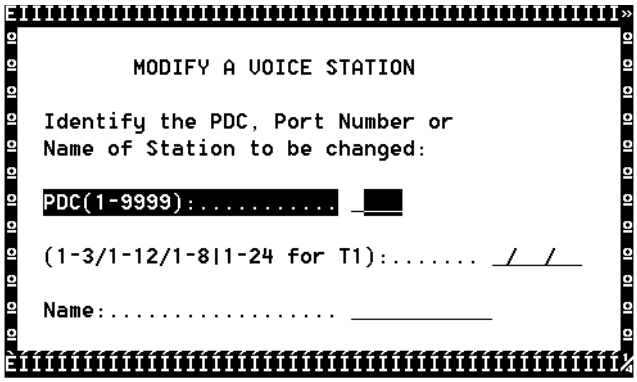


Figure 5-5. Modify A Voice Station Window; Renumbering Stations to Either a 3-Digit or 4-Digit Plan

2. Type either the station's PDC (in the first field) or the carrier/slot/port location (in the second field) and press ENTER.

   The other fields in window automatically populate with the corresponding information.

3. Press NEXT (F7).

   The system displays the Voice Station window (Figure 5-6).

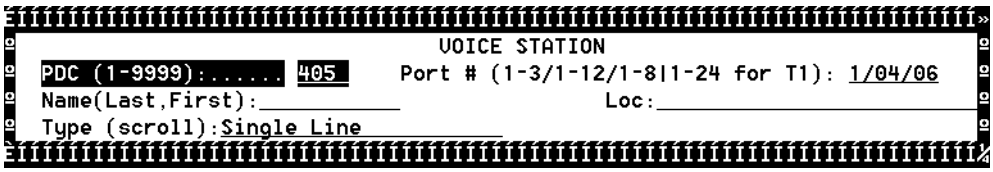


Figure 5-6. Voice Station Window; Entering New Dial Plan Information

4. Enter the new PDC in the PDC (1-9999) field.
5. Press SUBMIT (F3) to save your entry.
6. Press ESC repeatedly to return to the Main Menu and proceed to "Setting Coverage Options" on page 5-8.

Modifying Multiple User Extension Numbers to a Consistent Dial Plan

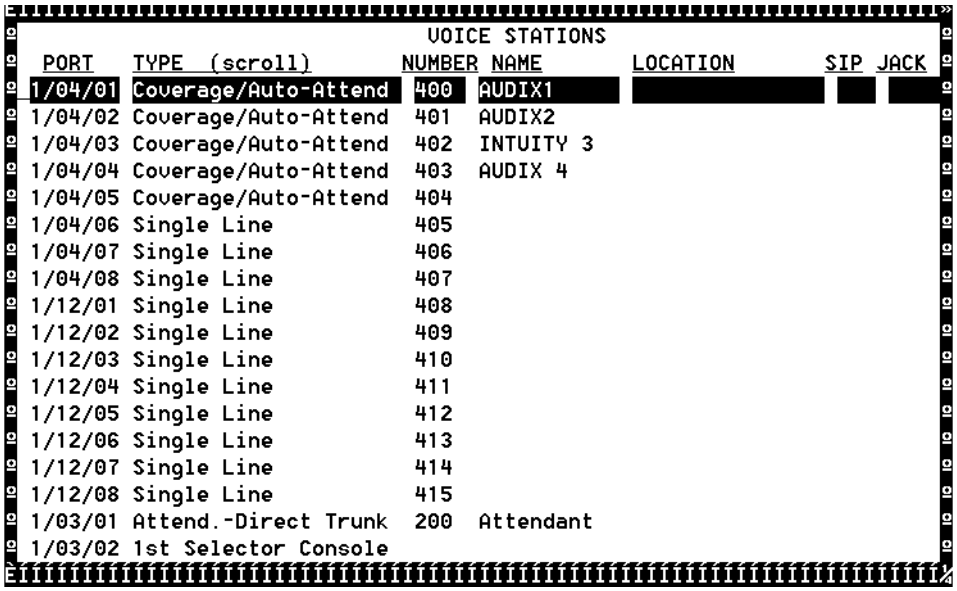
The Lucent INTUITY system requires that the dialing plan be 3 or 4 digits, but not both. The System 25 default is a 3-digit numbering plan, starting with 200. If your System 25 has been administered to allow a mixture of numbering plans, the stations must be renumbered. Use the values you wrote in Worksheet G, *Voice Station Records* for station information.

To renumber multiple user stations to comply with the dial plan, perform the following tasks:

1. From the System 25 Administration Main Menu, select:

```
> Voice Stations
    > User Stations
        > Voice Station Directory
```

   The system displays the Voice Station Directory window (Figure 5-5).



VOICE STATIONS

PORT	TYPE (scroll)	NUMBER	NAME	LOCATION	SIP	JACK
1/04/01	Coverage/Auto-Attend	400	AUDIX1			
1/04/02	Coverage/Auto-Attend	401	AUDIX2			
1/04/03	Coverage/Auto-Attend	402	INTUITY 3			
1/04/04	Coverage/Auto-Attend	403	AUDIX 4			
1/04/05	Coverage/Auto-Attend	404				
1/04/06	Single Line	405				
1/04/07	Single Line	406				
1/04/08	Single Line	407				
1/12/01	Single Line	408				
1/12/02	Single Line	409				
1/12/03	Single Line	410				
1/12/04	Single Line	411				
1/12/05	Single Line	412				
1/12/06	Single Line	413				
1/12/07	Single Line	414				
1/12/08	Single Line	415				
1/03/01	Attend.-Direct Trunk	200	Attendant			
1/03/02	1st Selector Console					

Figure 5-7. Modify A Voice Station Window; Renumbering Stations to Either a 3-Digit or 4-Digit Plan

2. Using the arrow keys, highlight a line containing a station you need to renumber.
3. Enter the station's new PDC in the `Number` field.
4. Press SUBMIT (F3) to save your entry.
5. Repeat step 2 and step 3 until all stations have been renumbered.
6. Press ESC repeatedly to return to the Main Menu and continue with the next procedure.

Setting Coverage Options

Typically, you administer the System 25 to allow coverage ringing on internal calls. Additionally you administer the system to send a call to coverage after a certain number of rings. Use the values you wrote in Worksheet A, *Coverage Options/ Maintenance Access*.

To administer coverage options, perform the following tasks:

1. From the Main Menu, select:

```
> System Wide Features
    > Coverage Options
```

The system displays the Coverage Options window (Figure 5-8).

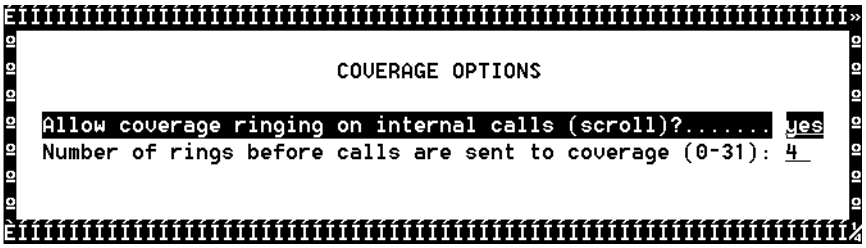


Figure 5-8. Coverage Options Window

2. Enter **yes** in the `Allow coverage ringing on internal call?` field.
3. Enter the number of rings before a call is sent to coverage (usually 3 or 4, but can be anything from 0 – 31) in the `Number of rings before calls are sent to coverage:` field.
4. Press SUBMIT (F3) to save your entry.
5. Press ESC repeatedly to return to the Main Menu and continue with the next procedure.

Administering Tip/Ring Ports for Use with INTUITY AUDIX

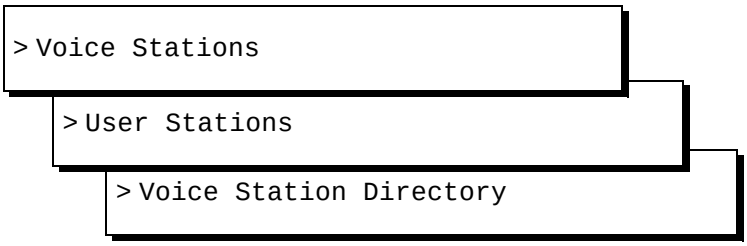
The Tip/Ring (T/R) ports that are to be used with AUDIX must be re-administered as VMS ports. Before you begin, you must know which T/R ports to use. Use the values you wrote in Worksheet B, *Voice Messaging Systems*.

NOTE:
If the INTUITY AUDIX is replacing an existing Integrated Solutions II or III system, this administration is already complete. In that case, proceed to the "Creating a DGC for INTUITY AUDIX" on page 5-15.

NOTE:
If you need to add new ports, use the Auxiliary Equipment window.

To administer T/R ports for use with AUDIX, perform the following tasks:

1. From the System 25 Administration Main Menu, select:



   The system displays the Voice Station window (Figure 5-6 on page 5-6).

2. Highlight an extension that will be used for AUDIX and press DELETE (F5).

   The system displays a message asking you to confirm that you would like to delete the extension's information.

3. Press SUBMIT (F3) to confirm deletion.

4. Press the spacebar repeatedly to until the TYPE column reads `Coverage/Auto-Attend`.

5. Tab to the NUMBER field and enter the extension number to which you would like this AUDIX port to be assigned.

6. Press SUBMIT (F3) to save your entry.

7. Press ENTER.

   The system displays the Voice Messaging System Option window (Figure 5-9).

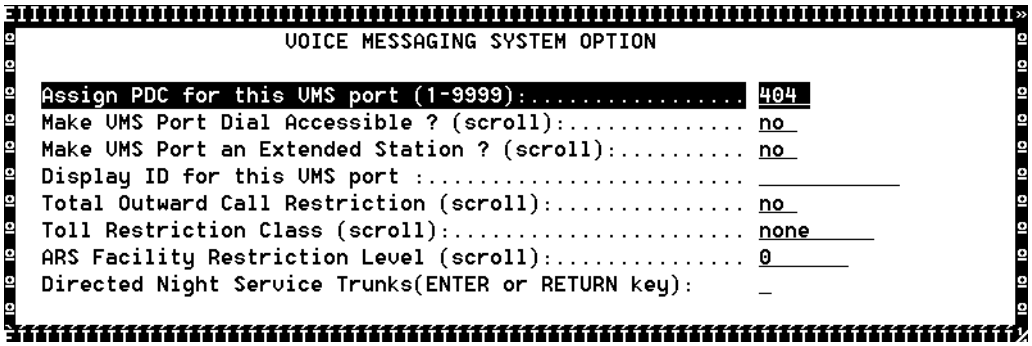


Figure 5-9. Voice Messaging System Option Window; Administering Tip/Ring Ports

8. Enter information based on the values your wrote on Worksheet B, *Voice Messaging Systems*
9. Press SUBMIT (F3) to save your entry.
10. Press ESC to return to the Voice Station Directory.
11. Repeat step 2 – step 10 until all extensions that will be used for AUDIX have been entered.
12. Press ESC repeatedly to return to the Main Menu and continue with the next procedure.

Assigning Personal Lines to a Phantom Extensions

Phantom extensions are administered extensions that *usually* have no corresponding hardware. For integration purposes, phantom extensions are most commonly used to direct incoming trunk calls to automated attendant coverage or to AUDIX login service.

NOTE:
If your business does not use automated attendants, proceed to the ''Send Special Disconnect Code'' on page 5-12.

CAUTION:
Verify that the attendant console does not own these lines.

To assign phantom extensions, perform the following tasks:

1. From the System 25 Administration Main Menu, select:

   ```
   > Voice Stations
     > User Stations
       > Add a Voice Station
   ```

   The system displays the Voice Station window (similar to Figure 5-5).

2. Type a carrier/slot/port (typically **3**/**12**/**1-8**) of an unused port in the `PCD (1-9999):` field and press SUBMIT (F3).

   The system displays a Voice Station window (similar to Figure 5-6 on page 5-6).

3. Enter the PDC in the `PDC (1-9999)` field.

4. Enter the type of station (typically **34 Button Deluxe**) in the Type field.

5. Press SUBMIT (F3) to save your entry.

6. Press NEXT (F7).

   The system displays the Station Options menu.

7. Select:

   ```
   > Buttons
   ```

   The system displays the appropriate Button Feature Assignment window (Figure 5-13 illustrates the 34-Button Deluxe type of multi-line set).

8. Use the arrow keys to highlight the button you would like to assign as a personal line and press ENTER.

   The system activates the Button Options menu (lower lefthand corner).

9. Press the spacebar until PERS LINE is highlighted and press ENTER.

   A pop-up window displays.

10. Enter the trunk number (0 – 9999).

11. If this station is to be used as a phantom for an auto-attendant, enter **y** in Principal Owner field.

12. If this station is to be used as a phantom for an auto-attendant, enter **y** in Allow Ring? field.

13. Press SUBMIT (F3) twice.

    The system redisplays the Button Feature Assignment window (Figure 5-14) and PERS LINE displays in the button number field.

14. Use the arrow keys to move to the next button and repeat step 8 and step 9 for all lines that are to be assigned to this phantom.

15. Press SUBMIT (F3) to save your entries.

16. Using the procedure under ''Assigning Members to Group Coverage'' on page 5-16, assign coverage for this extension.

17. Press ESC (F4) repeatedly to return to the Main Menu and continue with the next procedure.

Send Special Disconnect Code

The system default '##99' disconnect code must be turned off for use with Lucent INTUITY. Use the values you wrote in Worksheet D, *System Dial Plan*.

To disable the ##99 disconnect code, perform the following tasks:

1. From the Main Menu, select:

```
> System Wide Features
    > Dial Plan
```

   The system displays the Dial Plan window (Figure 5-10).

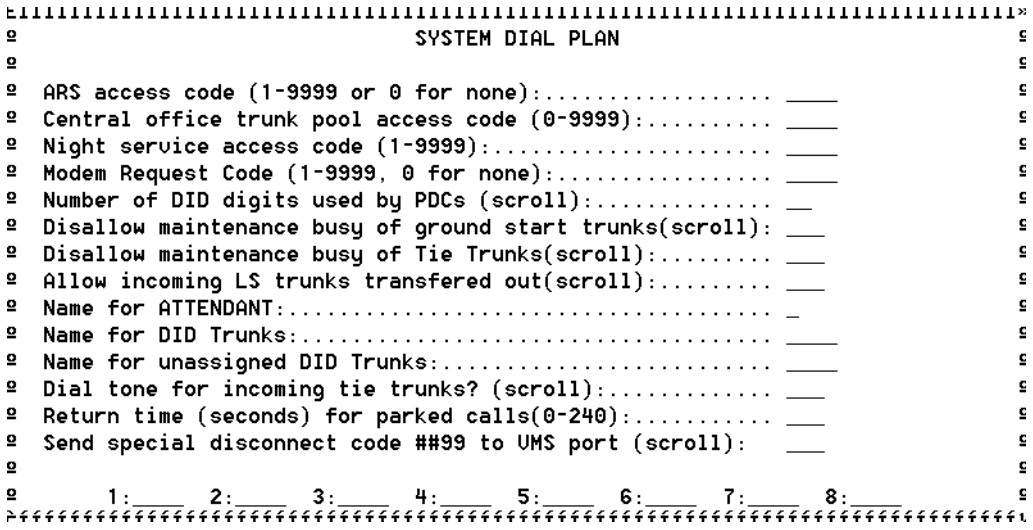


Figure 5-10. System Dial Plan; Turning Off Send Special Disconnect

2. Enter **no** in the `Send Special disconnect code ##99 to VMS port:` field (last line of text in the window).
3. Press SUBMIT (F3) to save your entry.
4. Press ESC (F4) repeatedly to return to the Main Menu.
5. If your configuration includes CAS, continue with the next procedure.

   If your configuration does not include CAS, proceed to ‘‘Creating a DGC for INTUITY AUDIX’’ on page 5-15.

Administer CAS Features

If your system has the optional Call Accounting System (CAS), there are 4 feature settings available that should be administered at this time, namely:

- Send SMDR records to the SMDR port – for analysis by the CAS application
- Call length before recording the call in the peg count
- Account code digits
- Call Accounting Terminal (CAT)

Use the values you wrote in Worksheet E, *SMDR Parameters (for Call Accounting System)*.

To administer CAS features, perform the following tasks:

1. From the System 25 Administration Main Menu, select:

   The system displays the Station Message Detail Recording (SMDR) window.

2. Enter **yes** in the `Allow SMDR records to be sent to SMDR port?` field.
3. Enter a number from 10 – 255 (seconds) in the `Minimum duration of call (in seconds) before recorded:` field.

   Typically, this number is set at 10.

4. Enter a number from 0 – 15 in the `Number of digits used for account codes:` field.

   This number is dictated by the system configuration.

5. Enter **no** in the `CAT or non-CAT:` field.
6. Press SUBMIT (F3) to save your entry.
7. Press ESC repeatedly to return to the Main Menu and continue with the next procedure.

Creating a DGC for INTUITY AUDIX

For the switch to cut the voice call through to AUDIX, the AUDIX ports must be in a Direct Calling Group (DGC). A DGC is similar in concept to a Hunt Group. Use the values you wrote in Worksheet F, *DGC Groups*.

To create a DGC for AUDIX, perform the following tasks:

1. From the System 25 Administration Main Menu, select:

```
> Groups
    > Direct Group Calling
```

   The system displays the DGC Groups window (Figure 5-11).

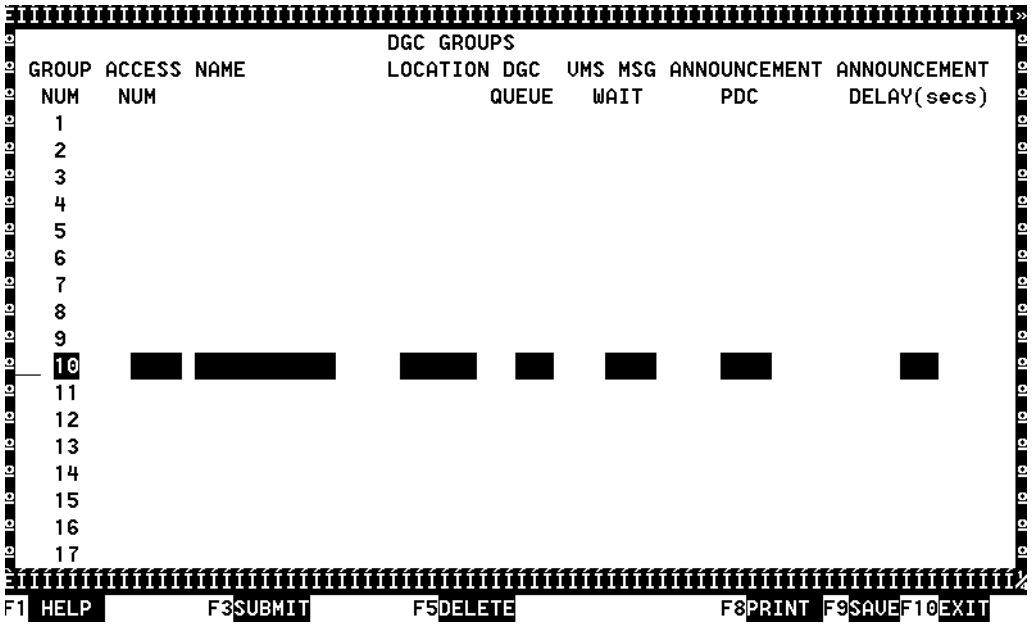


Figure 5-11. DGC Groups Window; Creating a DGC for AUDIX

2. Move your cursor to group number that you would like to use (typically, Group 10).
3. Press tab and enter an access number (for example, 777) in the ACCESS NUM field.
4. Enter an application name in the Name field.

5. Press SUBMIT (F3) to save your entry.
6. Press ENTER.

   The system displays the Group Members window.
7. Enter the VMS ports that are to belong to this DGC group in the `Group Members, Extension` field.
8. Press SUBMIT (F3) to save your entry.
9. Repeat step 7 and step 8 until all ports have been added.
10. Press ESC repeatedly to return to the Main Menu and continue with the next procedure.

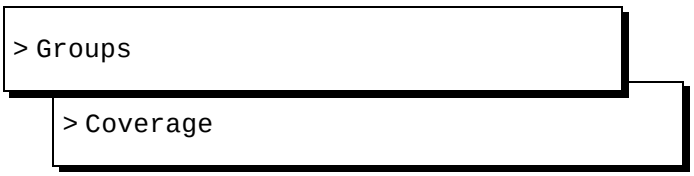
Assigning Members to Group Coverage

Now that the AUDIX DGC has been established, you must assign members (users) to the DGC. Use the values you wrote in Worksheet G, *Voice Station Records*. There are 2 ways to implement this

- By assigning stations to the coverage group (procedure below)
- by assigning a coverage group for a station (see page 5-18)

To assign members to group coverage, perform the following tasks:

1. From the System 25 Administration Main Menu, select:



   The system displays the Coverage Group List window (Figure 5-12).

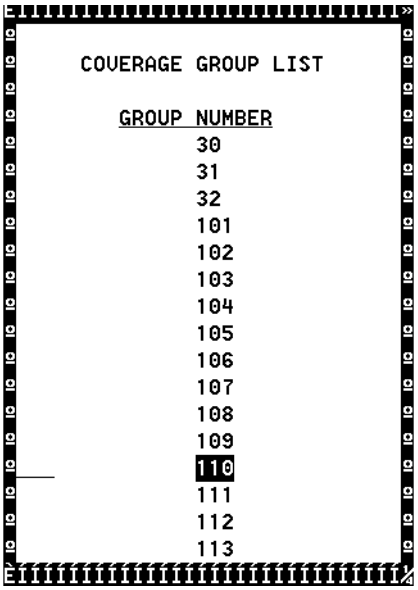


Figure 5-12. Coverage Group List; Assigning Members to Group Coverage

2. Use the arrow keys to move the cursor until you highlight the value that represents 100 + DGC number for AUDIX and press ENTER.

   Typically, this number is 110, but it's 100 + whatever you administered under ''Creating a DGC for INTUITY AUDIX'' on page 5-15. The system displays the Senders and Receivers lists.

3. Move the cursor to an empty record and enter the PDC of the new sender
4. Press SUBMIT (F3).
5. Continue adding sender PDCs until all senders (members) for this coverage group have been added.

   CAUTION:
   Do not implement coverage for all stations until you're ready to cut to service.

6. Press NEXT (F7) to access the Receivers list.
7. Add receivers using the same method described in step 3 and step 4 until all receivers for this coverage group have been added.
8. Press SUBMIT (F3) to save your entry.
9. Press CANCEL (F4) repeatedly to return to the Main Menu and continue with the next procedure.

Assigning Station Coverage

Calls that are not answered must be directed to the correct AUDIX calling group. Use the values you wrote in Worksheet H, *Voice Stations – Single Line Generic Example* or Worksheet I, *Voice Stations – Multiline Generic Example*, as appropriate.

CAUTION:
Do not implement coverage for all stations until you're ready to cut to service.

To assign station coverage, perform the following tasks:

1. From the System 25 Administration Main Menu, select:

   ```
   > Voice Stations
       > User Stations
           > Modify a Voice Station
   ```

   The system displays the Voice Station window (Figure 5-5 on page 5-5).

2. Type the station's extension in the `PCD (1-9999):` field and press ENTER.

3. Press NEXT (F7) twice.

   The system displays the Station Options menu.

4. Select:

   ```
   > Class of Service
   ```

   The system displays the Class of Service window (Figure 5-13).

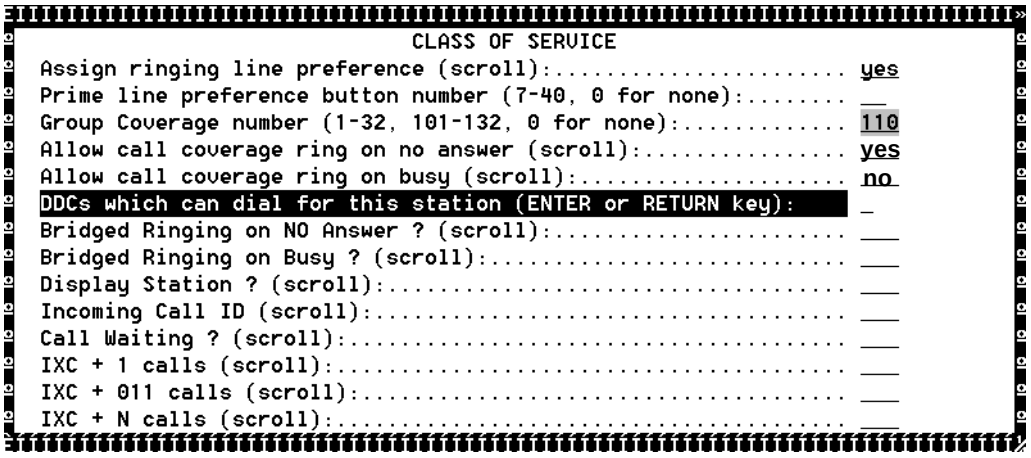


Figure 5-13. Class of Service Window; Assigning Station Coverage

5. Enter the group number in the `Group Coverage number:` field.

   NOTE:
   To use a calling group as a coverage point, add 100 to the group number. For example, group 10 is typically used as the AUDIX DGC group. In that case, 110 would be used as the administered coverage group.

6. Enter **yes** in the `Allow call coverage ring on no answer:` field.
7. Enter **no** in the `Allow call coverage ring on busy:` field.
8. Press SUBMIT (F3) to save your entry.
9. Press CANCEL (F4) repeatedly to return to the Main Menu.
10. If your site has multi-line sets, continue with the next procedure.

    If your site does not have multi-line sets, proceed to ''Allowed/Disallowed Lists'' on page 5-22.

Administering Multi-Line Features

Two features that are typically administered on multi-line stations are:

- Send All Calls – the incoming call is sent directly to AUDIX without ringing the called party's telephone
- Speed Dial – can be administered to call the AUDIX DGC directly

NOTE:
If your business has no multi-line sets, proceed to the ''Assigning Personal Lines to a Phantom Extensions'' on page 5-11.

To add Send All Calls and Speed Dial to multi-line stations, perform the following tasks:

1. From the System 25 Administration Main Menu, select:

   ```
   > Voice Stations
     > User Stations
       > Modify a Voice Station
   ```

   The system displays the Voice Station window (Figure 5-5).

2. Type the extension of the station you would like to have "Send All Calls" on in the `PCD (1-9999):` field and press ENTER.

3. Press NEXT (F7) twice.

   The system displays the Station Options menu.

4. Select:

   ```
   > Buttons
   ```

   The system displays the appropriate Button Feature Assignment window (Figure 5-13 illustrates the 34-Button Deluxe type of multi-line set).

