Lucent Technologies
Bell Labs Innovations

INTUITY™ Interchange

Release 5.3

Concepts, Features, and Planning Guide

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

Your Responsibility for Your System's Security
Toll fraud is the unauthorized use of your telecommunications system by an unauthorized party, for example, persons other than your company's employees, agents, subcontractors, or persons working on your company's behalf. Note that there may be a risk of toll fraud associated with your telecommunications system and, if toll fraud occurs, it can result in substantial additional charges for your telecommunications services.

You and your system manager are responsible for the security of your system, such as programming and configuring your equipment to prevent unauthorized use. The system manager is also responsible for reading all installation, instruction, and system administration documents provided with this product in order to fully understand the features that can introduce risk of toll fraud and the steps that can be taken to reduce that risk. Lucent Technologies does not warrant that this product is immune from or will prevent unauthorized use of common-carrier telecommunication services or facilities accessed through or connected to it. Lucent Technologies will not be responsible for any charges that result from such unauthorized use.

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Whether or not immediate support is required, all toll fraud incidents involving Lucent products or services should be reported to Lucent Corporate Security at 1 800 821-8235. In addition to recording the incident, Lucent Corporate Security is available for consultation on security issues, investigation support, referral to law enforcement agencies, and educational programs.

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If you *suspect that you are being victimized* by toll fraud and you need technical support or assistance, call the Lucent Technologies National Customer Care Center Toll Fraud Intervention Hotline at 1 800 643-2353.

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

Part 68: Network Registration Number. This equipment is registered with the FCC in accordance with Part 68 of the FCC Rules. It is identified by an FCC registration number.

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

This equipment returns answer-supervision signals on all DID calls forwarded back to the public switched telephone network. Permissible exceptions are:
- A call is unanswered
- A busy tone is received
- A reorder tone is received

Canadian Department of Communications (DOC)
Interference Information
This digital apparatus does not exceed the Class A limits for radio noise emissions set out in the radio interference regulations of the Canadian Department of Communications.

Le Présent Appareil Numérique 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.

Trademarks
See the section titled "About This Book."

Warranty
Lucent Technologies provides a limited warranty on this product. Refer to the "Limited Use Software License Agreement" card provided with your package.

European Union Declaration of Conformity
Lucent Technologies Business Communications Systems declares that the equipment specified in this document conforms to the referenced European Union (EU) Directives and Harmonized Standards listed below:

EMC Directive	89/336/EEC
Low-Voltage Directive	73/23/EEC

CE
The "CE" mark affixed to the equipment means that it conforms to the above directives.

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About This Document

Purpose

This book, INTUITY™ Interchange Release 5.3 Concepts, Features, and Planning Guide, describes the hardware and software requirements, and provides a description of the Lucent INTUITY™ Interchange. It includes information about architecture, user interface changes, protocol gateways, and system capacities. It contains information that is specific only to the INTUITY Interchange system.

Intended Audiences

This book is intended primarily for customers, marketing personnel, and service providers for the INTUITY Interchange system.

Release History

This is the first release of this book.

Conventions Used in This Book

This section describes the conventions used in this book.

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Terminology

- 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 INTUITY Interchange system displays "screens", *"windows" and "menus"*. "Screens" make up the INTUITY Interchange user interface through which you can enter data or commands or access windows or menus (Figure 1). "Windows" show and request system information (Figure 2). "Menus" present options from which you can choose to view another menu, screen or window (Figure 3).

- The words "subscriber" and "user" are interchangeable terms that describe a person administered on the INTUITY Interchange system. The word "user" is the preferred term in the text; however, "subscriber" appears on most of the screens.
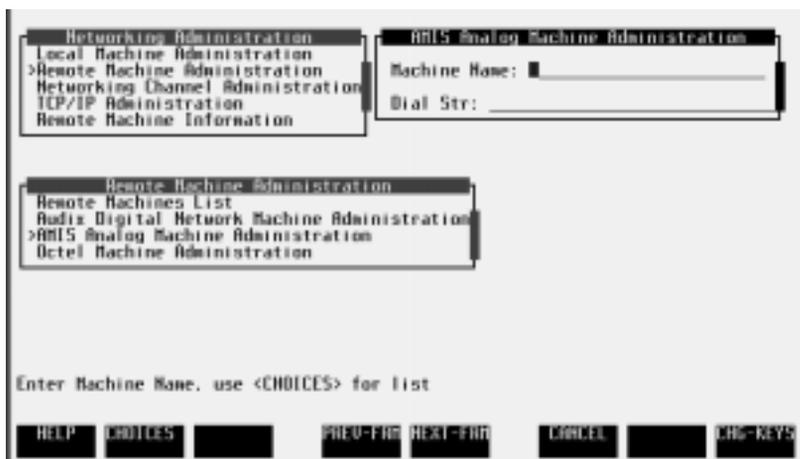
Figure 1.   Example of an INTUITY Interchange Screen

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Figure 2.   Example of an INTUITY Interchange Window
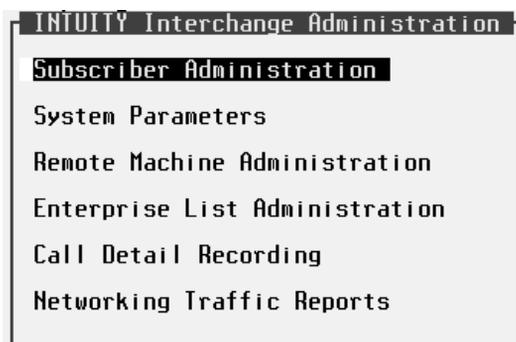
Figure 3.   Example of an INTUITY Interchange Menu

Terminal Keys

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

    Press (ENTER).

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

    Press (ALT) (D).

■ Function keys on your terminal, PC, or system screens, also known as *soft keys*, are represented as round boxes followed by the function or value of that key enclosed in parentheses. For example, an instruction to press function key 2 is shown as

Press (F2) (Choices).

■ 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 `constant-width` 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:

`Alarm Form Update was successful.`

`Press <Enter> to continue.`

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

Start at the Lucent INTUITY Administration menu and select

```
> INTUITY Interchange Administration
```

```
    > Subscriber Administration
```

In this example, you would access the Lucent INTUITY Administration menu and select the INTUITY Interchange Administration menu. From the INTUITY Interchange Administration menu, you would then select the Subscriber Administration screen.

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

Other Typography

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

  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.

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How to Use This Book

This book is organized into the following sections:

- Chapter 1, "INTUITY Interchange Description", provides a description of the Lucent INTUITY™ Interchange. It includes information about architecture, user interface, the AMIS Analog Gateway, OctelNet Gateway, and system capacities.

- Chapter 2, "INTUITY Interchange Networking", provides an introduction to the basics of Lucent INTUITY™ Interchange networking. It includes definitions of digital networking, Audio Messaging Interchange Specification (AMIS) analog networking, and OctelNet analog networking, types of networking connections, and networking terminology.

- Chapter 3, "INTUITY Interchange Requirements", describes the hardware and software requirements for a Lucent INTUITY™