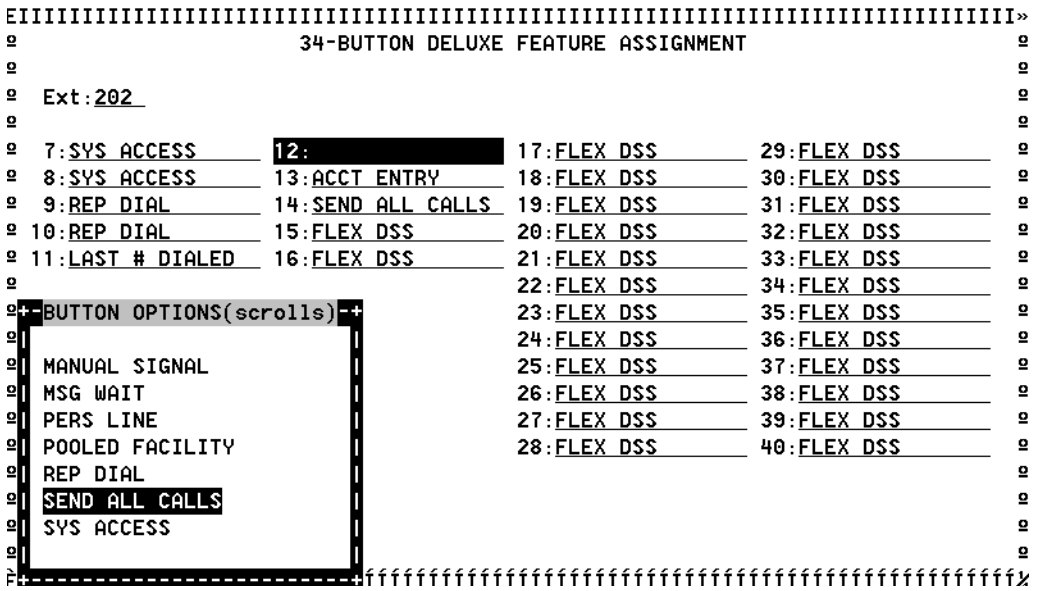


Figure 5-14. Button Options Menu; Administering Multi-Line Features

5. Use the arrow keys to highlight the button you would like to administer to have the Send All Calls feature and press ENTER.

   The system activates the Button Options menu (lower lefthand corner).

6. Use the arrow keys to highlight `Send All Calls` and press ENTER.

   The system displays the Send All Calls window (Figure 5-15).

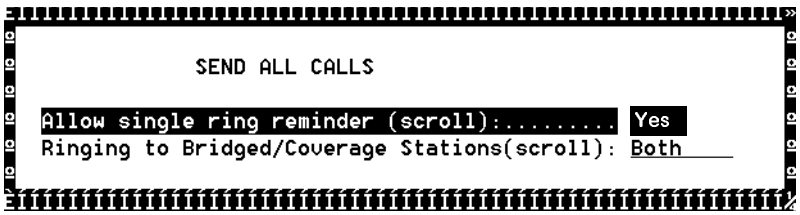


Figure 5-15. Send All Calls Window; Administering Multi-Line Features

7. Enter information based on your business needs. (Typically, the entries are **Yes** And **Both**, respectively.)

8. Press (F3) to save your entry.

   The system redisplays the Button Feature Assignment window (Figure 5-13) and `Send All Calls` displays in the button number field.

9. Highlight the button you would like to administer to have the Speed Dial feature and press ENTER.

   The system activates the Button Options menu (in the lower lefthand corner).

10. Select **DSS** and press ENTER.
11. Enter the AUDIX access number or DGC number for this line in the Direct Station Selection pop-up window that displays.
12. Press SUBMIT (F3) twice to save your entries.

    The system returns you to the Button Feature Assignment window and DSS displays in the button number field.

13. Press ESC repeatedly to return to the Main Menu and continue with the next procedure.

Allowed/Disallowed Lists

Allowe/Disallowed lists contain extension ranges to which callers can and cannot transfer. When a voice port is outward or toll restricted, allowed/disallowed number lists can be used to restrict calls to specific area codes and/or exchanges. When outcalling or AMIS networking is required, using outward or toll restriction in combination with an allowed/disallowed number lists limits the risk of unauthorized persons using the voice messaging or automated attendant systems to make toll calls because calls can only be made to the specified area codes and/or exchanges.

Allowed/disallowed are necessary to limit the extent of calls made by Lucent INTUITY for fax call delivery, outcalling, and AMIS/analog networking.

CAUTION:
The actual administration of allowed/disallowed lists and ARS is beyond the scope of this document. However, to successfully integrate your System 25 with Lucent INTUITY, these items must be addressed. See the AT&T System 25 R3 Implementation Manual (for Advanced Administration), 555-532-650 and AT&T System 25 R3 Advanced Administration User Guide (UNIX®) 6386, 555-532-650 for further information and the appropriate worksheets.

When you have finished administering Allowed/Disallowed Lists, continue with the implementation as described in Chapter 3, ‘‘Implementing the Integration’’.

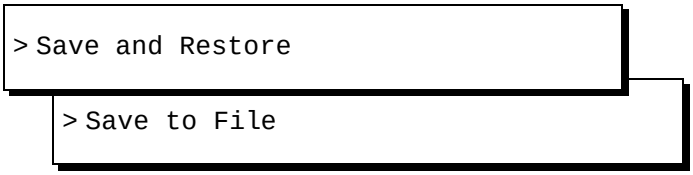
Saving Switch Changes to File

After the cut-to-service process has been completed (see ‘‘Administer System 25 for Cut-to-Service’’ on page 3-7) and all stations/members are assigned, it is very important to save a copy of the all switch configuration changes to a file. This safeguards the work you’ve done and ensures that the translations are available, should the need arise.

CAUTION:
These procedures can affect – and be affected by – call traffic on the System 25. If at all possible, they should be done during non-business hours.

To save the switch changes to a PC file, perform the following tasks:

1. From the System 25 Administration Main Menu, select:



   A save operation takes approximately 5 minutes to complete. The system displays a confirmation message asking if you’re sure you would like to continue with the save function.

2. Press SUBMIT (F3).

   A pop-up window displays with a default filename for the backup file.

3. If desired, enter in a new filename for the backup file. Otherwise, Press SUBMIT (F3).

   The administration translations are backed up to the file indicated.

   NOTE:
   While not required, it is recommended that you verify the file contents by selecting the `Verify with File` option.

4. Press ESC repeatedly to return to the Main Menu.

Lucent INTUITY System Administration

6

Overview

This chapter describes how to administer the Lucent INTUITY system for integration with the System 25. To integrate with the System 25, the Lucent INTUITY system needs to know the extension length being used.

This chapter also describes the procedure for entering the Routing Table, Business Schedules, and Holiday Schedules. They are not unique to the System 25.

Purpose

After reading this chapter, you will know how to:

- Administer the switch interface, including:
  - — Number of digits in dial plan
  - — Stopping and restarting the Voice System
- TCP/IP Networking, if required
- Perform required Lucent INTUITY administration, including:
  - — Verifying feature options
  - — Assigning extension ranges on the local machine
  - — Administering system parameters
  - — Administering voice ports
  - — Setting up business and holiday schedules
  - — Filling in the Routing Table

Administering the Switch Interface

The Lucent INTUITY system must know the extension length the System 25 uses. To administer the interface between the System 25 and the Lucent INTUITY, perform the following tasks (refer to Worksheet J):

1. Log in to the Lucent INTUITY system as **craft**.
2. Press ENTER to accept the AT386 default.

   The Lucent INTUITY Administration menu displays (Figure 6-1).

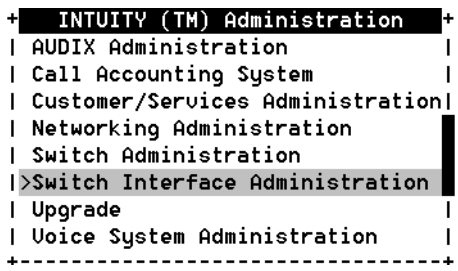


Figure 6-1. Lucent INTUITY™ Administration Menu

3. Select:

```
> Switch Interface Administration
```

   The Switch Interface Administration screen displays (Figure 6-2).

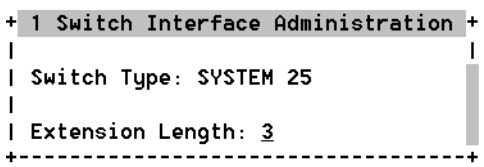


Figure 6-2. Switch Interface Administration Window

CAUTION:

If no change is required, that is, the extension length matches that of the System 25, do not continue this procedure. In that case, Press CANCEL (F6), and proceed to "Administering the Address Ranges on the Lucent INTUITY Machine" on page 6-8.

4. Enter *3 or 4* in the `Extension Length:` field, as per Worksheet J.

5. Press SAVE (F3).

   The Update System 25 SWIP Parameters window displays (Figure 6-3).

```
+ 2        Update SYSTEM 25 SWIP Parameters          +
|UPDATE SYSTEM 25 SWIP PARAMETERS                     |
|                                                     |
|Update Successful.                                   |
|
|In order for the new Extension Length to become
|effective, please restart the Voice System.
|                                                     |
|Press CANCEL to leave this window.                   |
+-----------------------------------------------------+
```

Figure 6-3. Update System 25 SWIP Parameters Window

6. Press CANCEL (F6) repeatedly to reach the Administration menu (Figure 6-1 on page 6-2).
7. If your site has TCP/IP networking, continue with the next procedure. If your site does not have TCP/IP, proceed to "Stopping and Restarting the Voice System" on page 6-6.

Administering TCP/IP Networking

Transmission Control Protocol/Internet Program (TCP/IP) is a set of protocols that links computers across a wide variety of networks. A TCP/IP connection to the AUDIX server is required for the trusted server to communicate with AUDIX.

Before You Begin

You will need to know the:

- Network IP address
- Host Identifier (AUDIX server name)
- Subnet mask
- Gateway Identifier (ID) to administer TCP/IP.

Your PC or LAN/Network system administrator should have this information.

To administer TCP/IP Networking, perform the following tasks:

1. Starting from the Administration menu (Figure 6-1 on page 6-2), select:

```
> Networking Administration
    > TCP/IP Administration
```

The system displays the TCP/IP Administration window (Figure 6-4).

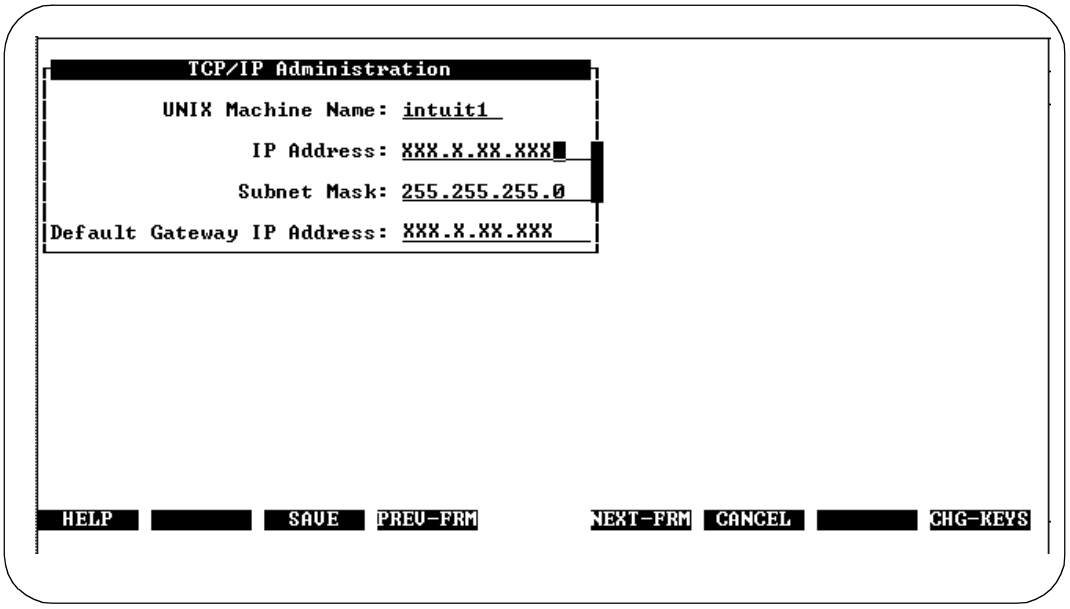


Figure 6-4. TCP/IP Administration Window; Administering TCP/IP

2. Enter the *AUDIX server name* in the `UNIX Machine Name:` field. This name should be listed on the *Installation Information* worksheet. This is a case-sensitive field, so capital letters must be typed as capitals, and lowercase letters as lowercase.

   NOTE:
   This name *must* be the same as the *local machine name* specified on the Local Machine Administration screen. It cannot contain any embedded spaces, for example, denver 1, and cannot start with a number.

3. Enter the *IP (Internet Protocol) address* in the `IP Address:` field and press TAB. This is the Lucent INTUITY system's address. Your PC/LAN system administrator should have this information.

4. Enter the *subnet mask* in the `Subnet Mask:` field.

   The subnet mask is used to determine which bytes of the IP address specify the network and host addresses. This is an optional field. If there is no entry for this field on your worksheet, leave the field blank. The system will automatically use a default.

   NOTE:
   The default value may conflict with your LAN configuration. Check with your PC/LAN system administrator to ensure compatibility.

5. Enter the *default gateway IP address* in the `Default Gateway IP Address:` field.

   The default gateway IP address is the address of the gateway router that serves to connect to addresses on other LANs. This field is left blank if the Lucent INTUITY system will only be communicating with other machines on the same LAN.

6. Press CHG-KEYS (F8) and then BRD CNFG (F2). The system displays the Ethernet Board Configuration window (Figure 6-5).

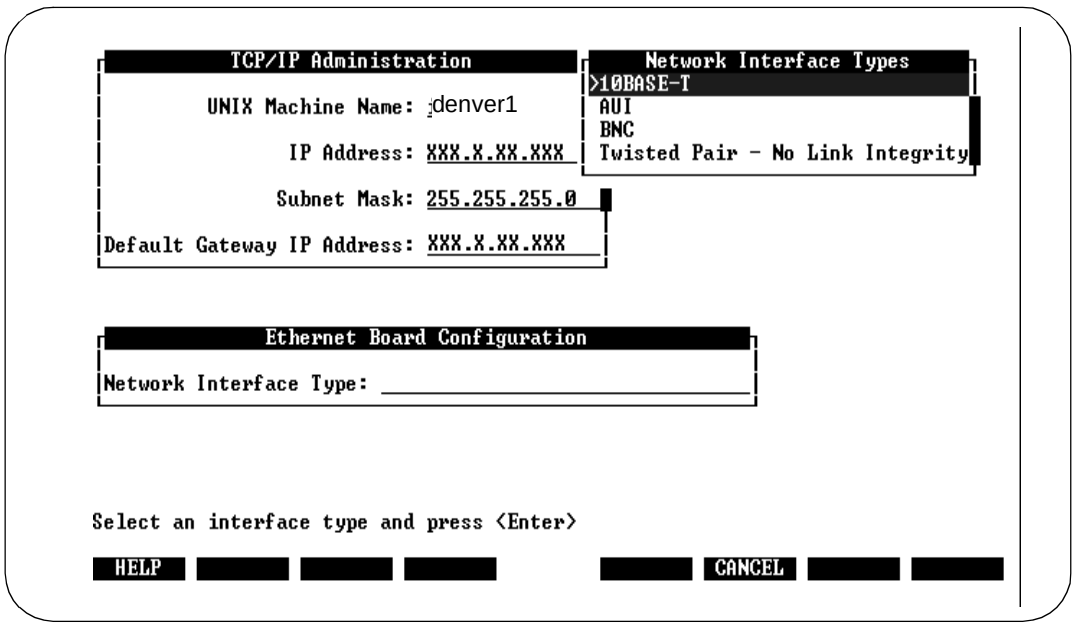


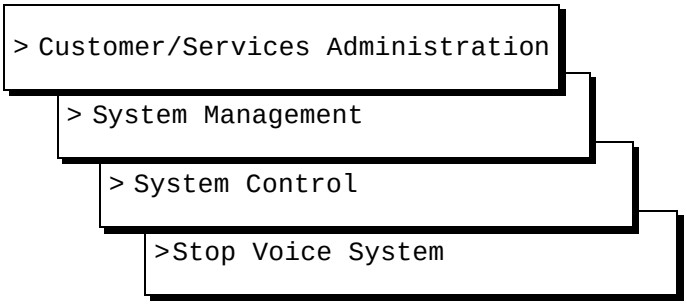
Figure 6-5. Ethernet Board Configuration Window; Administering TCP/IP for Message Manager

7. Press CHOICES (F2) to display a list of the network interface types.
8. Highlight the *network interface type* to be used on this system and press RETURN. Your PC/LAN System Administrator should have this information.
9. Press SAVE (F3) to save the Ethernet Board configuration.
10. Press SAVE (F3) to save the TCP/IP administration values.
11. Press CANCEL (F6) twice to return to the Administration menu.
12. Continue with the next procedure.

Stopping and Restarting the Voice System

To effect the changes you made to the Switch Interface and to TCP/IP networking (if applicable), you must stop and restart the voice system. Use the following procedure:

1. From the Administration menu (Figure 6-1 on page 6-2), select:



CAUTION:
Be sure to choose `Stop Voice System`*. Do* ***not*** *choose* `Shutdown Voice System`*.*

   The system displays the Stop Voice System window.

2. Enter **y** to confirm that you wish to stop the voice system.

   To cancel the request, type **n**

   When the process is finished, the system displays the message,
   "`The Voice System has stopped`
   `Press ENTER to continue...`"

3. Press ENTER to continue.

   The System Control menu redisplays.

4. Select `Start Voice System`.

   The system starts the voice system and performs some system validation. When the process is finished, the system displays the message:

   ```
   Startup of the Voice System is complete
   Press ENTER to continue...
   ```

5. Press ENTER.

   The System Control menu redisplays.

6. Press CANCEL (F6) repeatedly to return to the Administration menu (Figure 6-1 on page 6-2) and continue with the next procedure.

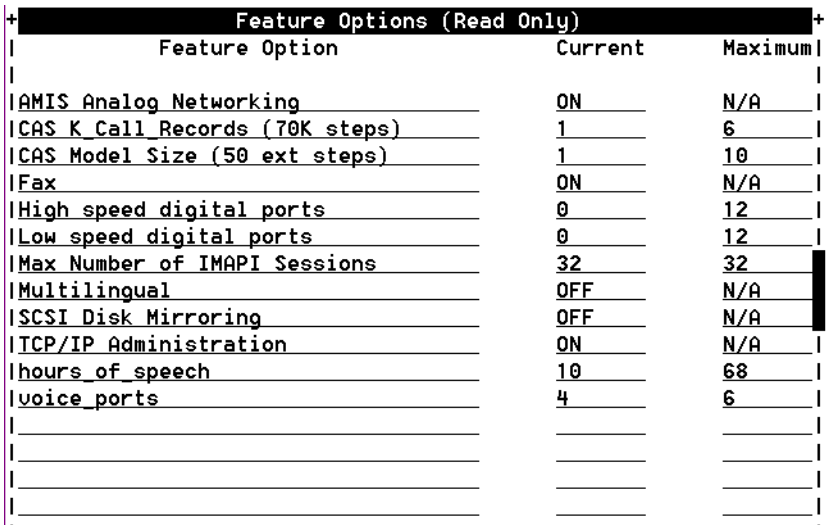
Verifying Feature Options

The Lucent INTUITY software is loaded and enabled at the factory according to what your business ordered. To ensure that all purchased features are available, check the Feature Options window by performing the following tasks:

1. From the Administration menu (Figure 6-1 on page 6-2), select:

```
> Customer/Services Administration
    > Feature Options
```

The system displays the read-only Feature Options window (Figure 6-6).



Feature Options (Read Only)

Feature Option	Current	Maximum
AMIS Analog Networking	ON	N/A
CAS K_Call_Records (70K steps)	1	6
CAS Model Size (50 ext steps)	1	10
Fax	ON	N/A
High speed digital ports	0	12
Low speed digital ports	0	12
Max Number of IMAPI Sessions	32	32
Multilingual	OFF	N/A
SCSI Disk Mirroring	OFF	N/A
TCP/IP Administration	ON	N/A
hours_of_speech	10	68
voice_ports	4	6

Figure 6-6. Feature Options (Read Only) Window; Verifying that Features are Enabled

2. Verify that all purchased features are correct. Some things to check include, but are not limited to, the:
   - AMIS Analog Networking is set to ON (if fax and/or AMIS was purchased)
   - Fax is set to ON (if purchased)
   - Number of hours of speech
   - Number of voice ports

3. If any fields are OFF for features that you purchased, call the support center to request that the features be enabled for your Lucent INTUITY platform. If any numeric values (for example, voice ports) differ from the worksheets, contact your account representative.
4. Press CANCEL (F6) twice to return to the Administration menu (Figure 6-1 on page 6-2).
5. Continue with the next procedure.

Administering the Address Ranges on the Lucent INTUITY Machine

Valid address (extension) ranges must be administered on the Lucent INTUITY machine for the AUDIX application to properly service incoming calls. To update the local Lucent INTUITY machine on the local Machine Profile screen, perform the following tasks (refer to Worksheet K):

1. Starting from the Administration menu (Figure 6-1 on page 6-2), select:

```
> AUDIX Administration
```

2. At the `enter command:` prompt, enter either:

Full Command Version	Short Command Version
change machine	**ch ma**

   The system displays the Machine Profile screen (Figure 6-7).

3. Fill out the fields in this screen using the information in Table 6-1 and on Worksheet K.

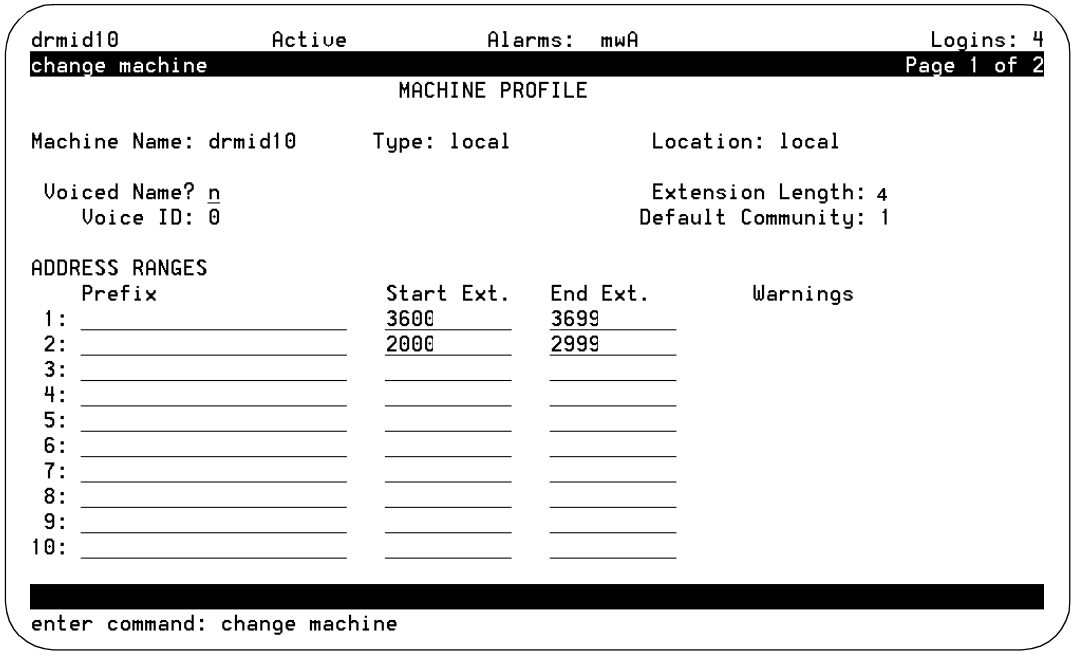


Figure 6-7. Machine Profile Screen for the Local Machine, Page 1

NOTE:
The `Machine Name`, `Type`, `Location`, `Extension Length`, and `Voice ID` fields are display only and cannot be changed.

Table 6-1. Local Machine Profile Screen — Page 1 Description

Field	Description/Procedure
Machine Name: Valid Input: Display only	Displays the Machine Name for the local machine entered in the Local Machine Administration window.
Machine Type: Valid Input: Display only	Displays `local`.
Location: Valid Input: Display only	Displays `local`.

Continued on next page

Table 6-1. Local Machine Profile Screen — Page 1 Description — *Continued*

Field	Description/Procedure
Voiced Name? Valid Input: n = no	The system sets this field to **y** when a system administrator with announcement permission records a name for the local system. Enter **n** into this field *only* if you have previously recorded a voiced name for this machine and would now like that voiced name to be deleted.
Extension Length: Valid Input: Display only	This display-only field indicates the length of extensions on the local system. (For System 25, this value is either 3 or 4.)
Voice ID: Valid Input: Display only	Display-only field automatically assigned by the system and used when recording the voiced name.
Default Community: Valid Input: An integer between 1 and 15	Enter *the number* to be used as the default community for AUDIX users for the sending restrictions feature. Typically, the default user community = 1.
Prefix: Valid Input: 0 – 21 alphanumeric characters	This is an optional entry field. The prefix can be used to distinguish between machines that have overlapping extension ranges Prefixes can be used on the local machine, but they limit the functionality and are not recommended.
Start Ext. Valid Input: 3 - 10 digits	Enter the *starting extensions for the ranges of telephone numbers* used on the local system (a block of switch extensions that can be used at the local system when assigning users). For example, if your system uses extensions between 2000 and 3000, enter **2000** in the `Start Ext.` field. Up to 10 different ranges can be specified to pinpoint the exact set of extension blocks used by the local system. The length of the start and end extension must agree with the `Extension Length` field. For a 4-digit extension, the default is 0000 to 9999.
End Ext. Valid Input: 3 - 10 digits	Enter the *ending extensions for the ranges of telephone numbers* used on the local system. For example, if your system uses extensions between 2000 and 3000, enter **3000** in the `End Ext.` field.
Warnings	A display-only field which shows when a duplication or overlap of an extension range for another machine is being assigned.

4. Press ENTER (F3) to save the information to the system database.

   The system displays the message `Command Successfully Completed`, and the cursor returns to the command line.

5. Type **exit** to leave AUDIX Administration and continue with the next procedure.

Administering Voice Ports

The voice ports on the Lucent INTUITY must be administered for the proper services. (Refer to Worksheet L.)

To administer the voice ports, perform the following tasks:

1. Starting from the Administration menu (Figure 6-1 on page 6-2) select:

   ```
   > Customer/Services Administration
       > Diagnostics
           > Voice Board Diagnostics
   ```

   The system displays the Diagnose Voice Equipment window (Figure 6-8).

```
+                          Diagnose Voice Equipment                           +
|                                                                             |
|                                                                             |
|  Card  0 is IUC6   O.S.Index:  0        Function: TipRing                   |
|                    State: Inserv                                            |
|  CD.PT CHN STATE   STATE-CHNG-TIME  SERVICE-NAME PHONE   GROUP   TYPE       |
|   0.0  0   Inserv  Sep 20 16:19:54  *DNIS_SVC    400     2       IUC6       |
|   0.1  1   Inserv  Sep 20 16:19:54  *DNIS_SVC    401     2       IUC6       |
|   0.2  2   Inserv  Sep 20 16:19:54  *DNIS_SVC    402     2       IUC6       |
|   0.3  3   Inserv  Sep 20 16:19:54  *DNIS_SVC    403     2       IUC6       |
|                                                                             |
|                                                                             |
|                                                                             |
|                                                                             |
|                                                                             |
+-----------------------------------------------------------------------------+

 HELP  PREVPAGE  NEXTPAGE  PREV-FRM          NEXT-FRM  CANCEL  CMD-MENU  CHG-KEYS
```

Figure 6-8. Diagnose Voice Equipment Window; Releasing Voice Ports

2. If the column under STATE reads MANOOS (Manually Out Of Service), then continue with the next step.

   If the column under STATE reads INSERV (In Service), press CANCEL (F6) repeatedly to return to the Administration menu and proceed to step 9.

3. Press CHG-KEYS (F8) and then RELEASE (F3).

   The system releases the voice ports and displays a pop-up window.

4. Enter *card* or *channel* in Equipment: field

5. Enter *card number* or **all** in the Number: field. You can card numbers in several forms:

   - A single card number (for example: 1)
   - A range of card numbers (for example: 0-4)
   - A list of single card numbers (for example: 6,9,10)
   - A list of single card numbers and ranges (for example: 1,4-7,9)
   - *All* to indicate all cards

6. Enter **y** in Change Immediately? field.

7. Press SAVE (F3) to save your changes to the system database.

8. Press CANCEL (F6) repeatedly to return to the Administration menu (Figure 6-1 on page 6-2).

9. Select:

   ```
   > Voice System Administration
       > Voice Equipment
   ```

   The system displays the Voice Equipment window (similar to Figure 6-8, except for the title of the window).

10. Press CHG-KEYS (F8) and then ASSIGN (F3).

    The system displays the Assign Menu (Figure 6-9).

```
+            Assign            +
| Channels to Groups            |
| Channel to PBX Extension      |
| Services to Called Numbers    |
|>Services to Channels          |
+-------------------------------+
```

Figure 6-9. Assign Menu; Assigning Service to Channels and Called Numbers

11. Select:

```
> Services to Channels
```

    The Assign Services to Channels window displays.

12. Press CHOICES (F2).

    A menu displays with a listing of all possible services. Because service names can be case-specific, you should always use the CHOICES (F2) when choosing services.

13. Select ***DNIS_SVC** and press ENTER.

14. Enter the *voice channel number(s) to be assigned* to the designated service or **all** in the `Channels:` field. You can channel numbers in several forms.

    - A single channel number (for example: 1)
    - A range of channel numbers (for example: 0-4)
    - A list of single channel numbers (for example: 6,9,10)
    - A list of single channel numbers and ranges (for example: 1,4-7,9)
    - *All* to indicate all channels

15. Press SAVE (F3).

    The system displays a window containing an informational message verifying that the designated voice channels are assigned the specified service.

16. Press CANCEL (F6) to return to the Voice Equipment window.

17. To assign more services to voice channels, repeat steps 3 through 15. When all assignments are complete, proceed to the next step.

18. Press CHG-KEYS (F8) and then ASSIGN (F3).

    The system displays the Assign Menu (Figure 6-9).

19. Select:

```
> Services to Called Numbers
```

    The Assign Services to Called Number window displays (Figure 6-10).

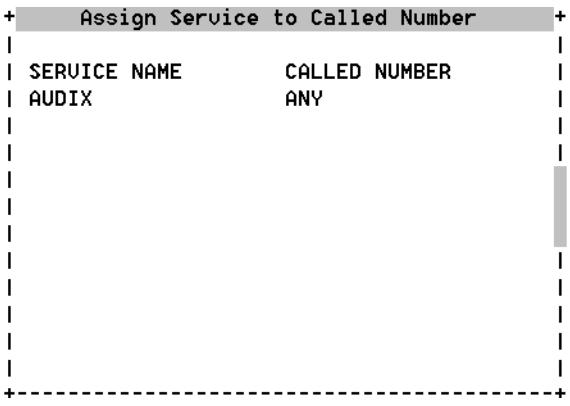


Figure 6-10. Assign Service to Called Number Window

20. Press CHG-KEYS (F8) and then ADD (F1).

    The Add Service to Called Number window displays.

21. Press CHOICES (F2).

22. Select either:

    - *AUDIX*
    - *AUDIX+ldg* – if you have Lucent INTUITY Lodging

    NOTE:
    The menu choice `AUDIX+ldg` will not appear if the Lodging software is not installed on your system.

23. Enter **ANY** in the `Corresponding called number:` field.

24. Press SAVE (F3) to save the information to the system database.

25. Press CANCEL (F6) repeatedly to return to the Administration menu (Figure 6-1 on page 6-2) and continue with the next procedure.

Administering AUDIX System Parameters

To set basic AUDIX system parameters, perform the following tasks (refer to Worksheet J):

1. Starting from the Administration menu (Figure 6-1 on page 6-2), select:

   ```
   > AUDIX Administration
   ```

2. At the `enter command:` prompt, enter either:

Full Command Version	Short Command Version
change system-parameters features	**ch sys fe**

   The system displays the System-Parameters Features screen.

3. Press NEXTPG (F7) twice.

   The system displays page 3 of the System-Parameters Features screen (Figure 6-11).

```
messngr            Active          Alarms: M  A                    Logins: 4
change system-parameters features                                Page 3 of 4
                          SYSTEM-PARAMETERS FEATURES

CALL TRANSFER OUT OF AUDIX
 Transfer Type: basic                      Transfer Restriction: subscribers
 Covering Extension:

ANNOUNCEMENT SETS
             System: us-eng                    Administrative: us-eng

RESCHEDULING INCREMENTS FOR UNSUCCESSFUL MESSAGE DELIVERY
 Incr 1: 0  days  0  hrs 5  mins      Incr 2: 0  days 0  hrs 15 mins
 Incr 3: 0  days  0  hrs 30 mins      Incr 4: 0  days 1  hrs 0  mins
 Incr 5: 0  days  2  hrs 0  mins      Incr 6: 0  days 6  hrs 0  mins
 Incr 7: 1  days  0  hrs 0  mins      Incr 8: 1  days 0  hrs 0  mins
 Incr 9: 7  days  0  hrs 0  mins      Incr10: 14 days 0  hrs 0  mins

enter command: change system-parameters features
 1Cancel  2Refresh  3Enter  4ClearFld 5Help  6Choices  7NextPage 8PrevPage
```

Figure 6-11. System-Parameters Features Screen – Page 3

4. Enter **basic** in the `Transfer Type:` field.
5. Enter **subscribers** in the `Transfer Restriction:` field.

6. Enter *the operator's extension*, if any, in the `Covering Extension:` field.

SECURITY ALERT:

Allowing transfers out of AUDIX increases the risk of toll fraud. That risk is increased even more if calls are allowed to transfer with a 0 press and then go to coverage at the transferred-to extension. See Appendix C, "System Security and Toll Fraud" in this book and the GBCS Product Security Handbook, 555-025-600 for information on securing your system.

7. Press ENTER (F3) to save the information to the system database.

   The system displays the message `Command Successfully Completed`, and the cursor returns to the command line.

8. Continue with the next procedure.

Setting up a Business Schedule

To set up the business schedule, perform the following tasks (Refer to Worksheet N):

1. Starting from the Administration menu (Figure 6-1 on page 6-2), select:

```
> AUDIX Administration
```

2. At the `enter command:` prompt, enter either:

Full Command Version	Short Command Version
change auto-attendant-routing business-schedule *schedule_number*	**ch au bu *schedule_number***

   where ***schedule_number*** is the number (1–4) that corresponds to the schedule you would like to administer. (The name of the schedule can be substituted for the number, if you prefer.) The system displays the Auto-Attendant Routing Business Schedules screen (Figure 6-12).

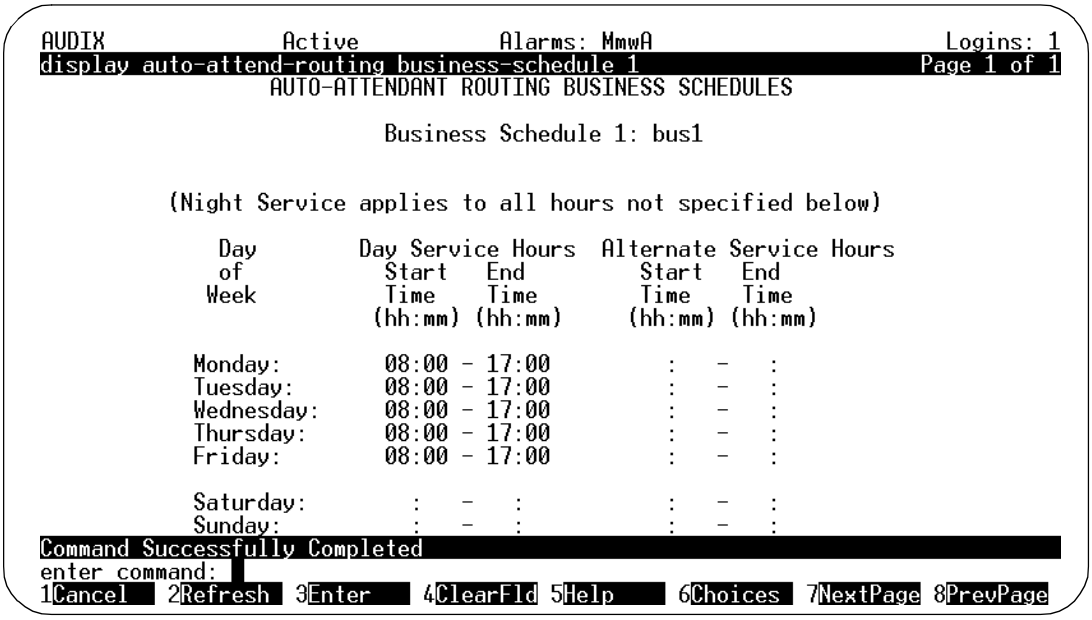


Figure 6-12. Auto-Attendant Routing Business Schedules Screen; Setting up an Auto-Attendant Schedule

3. Complete the fields on this screen using the information in Table 6-2.

Table 6-2. Field Definitions: Auto-Attendant Routing Business Schedule Screen

Field Name	Description/Procedure
Business Schedule *number*: Valid Input: 1- to 8- alphanumeric characters	OPTIONAL: Type *a new schedule name*, if the default name for the schedule does not seem descriptive enough.
Days of Week: Valid Input: display only	Starting with Monday, the weekdays are listed in this display-only column.
Day Service Hours, Start Time: End Time: Valid Input: 24-hour clock time in the format *hh:mm*	Type in the *time at which daytime operation of a telephone should begin* in the `Start Time:` field. Type in the *time at which daytime operation of a telephone should end* in the `End Time:` field. (AM starts at 00:00, midnight. PM times are 12:00 – 23:59.) Hours outside of this range are considered to be night service hours.

Continued on next page

Table 6-2. Field Definitions: Auto-Attendant Routing Business Schedule Screen *— Continued*

Field Name	Description/Procedure
Alternate Service Hours, Start Time: End Time: Valid Input: 24-hour clock time in the format *hh:mm*	Type in the *time at which alternate service should begin* in the `Start Time:` field. Type in the *time at which alternate service should end* in the `End Time:` field. (AM starts at 00:00, midnight. PM times are 12:00 – 23:59.) Alternate service hours indicates times that may be considered an exception to normal day service (lunch time, for example). *An alternate service period must either fall entirely inside or entirely outside of day service hours*.

4. Press ENTER (F3) to save the information to the system database.

   The system displays the message `Command Successfully Completed`, and the cursor returns to the command line.

5. Continue with the next procedure.

Setting up a Holiday Schedule

To set up the holiday schedule, perform the following tasks (Refer to Worksheet O):

1. Starting from the Administration menu (Figure 6-1 on page 6-2), select:

   ```
   > AUDIX Administration
   ```

2. At the `enter command:` prompt, enter either:

Full Command Version	Short Command Version
change auto-attendant-routing holiday-schedule *schedule_number*	**ch au ho *schedule_number***

   where ***schedule_number*** is the number (1–4) that corresponds to the schedule you would like to administer. (The name of the schedule can be substituted for the number if you prefer.) The system displays the Auto-Attendant Routing Holiday Schedules screen (Figure 6-13).

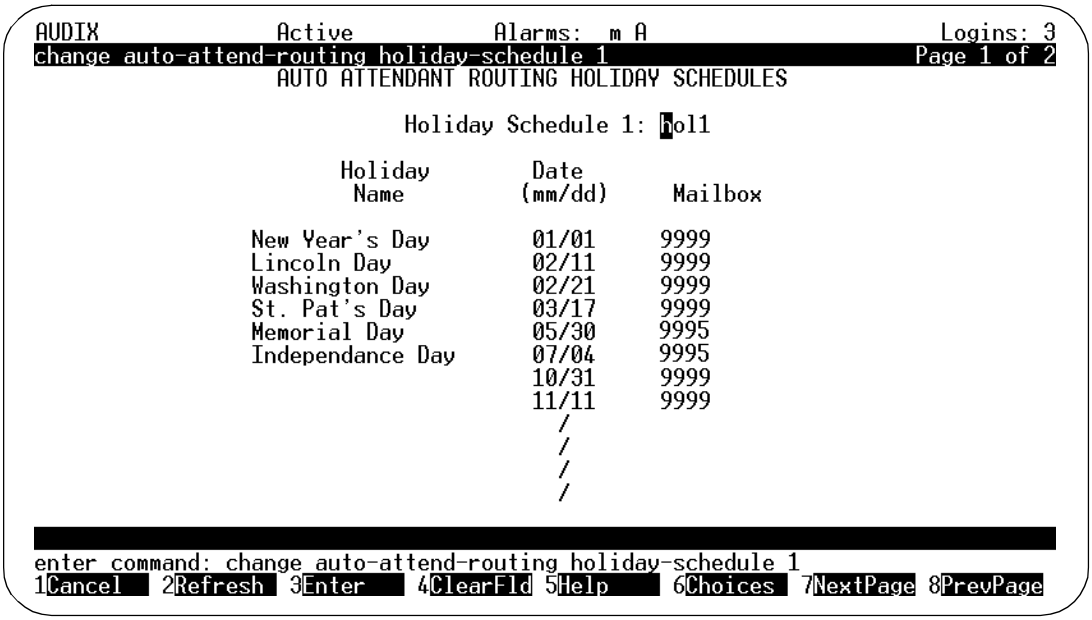


Figure 6-13. Auto Attendant Routing Holiday Schedules screen, Page 1; Setting up an Auto-Attendant Schedule

NOTE:
Before you can fill in the `Mailbox` field, the auto-attendants must exist.

3. Complete the fields on this screen using the information in Table 6-3.

Table 6-3. Field Definitions: Auto-Attendant Routing Holiday Schedule Screen

Field Name	Description/Procedure
Holiday Schedule *number*: Valid Input: 1 to 8 alphanumeric characters	Type *a new schedule name*, if the default name does not seem descriptive enough. Use capitol letters here if you intend to use them in the name of this schedule in the future.
Holiday Name Valid Input: This is an optional-entry field 1 to 18 alphanumeric characters	Type the *name of the holiday*. Any input into this field is for your convenience only and is not used by the system.

Continued on next page

Table 6-3. Field Definitions: Auto-Attendant Routing Holiday Schedule Screen *— Continued*

Field Name	Description/Procedure
Date: Valid Input: Month and day in the format *mm/dd*	Type the *date on which the affected incoming call will be forwarded* to mailbox.
Mailbox: Valid Input: This is an optional-entry field Any existing mailbox extension	Type the *mailbox extension of the auto-attendant* to be used for this holiday. This can be a specific reference or a general one, for example, you can make separate extensions for New Year's Day, Independence Day, etc., or you can route to one extension for all holidays. If you choose separate extensions, be sure to record a greeting for each one. **NOTE**: Holidays with no mailbox extension will be ignored by the call routing function.

4. Press ENTER (F3) to save the information to the system database.

   The system displays the message `Command Successfully Completed`, and the cursor returns to the command line.

5. Continue with the next procedure.

Filling in the Routing Table

Now that the schedules are set up to suit your business purposes, you are ready to complete the routing table. (Refer to Worksheet P.)

To set the routing table, perform the following tasks:

1. Starting from the Administration menu (Figure 6-1 on page 6-2), select:

```
> AUDIX Administration
```

2. At the `enter command:` prompt, enter either:

Full Command Version	Short Command Version
change auto-attendant-routing routing-table	**ch au ro**

   The system displays the Auto-Attendant Routing Table screen (Figure 6-14).

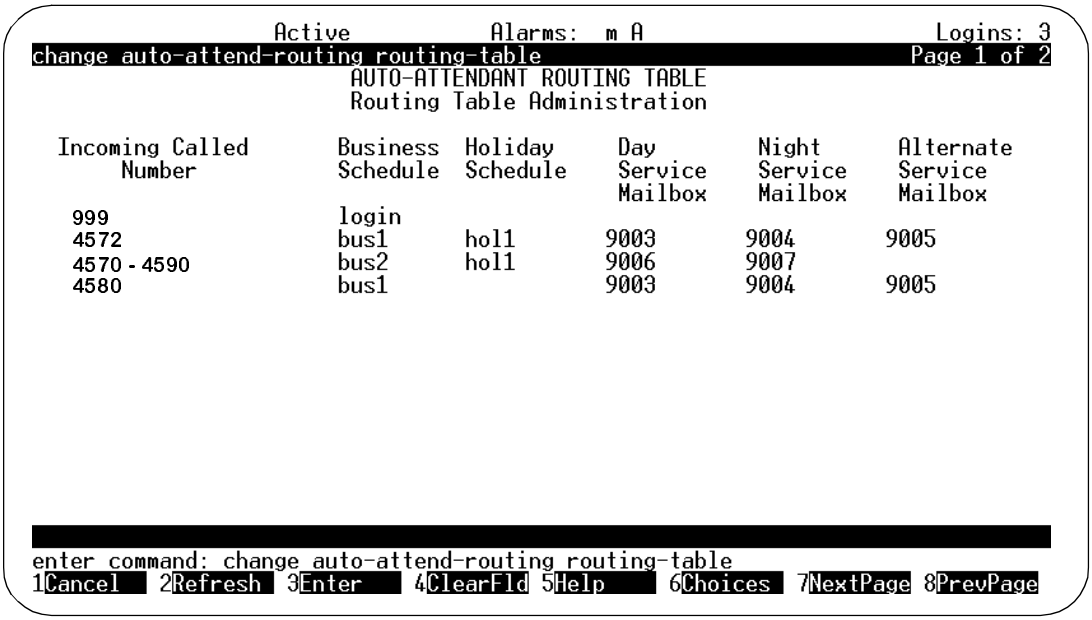


Figure 6-14. Auto-Attendant Routing-Table Screen

The routing function redirects calls to specified numbers according to the instructions given in the business and holiday schedules and the routing table. Using Figure 6-14 as an example, if a call came in on extension 4572 on New Year's Day, the call would be routed according to the Holiday Schedule *hol1*.

Referring to Figure 6-13 on page 6-19, you see that on 01/01 (New Year's Day), calls are directed to extension 9999. This extension might be administered with a greeting that tells the caller that the office is closed for the day. If the call came in on extension 4572 during a regular business day, it would be routed to extension 9003.

3. Complete the routing table using the information in Table 6-4.

Table 6-4. Field Definitions: Auto-Attendant Routing Table screen

Field Name	Description/Procedure
Incoming Called Number Valid Input: 1- to 8-alphanumeric characters	Type in the *numbers to be redirected*. These can be any incoming numbers reported to AUDIX by the switch (perhaps an incoming trunk number (999) or a covered extension number). If you are implementing: ■ Multiple primary auto-attendants, enter each phantom extension ■ Multiple secondary auto-attendants, enter the Direct Trunk Attendant Console (DTAC) and/or phantom extension ■ A single secondary auto-attendant using a DTAC, enter the DTAC extension If a number appears twice in this column, the first instance prevails. For example, 4572 appears before the range 4570-4590, and will be treated separately per its first appearance. However, 4580 appears after the range of numbers, so it will be treated as set out on the line associated with the range, and ignored.
Business Schedule Valid Input: 1- to 8-alphanumeric characters or a value of 1 to 4	Type the *name or number of the business schedule* that is to determine how the incoming number is to be treated. The name **login** is reserved to indicate that a direct, external call to the associated incoming number is allowed to log in, that is, if you call in over this trunk, AUDIX will ask you to log in.
Holiday Schedule Valid Input: 1- to 8-alphanumeric characters a value of 1 to 4	Type the *name or number of the holiday schedule* (if any) that is to determine how the incoming number is to be treated on holidays.

Continued on next page

Table 6-4. Field Definitions: Auto-Attendant Routing Table screen — *Continued*

Field Name	Description/Procedure
Mailboxes, Day Service, Night Service, Alternative Service Valid Input: see description at right	**NOTE**: *All auto-attendant mailbox extensions must be defined before they can be entered in these columns.* ■ Day Service Mailbox: Type the *extension number* of the auto-attendant mailbox to be accessed during the business hours given in the business schedule. This field must be filled in if the associated business schedule either follows the (Merlin) switch's night service status or specifies day service hours. ■ Night Service Mailbox: Type the *extension number* of the auto-attendant mailbox to be accessed during the period not otherwise specified in the business schedule. ■ Alternate Service Mailbox: Type the *extension number* of the auto-attendant mailbox to be accessed during the alternate-service period given in the business schedule. This field must be filled in if the associated business schedule specifies alternate service hours.

4. Press ENTER (F3) to save the information to the system database.

   The system displays the message `Command Successfully Completed`, and the cursor returns to the command line.

5. Enter an administrative command at the `enter command:` prompt or type exit to leave AUDIX Administration.

Other Lucent INTUITY Administration

Depending on the other Lucent INTUITY features you've purchased, you may have additional feature administration to perform, such as:

- Lucent INTUITY Message Manager
- Lucent INTUITY FAX Messaging

See *Lucent INTUITY™ Software Installation for Release 3.0, 585-310-160,* for administration procedures.

Implementing Automated Attendants with System 25

A

Overview

This appendix describes the planning, implementation, and administrative processes required to implement multiple Automated Attendants (auto-attendants) with a System 25.

This appendix provides information with which you can fill out the relevant planning worksheets (located in Chapter 2). Additionally, this appendix provides an INTUITY AUDIX administration checklist and the procedural information to administer an auto-attendant to redirect an incoming DID trunk call to AUDIX login service or to auto-attendant service.

Purpose

After reading this chapter, you will know how to:

- Plan for auto-attendants, including auto-attendants using:
  - — Primary auto-attendant mode
  - — Secondary auto-attendant mode
  - — Multiple auto-attendants
- Design Main and Nested Automated Attendants
- Set up operational schedules, including:
  - — Business, holiday, and alternate operational schedules
- Routing incoming calls to the auto-attendant
- Set up phantom extensions

- Implement auto-attendants, including
  - — Implementing a single auto-attendant
  - — Implementing multiple automated attendants
- Perform required AUDIX administration
- Perform optional AUDIX administration
- Perform required System 25 Administration, including:
  - — Administering a single secondary auto-attendant
  - — Administering multiple secondary auto-attendants
  - — Administering multiple main auto-attendants

Planning for Automated Attendants

Planning for automated attendants (auto-attendants) involves understanding what an auto-attendant is, and designing your system based on that concept, including:

- Primary mode
- Secondary mode
- Business schedule(s)
- Holiday schedule(s)
- Alternate service schedule(s)
- Routing table
- Phantom extensions

This appendix discusses the planning and implementation of auto-attendants.

What is an Automated Attendant?

An auto-attendant is an interactive telephone answering system that answers incoming calls with a pre-recorded announcement and routes them based on the caller's response to menus and prompts.

You set up an auto-attendant so that callers hear a menu of options. Callers then press the button on their telephone keypad that corresponds to the menu option they would like and the auto-attendant executes the selected option. Callers who do not have touch tone telephones are typically told that they can hold or call another number to speak with a live attendant.

You can design an auto-attendant menu system, or *menu tree*, to contain subordinate layers of menus or bulletin boards. The sub-menus, or *nested menus*, play additional options that can include a choice leading to another nested menu.

The voiced menu options that callers hear are actually personal greetings that you record for the auto-attendant's extension. You can easily change the text of the message just as you would any personal greeting. You can also use the Multiple Personal Greetings feature to provide different menus and options for different types of callers.

The auto-attendant can be administered to function in a primary call handling mode or a secondary call handling mode:

- In *primary call handling mode*, the incoming calls ring are answered directly by the auto-attendant. A receptionist backs up the auto-attendant by handling overflow calls and calls from people needing assistance (for example, time-outs and dial 0).
- In *secondary call handling mode*, a receptionist answers as many calls as possible and the auto-attendant handles any overflow calls.

The auto-attendant feature can be implemented as a single attendant, that is, as a single extension, or a business can use multiple auto-attendants to handle a variety of call types (for example, non-English languages) and call times (for example, during business hours, during lunch, and after hours).

Primary Automated Attendant Mode

When a business uses the INTUITY AUDIX auto-attendant service in primary mode, calls are administered to ring immediately at the INTUITY AUDIX auto-attendant service. This is done by administering the trunks to ring into a System 25 AUDIX calling group (a special type of calling group) whose members are the Lucent INTUITY system voice ports.

System 25 sends the trunk number (999) to INTUITY AUDIX for direct (non-coverage) external calls. The INTUITY AUDIX routing table maps the trunk number received from the telephone system to the auto-attendant mailbox numbers.

Customers may want to play different auto-attendant greetings and/or handle calls differently during day and night times, and holidays. This is done by specifying different auto-attendant mailboxes for day and night times in the auto-attendant routing table. The routing table also allows customers to specify an auto-attendant mailbox for handling calls during the alternate service hours.

Secondary Automated Attendant Mode

Auto-attendant service may be used in secondary mode to back up the receptionist. This is typically implemented through coverage of the receptionist. INTUITY AUDIX identifies coverage calls for the receptionist and routes these calls to an appropriate auto-attendant mailbox anytime a coverage call is received. INTUITY AUDIX uses the appropriate auto-attendant mailbox number in the routing table as the called party, taking into account holidays and time of day. If no matching entry is found, the called party number received from the telephone system is used to provide standard Call Answer service.

This scheme allows a business to play different greetings and menus depending on whether the business schedule is providing day or night service, even when the auto-attendant service is configured to operate in backup mode.

Multiple Automated Attendants

Because INTUITY AUDIX implements auto-attendants as a special type of mailbox, it is possible to have multiple main auto-attendants in one Lucent INTUITY system. This is done by administering phantom extensions that terminate trunks and/or DID numbers and cover directly to AUDIX. The incoming call is transferred to the mailbox specified by the called number or routed to an alternate mailbox as defined by the routing table (that process the call before it reaches INTUITY AUDIX).

Each auto-attendant may have separate menus for routing calls during business hours and non-business hours and custom service for special hours and for holidays. The call is passed from the System 25 to the Lucent INTUITY system with call information that allows the Lucent INTUITY system to provide auto-attendant processing based whether the call is received directly from a trunk and/or covered from another extension.

Automated Attendant Tenant Service Operation

Sometimes a single telephone system and voice messaging system is shared by several small businesses, or a business has several divisions under the same roof. INTUITY AUDIX can provide auto-attendant service in these cases by creating multiple main-level auto-attendants and routing specific calls to each via a variety of coverage techniques.

Design Main and Nested Automated Attendants

The *main auto-attendant* is the highest level auto-attendant. The main auto-attendant plays a menu of options for selecting a telephone extension, a subordinate menu of options, or a mailbox.

Each auto-attendant may contain subordinate layers of menus or bulletin boards. The sub-menus, or *nested menus*, play additional options that can include a choice leading to another nested menu.

The auto-attendant can have as many as 10 menu options, corresponding to the buttons 0 through 9 on a touch tone telephone.

You *must* create the nested attendant in AUDIX *before* you specify it in a main or higher-layer attendant. *Create a diagram on paper* of the menu “tree” that you would like to use, and administer the auto-attendant system starting from the last (deepest) menu layer and work your way back to the main auto-attendant.

Operational Schedules

NOTE:
Typically businesses are considered “open” during the day and “closed” during the night. We use the terms “day”/”open” and “night”/”closed” interchangeably.

The INTUITY AUDIX auto-attendant service can be designed to answer incoming calls on a 24-hour/day basis or only at night, depending upon your business needs. Auto-attendants use *Business Schedules*, *Holiday Schedules*, and *Alternate Service Schedules* to determine how to route an incoming call.

Business Operational Schedule

The auto-attendant can use the INTUITY AUDIX weekly business schedule for time-of-day operation or it can rely on the telephone system to indicate when it should operate in a day schedule and night schedule.

Each Lucent INTUITY system can have up to 4 weekly business schedules (for example, the Sales and Service divisions may have completely different work schedules).

Holiday Operational Schedule

The auto-attendant can be administered to deviate from the normal business schedule for a day at a time. You might use these schedules to play different greetings and to handle calls differently on holidays.

Each Lucent INTUITY system can have up to 4 holiday schedules. Each holiday schedule can include up to 26 holidays and the auto-attendant (mailbox) to be used for each of those holidays. This allows customers to use a different holiday schedule for the sales division (opened on Columbus day) and the services division (closed on Columbus day). It also allows them to administer different auto-attendant greetings and menu options for each of those holidays.

Alternate Operational Schedule

The Alternate Service Hours feature allows the auto-attendant to play a different menu and/or handle calls differently based on the needs of the business, (for example, during lunch time or to accommodate callers from other time zones.) The routing table provides a way to do this.

Routing Table

These operational schedules are tied together within a *routing table*. A routing table applies the business schedule and a holiday schedule to an incoming called number such as an incoming trunk or covered extension. You then assign a schedule to the auto-attendant mailboxes you would like to handle the calls at the various times.

Routing Incoming Calls to the Automated Attendant

Customers who would like to provide auto-attendant coverage as a way of handling overflow calls should consider routing certain trunks specifically to the auto-attendant using *phantom extensions*, and other trunks to the live attendant. For example, sales and service employees who call in regularly can be given a separate number and their calls can be routed to the auto-attendant.

Customers who would like to redirect calls to the auto-attendant during lunch or other periods of unavailability should administer the switch either to by using the Directed Night Service feature (making the receiver the AUDIX calling group) or by using Send All Calls.

Phantom Extensions

System 25 cannot differentiate between incoming trunks. Therefore, phantom extensions are used to direct incoming trunk or DID calls to the appropriate auto-attendant service and/or to provide AUDIX login service. (Phantom extensions are also used to implement secondary fax extensions and other optional Lucent INTUITY features. See *Lucent INTUITY™ AUDIX® Release 3.3 Administration and Feature Operations*, 585-310-552 for more information on these non-auto-attendant scenarios.)

There are 3 ways to create phantom extensions:

- Floating Personal Dial Codes (FPDCs)
- Equipped station ports
- Un-equipped station ports

Each method has advantages and disadvantages. This section discusses them.

Floating Personal Dial Codes

FPDCs are virtual extensions that can be logged into any station set. FPDCs can be assigned to DID numbers but cannot terminate trunks. An FPDC does not have it's own coverage; coverage follows that of the station to which the FPDC is logged in.

The FPDC must be logged into an unused host extension that covers to AUDIX and the Send All Calls feature must be turned on for the station.

Suggested Auto-Attendant Application

This method of creating a phantom extension is useful in situations where the customer has DID, needs at least one auto-attendant, and also wants to be able to directly access AUDIX login service.

Advantages

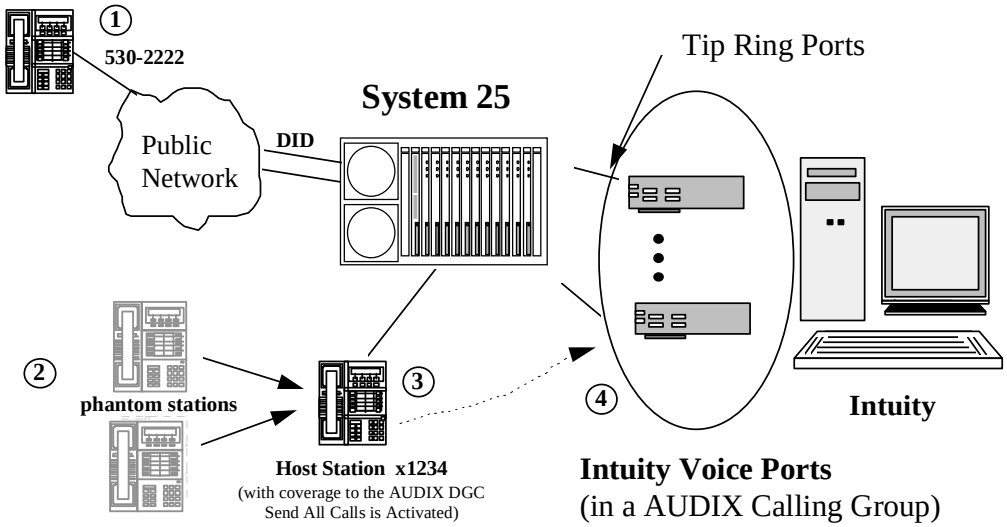
This implementation is 'clean' and there are no switch errors after power failure.

Disadvantages

The disadvantages are:

- The Send All Calls feature setting is lost after a power failure
- FPDC logging information is not backed up in switch translation. Any situation that requires a switch reload will require re-logging the FPDCs in.
- A physical station must be reserved as a host station
- FPDCs cannot support direct trunk terminations

Figure 6-15 illustrates this implementation.



1. Caller dials published number (530-2222) for auto-attendant service
2. Called Number is '2222' – 2222 is an FPDC that is logged into the host station
3. The call follows the host station's coverage to AUDIX
4. Call arrives at AUDIX, 'Called Number' is '2222'

Figure 6-15. Implementing Auto-Attendant Phantom Extensions using FPDCs

Equipped Station Ports

Phantom extensions can be created by administering unused station ports on existing circuit packs. These extensions can be treated like any other extension. As a result, trunks, DID numbers, and coverage can be assigned to them.

When this type of phantom extension is used to terminate trunks, the phantom extensions should be assigned as the 'owner' so that covered calls get identified properly. Additionally, coverage for the phantom extension must be assigned to the AUDIX DCG.

If the phantom extension is a DID extension then the System Access buttons should be removed to enable immediate coverage to AUDIX.

Suggested Auto-Attendant Application

This method of creating a phantom extension is useful in situations where the customer has spare ports and would like to have auto-attendants assigned to specific trunks.

Advantages

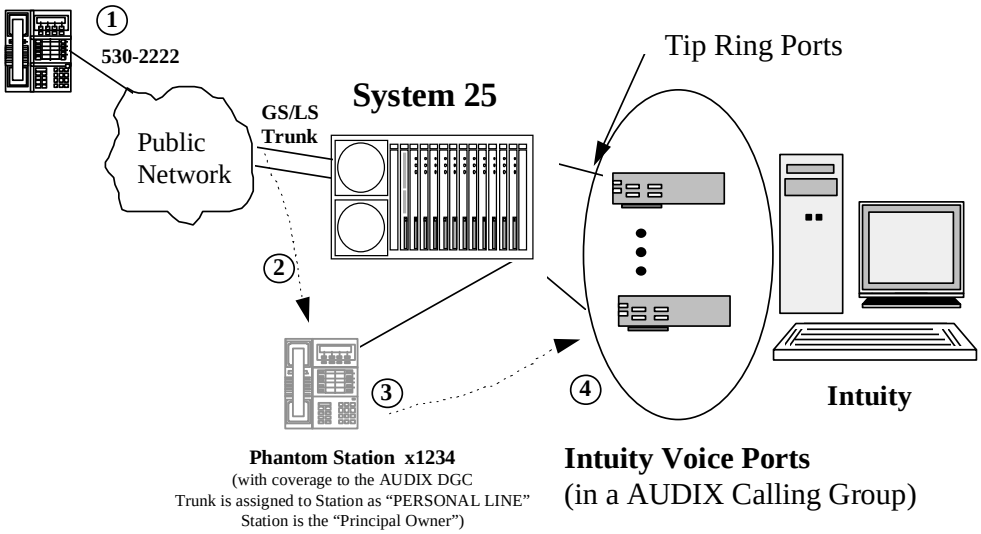
This implementation has no switch errors after power failure and it can support direct trunk termination.

Disadvantages

The disadvantages are:

- Call Answer for direct trunk call is delayed by the administered coverage interval
- The switch administrator must carefully document any administrative changes so that subsequent system changes do not overwrite the configuration

Figure 6-16 illustrates this implementation.



1. Caller dials published number (530-2222) for auto-attendant service
2. Trunk rings on phantom station
3. The call follows the phantom station's coverage to AUDIX
4. Call arrives at AUDIX, 'Called Number' is '1234'

Figure 6-16. Implementing Auto-Attendant Phantom Extensions using Equipped Station Ports

Un-Equipped Station Ports

Phantom extensions can be created by administering unused station ports on non-existent circuit packs. These extensions can be treated like any other extension. As a result, trunks, DID numbers, and coverage can be assigned to them.

Phantom circuit packs/ports are typically administered in the last slot of the third carrier.

When this type of phantom extension is used to terminate trunks, the phantom extensions should be assigned as the 'owner' so that covered calls get identified properly. Additionally, coverage for the phantom extension must be assigned to the AUDIX DCG.

If the phantom extension is a DID extension then the System Access buttons should be removed to enable immediate coverage to AUDIX.

Suggested Auto-Attendant Application

This method of creating a phantom extension is useful in situations where the customer has no spare ports and would like to have auto-attendants assigned to specific trunks.

Advantages

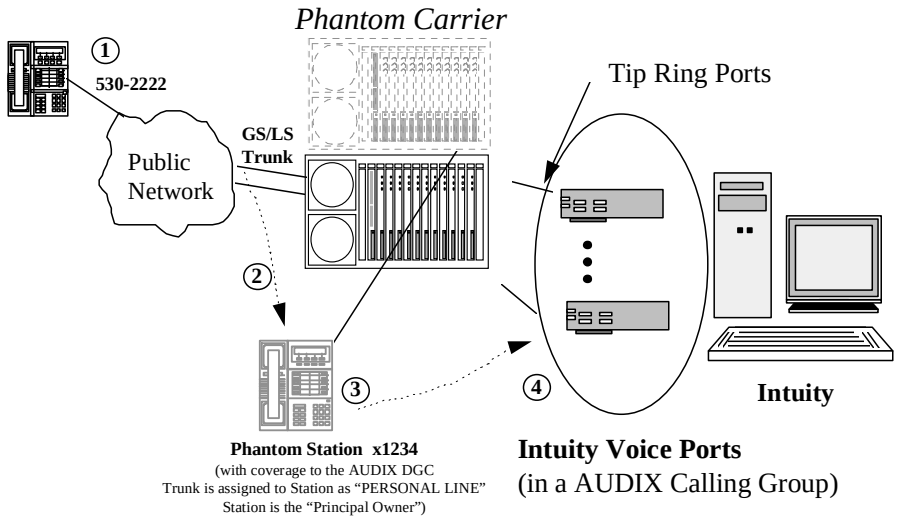
This implementation can support direct trunk termination.

Disadvantages

The disadvantages are:

- The System 25 generates a permanent error after power failure (console Alarm flashes)
- Call Answer for direct trunk call is delayed by the administered coverage interval
- The switch administrator must carefully document any administrative changes so that subsequent system changes do not overwrite the configuration

Figure 6-17 illustrates this implementation.



1. Caller dials published number (530-2222) for auto-attendant service
2. Trunk rings on phantom station
3. The call follows the host station's coverage to AUDIX
4. Call arrives at AUDIX, 'Called Number' is '2222'

Figure 6-17. Implementing Auto-Attendant Phantom Extensions using Un-Equipped Station Ports

Implementing Automated Attendants

If you choose to implement phantom extensions using FPDCs, record the FPDCs you will be using on Worksheet C, *Floating Personal Dial Code List*.

If you choose to implement phantom extensions using station ports, have Worksheet G, *Voice Station Records* available with the port assignments listed.

NOTE:
If you are using un-assigned ports, it is recommended that you highlight those ports on Worksheet G and attach the worksheet to the switch. That way another technician or administrator will be aware that – although the ports appear to be unassigned – they are actually "in use."

Using the instructions in this section, complete:

- Worksheet N, *Business Schedule*
- Worksheet O, *Holiday Schedule*
- Worksheet P, *Routing Table*

Implementing a Single Automated Attendant on the System 25

Auto-attendant concepts were discussed under "Operational Schedules" on page A-6. With that discussion as a foundation, use the following information and complete the required worksheets.

Business Schedule Worksheet (Worksheet N)

Each Lucent INTUITY system can have up to 4 weekly business schedules (for example, the Sales and Service divisions may have completely different work schedules). This gives the flexibility needed for the sales division to follow a weekly business schedule for its auto-attendant service and for the services division to use a completely different business schedule to control its auto-attendant service.

Businesses can also specify alternate service hours for additional flexibility. This allows businesses to handle calls more professionally during regularly-scheduled periods of unavailability, for example, lunch time or weekends. It can also be used by an organization spread across several time zones to handle calls appropriately when one location is closed but another is open.

A business schedule can be associated with one or more called number (which may be trunk number 999 or the phantom extension number). Each business schedule is created from Worksheet N, *Business Schedule* on page 2-37. This worksheet has the following fields and columns:

- Business Schedule

  This field contains the name of the business schedule. Default names are "bus*n*" where *n* is 1, 2, 3, or 4. The business schedule can be referred to in the Routing Table by either its name or number. The specific name "login" is reserved and cannot be used as the name of a business schedule.

- Day of Week

  This column lists the 7 days of the week. It cannot be changed.

- Day Service Hours (Start Time and End Time)

  This pair of columns lists the start and end times for day service on the specified day of week. Use 24-hour time (00:00 to 23:59) to specify start and end times. For day service only, specify start time as 00:00 and end time as 23:59.

- Alternate Service Hours (Start Time and End Time)

  This pair of columns lists the start and end times for alternate service on the specified day of week. Use 24-hour time (00:00 to 23:59) to specify start and end times. The end time must be later than the start time.

Holiday Schedule Worksheet Worksheet O

Typically, businesses like to play different greetings and handle calls differently on holidays. INTUITY AUDIX system allows customers to use 4 different holiday schedules. Each holiday schedule can include up to 26 holidays and the auto-attendant (mailbox) to be used for each of those holidays. This allows customers to use a different holiday schedule for the sales division (opened on Columbus day) and the services division (closed on Columbus day). It also allows them to administer different auto-attendant greetings and menu options for each of those holidays.

Each holiday schedule is created from Worksheet O, *Holiday Schedule* on page 2-39. This worksheet has the following fields and columns:

- Holiday Schedule

  This field contains the name of the holiday schedule. Default names are "hol*n*" where *n* is 1, 2, 3, or 4. The holiday schedule can be referred to in the Routing Table by either its name or number.

- Holiday Name

  This column contains the name of the holiday. It is used only for documentation.

- Date

  This column contains the date (mm/dd) to be used for matching.

- Mailbox

  This column contains the auto-attendant mailbox or bulletin board to be substituted for the called number if a match is found in the "Date" column. This mailbox does not need to correspond to an extension on the switch.

Routing Table Worksheet P

The Routing Table is created from Worksheet P, *Routing Table* on page 2-41. There are a maximum of 25 rows in the routing table. This worksheet has the following columns:

- Incoming Called Number

  This column contains a called number or a range of called numbers (separated by a dash). The called number on an incoming call is compared to this column. If no match is found, it is passed directly to INTUITY AUDIX without changing the called number. If a match is found, the remaining columns are examined for processing.

  NOTE:
  On the System 25, any trunk that rings directly into a calling group will deliver the "Trunk ID" (999) as the called number. Otherwise, the called number is the telephone number of the covered extension or phantom extension.

- Business Schedule

  This column contains either the *specific name* or the *number of 1 of the 4 possible business schedules*, or the word **login**.

  NOTE:
  The Business Schedule column cannot be blank.

  If the specific name, *login*, is entered here, the call information is altered so that the call is passed to INTUITY AUDIX and the caller will receive Voice Mail service.

  If a business schedule is specified (and the current date was not already found in the specified holiday schedule), the system examines it to determine if the current time falls within the alternate hours for the current day of week. If a match is found, the auto-attendant mailbox in the "Alternate Service Mailbox" column is substituted for the called number, and the call is passed to INTUITY AUDIX.

If a match to the alternate hours is not found, the day service hours are examined for the current day of week. If a match is found, the auto-attendant mailbox in the "Day Service Mailbox" column is substituted for the called number, and the call is passed to INTUITY AUDIX. Otherwise, the auto-attendant mailbox in the "Night Service Mailbox" column is substituted for the called number, and the call is passed to INTUITY AUDIX.

- Holiday Schedule

  This column contains the name or number of 1 of the 4 possible holiday schedules or is blank.

  NOTE:
  The Holiday Schedule column may be left blank.

  The system first checks the "Business Schedule" column for the specific business name or number. Then, any specified holiday schedule is checked for an entry for the current date. If a matching date is found, the auto-attendant mailbox from the "Mailbox" column of the specified holiday schedule is substituted for the called number, and the call is passed to INTUITY AUDIX.

- Day Service Mailbox

  This column contains the auto-attendant mailbox to be substituted for the called number if a match is found in the business schedule for day service hours. This matching is performed after checking for a match on alternate service hours.

- Night Service Mailbox

  This column contains the auto-attendant mailbox to be substituted for the called number if a match is found in the business schedule for night service hours. This matching is performed after checking for a match on alternate service hours.

- Alternate Service Mailbox

  This column contains the auto-attendant mailbox to be substituted for the called number if a match is found in the business schedule for alternate service hours.

  NOTE:
  The mailboxes that are specified in the routing table and holiday schedules typically do not correspond to extensions on the telephone system. They are defined as auto-attendant main menus.

  Additionally, they must be administered on the Lucent INTUITY system before the routing table and holiday schedules can be administered.

Implementing Multiple Automated Attendants on the System 25

Because INTUITY AUDIX implements auto-attendants as a special type of mailbox, it is possible to have multiple main auto-attendants in one Lucent INTUITY system. An incoming call is transferred to the mailbox specified by the called number, which may be the dialed number, a covered extension, a trunk number (999), or a mailbox substituted through the routing tables (that process the call before it reaches INTUITY AUDIX). On System 25, multiple auto-attendants are typically implemented using phantom extensions. Each main auto-attendant level will have its own phantom extension.

Each auto-attendant may have separate menus for routing calls during business hours and non-business hours and custom service for special hours and for holidays. The call is passed from the System 25 to the Lucent INTUITY system with call information that allows the Lucent INTUITY system to provide auto-attendant processing based whether the call is received directly from a trunk and/or covered from another extension.

If you choose to implement phantom extensions using FPDCs, record the FPDCs you will be using on Worksheet C, *Floating Personal Dial Code List* ready.

If you choose to implement phantom extensions using station ports, have Worksheet G**,** *Voice Station Records* available with the port assignments listed.

Fill out Worksheets N, *Business Schedule*, O, *Holiday Schedule*, and P, *Routing Table* as described starting on page A-13.

Required AUDIX Administration

Table 1 contains a checklist of AUDIX administration to support auto-attendant operation.

Table A-1. Initial Lucent INTUITY Administration Checklist

Task	Procedure Located in	Comment
Activate Call Transfer Out of AUDIX		This administration should already be complete as a part of initial AUDIX administration.
The phantom or DTAC extension number in the Routing Table	Chapter 6, "Lucent INTUITY System Administration" in this book, starting on page 6-20	Worksheet B, Voice Messaging Systems or Worksheet G**,** Voice Station Records, as appropriate
Set up auto-attendant mailboxes	Appendix A, page A-18	
Set up day, night, and alternate service	Chapter 6, "Lucent INTUITY System Administration" in this book, starting on page 6-16	Use the values from Worksheet *N*, *Business Schedule and* Worksheet *O*, *Holiday Schedule*
Set up Business/Holiday Schedules		
Set up Routing Table		Use the values from Worksheet *P*, *Routing Table*

Administer the Auto-Attendant as a User

NOTE:
You must create a nested attendant before the main or higher-layer attendant that will contain it.

Additionally, the nested auto-attendant's extension must be administered in the AUDIX system but not on the switch, that is, administered as a phantom extension.

To set up an auto-attendant, perform the following tasks:

1. Starting from the Main Menu, select:

```
> AUDIX Administration
```

2. At the `enter command:` prompt, enter either:

Full Command Version	Short Command Version
add subscriber *name/extension*	**ad su *name/extension***

where ***name/extension*** is the name or telephone extension of the auto-attendant you would like to add to the system database. The system displays page 1 of the Subscriber screen (Figure 6-2).

```
messngr            Active          Alarms: Mm A                    Logins: 7
change subscriber 84804                                          Page 1 of 2
                                SUBSCRIBER

        Name: Barton, Clara                        Locked? n
   Extension: 84804                              Password:
         COS: N                                Miscellaneous:
Switch Number: 13                        Covering Extension:
 Community ID: 1                          Broadcast Mailbox? n
Secondary Ext: 88332

enter command: change subscriber 84804
1Cancel  2Refresh  3Enter  4ClearFld 5Help  6Choices  7NextPage 8PrevPage
```

Figure 6-2. Subscriber Screen, Page 1; Adding an Automated Attendant

3. Administer the auto-attendant as an AUDIX user, using the following attendant-specific information:
   - `Name:` – Enter a *1- to 29-alphabetic character name* for the auto-attendant. The name must be touch tone unique.
   - `Extension:` – Enter the *extension of the auto-attendant*. The extension can be determined as follows:
     — If you are using a routing table, the extension of the main auto-attendant will be the number you defined in the table.
     — If you are not using a routing table, the extension of the main auto-attendant will be the telephone number callers will dial to access the attendant.
     — For a nested auto-attendant, the extension will be an extension accessed as an option on a main or higher-layer auto-attendant.

   SECURITY ALERT:
   The extension you enter in this field should be an administered extension on the switch to minimize the possibility of toll fraud.

   - `COS:` — Enter the *class of service name or number* you would like for this auto-attendant. (We recommend that you create a special COS that identifies the `PERMISSIONS, Type` as **auto-attendant**. If you do so, enter the name or number of that COS in this field so you do not have to customize Page 2 of the auto-attendant Subscriber screen.)

     CAUTION:
     If you decide to set up an auto-attendant COS, be sure that existing users are not already assigned to that Class of Service.

   - `Switch Number:` — Enter the *number of the switch* on which the auto-attendant's extension is administered. For System 25, a valid entry in this field is either 0 or 1. A 0 (zero) in this field means that the attendant has an AUDIX mailbox, but does not have an extension on the switch. The default is 1.

     NOTE:
     The Message Waiting Indicator (MWI) feature will not work properly unless the switch number is 1. Normally, there should be no need to use anything other than the default value in this field.

4. Press NEXTPG (F7) to access page 2 (Figure 6-3).

```
AUDIX              Active          Alarms: Mm A                    Logins: 1
change subscriber 200                                              Page 2 of 3
                      SUBSCRIBER CLASS OF SERVICE PARAMETERS
Addressing Format: extension
                                        Login Announcement Set: System
System Multilingual is OFF          Call Answer Primary Annc. Set: System
Call Answer Language Choice? n  Call Answer Secondary Annc. Set: System

PERMISSIONS  Type: auto-attendant              Announcement Control? y
       Outcalling? n           Priority Messages? n       Broadcast: none
     IMAPI Access? n    IMAPI Voice File Transfer? n             Fax? n

INCOMING MAILBOX          Order: fifo              Category Order: nuo
  Retention Times (days),   New: 10      Old: 10        Unopened: 10
OUTGOING MAILBOX          Order: fifo              Category Order: unfda
Retention Times(days), File Cab: 10     Delivered/Nondeliverable: 5

Voice Mail Message (seconds),  Maximum Length: 300  Minimum Needed: 32
Call Answer Message (seconds), Maximum Length: 120  Minimum Needed: 8
        End of Message Warning Time (seconds):
          Maximum Mailing Lists: 25    Total Entries in all Lists: 250
Mailbox Size (seconds), Maximum: 1200           Minimum Guarantee: 0

enter command: change subscriber 200
```

Figure 6-3. Subscriber Screen, Page 2; Adding and Automated Attendant

5. Administer the auto-attendant using the following attendant-specific information:
   - `Addressing Format:` — Enter **name**, if you would like callers to be able to enter names, *not* extensions, to select certain destinations. Enter **extension** if you would prefer that callers enter extension numbers to select destinations.
   - `Call Answer Language Choice?`
     - — Enter **y** if you have purchased multilingual announcement sets and are using the Multilingual feature to give callers the option to hear voice prompts in another language.
     - — Enter **n** if you are using the Multiple Personal Greetings feature to record the voice prompts for the auto-attendant menus.
   - `Call Answer Secondary Annc. Set:` — Enter the *name of the secondary language set* you would like callers to be able to select. (This only applies if you have purchased a second announcement set. If you are using Multiple Personal Greetings for the voice prompts, skip this field.)
   - `PERMISSIONS, Type:` — Enter **auto-attendant** .
6. Press NEXTPAGE (F7). The system displays page 3 (Figure 6-4).

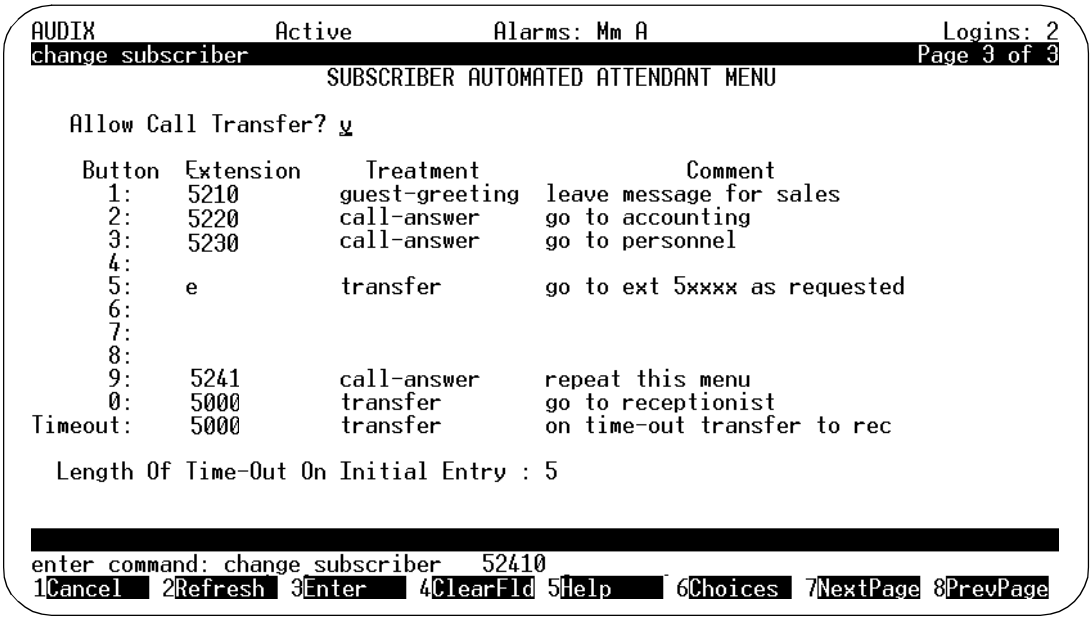


Figure 6-4. Automated Attendant Subscriber Screen, Page 3; Administering an Auto-Attendant

7. Complete the fields on this screen using the information provided in Table 6-1.

Table 6-1. Field Definitions: Subscriber Automated Attendant Menu screen — Page 3 of 3

Field Name	Description/Procedure
Allow Call Transfer? Valid Input: y = yes n = no	Type **y** to allow callers to transfer out of the AUDIX system via * 8 when this auto-attendant is reached. Type **n** to prevent callers from using * 8 to transfer. The default value is n. **SECURITY ALERT:** *To reduce the risk of toll fraud, it is strongly recommended that this field be left at its default setting of "n" for most attendants.*
Button: Valid Input: display only	This field lists the telephone keypad numbers from 1 – 9 and 0.

Continued on next page

Table 6-1. Field Definitions: Subscriber Automated Attendant Menu screen — Page 3 of 3 — *Continued*

Field Name	Description/Procedure
Extension: Valid Input: A 3- or 4-digit extension or e	For each button number you would like a caller to use, type a *3- or 4-digit extension* (depending on your dial plan) or **e** . The default is a blank. ■ Type *an extension* if you administered the `Addressing Format:` field page 2 of this screen as **extension**. The AUDIX system will connect a call to this extension when the caller presses the associated button number. The extension could lead to a nested auto-attendant or bulletin board, ring at a telephone, or connect directly to a voice mailbox. **NOTE**: If the extension leads to a nested attendant, that attendant must already have been created. ■ Type **e** if you administered the `Addressing Format:` field page 2 of this screen as **name**. The AUDIX system will allow the caller to dial any name beginning with the associated button number. The associated voice prompt should instruct the caller to enter an extension or name. **NOTE**: For a menu with only one button option, the value in this field should be an extension.
Treatment Valid Input: see description at right.	For any extension listed, enter one of the following to identify how the AUDIX system handles the call when this button is pressed: ■ **blank** — means the corresponding button selection on the telephone keypad will not be an available menu selection. A blank in the `Extension` field requires a blank in the `Treatment` field. ■ **call-answer** — puts the call directly into the mailbox for the extension and plays the call answer greeting, attendant menu, or bulletin board message without transferring through the switch. If it is a mailbox with a `PERMISSIONS, Type` of *call answer*, the AUDIX system then provides normal call answer treatment for the mailbox. If the treatment is call answer and no personal greeting is recorded or active, the system call answer greeting is played. ■ **guest-greeting** — puts the call into the mailbox for the designated extension (without transferring through the switch), plays the standard guest greeting ("Please leave a message for *name*.") and allows the caller to record a message. ■ **transfer** — transfers the call to the extension on the switch.
Comment Valid Input: 1- to 29-alpha-numeric characters or blank	This is an optional field that can be used for any notation that may help to identify the extension. This could be helpful should you need to modify the attendant's functions or re-record the attendant menu at a later date.

Continued on next page

Table 6-1. Field Definitions: Subscriber Automated Attendant Menu screen — Page 3 of 3 — *Continued*

Field Name	Description/Procedure
Timeout, Extension Valid Input: A 3- or 4-digit extension or blank	Type a *3- or 4-digit extension* or leave *blank*. This field specifies the extension to which the caller goes when the time-out period has elapsed. If this field is left blank, the caller is disconnected after two time-out periods have elapsed.
Timeout, Treatment Valid Input: blank call-answer guest-greeting transfer	Type **call-answer**, **guest-greeting**, or **transfer** in this field, or leave *blank* . Refer to the `Treatment` field description above to determine your choice. This field identifies how the system handles the call if a time-out occurs and no input is received. ■ If you leave this field *blank*, the `Timeout, Extension:` field must be blank. ■ If you type *an entry* in this field, the `Timeout, Extension:` field must contain an entry.
Comment Valid Input: 1- to 29-alpha-numeric characters or blank	This is an optional field that can be used for any notation that may help to identify the extension. This could be helpful should you need to modify the attendant's functions or re-record the attendant menu at a later date.
Length of Timeout on Initial Entry Valid Input: A value from 0 to 9	Type the *number of seconds* the system will wait for a response from the caller. The default value is 5 seconds.

8. When you finish entering system limit information, press ENTER (F3) to save the information in the system database.

   The cursor returns to the command line and the system displays the confirmation message `Command Successfully Completed`.

9. Continue with the next procedure.

Recording Greeting(s) for the Automated Attendant Menu(s)

Use your touch tone telephone to record the auto-attendant menu greetings that callers will hear when they press a key on their telephones. You record an attendant menu greeting in the same way you record a personal greeting, except that you record the greeting for the attendant extension, and the greeting describes the option(s) for the attendant.

It is a good idea to write down a script for the menu greeting ahead of time and read it aloud to a colleague before recording it. We also recommend that you write down the menu greeting numbers so that you will have both the number and the corresponding greeting script should you need to re-record any greetings at a later date.

You might wish to consider the following in the menu greeting script:

- A "hello and welcome" greeting followed by the menu choices available to the caller
- An instruction on pressing * 8 # to transfer to a specific extension (if this option is active)
- An instruction to wait if a time-out extension is administered
- An instruction on pressing * 4 to repeat the menu selections

NOTE:
You can also set up a one-button press to repeat the menu by putting the *auto-attendant's extension* in the `Extension` field and **call-answer** in the `Treatment` field.

Record an Automated Attendant Menu Greeting (No Multiple Personal Greetings)

To record a single auto-attendant menu greeting (the multiple personal greetings feature is *not* used), perform the following tasks:

1. Log in as the auto-attendant using the extension and password (if any) you assigned on the Subscriber screen.
2. At the activity menu, press 3 to administer the attendant menu.
3. Press 1 to record the attendant menu greeting.
4. At the tone, speak the scripted greeting for the menu and then press 1 to stop the recording.
   - Press 1 again to record from where you last stopped.
   - Press 2 3 to listen to the recording.
   - Press * 3 to delete and re-record.
5. Press # to approve.

Record an Automated Attendant Menu Greeting (Multiple Personal Greetings)

With multiple personal greetings, your auto-attendant menu greeting can change according to type of call type (for example, you can have one greeting for out-of-hours calls and another for calls during regular business hours).

NOTE:
If your system should lose any voice messages, for example, due to a disk crash, you must check each of the auto-attendant menu greetings to ensure that none were lost. It is a good idea to write down the scripts for the menu greetings as a precaution. If an auto-attendant menu greeting is lost, simply re-record it.

If an auto-attendant menu is lost or was never recorded, callers hear a system announcement indicating that attendant services are not available. The system also makes an entry in the Administrator's Log each time a caller dials the auto-attendant extension. You can view these logs at any time. (See *Lucent INTUITY™ AUDIX® Release 3.3 Administration and Feature Operations*, 585-310-552).

Confirm Automated Attendant Administration

Defining an auto-attendant menu system is complete when all of its submenus are defined and all the voice prompts including any announcements such as attendant menus are recorded. INTUITY AUDIX provides a convenient way of testing the structure of a menu so that callers will not encounter an incomplete automatic-attendant menu tree.

To access the testing program, perform the following tasks:

1. Starting from the Main Menu, select:

```
> AUDIX Administration
```

2. At the `enter command:` prompt, enter either:

Full Command Version	Short Command Version
display auto-attendant-routing menu-tree	**di au me**

The system displays the Auto-Attendant Menu Tree screen (Figure 6-5).

NOTE:
To print the content of these screens, precede the keyword **display** with **print**. You must have a system printer available and enabled to print screens.

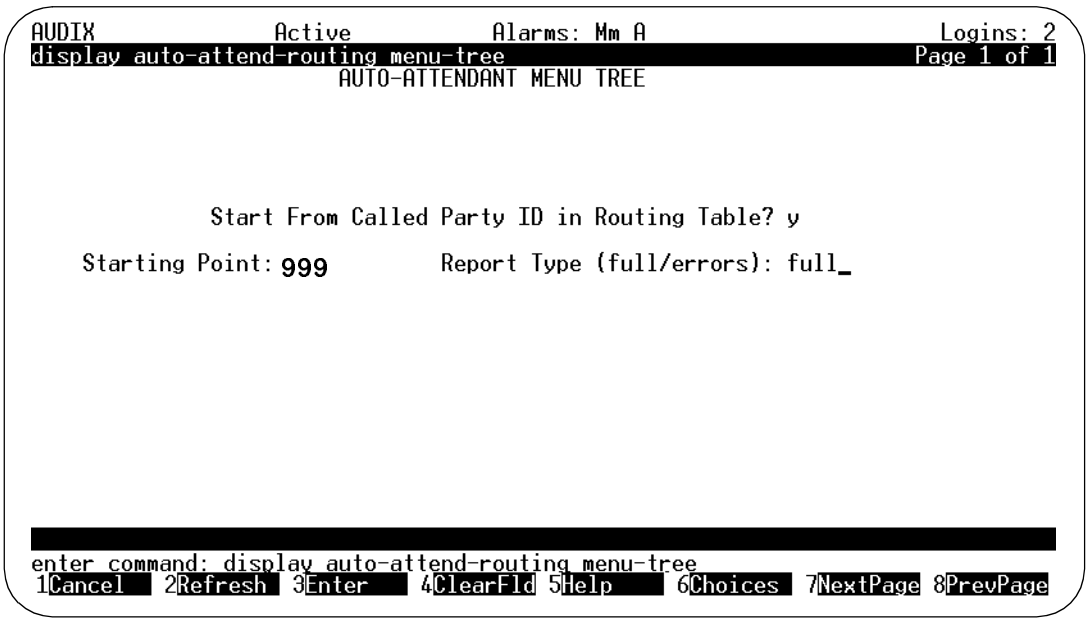


Figure 6-5. Auto-Attendant Menu Tree screen

3. Complete the fields in this screen using the information in Table 6-2.

Table 6-2. Field Definitions: Auto-Attendant Menu Tree Screen

Field Name	Description/Procedure
Start From Called Party ID in Routing Table? Valid Input: y = yes n = no	Type **y** in this field to make the program start its search at the `Incoming Called Number` in the routing table. Type **n** in this field to make the program test the mailbox number specified under `Starting Point` first, and then test the mailboxes that are set out in the menu that applies to the specified mailbox.
Starting Point: Valid Input: A 2- to 10- digit number	Type the *extension number of the mailbox or Incoming Called Number* that is to be tested. Leave the field blank to test all attendant mailboxes (or all mailboxes in the routing table, if you typed **y** in the first field).
Report Type (full/errors): Valid Input: f = full e = errors	Type **f** to have the program display not only errors but each component element of each mailbox as well. Type **e** to have the program identify only flawed mailboxes and the errors discovered by the program.

4. Press ENTER (F3) to begin testing the menu tree.

   The testing utility searches auto-attendant menus to verify that each mentioned auto-attendant mailbox exists and that the necessary personal greeting(s) have been recorded.

   The program tests nested mailboxes until they have all been tested. As the testing proceeds, the results display on the screen.

5. Press CANCEL (F1) to return the cursor to the command line.
6. Enter an administrative command at the `enter command:` prompt or type **exit** to leave AUDIX Administration.

Optional AUDIX Administration

You can set up a special Telecommunications Device for the Deaf (TDD) auto-attendants with a TDD announcement set that provides service to hearing-impaired callers. (The TDD announcement set is recommended but not required to set up TDD auto-attendants.) Hearing-impaired callers need a standard stand-alone, acoustically-coupled TDD along with a touch tone telephone.

Lucent INTUITY™ AUDIX® Release 3.3 Administration and Feature Operations, 585-310-552, contains more information about planning and implementing TDD auto-attendants.

Required System 25 Administration

What administration is required depends on:

- Whether you're implementing a single auto-attendant or multiple auto-attendants
- If, and how, you're implementing the phantom extensions
- The type of attendant console in use, namely:
  - — Direct Trunk Attendant Console (DTAC)
  - — Switched Loop Attendant Console (SLAC)

Follow the procedures below according to the design and implementation decisions you've made.

Administering a Single Secondary Automated Attendant

If you would like to implement an auto-attendant to handle overflow calls that the live attendant cannot get to, administer the DTAC as the 'owner' of all line appearances that are to be covered by the auto-attendant. Also, set the coverage of the DTAC to the AUDIX calling group (refer to Worksheet F, *DGC Groups*).

Follow the procedure under "Assigning Personal Lines to a Phantom Extensions" on page 5-11, substituting the DTAC extension for the phantom extension.

Using the procedure under "Assigning Members to Group Coverage" on page 5-16, assign coverage for this extension.

In AUDIX, make sure there's an entry in the Routing Table for the DTAC's extension.

Administering Multiple Secondary Automated Attendants

If you would like to implement nested auto-attendants or to use separate auto-attendants to back up multiple live attendants, use this procedure.

Implementation details depend on the type of attendant console the customer has, namely:

- Direct Trunk Attendant Console (DTAC)
- Switched Loop Attendant Console (SLAC)

Direct Trunk Attendant Console

The DTAC must be designated the ‘owner’ of all line appearances that are to be covered by the auto-attendant. Also, set the coverage of the DTAC to the AUDIX calling group (refer to Worksheet F, *DGC Groups*).

Switched Loop Attendant Console

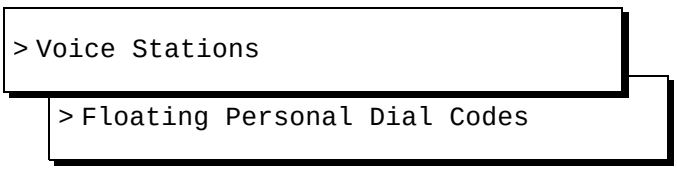
If your site has a SLAC, you must create a phantom extension. The phantom extension would be designated the ‘owner’ of all line appearances that are to be covered by the auto-attendant. As discussed under "Phantom Extensions" on page A-7 there are 3 ways to create phantom extensions:

- Floating Personal Dial Codes (FPDCs) – suggested for DID lines
- Equipped station ports (see page A-31)
- Un-equipped station ports (see page A-31)

Setting Up Phantom Extensions using FPDCs

If the system has DID lines, using FPDCs is the suggested way to implement phantom extensions. To create a phantom extension using FPDCs, perform the following tasks:

1. From the System 25 Administration Main Menu (Figure 5-4), select:



2. The system displays the Floating Personal Dial Codes window (Figure 6-6).

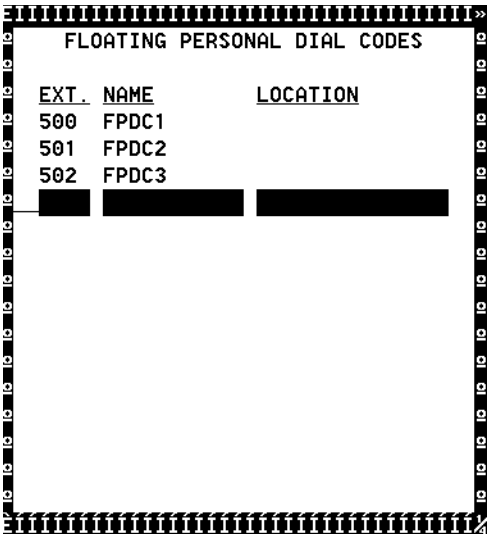


Figure 6-6. Floating Personal Dial Codes Window; Administering Auto-Attendants

3. Enter the FPDC to be assigned and press SUBMIT (F3).
4. Repeat, as necessary, until all FPDCs are submitted.
5. Press ESC repeatedly to return to the Main Menu.
6. Log these FPDCs into a host station by using **FPDC FPDC.

NOTE:
Remember, to use FPDCs, you need a dedicated host extension. This host extension must be covered to AUDIX and Send All Calls (SAC) must be turned on. In AUDIX, make sure there's an entry in the Routing Table for each FPDC.

Setting Up Phantom Extensions using Equipped or Un-Equipped Station Ports

You must create phantom extensions for each block of direct trunks that require an auto-attendant. *If at all possible*, administer the phantom station on an *equipped station port*. If the circuit pack is imaginary (that is, the station is administered against an empty slot) then any system restart (for example, due to a brief power outage) will cause a system error that will light the alarm button on the attendant console, leading to unnecessary visits by service personnel.

Follow the procedure under "Assigning Personal Lines to a Phantom Extensions" on page 5-11.

NOTE:
Remember, to use phantom extensions, you need a dedicated host extension. This host extension must be covered to AUDIX and Send All Calls (SAC) must be turned on. In AUDIX, make sure there's an entry in the Routing Table for each phantom extension.

Additionally, if the phantom extension is terminating a DID number, delete the system access buttons from the station. That way, calls for that station will immediately go to coverage, rather than waiting the administered number of rings.

Administering Multiple Main Automated Attendants

To administer multiple main automated attendants, you need a phantom extension for each DID number or group of trunks used by each main auto-attendant.

Administer the phantom extensions as discussed under "Switched Loop Attendant Console" on page A-29.

Administer the host extension to cover to AUDIX and turn SAC on.

If the phantom extension is terminating a DID number, delete the system access buttons from the station.

Installing System 25 Software on the Lucent INTUITY System

B

Overview

This appendix provides procedures for installing the System 25 software on the Lucent INTUITY system.

NOTE:
All software, including the System 25 Switch Integration (SWIN) Software, Advanced Administration Software (AAS), and Call Accounting System (CAS), is installed at the factory. This procedure is needed *only* when a system has to be re-installed in the field. Before you install the System 25 software, make sure that the voice system and maintenance software are installed.

To install the System 25 software, perform the following 3 procedures:

- Stopping the Voice System (see page B-2)
- Loading the System 25 Software (see page B-2)
- Loading the AAS software(see page B-2)
- Loading the CAS software (see page B-2)
- Restarting the System

These procedures are described (or referenced) in this appendix.

Before You Begin

Before you install the System 25 software, note the following requirements:

Login:	craft
Materials:	System 25 Switch Integration Software (S25 SWIN) (1 diskette)
	Call Accounting System Software (See *Lucent INTUITY™ Call Accounting System User Guide*, 585-310-728)
	Advanced Administration Software (2 diskettes)

Stopping the Voice System

Before you can load the System 25 software, you must stop the voice system.

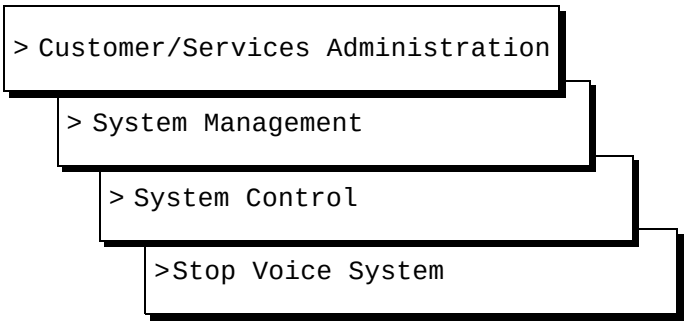
The voice system is INTUITY AUDIX's base voice processing software. Stopping the voice system brings the software into a lower level state in which it cannot accept calls.

CAUTION:
Only stop the voice system when it is absolutely necessary. All calls in progress will be disconnected. Users calling AUDIX will hear a fast busy signal. Callers sent to AUDIX coverage will hear ring/no answer.

NOTE:
When the voice system is stopped, you cannot access INTUITY AUDIX administration screens. *AUDIX Administration* still appears as an option on the Main Menu, but you cannot select this option. To again view INTUITY AUDIX administration screens, you must reboot the voice system software.

1. Login as **craft**.
2. Press ENTER to accept the AT386 default.
3. The main Administration menu displays (Figure 6-1 on page 6-2).

4. Select:



   The system displays the Stop Voice System window and the message "`Enter y to continue, n to quit.`"

5. Enter **y** to confirm that you wish to stop the voice system.

   To cancel the request, type **n**

   If you entered y, the system waits until all calls in progress disconnect before stopping the voice system.

   When the process is finished, the system displays the message, "`The Voice System has stopped`
   `Press ENTER to continue...`"

6. Press ENTER.

   The System Control menu redisplays.

7. Press CANCEL until the Administration menu displays (Figure 6-1 on page 6-2).

8. You are now ready to load the System 25 software. Continue with the next procedure.

Loading the System 25 Software

1. Log in to Lucent INTUITY as **craft**.

2. Press ENTER to accept the AT386 default.

   The Administration menu displays (Figure 6-1 on page 6-2).

3. Select:

```
> Customer/Services Administration
    >System Management
        >UNIX Management
            >Software Install
```

The system displays the Software Install menu (Figure 6-7).

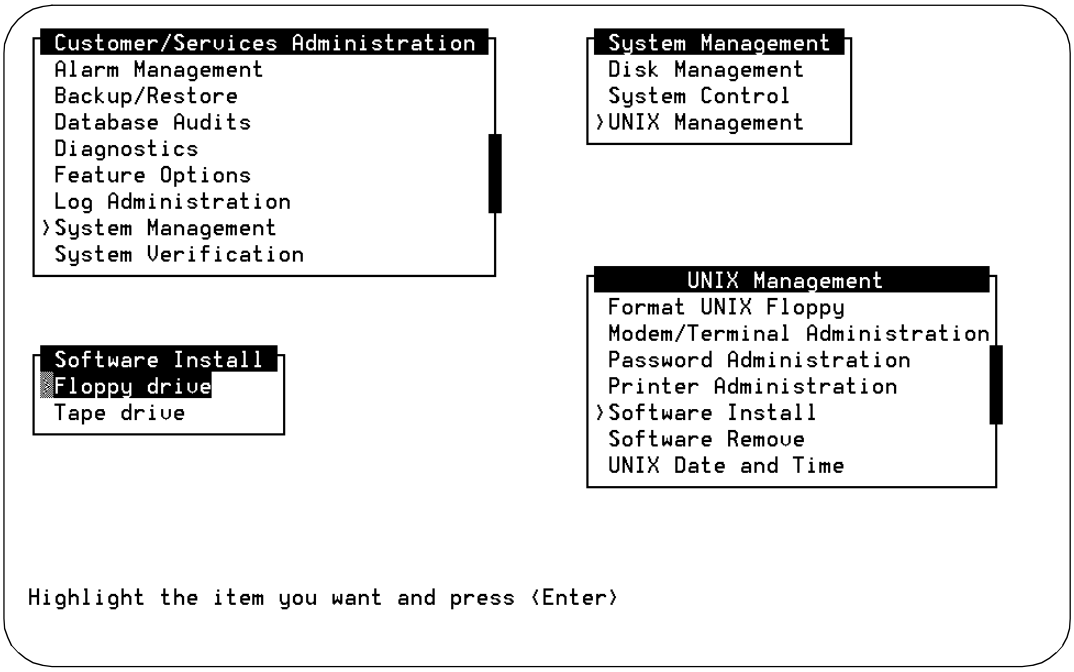


Figure 6-7. Software Install Window

4. Press ENTER to select the Floppy drive.

   The system displays the message:

   ```
   Insert a diskette into Floppy Drive 1.
   Type [go] when ready
   or [q] to quit: (default: go)
   ```

5. Insert System 25 Switch Integration Package Disk Disk 1 of 2 into the 3.5” floppy drive.

6. Press ENTER to install the software.

   The system displays the message:

   "`Installation in progress. Do not remove the diskette.`

   ```
   The following pkgs are available:
        1    swin Intuity System 25
             Switch Integration Package
             (486) x.x-xx

   Select package(s) you wish to process (or 'all' to
   process all packages). (default: all)  [?, ??, q]"
   ```

7. Press ENTER to accept the default of *all*.

   The installation proceeds, during which time you see various status messages display. After the installation completes, the system displays the message:

   ```
   Installation of Intuity System 25 Switch Integration
   Package (swin) was successful.

   Insert a diskette into Floppy Drive 1.
   Type [go] when ready or [q] to quit: (default: go)
   ```

8. Remove the diskette from the floppy drive.

Loading the AAS Software

1. Return to step 5 and repeat this procedure with the System 25 Advanced Administration Software diskette.
2. When you reach step 7, insert the second AAS diskette into the floppy drive and type **go** and remove the diskette when the installation completes.
3. If your configuration includes CAS, continue with the next step.

   If this is not the case, proceed to "Rebooting the Lucent INTUITY System" on page B-6.

Loading the CAS Software

1. Refer to the procedure in *Lucent INTUITY™ Call Accounting System User Guide*, 585-310-728.
2. When all software has been successfully installed, type **q** to quit.

   The Software Install screen redisplays.

3. Continue with the next step.

Rebooting the Lucent INTUITY System

1. You must now reboot the system. Press ENTER to continue.
2. Press CANCEL (F6) to return to the `System Control` menu and select:

   ```
   > Shutdown System
   ```

3. Enter **y** to confirm that you wish to shutdown the system.

   The system proceeds to shut down. When the process is complete, the system displays the message "`The system is down. Press Ctrl-Alt-Del to reboot the system`."

4. Press Ctrl-Alt-Del to reboot.

   The system reboots and performs power-on self test (POST), the results of which are presented in two columns on your screen. The first column lists various hardware components. The second column presents a status of the tests performed on components in the first column.

   NOTE:
   If `FAIL` appears in the second column for any component, record the component's name and begin troubleshooting. For assistance, see *Lucent INTUITY Platform Administration and Maintenance for Release 3.0,* 585-310-557.

   When the system reboot is complete, the console login prompt displays.

System Security and Toll Fraud

C

Overview

This appendix describes ways to use your system administration tools to minimize the possibility of telecommunications toll fraud on your system. Telecommunications fraud is the unauthorized use of another company's telecommunications service. Simply put, toll fraud occurs when people misdirect their own telecommunications charges to another entity (person or business).

This type of fraud has been in existence since Direct Distance Dialing (DDD) was introduced in the 1950s. Twenty years later, Remote Access became a target of individuals seeking unauthorized network access. Now, with the added capabilities of voice mail and automated attendant services, toll fraud based on customer premises equipment has expanded as a new type of communications abuse. Telecommunications fraud has rapidly become a highly profitable criminal activity.

As concerns users of Lucent INTUITY systems, toll fraud consists of using the system and INTUITY AUDIX to complete a toll call through a networked switch. Now more than ever, it is imperative that you take steps to secure your messaging system.

NOTE:
Much of the information in this section has been condensed from the *BCS Product Security Handbook, 555-025-600*. Please see the handbook for complete information on securing your voice mail system from possible toll fraud.

Purpose

This appendix offers safeguards that make it harder for a criminal to penetrate your Lucent INTUITY system.

Introduction

There are several features of the system that criminals might use to breach your system. Among these features are:

- ***Unauthorized System Use***

  An intruder accesses your system and creates a mailbox.

- ***Unauthorized Mailbox Use***

  An intruder discovers how to access a particular mailbox, perhaps by:

  — Finding the password

  — Trying all the common variations of passwords

  — Buying the password from a computer hacker that breached the UNIX interface and logged in as an administrator

- ***Unauthorized Use of Outcalling or AMIS Analog Networking Call Delivery***

  An intruder uses your system to send an AMIS message or a fax to a distant number.

- ***Fraudulent Call Transfer***

  An intruder makes use of the transfer to extension feature by transferring to the first few digits of a Trunk Access Code.

This appendix discusses options available to you and administrative considerations for you to make your system as secure as possible. Additionally, this appendix lists some methods of detecting fraud and includes Lucent's Statement of Direction concerning the theft of customer services.

Unauthorized System Use

You can minimize the risk of unauthorized people gaining access to your system by strictly following the compliance guidelines for your Voice Mail (vm) and AUDIX System Administration (sa) passwords.

Once thieves transfer to inside dial tone, they have access to any unprotected switch features. Preventing this type of abuse requires security at both the switch and at the voice messaging system.

Administration Passwords

Your INTUITY AUDIX system comes equipped with administrative password features and options that you control to assist you in securing your system. These include changing default administrator password and maintaining minimum administrative password standards.

When you first get your system, both the *sa* (system administrator) and *vm* (voice mail administrator) logins come with a default password. You are required to change this password immediately. See *Lucent INTUITY™ AUDIX® Release 3.3 Administration and Feature Operations*, *585-310-552* for information on how to effect this change.

Administrator Password Standards

There are certain minimum standards passwords must follow to comply with the system's standards. These standards include:

- Establish a new password as soon as the INTUITY AUDIX system is installed.
- Use 6–11 alphanumeric characters. The password must include at least 1 numeric and 2 alpha characters.
- Never use obvious or trivial passwords, such as a phone extension, room number, employee identification number, social security number, or easily guessed numeric or letter combinations (for example, denver or audix).
- Do not post, share, print, or write down passwords.
- Do not put the password on a programmable function key.
- Change the password periodically (at least once per month).

Unauthorized Mailbox Use

One type of voice mail fraud occurs when a hacker takes over a mailbox and uses it to communicate with other hackers. Typically a hacker hacks the mailbox password and changes both it and the greeting.

Once thieves break into a mailbox, they can use it as a message drop for untraceable calls or for illegal activities. If you have 800 lines that can connect to your voice messaging system, they can pass stolen information around at your expense using your 800 lines. If you have user administrable outcalling, they can pass stolen information around at your expense automatically.

NOTE:
To break a password, every word in a computerized 100,000 word-processor spell checker or dictionary can be tried in just a few minutes. In a slightly longer time, every digit combination from 1 to 100,000 can be tried.

Mailbox Administration

- To block break-in attempts, administer your system so that the number of consecutive unsuccessful attempts to log into a mailbox is low (no more than 2 or 3 attempts on the same call). Administer this on the System-Parameters Features screen.
- Deactivate unassigned mailboxes. When an employee leaves the company, remove the user profile and, if necessary, reassign the mailbox.
- Do not create mailboxes before they are needed.
- The INTUITY AUDIX system offers password length and password aging mechanisms that can help restrict unauthorized users. Users can have passwords up to 15 digits for maximum security, and you can specify the minimum length required. Use a minimum of 5 digits, and a length *at least one digit greater than the extension number length*.
- Use the password aging feature so that users must change their passwords monthly.
- Ensure that users change the initial password the first time they log in to the AUDIX system by making the initial password *shorter* than the minimum password length.
- Do not have permanent “guest” mailboxes (mailboxes without a physical extension that are loaned to outsiders for the duration of a project). If you need a guest mailbox, assign it when it is needed and deactivate or change its password immediately after it is no longer needed. Do not reassign a guest mailbox without changing the password.
- Restrict the use of outcalling to personnel who actually need it.
- Restrict the number of digits that can be used for outcalling to seven or ten if possible. (Outcalling to pagers may require more.)

- Do not use default initial passwords that follow any scheme. Have a list of random passwords and select one when you create the mailbox. Go over the user password guidelines with the user when you give out the initial password.
- Inform all system operators that they are not to dial outside calls. Request that operators report all attempts to bypass switch restrictions to the telecommunications department for repairs or to the corporate security office for investigation.
- Monitor call detail recording (SMDR) reports, call traffic reports, AUDIX traffic reports, and other available reports regularly.

Tips for Your Users

To minimize the risk of unauthorized people accessing AUDIX mailboxes and using them for toll fraud, educate your users to behave in accordance with the following guidelines:

- Make sure that users change the initial password the first time they log in. This ensures that only the user will have access to his/her mailbox, not someone else who enters a user's extension number, then enters #. (The use of only a # – indicating the lack of a password – is well-known by telephone hackers.)
- Never use obvious or trivial passwords, such as a room number, employee identification number, social security number, or easily guessed numeric combinations.
- Discourage the practice of writing down passwords, storing them, or sharing them with others. If a password needs to be written down, advise the user to keep it in a secure place and never discard it while it is active.
- Never program passwords onto auto dial buttons.
- Inform employees on how to report suspected toll fraud to the corporate security office.
- Never have a personal greeting state that the called extension will accept third party billed calls (this allows unauthorized individuals to charge calls to your company). If someone at your company has a greeting like this, point out the vulnerability to the person and recommend they change the greeting immediately.
- If a user receives any strange AUDIX messages, or tells you that her/his personal greeting has been changed, or if for any other reason you suspect that your AUDIX facilities are being used by someone else, contact Lucent Network Corporate Security.

NOTE:
Inform your users that cellular phones can be monitored. If a users enters a mailbox number and a password on a cellular phone, the mailbox number and the password will be known to anyone listening.

Unauthorized Use of Outcalling/ AMIS Analog Networking Call Delivery

The previous discussion concerned how to prevent someone from breaking into your system. This section discusses how to minimize the risk of someone who is in your system from making unauthorized outbound calls. In this case, the unauthorized usage could be from an employee, or from someone who has breached your system security and gained access.

Outcalling Security (AUDIX Provisions)

When outcalling is enabled for users who are off-site (often the message notification is forwarded to a call pager number), 3 options exist to minimize toll fraud:

1. The AUDIX voice ports can be assigned to a toll-restricted COR that allows calling only within a local area
2. The outcalling numbers can be entered into an unrestricted calling list for either ARS or Toll Analysis, or
3. Outcalling numbers can be limited to 7 or 10 digits.

On the Subscriber screen, turn off outcalling by using the proper COS for each user.

On the System Parameters Outcalling form, limit the number of digits that can be dialed for outcalling.

NOTE:
If outcalling to a pager is allowed, additional digits may be required.

Analog Networking Call Delivery

To increase security for AMIS analog networking, including the Message Delivery service and FAX call delivery, restrict the number ranges that may be used to address messages. Be sure to assign all the appropriate PBX outgoing call restrictions on the AUDIX voice ports.

Fax Call Delivery

There are no fax-specific security issues. However, since Lucent INTUITY Fax Messaging requires that Analog Networking be turned on, be sure that outgoing AUDIX voice ports have the appropriate PBX calling restrictions. Such restrictions are discussed following ''Switch Administration'' on page C-10, and in ''INTUITY AUDIX Administration'' on page C-7.

Fraudulent Transfers

Once thieves transfer to dial tone, they may dial a Trunk Access Code (TAC), Feature Access Code (FAC), or extension number. If the system is not properly secured, thieves can make fraudulent long distance calls or request a company employee to transfer them to a long distance number.

Fraudulant transfers can be minimized by administering features and options in AUDIX and on the switch.

INTUITY AUDIX Administration

To minimize the risk of unauthorized people using the INTUITY AUDIX system to make toll calls, you can administer the AUDIX system in any of the following ways.

Basic Call Transfer (MERLIN LEGEND, System 25, and Non-Lucent Switches)

With Basic Call Transfer, after an AUDIX caller enters * + 8, the AUDIX system does the following:

4. The AUDIX system verifies that the digits entered contain the same number of digits as administered on the AUDIX system for extension lengths.

   If call transfers are restricted to Users, the AUDIX system also verifies that the digits entered match the extension number for an administered user.

5. If step 1 is successful, the AUDIX system performs a switch-hook flash, putting the caller on hold.

   If step 1 is unsuccessful, the AUDIX system plays an error message and prompts the caller for another try.

6. The AUDIX system sends the digits to the switch.
7. The AUDIX system completes the transfer.

With Basic Call Transfer, a caller can dial any number, provided the number of digits matches the length of a valid extension. So, if an unauthorized caller dials an access code followed by the first digits of a long-distance telephone number, such as 9 1 8 0 9, the AUDIX system passes the numbers on to the switch. (This example shows a 5-digit plan.) The switch interprets the first digit (9) as an access code, and the following digits as the prefix digit and area code. The caller then enters the remaining digits of the phone number to complete the call.

If call transfers are restricted to users, a caller cannot initiate a transfer to an off-premises destination unless the digits entered match an administered user's mailbox identifier (for example, 91809). To ensure the integrity of the "user" restriction, do not administer mailboxes that start with the same digit(s) as a valid switch trunk access code.

Controlled Transfer out of AUDIX

Your INTUITY AUDIX system, like all voice messaging and automated attendant systems, is subject to unauthorized long distance call attempts (toll fraud). Most such attempts occur as a caller attempts to transfer out of the AUDIX system.

Call transfers out of AUDIX are subject to control by administration on your part, control that is designed to encompass all of the numbers to which a caller may transfer.

Allowed Numbers Menu

To transfer out of the INTUITY AUDIX system, the user presses * T, the digits of the extension to which s/he wishes to transfer, and #. If the pattern of the number dialed corresponds to a pattern you have permitted on the *Allowed Numbers* menu, the system will permit the next step. The INTUITY AUDIX system initiates the transfer. The switch then verifies that it is allowed to transfer to the requested destination.

Before you enable transfer out of the AUDIX system, you should restrict such transfers. Within this menu system, you can specify extensions to which a caller may transfer.

Denied Numbers Menu

Callers may not transfer to extensions expressly denied on the *Denied Numbers* menu. You may wish, for example, to forbid call transfer to extensions beginning with “9” if this number causes access to an outside line.

If a caller enters an extension that is an allowed transfer, the switch completes the transfer, disconnects the INTUITY AUDIX system, and sends a "disconnect — successful transfer" message to the system. If the number is *not* valid, the switch leaves the system connected to the caller and sends a "fail" message to the INTUITY AUDIX system. Then the system plays an error message to the caller and prompts for further activity.

Transfer Restriction – System-Parameters Features screen

If you administer your system to allow [*] [T] tranfers (`Call Transfer` has been activated on the System-Parameters Features screen), the risk of toll fraud attempts can be minimized by:

- Setting `the Transfer Restriction` field on the System-Parameters Features screen to **subscribers**

AND

- Administering allowed and denied numbers as described in *Lucent INTUITY™ AUDIX® Release 3.3 Administration and Feature Operations*, *585-310-552*. In this case, if the pattern of the number dialed corresponds to a pattern you have permitted on the Transfer Security menu system, and if the number is a valid extension number for an administered user (either local or remote), transfer will be permitted.

Restricting call transfers to administered users is the more secure of the two options — fraudulent use of call transfer will be virtually eliminated since the INTUITY AUDIX system can verify that the specified destination is an administered number. If digits are specified, on the other hand, the caller might find a way to access the switch and to use switch features and functions to complete fraudulent long-distance calls.

WARNING:
If you wish to assign non-resident users (users with a mailbox but no telephone on the switch) to extension numbers that start with the same digit(s) as switch trunk access codes (such as 9), you should carefully administer the restrictions using the Transfer Restrictions menu.

Automated Attendant Security

Automated attendants (auto-attendants) are used by many companies to augment or replace a switchboard operator. When an auto-attendant answers, the caller is generally given several options. A typical greeting is: “Hello, you’ve reached XYZ Bank. Please press1 for Auto Loans, 2 for Home Mortgages. If you know the number of the person you are calling, please enter that now.”

In some switches, button 9 is used to access dial tone. In addition, when asked to enter an extension, the hacker enters 9180 or 9011. If the system is not properly configured, the auto-attendant passes the call back to the PBX. The PBX reacts to 9 as a request for a dial tone. The 180 becomes the first numbers of a 1-809 call to the Dominican Republic. The 011 is treated as the first digits of an international call. The hacker then enters the remaining digits of the phone number and the call is completed. You, the PBX owner, pay for it. This hacker scenario works the same way with a voice mail system.

To help secure a system using auto-attendants:

- Restrict transfer out of the AUDIX system as described in *Lucent INTUITY™ AUDIX® Release 3.3 Administration and Feature Operations*, *585-310-552*.
- Restrict transfers to `subscribers` only.
- Inform all receptionists or other live attendants that they are not to dial outside calls. Request that all attempts to bypass switch restrictions be reported to the telecommunications department for repairs or to the corporate security office for investigation.
- Inform employees on how to report suspected toll fraud to the System Administrator.
- Monitor call detail recording (SMDR) reports, call traffic reports, AUDIX traffic reports, and other available reports regularly.

Switch Administration

The measures you can take to minimize the security risk of owning a telecommunications system depend on how the telecommunications system is used and how any associated voice messaging or automated attendant system is used.

To minimize the risk of unauthorized persons using the voice messaging or automated attendant systems to make toll calls, administer the voice ports on your switch in any of the following ways.

Assign Low Facilities Restriction Level (FRL)

The switch treats all the PBX ports used by voice mail systems as stations. Therefore, each voice mail port can be assigned a COR/COS with an FRL associated with the COR/COS. FRLs provide eight different levels of restrictions for Automatic Alternate Routing (AAR), Automatic Route Selection (ARS), or World Class Routing (WCR) calls. They are used in combination with calling permissions and routing patterns and/or preferences to determine where calls can be made. FRLs range from 0 to 7, with each number representing a different level of restriction (or no restrictions at all).

The FRL is used for the AAR/ARS/WCR feature to determine call access to an outgoing trunk group. Outgoing call routing is determined by a comparison of the FRLs in the AAR/ARS/WCR routing pattern to the FRL associated with the COR/COS of the call originator.

The higher the FRL number, the greater the calling privileges. For example, when voice mail ports are assigned to a COR with an FRL of 0, outside calls are disallowed. If that is too restrictive, the voice mail ports can be assigned to a COR with an FRL that is higher, yet low enough to limit calls to the calling area needed.

NOTE:
Voice Messaging ports that are outward restricted via COR cannot use AAR/ARS/WCR trunks. Therefore, the FRL level doesn't matter since FRLs are not checked.

FRLs can be assigned to offer a range of calling areas. Choose the one that provides the most restricted calling area that is required. Table C-1 provides suggested FRL values.

Table C-1. Suggested Values for FRLs

FRL	Suggested Value
0	No outgoing (off-switch) calls permitted.
1	Allow local calls only; deny 0+ and 1-800 calls.
2	Allow local calls, 0+, and 1-800 calls.
3	Allow local calls plus calls on FX and WATS trunks.
4	Allow calls within the home NPA.
5	Allow calls to certain destinations within the continental USA.
6	Allow calls throughout the continental USA.
7	Allow international calling. Assign attendant console FRL 7. Be aware, however, if Extension Number Portability is used, the originating endpoint is assigned FRL 7.

NOTE:
In Table C-1, FRLs 1 through 7 include the capabilities of the lower FRLs. For example, FRL 3 allows private network trunk calls and local calls in addition to FX and WATS trunk calls.

To set FRLs on G2, System 25, and System 85:

- Use **P010 W3 F23** to assign FRLs for use with AAR/ARS/WCR trunks. Assign higher FRLs to restricted patterns in **P309** than the FRL in the COS for the voice mail ports.
- For G2.2, do not use **P314** to mark disallowed destinations with a higher FRL value. **P314 W1** assigns a Virtual Nodepoint Identifier (VNI) to the restricted dial string. **P317 W2** maps the VNI to the pattern, and **P317 W2** shows the pattern preference, with the FRL in field 4.

  For earlier releases, use **P313** to enter disallowed destinations in the Unauthorized Call Control table.

Restrict Toll Areas

A reverse strategy to preventing calls is to allow outbound calls only to certain numbers.

For G2, System 25, and System 85:

- Use **P311 W2** to establish 6-digit translation tables for foreign NPAs, and assign up to 10 different routing designators to each foreign NPA (area code).
- Use **P311 W3** to map restricted and unrestricted exchanges to different routing designators.
- If the unrestricted toll exchanges are in the Home NPA, use **P311 W1** to map them to a routing designator.
- If the Tenant Services feature is used, use **P314 W1** to map routing designators to patterns. If Tenant Services is not used, the pattern number will be the same as the routing designator number.
- Use **P309 W3** to define the restricted and unrestricted patterns.

Create Disallowed Number Lists

When a voice port is unrestricted, or has no toll restriction, a disallowed number list can be used to prevent calls to specific numbers, specific exchanges within all area codes, or specific numbers. There can be a maximum of 8 disallowed lists in the System 25 system with a maximum of 10 numbers on each list. Each voice port can be assigned any or all of the disallowed number lists.

Create Allowed Number Lists

When a voice port is outward or toll restricted, an allowed number list can be used to allow calls to specific area codes and/or exchanges. When outcalling or AMIS networking is required, using outward or toll restriction in combination with an allowed number list limits the risk of unauthorized persons using the voice messaging or automated attendant systems to make toll calls because calls can only be made to the specified area codes and/or exchanges.

There can be a maximum of 8 allowed lists in the System 25 system with a maximum of 10 numbers on each list. Each voice port can be assigned any or all of the allowed number lists.

Detecting Voice Mail Fraud

Table F-3 shows the reports that help determine if your voice mail system is being used for fraudulent purposes.

Table F-3. Reports and Monitoring Techniques for the AUDIX System

Monitoring Technique	Switch
Call Detail Recording (or SMDR)	All
Traffic Measurements and Performance	All
Automatic Circuit Assurance	All
Busy Verification	All
Call Traffic Report	All
Trunk Group Report	G1, G3, System 75
AUDIX Traffic Reports	All

Call Detail Recording (or SMDR)

With Call Detail Recording (CDR) activated for the incoming trunk groups, you can find out details about the calls made into your voice mail ports. This feature is known as Station Message Detail Recording (SMDR) on some switches including the System 25.

NOTE:
Lucent's optional Call Accounting System (CAS) may be installed on the Lucent INTUITY system, allowing you to create customized reports with your data. The optional Lucent HackerTracker program works in conjunction with CAS Plus Version 3 to alert you to abnormal calling activities. Call 800-521-7872 for more information.

Most other call accounting packages discard valuable security information. If you are using a call accounting package, check to see if this information can be stored by making adjustments in the software. If it cannot be stored, be sure to check the raw data supplied by the CDR.

Review CDR for the following symptoms of voice messaging abuse:

- Short holding times on any trunk group where voice messaging is the originating endpoint or terminating endpoint
- Calls to international locations not normally used by your business
- Calls to suspicious destinations
- Numerous calls to the same number
- Undefined account codes

Call Traffic Report

This report provides hourly port usage data and counts the number of calls originated by each port. By tracking normal traffic patterns, you can respond quickly if an unusually high volume of calls begins to appear, especially after business hours or during weekends, which might indicate hacker activity.

Traffic data reports are maintained for the last hour and the peak hour.

Trunk Group Report

This report tracks call traffic on trunk groups at hourly intervals. Since trunk traffic is fairly predictable, you can easily establish over time what is normal usage for each trunk group. Use this report to watch for abnormal traffic patterns, such as unusually high off-hour loading.

SAT, Manager I, and G3-MT Reporting

Traffic reporting capabilities are built-in and are obtained through the System Administrator Tool (SAT), Manager I, and G3-MT terminals. These programs track and record the usage of hardware and software features. The measurements include peg counts (number of times ports are accessed) and call duration.

Traffic measurements are maintained constantly and are available on demand. However, reports are not archived and should therefore be printed to monitor a history of traffic patterns.

ARS Measurement Selection

The ARS Measurement Selection can monitor up to 20 routing patterns (25 for G3) for traffic flow and usage.

Automatic Circuit Assurance

This monitoring technique detects a number of short holding time calls or a single long holding time call which may indicate hacker activity. Long holding times on Trunk-to-Trunk calls can be a warning sign. The ACA feature allows you to set time limit thresholds defining what is considered a short holding time and a long holding time. When a violation occurs, a designated station is visually notified.

When an alarm occurs, determine if the call is still active. If toll fraud is suspected (for example, a long holding time alarm occurs on a Trunk-to-Trunk call), you may want to use the busy verification feature (see *Busy Verification* that follows) to monitor the call in progress.

For G2, System 25, and System 85:

- Use **P285 W1 F5** and **P286 W1 F1** to enable ACA systemwide.
- Use **P120 W1** to set ACA call limits and number of calls thresholds.
- Choose the appropriate option:
  - — To send the alarms and/or reports to a designated maintenance facility, use **P497 W3**.
  - — To send the alarms and/or reports to an attendant, use **P286 W1 F3**.

Busy Verification

When toll fraud is suspected, you can interrupt the call on a specified trunk group and monitor the call in progress. Callers will hear a long tone to indicate the call is being monitored.

For G2, System 25, and System 85:

- Administer a Busy Verification button on the attendant console.
- To activate the feature, press the button and enter the trunk access code and the member number.

AUDIX Traffic Reports

The INTUITY AUDIX system tracks traffic data over various timespans. Reviewing these reports on a regular basis helps to establish traffic trends. If increased activity or unusual usage patterns occur, such as heavy call volume on ports assigned to outcalling, they can be investigated immediately. In addition, the AUDIX Administration and Data Acquisition Package (ADAP) uses a PC to provide extended storage and analysis capabilities for the traffic data. You can also use the AUDIX Administration Log and Activity Log to monitor usage and investigate possible break-in attempts. For more information on running and using reports, see *Lucent INTUITY™ AUDIX® Release 3.3 Administration and Feature Operations*, *585-310-552*.

Lucent's Statement of Direction

The telecommunications industry is faced with a significant and growing problem of theft of customer services. To aid in combating these crimes, Lucent intends to strengthen relationships with its customers and its support of law enforcement officials in apprehending and successfully prosecuting those responsible.

No telecommunications system can be entirely free from risk of unauthorized use. However, diligent attention to system management and to security can reduce that risk considerably. Often, a trade-off is required between reduced risk and ease of use and flexibility. Customers who use and administer their systems make this trade-off decision. They know best how to tailor the system to meet their unique needs and are therefore in the best position to protect the system from unauthorized use. Because the customer has ultimate control over the configuration and use of Lucent services and products it purchases, the customer properly bears responsibility for fraudulent uses of those services and products.

To help customers use and manage their systems in light of the trade-off decisions they make and to ensure the greatest security possible, Lucent commits to the following:

- Lucent products and services will offer the widest range of options available in the industry to help customers secure their communications systems in ways consistent with their telecommunications needs.
- Lucent is committed to develop and offer services that, for a fee, reduce or eliminate customer liability for PBX toll fraud, provided the customer implements prescribed security requirements in its telecommunications systems.
- Lucent's product and service literature, marketing information and contractual documents will address, wherever practical, the security features of our offerings and their limitations, and the responsibility our customers have for preventing fraudulent use of their Lucent products and services.
- Lucent sales and service people will be the best informed in the industry on how to help customers manage their systems securely. In their continuing contacts with customers, they will provide the latest information on how to do that most effectively.
- Lucent will train its sales, installation and maintenance, and technical support people to focus customers on known toll fraud risks; to describe mechanisms that reduce those risks; to discuss the trade-offs between enhanced security and diminished ease of use and flexibility; and to ensure that customers understand their role in the decision-making process and their corresponding financial responsibility for fraudulent use of their telecommunications system.

- Lucent will provide education programs for customers and our own people to keep them apprised of emerging technologies, trends, and options in the area of telecommunications fraud.
- As new fraudulent schemes develop, we will promptly initiate ways to impede those schemes, share our learning with our customers, and work with law enforcement officials to identify and prosecute fraudulent users whenever possible.

We are committed to meeting and exceeding our customers' expectations, and to providing services and products that are easy to use and are of high value. This fundamental principle drives our renewed assault on the fraudulent use by third parties of our customers' communications services and products.

Lucent Security Offerings

Lucent has developed a variety of offerings to assist in maximizing the security of your system. These offerings include:

- Security Audit Service of your installed systems
- Fraud Intervention Service
- Individualized Learning Program, a self-paced text that uses diagrams of system administration screens to help customers design security into their systems. The program also includes a videotape and the *BCS Products Security Handbook*.
- Call Accounting package that calls you when preset types and thresholds of calls are established.
- Remote Port Security Device that makes it difficult for computer hackers to access the remote maintenance ports
- Software that can identify the exact digits passed through the voice mail system.

For more information about these services, see the *BCS Product Security Handbook, 555-025-600*.

Lucent Toll Fraud Crisis Intervention

If you suspect you are being victimized by toll fraud or theft of service and need technical support or assistance, call one of the following numbers immediately.

System 25 — Lucent BCS National Service Assistance Center (NSAC)	800 628-2888
Lucent Corporate Network Security	800 821-8235
AUDIX Help Line	800 562-8349
BCS Technical Service Center Toll Fraud Intervention Hotline	800-643-2353

NOTE:
These services are available 24 hours a day, 365 days a year. Consultation charges may apply.

Lucent Corporate Security

Whether or not immediate support is required, please report all toll fraud incidents perpetrated on Lucent services to Lucent Corporate Security. In addition to recording the incident, Lucent Corporate Security is available for consultation on product issues, investigation support, law enforcement, and education programs.

Switch Administration for Lucent INTUITY Lodging

D

Overview

This chapter describes the switch administration you need to complete if you have Lucent INTUITY Lodging. Read the information and configure your switch as required.

Purpose

After reading this chapter, you will know how to administer INTUITY AUDIX to provide lodging service, including administering:

- Direct Calling Group
- Message retrieval
  - — Without AUDIX
  - — With AUDIX
  - — Alternate message retrieval method
- Voice Mail
- Call Coverage
- Do Not Disturb
- Cut-to-Service

Direct Calling Group Administration

A Direct Calling Group (DCG) group is a set of extension numbers assigned to another phone number. When calls arrive, the system searches for an available calling group member starting with the station after the last station to receive a call. This is called *circular hunt*.

Trunks can be set to "ring in" to the calling group so that an incoming trunk call goes directly to the first available station. Each member of a calling group is administered as a voice messaging port.

The calling group can be administered as the receiver for a coverage calls so that unanswered calls automatically go to the first available station for coverage.

An AUDIX calling group provides call information to the voice port receiving each call. The call information allows the Lucent INTUITY system to determine:

- If the call being processed was a direct call or a coverage call
- If the call was a direct inside call (to the calling group number) or a direct outside call (on one of the trunks assigned to ring into the calling group)
- If the coverage is for one extension calling another, or for a call made from outside (trunk) to an extension

Coverage for calls is provided by assigning a *DGC group* (or AUDIX calling group) as the last point of each extension's coverage path.

Additional information required for coordination of the Lucent INTUITY system and the System 25 is passed in both directions by touch tones. The Lucent INTUITY system and the System 25 also communicate by switch-hook flashes and call progress tones.

In order to configure a DGC group for calls being received by the Lucent INTUITY system you must:

1. Administer your switch to create a DGC for INTUITY AUDIX.
2. Have the switch ports that terminate the DGC group extensions wired to the voice ports on the Lucent INTUITY platform. Wire them as described in the Hardware Installation book specific to the platform you're using.

Message Retrieval Administration

The message retrieval number is the telephone number that users call to retrieve voice mail messages. Like other calls to the Lucent INTUITY system, message retrieval calls are ultimately forwarded to the Lucent INTUITY hunt group.

Message Retrieval in Lodging Systems without AUDIX

1. Provide the Lucent INTUITY system's message retrieval number to your users.

Message Retrieval in Systems Shared with AUDIX

There must be two message retrieval numbers in a shared system, one to retrieve from the AUDIX application, and one to retrieve from the Lodging application.

Retrieval from the AUDIX Application

1. Provide the Lucent INTUITY system message retrieval number to your users for the AUDIX application.

Retrieval from the Lodging Application

1. Administer on your switch an extension number *not* associated with a switch port, that is, administer it as a phantom extension. This number becomes the Lodging message-retrieval number for your system.
2. Configure the Lodging message retrieval number so that the Lucent INTUITY DGC group covers all calls.
3. Provide the Lodging message retrieval number to your users for the Lodging application.

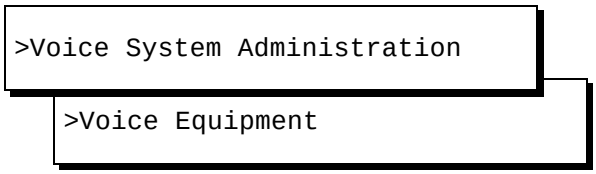
Alternate Message Retrieval Method

Guests can also be allowed to log on from a remote phone to any mailbox for which they have a password. A guest will call a number to access this service then enter an extension number and a password to retrieve messages in the mailbox.

To provide this service:

1. Administer on your switch a phantom number. This is the message retrieval number used from a remote phone.

2. Configure the phantom number so the INTUITY AUDIX DGC group covers all calls.
3. If your switch has password capability, assign a password to the new extension.
4. Assign services to the new extension, by performing the following tasks:
    a. Log on to the Lucent INTUITY system as ***sa*** or ***craft***.
    b. From the main Administration menu, select:.



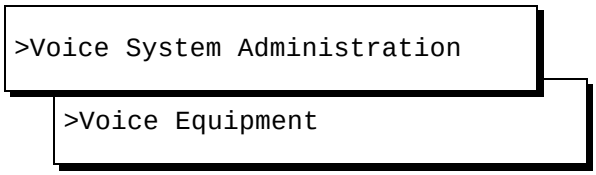
    c. From the Voice Equipment screen, press CHG-KEYS (F8) then ASSIGN (F3).
    d. Select Services to Called Numbers from the Assign menu.
    e. Press CHOICES (F2) and select **AUDIX+ldgn**.
    f. Enter the called number that was administered on the switch for this purpose.
    g. Press SAVE (F3). A command-output screen appears confirming your choice.
    h. Press CANCEL (F6) repeatedly to return to the Administration menu.
5. If the phantom extension is to be accessed from outside your system, assign the extension to a Direct-Inward-Dialing number.
6. Provide the Lodging message retrieval number to your users for the Lodging application.

Voice Mail Administration

Voice mail is enabled when the switch sends a guest's call to a coverage path. The following procedure, however, provides a separate number that can be used at any time to send voice mail to a guest.

To provide this service:

1. Administer a phantom number on your switch to be used to send voice messages to your users.
2. Configure the phantom number so that the Lucent INTUITY system DGC group all calls.
3. Assign services to the new extension, by performing the following tasks:
   a. Log in to the Lucent INTUITY system as ***sa*** or ***craft***.
   b. From the Main Menu select the following sequence:.



   c. From the Voice Equipment screen, press CHG-KEYS (F8) then ASSIGN (F3).
   d. Select `Services to Called Numbers`.
   e. Press CHOICES (F2) and select **AUDIX+ldgn**.
   f. Enter the called number of your choice.
   g. Press SAVE (F3). A system displays a command-output screen confirming your choice.
   h. Press CANCEL (F6) repeatedly to return to the Administration menu.
4. If the phantom extension will be accessed from outside your system, assign the extension to a Direct-Inward-Dialing number.
5. Provide the Lodging voice mail number to users for the Lodging application.

Call Coverage Path

A coverage path directs the switch to transfer unanswered calls to a DGC group, to a service, or to another extension.

When a call goes to coverage, the switch forwards the called number to the Lucent INTUITY system. The Lucent INTUITY system detects that the called number is administered as a specific user's extension and treats the call as one to be answered and recorded. Depending on how the extension is configured, the call may be answered by either the AUDIX or the Lodging application.

1. Administer your switch to assign call coverage for each guest's extension to the associated INTUITY AUDIX DGC group number.

Do Not Disturb

Look for features on your switch that adapt themselves especially well to lodging situations. One example is the *Do not Disturb* feature on some switches. This feature makes it possible to request that a particular extension not receive calls until a specified time. At the specified time, the switch automatically deactivates the feature and allows calls to terminate normally at the extension.

If this extension is covered by the Lucent INTUITY system hunt group, then calls received while *Do-not-Disturb* is active will be recorded for later retrieval.

Cut-to-Service

A cut-to-service of the Lucent INTUITY Lodging application amounts to changing the coverage path for each guest extension to the Lucent INTUITY system DGC group. The associated system must be completely installed before you cut the Lucent INTUITY Lodging application into service. Furthermore, all Lucent INTUITY system initial administration, associated switch administration, and acceptance tests must be completed.

Some switching systems make it possible to group these extensions as a set allowing the coverage path to be changed simultaneously. Most switching systems permit changing the coverage path for guest extensions one extension at a time. You may use either method.

Gradual Cut to Service

Using this cut-to-service strategy, enter guests into the Lucent INTUITY Lodging system as they check in. Only new guests, not current guests, receive Lucent INTUITY Lodging services.

The advantages of this method include:

- Attendants can learn the new system while only a portion of guests are also learning to use it.
- Guests do not have to learn both the previous and the new systems. Current guests use the previous system; new guests use the Lucent INTUITY Lodging system.
- Custom passwords and language options can be assigned to each guest as the guest is checked in.

Gradually cut to service as follows:

1. Administer your switch to send the guests' telephone call coverage to the INTUITY AUDIX DGC group.
2. Check in each new guest as described in *Lucent INTUITY Lodging Administration and Feature Operations, 585-310-559*.

One-Step Cut to Service

On switches where a coverage path is separately defined and then applied to a class of stations, assign all guest stations to Lucent INTUITY Lodging at once.

Using this cut-to-service strategy, all guest stations are changed to Lucent INTUITY Lodging at the same time.

The advantages of this method include:

- Since Lucent INTUITY Lodging is brought up in one step, attendants must cope with only one call-answering system at a time.
- Cut-to-service is over at once. Multiple messaging systems can confuse the guests.
- Reasonable coverage options can be assigned to all guests at once; administration can be modified for the few that have unusual requirements.

Cut to service as follows:

1. Use Lucent INTUITY Lodging to administer the options that guests require.
2. Make sure guests and attendants know when the change will take place and have some idea of how the new service operates.
3. On your switch, determine the coverage path that applies to your guests' stations.
4. On your switch, set the new coverage path for your guests' stations to the INTUITY AUDIX DGC group.

Summary

You have completed the switch integration tasks necessary to configure your Lucent INTUITY system for the Lodging application.

Abbreviations

A

AC
alternating current

ACD
automatic call distribution

ADAP
administration and data acquisition package

ADU
asynchronous data unit

ALT
assembly load and test

AMIS
Audio Messaging Interchange Specification

API
application programming interface

AUDIX
Audio Information Exchange

AWG
American wire gauge

B

BCS
Business Communications Systems

BIOS
basic input/output system

bit
binary digit

bps
bits per second

BRI
basic rate interface

BSC
binary synchronous communications

BTU
British thermal unit

C

CAS
call accounting system

CCA
call classification analysis

CDH
call data handler process

CELP
code excited linear prediction

CICS
customer information control system

CMS
call management system

CO
central office

COIN
central office implemented network

COM1
serial communications port 1

COM2
serial communications port 2

COR
class of restriction

COS
class of service

CPU
central processing unit

CSI
called subscriber information

CTS
clear to send

D

DAC
dial access code

DBP
database processor

DC
direct current

DCE
data communications equipment

DCIU
data communications interface unit

DCP
digital communications protocol

DCS
distributed communications system

DID
direct inward dialing

DIP
data interface process

DMA
direct memory access

DNIS
dialed number identification service

DSP
digital signal processor

DSR
data set ready

DSU
data service unit

DTE
data terminal equipment

DTMF
dual tone multifrequency

DTR
data terminal ready

E

EIA
Electronic Industries Association

ESD
electrostatic discharge

ESS
electronic switching system

F

F key
function key

FIFO
first-in first-out

FOOS
facility out of service

G

GOS
grade of service

H

Hz
hertz

I

I/O
input/output

IDI
isolating data interface

IMAPI
Intuity messaging application programming interface

INADS
initialization and administration system

IRQ
interrupt request

ISDN
integrated services digital network

IVC6
integrated voice CELP card (6 channels)

IVR
integrated voice response

K

Kbps
kilobits per second

Kbyte
kilobyte (1024 bytes)

kHz
kilohertz

L

LAN
local area network

LCD
liquid crystal display

LED
light-emitting diode

LIFO
last-in first-out

LWC
leave word calling

M

MANOOS
manually out of service

Mbyte
megabyte (one million bytes)

MHz
megahertz

modem
modulator/demodulator

MPDM
modular processor data module

ms
millisecond

MT
maintenance (Intuity software component)

MTBF
mean time between failures

MWI
message-waiting indicator

MWL
message-waiting lamp

N

NW
Intuity AUDIX Digital Networking

O

OA&M
operations, administration, and maintenance

OS
operating system

OSI
open systems interconnection

P

PBX
private branch exchange

PC
power converter or personal computer

PDM
processor data module

PEC
price element code

PIB
processor interface board

PMS
property management system

POST
power-on self test

R

RAM
random-access memory

REN
ringer equivalence number

ROM
read-only memory

RTS
request to send

RTU
right to use

S

SCA
switch communications adapter

SCSI
small computer systems interface

SID
switch integration device

SIMM
single in-line memory module

SMDR
Station Message Detail Reporting

SMSI
simplified message service interface

SW
switch integration (Intuity software component)

T

TCP/IP
Transmission Control Protocol/Internet Program

TDD
telecommunications device for the deaf

TDM
time division multiplex

T/R
tip/ring

TRIP
tip/ring input process

TSC
Lucent's Technical Services Center

U

UCD
uniform call distribution

UPS
uninterruptible power supply

V

VM
INTUITY AUDIX Voice Messaging

VP
voice platform (INTUITY software component)

VROP
voice response output process

Glossary

5ESS Switch
An AT&T central office switch that can be integrated with the AT&T Intuity system.

A

accessed message
A message that was received and scanned (either the entire message or just the header).

ACD
See *automatic call distribution*.

activity menu
The list of options spoken to subscribers when they first access a messaging system. Selecting an activity is the starting point for all user operations.

ADAP
See *administration and data acquisition package*.

address
Intuity AUDIX subscriber identification, containing the subscriber's extension and machine, that indicates where the system needs to deliver a message. An address may include several subscribers or mailing lists. Name or number addressing can be selected with the *A command.

adjunct
A separate system closely integrated with a switch, such as an AT&T Intuity system or a call management system (CMS).

administration
The process of setting up a system (such as a switch or a messaging system) to function as desired. Options and defaults are normally set up (translated) by the system administrator or service personnel.

administration and data acquisition package (ADAP)
A software package that allows the system administrator to transfer system subscriber, maintenance, or traffic data from an Intuity AUDIX system to a personal computer (PC).

ADU
See *asynchronous data unit*.

alarm log
A list of alarms that represent all of the active or resolved problems on an AT&T Intuity system. The alarm log is stored in a software file on disk and can be accessed either locally or remotely on a terminal connected to the system.

alarms
Hardware, software, or environmental problems that may affect system operation. Alarms are classified as major, minor, or warning.

alphanumeric
Alphabetic, numeric, or punctuation symbols.

ALT
See *assemble load and test.*

AMIS
See *Audio Messaging Interchange Specification*.

AMIS Prefix
A number added to the destination number to indicate that the destination number is an AMIS analog networking number.

ampere (amp)
The unit of measurement of electric current. One volt of potential across one ohm causes a current flow of one amp.

analog networking
A method of transferring a message from one messaging system to another whereby the message is played back (voiced) during the transmission from one system to another.

analog signal
A communications path that, in teleprocessing usage, usually refers to a voice-grade telephone line.

announcement fragment
A numbered piece of spoken information that makes up a system message or prompt.

antistatic
A material that is treated to prevent the build-up of static electricity.

API
See *application programming interface.*

application programming interface
A set of formalized software calls and routines that can be referenced by an application program to access underlying network services.

assemble load and test
The factory process that preloads software, installs hardware, and tests the system prior to shipping.

asynchronous communication
A method of data transmission in which bits or characters are sent at irregular intervals and bits or characters are spaced by start and stop bits and not by time. See also *synchronous communication*.

asynchronous data unit (ADU)
An electronic communications device that can extend data transmission over asynchronous lines more than 50 feet in length. Recommended ADUs include Z3A1 or Z3A4.

asynchronous transmission
A form of serial communications where each transmitted character is bracketed with a start bit and one or two stop bits. The AT&T Intuity system provides asynchronous RS-232 capabilities for Intuity AUDIX Digital Networking, if required.

attendant console
A special purpose phone with numerous lines and features located at the front desk. The front desk attendant uses the phone to answer and transfer calls.

Audio Messaging Interchange Specification (AMIS)
An analog networking protocol that allows subscribers to exchange messages with any messaging system that also has AMIS Analog Networking capabilities. Messages can be exchanged with subscribers on AT&T Intuity systems as well as with users on remote messaging systems made by vendors other than AT&T.

Audio Information Exchange (AUDIX)
A complete messaging system accessed and operated by touch-tone telephones and integrated with a switch.

audit
A software program that resolves filesystem incompatibilities and updates restored filesystems to a workable level of service. Audits are done automatically on a periodic basis, or can be performed on demand.

AUDIX
See *Audio Information Exchange*.

autodelete
An Intuity AUDIX feature that allows subscribers to indicate that faxes are automatically deleted from their mailbox after being printed.

automated attendant
A feature that allows a user of an Intuity system to set up a main extension number with a menu of options that routes callers to an appropriate department at the touch of a button.

automatic call distribution (ACD)
The System 85, Generic 2, or Generic 3 call-distribution group of analog ports that connects Intuity subscribers and users to the system. See also *call-distribution group*.

automatic message scan
An Intuity AUDIX feature that allows subscribers to scan all message headers and messages at the touch of two buttons. With Intuity FAX Messaging, this feature allows all new faxes to be bundled and transmitted over a single fax call delivery call. Also called *autoscan*.

autoprint
An Intuity AUDIX feature that allows subscribers to indicate that faxes are automatically sent to a specified print destination.

autoscan
See *automatic message scan*.

AWG
See *American wire gauge.*

American wire gauge
A standard measuring gauge for non-ferrous conductors.

B

background testing
Testing that runs continuously when the system is not busy doing other tasks.

backup
A duplicate copy of files and directories saved on a removable media such as floppy diskette or tape. The backup filesystem may be copied back (restored) if the active version is damaged (corrupted) or lost.

basic input/output system (BIOS)
A system that contains the buffers for sending information from a program to the actual hardware device the information should go to.

baud
A unit of measurement that describes the speed of transferred information.

baud rate
Transmission signaling speed.

basic call transfer
A switch hook-flash method used to send the Intuity AUDIX transfer command over analog voice ports.

basic rate access
See *basic rate interface*.

basic rate interface (BRI)
International standard protocol for connecting a station terminal to an integrated systems digital network (ISDN) switch. ISDN BRI supports two 64 Kbps information bearer channels (B1 and B2), and one 16 Kbps call status and control (D) channel (a 2B + D format). Also called b*asic rate access*.

binary digit (bit)
Two-number notation that uses the digits 0 and 1. Low-order bits are on the right (for example, 0001=1, 0010=2, and so forth). Four bits make a nybble; eight bits make a byte.

binary synchronous communications (BSC)
A character-oriented synchronous link protocol.

BIOS
See *basic input/output system*.

bit
See *binary digit*.

body
The part of subscriber voice mail that contains the actual spoken message. For a leave word calling (LWC) message, it is a standard system announcement.

boot
The operation to start a computer system by loading programs from disk to main memory (part of system initialization). Booting is typically accomplished by physically turning on or restarting the system. Also called *reboot*.

boot filesystem
The filesystem from which the system loads its initial programs.

bps (bits per second)
The number of binary units of information (1s or 0s) that can be transmitted per second. Mbps refers to a million bits per second; Kbps refers to a thousand bits per second.

BRI
See *basic rate interface*.

broadcast messaging
An Intuity AUDIX feature that enables the system administrator and other designated users to send a message to all subscribers automatically.

BSC
See *binary synchronous communications*.

buffer
Memory used to compensate for time differences in transmission by temporarily storing data.

bulletin board
An Intuity AUDIX feature that allows a message to be played to callers who dial the extension. Callers cannot leave a message since it is a listen-only service. Also called *information service*.

bundling
Combining several calls and handling them as a single call. See also *automatic message scan*.

bus
An electrical connection/cable allowing two or more wires, lines, or peripherals to be connected together.

busy-out/release
To remove an Intuity device from service (make it appear busy or in use), and later restore it to service (release it). The Intuity switch data link, voice ports, or networking ports may be busied out if they appear faulty or if maintenance tests are run.

byte
A unit of storage in the computer. On many systems, a byte is eight bits (binary digits), the equivalent of one character of text.

C

call accounting system (CAS)
A software device that monitors and records information about a calling system.

call-answer
An Intuity AUDIX or AT&T Intuity Lodging feature that allows the system to answer a call and record a message when the subscriber is unavailable. Callers may be redirected to the system through the call coverage or call forwarding switch features. Intuity AUDIX subscribers may record a personal greeting for these callers.

call-answer language choice
The capability of subscriber mailboxes to accept messages in different languages. For the Intuity AUDIX application, this capability exists when the multilingual feature is turned on.

callback number
In AMIS analog networking, the telephone number transmitted to the recipient machine to be used in returning messages that cannot be delivered.

call coverage
A switch feature that defines a preselected path for calls to follow if the first (or second) coverage points are not answered. The Intuity system may be placed at the end of a coverage path to handle redirected calls through call coverage, send all calls, go to cover, etc.

call delivery
See *message delivery*.

call-distribution group
The set of analog port cards on the switch that connects subscribers and users to the Intuity system by distributing new calls to idle ports. This group (or split) is called automatic call distribution (ACD) on System 85, Generic 2, and Generic 3 and uniform call distribution (UCD) on System 75, Generic 1, and Generic 3. See also *automatic call distribution* and *uniform call distribution*.

call management system (CMS)
An inbound call distribution and management reporting package.

called tone (CED tone)
The distinctive tone generated by a fax endpoint when it answers a call (constant 2100 Hz tone).

called subscriber information (CSI)
The identifier for the answering fax endpoint. This identifier is sent in the T.30 protocol and is generally the telephone number of the fax endpoint.

calling tone (CNG tone)
The distinctive tone generated by a fax endpoint when placing a call (constant 1100 Hz tone on for one-half second, off for three seconds).

call vectoring
A System 85 R2V4, Generic 2, and Generic 3 feature that uses a vector (switch program), allowing a switch administrator to customize the behavior of calls sent to an automatic call distribution (ACD) group.

card cage
An area within the Intuity hardware platform that contains and secures all of the standard and optional circuit cards used in the system.

cartridge tape drive
A high-capacity data storage/retrieval device that can be used to transfer large amounts of information onto high-density magnetic cartridge tape based on a predetermined format. This tape is to be removed from the system and stored as a backup.

CAS
See *call accouting system*.

CED tone
See *called tone*.

CELP
See *code excited linear prediction*.

central office (CO)
An office or location in which large telecommunication machines such as telephone switches and network access facilities are maintained. In a CO, private customer lines are terminated and connected to the public network through common carriers.

central processing unit (CPU)
The component of the computer that manipulates data and processes instructions coming from software.

channel
A telecommunications transmission path for voice and/or data.

channel capacity
A measure of the maximum bit rate through a channel.

CICS
See *customer information control system*.

class of service (COS)
The standard set of Intuity AUDIX features given to subscribers when they are first administered (set up with a voice mailbox).

clear to send (CTS)
Located on Pin 5 of the 25-conductor RS-232 interface, CTS is used in the transfer of data between the computer and a serial device.

client
A computer that sends, receives and uses data, but that also shares a larger resource whose function is to do most data storage and processing. For Intuity Message Manager, the subscriber's PC running Message Manager is the client. See also *server*.

CMS
See *call management system*.

CNG tone
See *calling tone*.

CO
See *central office*.

COS
See *class of service*.

code excited linear prediction
An analog-to-digital voice coding scheme.

collocated
An Intuity system installed in the same physical location as the host switch. See also *local installation*.

collocated adjunct
Two or more adjuncts that are serving the same switch (i.e., each has voice port connections to the switch) or that are serving different switches but can be networked through a direct RS-232 connection due to their proximity.

comcode
AT&T's numbering system for telecommunications equipment. Each comcode is a nine digit number that represents a specific piece of hardware, software, or documentation.

command
An instruction or request given by the user to the software to perform a particular function. An entire command consists of the command name and options. Also, one- or two-key touch tones that control a mailbox activity or function.

compound message
A message that combines both a message and a fax message into one unit, which is then handled by Intuity AUDIX as a single message.

configuration
The particular combination of hardware and software components selected for a system, including external connections, internal options, and peripheral equipment.

controller circuit card
A circuit card used on a computer system that controls its basic functionality and makes the system operational. These cards are used to control magnetic peripherals, video monitors, and basic system communications.

COS
See *class of service*.

coverage path
The sequence of alternate destinations to which a call is automatically sent when the call is not answered by a subscriber. This sequence is set up on the switch, normally with the AT&T Intuity system as the last or only destination.

CPU
See *central processing unit*.

cross connect
Distribution system equipment used to terminate and administer communication circuits.

cross connection
The connection of one wire to another, usually by anchoring each wire to a connecting block and then placing a third wire between them so that an electrical connection is made.

CSI
See *called subscriber information*.

CTS
See *clear to send*.

D

DAC
See *dial access code*.

database
A structured set of files, records, or tables. Also, a collection of filesystems and files in disk memory that store the voice and nonvoice (program data) necessary for AT&T Intuity system operation.

data communications equipment (DCE)
Standard type of data interface normally used to connect to data terminal equipment (DTE) devices. DCE devices include the data service unit (DSU), the isolating data interface (IDI), and the modular processor data module (MPDM).

data communications interface unit (DCIU)
A switch device that allows nonvoice (data) communication between an AT&T Intuity system and an AT&T switch. The DCIU is a high-speed synchronous data link that communicates with the

common control switch processor over a direct memory access (DMA) channel that reads data directly from FP memory.

data link
A term used to describe the communications link used for data transmission from a source to a destination. For example, a phone line for data transmission.

data service unit (DSU)
A device used to access digital data channels. DATAPHONE II 2500 DSUs are synchronous data communications equipment (DCE) devices used for extended-local AT&T Intuity system connections. The 2600 or 2700 series may also be used; these are more expensive DSU options and support diagnostic testing and the DATAPHONE II Service network system.

data set
AT&T term for a modem. A data set usually includes the telephone. See also *modem*.

data terminal equipment (DTE)
Standard type of data interface normally used for the endpoints in a connection. Normally the AT&T Intuity system, most terminals, and the switch data link are DTE devices.

data terminal ready (DTR)
A control signal sent from the data terminal equipment (DTE) to the data communications equipment (DCE) that indicates the DTE is on and ready to communicate.

DBP
See *data base processor*.

DCE
See *data communications equipment*.

DCIU
See *data communications interface unit*.

DCP
See *digital communications protocol*.

DCS
See *distributed communications system*.

debug
See *troubleshoot*.

dedicated line
A communications path that does not go through a switch. A dedicated (hard-wired) path may be formed with directly connected cables. MPDMs, DSUs, or other devices may also be used to extend the distance that signals can travel directly through the building wiring.

default
A value that is automatically supplied by the system if no other value is specified.

default print number
The subscriber-administered extension to which autoprinted faxes are redirected upon their receipt into the subscriber's mailbox. This default print destination is also provided as a print option when the subscriber is manually retrieving and printing faxes from the mailbox.

delivered message
A message that has been successfully transmitted to a recipient's incoming mailbox.

demand testing
Testing performed on request (usually by service personnel).

diagnostic testing
A program run for testing and determining faults in the system.

dial-ahead/dial-through
The act of interrupting or preceding Intuity AUDIX system announcements by typing (buffering) touch-tone commands in the order the system would normally prompt for them.

dialed number identification service (*DNIS_SVC)
An available channel service assignment on the AT&T Intuity system. Assigning this service to a channel permits the AT&T Intuity system to interpret information from the switch and operate the appropriate application for the incoming telephone call.

DID
See *direct inward dialing*.

digital
Discrete data or signals such as 0 and 1, as opposed to analog continuous signals.

digital communications protocol (DCP)
A 64 Kbps digital data transmission code with a 160 Kbps bipolar bit stream divided into two information (I) channels and one signaling (S) channel.

digital networking
A method of transferring messages between messaging systems in a digital format. See also *Intuity AUDIX Digital Networking*.

digital signal processor
A specialized digital microprocessor that performs calculations on digitized signals that were originally analog and then sends the results on.

DIP
See *data interface process*.

DIP switch
See *dual in-line package switch*.

direct inward dialing
The ability for a caller outside a company to call an internal extension without having to pass through an operator or attendant.

direct memory access (DMA)
A quick method of moving data from a storage device directly to RAM, which speeds processing.

directory
An Intuity AUDIX feature allowing you to hear a subscriber's name and extension after typing **N at the activity menu. Also, a group of related files accessed by a common name in software.

display terminal
A data terminal with a screen and keyboard used for displaying AT&T Intuity screens and performing maintenance or administration activities.

distributed communications system (DCS)
A network of two or more switches that uses logical and physical data links to provide full or partial feature transparency. Voice links are made using tie trunks.

distribution list
See *mailing list*.

DMA
See *direct memory access*.

DNIS
See *dialed number identification service*.

DSP
See *digital signal processor*.

DSU
See *data service unit*.

DTE
See *data terminal equipment*.

DTMF
See *dual tone multifrequency*.

dual in-line package (DIP) switch
A very small switch, usually attached to a printed circuit card, in which there are only two settings: on or off (or 0 or 1). DIP switches are used to configure the card in a semipermanent way.

dual language greetings
The capability of Intuity AUDIX subscribers to create personal greetings in two different languages — one in a primary language and one in a secondary language. This capability exists when the multilingual feature is turned on and the prompts for subscriber mailboxes can be in either of the two languages.

dual tone multifrequency
A way of signaling consisting of a pushbutton or touch tone dial that sends out a sound which consists of two discrete tones picked up and interpreted by telephone switches.

E

electrostatic discharge (ESD)
Discharge of a static charge on a surface or body through a conductive path to ground. An ESD can be damaging to integrated circuits.

enabled/disabled
The state of a hardware device that indicates whether the AT&T Intuity system can use it. Devices must be equipped before they can be enabled (made active). See also *equipped/unequipped*.

endpoint
See *fax endpoint*.

enhanced call transfer
An Intuity AUDIX feature that allows compatible switches to transmit messages digitally over the BX.25 (data) link. This feature is used for quick call transfers and requires a fully integrated digital switch. Callers can only transfer to other extensions in the switch dial plan.

enhanced serial data interface
A software- and hardware-controlled method used to store data on magnetic peripherals.

equipped/unequipped
The state of a networking channel that indicates whether AT&T Intuity software has recognized it. Devices must be equipped before they can be enabled (made active). See also *enabled/disabled*.

error message
A message on the screen indicating that something is wrong and possibly suggesting how to correct it.

errors
Problems detected by the system during operation and recorded in the maintenance log. Errors can produce an alarm if they exceed a threshold.

escape from reply
The ability to quickly return to getting messages for a subscriber who gets stuck trying to respond to a message. To escape, the subscriber simply presses #.

escape to attendant
An Intuity AUDIX feature that allows a subscriber with the call answer feature to have a personal attendant or operator administered to potentially pick up an unanswered call. A system-wide extension could also be used to send callers to a live agent.

ESD
See *electrostatic discharge*.

events
Informational messages about the system's activities. For example, an event is logged when the system is rebooted. Events may or may not be related to errors and alarms.

F

facility out-of-service
The current channel is not receiving a dial tone and is not functioning.

fax endpoint
Any device capable of receiving fax calls. Fax endpoints include fax machines, individual PC fax modems, fax ports on LAN fax servers, and ports on fax-enabled messaging systems.

field
An area on a screen, menu, or report where information can be typed or displayed.

FIFO
See *first-in/first-out*.

file
A collection of data treated as a basic unit of storage.

filename
Alphanumeric characters used to identify a particular file.

file redundancy
See *mirroring*.

file system
A collection of related files (programs or data) stored on disk that are required to initialize an AT&T Intuity system.

first-in/first-out
The first call (or data) to be received is the first call (or data) to be processed.

F key
See *function key*.

FOOS
See *facility out-of-service*.

format
To set up a disk, floppy diskette, or tape with a predetermined arrangement of characters so that the system can interpret meaningful information.

FPDC
See *Floating Personal Dial Code*.

Floating Personal Dial Code
Virtual extensions that can be logged into any station set.

function
Individual steps or procedures within a mailbox activity.

function key (F key)
A key on a computer keyboard that performs a defined function when pressed. The user interface for the AT&T Intuity system defines keys F1 through F8.

G

Generic 1, 2, or 3
AT&T switch system software releases. Generic 1, Generic 3i, and Generic 3s correspond to the new generation of System 75-based software. Generic 2 and Generic 3r correspond to the new release of System 85-based software.

generic tape
A copy of the standard software and stand-alone tape utilities that is shipped with a new AT&T Intuity system.

GOS
See *grade of service*.

grade of service (GOS)
A parameter that describes the delays in accessing a port on the AT&T Intuity system. For example, if the GOS is P05, 95% of the callers would hear the system answer and 5% would hear ringing until a port became available to answer the call.

guaranteed fax
A feature of AT&T Intuity FAX Messaging that temporarily stores faxes sent to a fax machine. In cases where the fax machine is busy or does not answer a call, the call is sent to an Intuity AUDIX mailbox.

guest password
A feature that allows users who are not Intuity AUDIX subscribers to leave messages on the system by dialing a subscriber's extension and entering a system-wide guest password.

H

hard disk drive
A high-capacity data storage/retrieval device that is located inside a computer platform. A hard disk drive stores data on non-removable high-density magnetic media based on a predetermined format for retrieval by the system at a later date.

hardware
The physical components of a computer system. The central processing unit, disks, tape and floppy drives are all hardware.

header
Information that the system creates to identify a message. A message header includes the originator or recipient, type of message, creation time, and delivery time.

help
A command run by pressing HELP or CTRL ? on an AT&T Intuity display terminal to show the options available at your current screen position. In the Intuity AUDIX system, press * H on the telephone keypad to get a list of options. See also *on-line help*.

hertz (Hz)
A measurement of frequency in cycles per second. A hertz is one cycle per second.

host switch
The switch directly connected to the AT&T Intuity system over the data link. Also, the physical link connecting an AT&T Intuity system to a distributed communications system (DCS) network.

hunt group
A group of analog ports on a switch usually administered to search for available ports in a circular pattern.

Hz
See *hertz*.

I

I/O
Input/output.

IDI
See *isolating data interface*.

IMAPI
See *Intuity messaging application programming interface*.

INADS
See *initialization and administration system*.

information service
See *bulletin board*.

initialization
The process of bringing a system to a predetermined operational state. The start-up procedure tests hardware; loads the boot filesystem programs; locates, mounts, and opens other required filesystems; and starts normal service.

initialization and administration system (INADS)
A computer-aided maintenance system used by remote technicians to track alarms.

initialize
To start up the system for the first time.

input
A signal fed into a circuit or channel.

integrated services digital network (ISDN)
A network that provides end-to-end digital connectivity to support a wide range of voice and data services.

integrated voice processing CELP (IVC6) card
A computer circuit card that supports both fax processing and voice processing capabilities. It provides two analog ports to support six analog channels. All telephone calls to and from the AT&T Intuity system are processed through the IVC6 card.

integrated voice response
An application module that allows customers to write their own alternate applications, also known as a script builder.

interface
The device or software that forms the boundary between two devices or parts of a system, allowing them to work together. See also *subscriber interface*.

interrupt request (IRQ)
A device that signals the data bus and the CPU that it needs attention.

Intuity AUDIX Digital Networking
An AT&T Intuity feature that allows customers to link together up to 500 remote AT&T Intuity machines for a total of up to 500,000 remote subscribers. See also *digital networking*.

Intuity Message Manager
A Windows-based software product that allows Intuity AUDIX subscribers to receive, store, and send their voice/FAX messages from a PC.

Intuity messaging application programming interface (IMAPI)
A software function-call interface that allows Intuity AUDIX to interact with AT&T Intuity Message Manager.

I/O address
input/output address.

IRQ
See *interrupt request*.

ISDN
See *integrated services digital network*.

isolating data interface (IDI)
A synchronous, full duplex data device used for cable connections between an AT&T Intuity GPSC-AT/E card and the switch data communications interface unit (DCIU).

IVC6
See *integrated voice processing CELP (IVC6) card.*

IVR
See *integrated voice response*.

J

jumper
Pairs or sets of small prongs on circuit cards and mother boards that allow the user to instruct the computer to select one of its available operation options. When two pins are covered, an electrical circuit is completed.

K

Kbps
kilobits per second; one thousand bits per second.

Kbyte
kilobyte per second; 1024 thousand bytes per second.

L

label
The name assigned to a disk device (either a removable tape cartridge or permanent drive) through software. Cartridge labels may have a generic name (such as 3:3) to show the software release or a descriptive name if for backup copies (such as back01). Disk drive labels usually indicate the disk position (such as disk00 or disk02).

LAN
See *local area network*.

last-in/first-out
The last call (or data) to be received is the first call (or data) to be processed.

LCD
See *liquid crystal display*.

leave word calling (LWC)
A switch feature that allows the calling party to leave a standard (nonvoice) message for the called party using a feature button or dial access code.

LED
See *light emitting diode*.

LIFO
See *last-in/first-out*.

light emitting diode (LED)
A light indicator on the hardware platform that shows the status of operations.

liquid crystal display (LCD)
The 10-character alphanumeric display that shows status of the system, including alarms.

load
To read software from external storage (such as disk) and place a copy in system memory.

local area network (LAN)
A network of PCs that communicate with each other and that normally share the resources of one or more servers. Operation of AT&T Intuity Message Manager requires that the Intuity AUDIX system and the subscribers' PCs are on a LAN.

local AUDIX machine
The AT&T Intuity system where a subscriber's Intuity AUDIX mailbox is located. All subscribers on this home machine are called *local subscribers*.

local installation
A switch, adjunct, or peripheral equipment installed physically near the host switch or system. See also *collocated*.

local network
An Intuity AUDIX Digital Network in which all AT&T Intuity systems are connected to the same switch.

login
A unique code used to gain approved access to the AT&T Intuity system. See also *password*.

login announcement
A feature enabling the system administrator and other designated users to create a mail message that is automatically played to all Intuity AUDIX subscribers every time they login to the system.

LWC
See *leave word calling*.

M

magnetic peripherals
Data storage devices that use magnetic media to store information. Such devices include hard disk drives, floppy disk drives, and cartridge tape drives.

mailbox
A portion of disk memory given to each subscriber for creating and storing outgoing and incoming messages.

mailing list
A group of subscriber addresses assigned a list ID# and public or private status. A mailing list may be used to simplify sending messages to several subscribers.

maintenance
The process of identifying system errors and correcting them, or taking steps to prevent problems from occurring.

major alarm
An alarm detected by AT&T Intuity software that affects at least one fourth of the AT&T Intuity ports in service. Often a major alarm indicates that service is affected.

MANOOS
See *manually out-of-service*.

manually out-of-service
A unit has been intentionally taken out of service.

mean time between failures
The average time a manufacturer estimates before a failure occurs in a component or system.

megabyte
A unit of memory equal to 1,048,576 bytes (1024 x 1024). It is often rounded to one million.

memory
A device which can store logic states such that data can be accessed and retrieved. Memory may be temporary (such as system RAM) or permanent (such as disk).

menu tree
The way in which nested automated attendants are set up.

message categories
Groups of messages in Intuity AUDIX subscribers' mailboxes. Categories include new, unopened, and old for the incoming mailbox and delivered, accessed, undelivered, undeliverable (not deliverable), and file cabinet for the outgoing mailbox.

message delivery
An optional AT&T Intuity feature that permits subscribers to send messages to any touch-tone telephone, as long as the telephone number is in the range of allowable numbers. This feature is an extension of the AMIS analog networking feature and is automatically available when the AMIS feature is activated.

Message Manager
See *Intuity Message Manager*.

message-waiting indicator (MWI)
An indicator that alerts subscribers that they have received new mail messages. An MWI can be LED, neon, or audio (stutter dial tone).

message waiting lamp (MWL)
An lamp that alerts subscribers that they have received new mail messages. An MWL can be LED, neon, or audio (stutter dial tone). Also known as a message-waiting indicator.

migration
An installation that moves data from another messaging system to the AT&T Intuity system.

minor alarm
An alarm detected by maintenance software that affects less than one fourth of the AT&T Intuity ports in service, but has exceeded error thresholds or may impact service.

mirroring
An AT&T Intuity system feature that allows data from crucial filesystems to be continuously copied to backup (mirror) filesystems while the system is running. If the system has some problem where an original filesystem cannot be used, the backup filesystem is placed in service automatically.

mode code
A string of touch-tones from a MERLIN LEGEND switch. A mode code may send the AT&T Intuity AUDIX system information such as call type, calling party, called party, and on/off signals for message waiting lamps.

modem
A device that converts data from a form that is compatible with data processing equipment (digital) to a form compatible with transmission facilities (analog), and vice-vera.

modular
A term that describes equipment made of plug-in units that can be added together to make the system larger, improve its capabilities, or expand its size.

modular processor data module (MPDM)
A data device that converts RS-232C or RS-449 protocol signals to digital communications protocol (DCP) used by System 75/85, Generic1, and Generic 3 switches. MPDMs may connect AT&T Intuity to a switch DCIU or SCI link or connect terminals to a switch port card.

MPDM
See *modular processor data module*.

MTBF
See *mean time between failures*.

multi-application platform (MAP)
The computer hardware platform used by the AT&T Intuity system. Currently, a MAP/5, MAP/40, and MAP/100 are available.

multilingual feature
A feature that allows simultaneously-active language announcement sets on the system. With this feature, mailboxes can be administered so that subscribers can hear prompts in the language of their choice.

MWI
See *message-waiting indicator*.

MWL
See *message waiting lamp*.

N

networking
See *Intuity AUDIX Digital Networking*.

networking prefix
A set of digits that identifies an AT&T Intuity machine.

night attendant
The automated attendant created on a MERLIN LEGEND switch that automatically becomes active during off-hours. The night attendant substitutes for one or more daytime attendants.

not deliverable message
Al message that could not be delivered after a specified number of attempts. This usually means that the subscriber's mailbox is full.

O

on-line help
An AT&T Intuity feature that provides information about AT&T Intuity user interface screens by pressing a predetermined key. See also *help*.

open systems interconnection (OSI)
Internationally accepted framework of standards for communication between two systems made by different vendors.

operating system (OS)
The set of programs that runs the hardware and interprets software commands.

option
A choice selected from a menu, or an argument used in a command line to modify program output by modifying the execution of a command. When you do not specify any options, the command will execute according to its default options.

OS
See *operating system*.

OSI
See *open systems interconnection*.

outcalling
An AT&T Intuity feature that allows the system to dial subscribers' numbers to inform them they have new messages.

outgoing mailbox
A storage area for subscribers to keep copies of messages for future reference or action.

P

parallel transmission
The transmission of several bits of data at the same time over different wires. Parallel transmission of data is usually faster than serial transmission.

password
A code assigned to every AT&T Intuity terminal user and Intuity AUDIX subscriber for security reasons. After dialing the system, subscribers must dial their personal password correctly to log on. Passwords are also assigned to local and remote networked machines to identify the machines or the network. See also *login.*

password aging
An Intuity AUDIX feature that allows administrators to set a length of time after which a subscriber's password expires. The subscriber is then forced to change the password.

PBX
See *private branch exchange*.

PC
See *power converter*.

PDM (processor data module)
See *modular processor data module (MPDM)*.

PEC
See *price element code*.

peripheral device
Equipment external to the AT&T Intuity cabinet, such as printers or terminals, necessary for full operation and maintenance of the AT&T Intuity system. Also called *peripherals*.

personal directory
An Intuity AUDIX feature allowing each subscriber to create a private list of customized names.

personal fax extension
See *secondary extension*.

pinouts
The signal description per pin number for a particular connector.

PMS
See *property management system*.

port
A connection or link between two devices, allowing information to travel to a desired location. For example, a switch port connects to an AT&T Intuity voice port to allow a subscriber to leave a message.

POST
See power-on self test.

priority call answer
An Intuity AUDIX feature that allows callers to designate a call answer message as a priority message. To make a message priority, the caller presses 2 after recording the message.

priority messaging
An Intuity AUDIX feature that allows some subscribers to send messages that are specially marked and preferentially presented to recipients. See also *priority outcalling*.

priority outcalling
Works with the priority messaging feature by allowing the message recipient to elect to be notified by outcalling only when a priority message has been received. See also *priority messaging*.

private branch exchange (PBX)
An analog, digital, or electronic system where data and voice transmissions are not confined to fixed communications paths, but are routed among available ports or channels. See also *switch*.

private mailing list
A list of addresses that only the owning subscriber can access.

private messaging
A feature of Intuity AUDIX that allows a subscriber to send a message that cannot be forwarded by the recipient.

processor data module (PDM)
See *modular processor data module (MPDM)*.

processor interface (PI)
A System 75, Generic 1, Generic 3i, Generic 3s, and Generic 3vs switch data link. Also called *processor interface board (PIB)*.

programmed function key
See *function key*.

property management system
Term used in hospitality industry referring to the database used by hotels for guest records and billing information.

protocol
A set of conventions or rules governing the format and timing of message exchanges (signals) to control data movement and the detection and possible correction of errors.

public mailing list
A list of addresses that any Intuity AUDIX subscriber can use if that subscriber knows the owner's list ID# and extension number. Only the owner can modify a public mailing list.

pulse-to-touchtone converter
A device connected to the switch that converts signals from a rotary phone to touch tones. This device allows callers to use rotary phones to access options in a subscriber's mailbox or to access options in an automated attendant.

R

RAM
See *random access memory*.

random access memory (RAM)
The primary memory in a computer that can be overwritten with new information.

read-only memory
A memory device which is programmed at the factory and whose contents thereafter cannot be altered.

reboot
See *boot*.

remote access
Sending and receiving data to and from a computer or controlling a computer with terminals or PCs connected through communications links.

remote installation
A system, site, or piece of peripheral equipment that is installed in a different location from the host switch or system.

remote network
A network in which the systems are integrated with more than one switch.

remote service center
An AT&T or AT&T-certified organization that provides remote support to AT&T Intuity customers. Depending upon the terms of the maintenance contract, your remote service center may be notified of all major and minor alarms and have the ability to remotely log into your system and remedy problems.

remote subscribers
Intuity AUDIX subscribers whose mailboxes reside on a remote Intuity AUDIX Digital Networking machine.

remote terminal
A terminal connected to a computer over a phone line.

REN
See *ringer equivalence number*.

reply loop escape
An Intuity AUDIX feature that allows a subscriber the option of continuing to respond to a message after trying to reply to a nonsubscriber message.

reply to sender
An Intuity AUDIX feature that allows subscribers to immediately place a call to the originator of an incoming message if that person is in the switch's dial plan.

request to send (RTS)
One of the control signals on a RS-232 connector that places the modem in the originate mode so that it can begin to send.

restart
An AT&T Intuity feature that allows Intuity AUDIX subscribers who have reached the system through the call answer feature to access their own mailboxes by typing the *R (Restart) command. This feature is especially useful for long-distance calls or for users who wish to access the AT&T Intuity system when all the ports are busy. Also, the reinitialization of certain software. For example, restarting the messaging system.

restore
The process of recovering lost or damaged files by retrieving them from available backup tapes, floppy diskette, or another disk device.

retention time
The amount of time messages are saved on disk before being automatically deleted from a subscriber's mailbox.

ringer equivalence number (REN)
A number required in the United States for registering your telephone equipment with the phone company.

ROM
See *read-only memory*.

RS-232
A set of standards developed by the Electrical Industries Association (EIA) that specifies various electrical and mechanical characteristics for interfaces between computers, terminals, and modems.

RTS
See *request to send*.

S

sales representative
An AT&T or AT&T-certified person who assists you in the purchasing, planning, and implementation of AT&T equipment and solutions.

SCA
See *switch communications adapter*.

scan
To automatically play mail messages, headers, or both.

scheduled delivery time
A time and/or date that an Intuity AUDIX subscriber optionally assigns to a message that tells the system when to deliver it. If a delivery time is omitted, the system sends the message immediately.

SCSI
See *small computer system interface*.

secondary extension
A second, fax-dedicated extension that directs incoming faxes directly into a subscriber's mailbox without ringing the telephone. The secondary extension shares the same mailbox as the voice extension, but acts like a fax machine. Also called *personal fax extension*.

serial transmission
The transmission of one bit at a time over a single wire.

server
A computer that processes and stores data that is used by other smaller computers. For AT&T Intuity Message Manager, Intuity AUDIX is the server. See also *client*.

shielded cables
Cables that are protected from interference with metallic braid or foil.

SID
See *switch integration device*.

SIMMs
See *single in-line memory modules*.

simplified message service interface (SMSI)
Type of data link connection to an integrated 1A ESS switch or 5ESS switch in the AT&T Intuity system.

single in-line memory modules (SIMMs)
A method of containing random access memory (RAM) chips on narrow circuit card strips that attach directly to sockets on the CPU circuit card. Multiple SIMMs are sometimes installed on a single CPU circuit card.

small computer systems interface (SCSI)
An interface standard defining the physical, logical, and electrical connections to computer system peripherals such as tape and disk drives.

SMSI
See *simplified message service interface*.

split
Group (or queue) of analog ports on the switch. See also *call-distribution group*.

subscriber
An AT&T Intuity user who has been assigned the ability to access the Intuity AUDIX Voice Messaging system.

subscriber interface
The devices that subscribers use to access their mailboxes, manage mailing lists, administer personal greeting, and use other messaging capabilities. Subscriber interfaces include a touch-tone telephone keypad and a PC using AT&T Intuity Message Manager.

surge
A sudden voltage rise and fall in an electrical circuit.

surge protector
A device that plugs into the phone system and the commercial AC power outlet. It is designed to protect the phone system from high voltage surges that could be damaging to the phone system.

SW
See *switch integration*.

switch
An automatic telephone exchange that allows the transmission of calls to and from the public telephone network. See also *private branch exchange (PBX)*.

switched access
A connection made from one endpoint to another through switch port cards. This allows the endpoint (such as a terminal) to be used for several applications.

switch hook
The device at the top of most telephones which is depressed when the handset is resting in the cradle (on hook). This device is raised when the handset is picked up (the phone is off hook).

switch hook flash
A signaling technique in which the signal is originated by momentarily depressing the switch hook.

switch integration
Sharing of information between a messaging system and a switch in order to provide a seamless interface to callers and subscribers.

switch integration device
Operates as a digital telephone set emulator.

switch network
Two or more interconnected switching systems.

synchronous communication
A method of data transmission in which bits or characters are sent at regular time intervals, rather than being spaced by start and stop bits. See also *asynchronous communication*.

synchronous transmission
A type of data transmission where the data characters and bits are exchanged at a fixed rate with the transmitter and receiver synchronized. This allows greater efficiency and supports more powerful protocols.

system configuration
See *configuration*.

T

T.30
The standard for Group III fax machines that covers the protocol used to manage a fax session and negotiate the capabilities supported by each fax endpoint.

tape cartridge
One or more spare removable cartridges required to back up system information.

tape drive
The physical unit that holds, reads, and writes magnetic tape.

TCP/IP
See *transmission control protocol/internet program*.

TDD
See *telecommunications device for the deaf*.

TDM
See *time division multiplex*.

telecommunications device for the deaf (TDD)
A device with a keyboard and display unit that connects to or substitutes for a phone. The TDD allows a deaf or hearing-impaired person to communicate over the phone lines with other people who have TDDs. It also allows a deaf person to communicate with the Intuity AUDIX system.

terminal
See *display terminal*.

terminal type
A number indicating the type of terminal being used to log on to the AT&T Intuity system. Terminal type is the last required entry before gaining access to the AT&T Intuity display screens.

terminating resistor
A grounding resistor placed at the end of bus, line, or cable to prevent signals from being reflected or echoed.

time division multiplex
A device which derives multiple channels on a single transmission facility by connecting bit streams one at a time at regular intervals.

tip/ring
A term used to denote the analog telecommunications interface.

tone generator
A device acoustically coupled to a rotary phone, used to produce touch-tone sounds when subscribers cannot use a regular touch-tone generating voice terminal.

traffic
The flow of attempts, calls, and messages across a telecommunications network.

translations
Software assignments that tell a system what to expect on a certain voice port or the data link, or how to handle incoming data. They customize the AT&T Intuity system and switch features for users.

transmission control protocol/internet program (TCP/IP)
A set of protocols developed by the Department of Defense to link dissimilar computers across many kinds of networks. It is the protocol commonly used over Ethernet, as well as x.25, networks. Although committed to an eventual migration to an Open Systems Interconnection (OSI) architecture. TCP/IP currently divides networking functionality into only four layers: network interface, Internet, transport, and application.

T/R
See *tip/ring*.

troubleshoot
The process of locating and correcting errors in computer programs. Also called *debug*.

U

UCD
See *uniform call distribution*.

Undelete
An Intuity AUDIX feature that allows subscribers to restore the last message deleted. The subscriber presses * U to restore a deleted message.

undelivered message
A message that has not yet been sent to an Intuity AUDIX subscriber's incoming mailbox. The message resides in the sender's outgoing message and may be modified or redirected by the sender.

Unequipped
See *equipped/unequipped*.

unfinished message
A message that was recorded but not approved or addressed, usually the result of an interrupted Intuity AUDIX session. Also called *working message*.

uniform call distribution (UCD)
The type of call-distribution group (or hunt group) of analog port cards on some switches that connects subscribers and users to the Intuity AUDIX system. System 75, Generic 1, Generic 3, and some central office switches use UCD groups. See also *call-distribution group*.

uninterruptable power supply
An auxiliary power unit for a telephone system that provides continuous power in cases where commercial power is lost.

UNIX operating system
A multi-user, multi-tasking computer operating system.

upgrade
An installation that moves an AT&T Intuity system to a newer release.

untouched message
An Intuity AUDIX feature that allows a subscriber to keep a message in its current category by using the **H (Hold) command. If the message is in the new category, message-waiting indication remains active (for example, the message-waiting lamp will remain lit).

UPS
See *uninterruptable power supply*.

U. S. 123
An alternate announcement set in U. S. English whose prompts use numbers, not letters, to identify phone keypad presses. For example, a prompt might say, "press star three," instead of, "press star D."

user population
A combination of light, medium, and heavy users on which AT&T Intuity configuration guidelines are based.

V

vector
A customized program in the switch for processing incoming calls.

voice link
The AT&T Intuity analog connection(s) to a call-distribution group (or hunt group) of analog ports on the switch.

voice mail
See *voice message*.

voice mailbox
See *mailbox*.

voice message
Digitized information stored by the AT&T Intuity system on disk memory. Also called *voice mail*.

voice port
The IVC6 port that provides the interface between the AT&T Intuity system and the analog ports on the switch.

voice terminal
A telephone used for spoken communications with the AT&T Intuity system. A touch-tone telephone with a message-waiting indicator is recommended for all Intuity AUDIX subscribers.

voicing
Either speaking a message into the AT&T Intuity system during recording, or having the system playback a message or prompt to a subscriber.

volt
The unit of measurement of electromotive force. One volt is the force required to product a current of one ampere through a resistance of one ohm.

W

watt
A unit of electrical power that is required to maintain a current of one amp under the pressure of one volt.

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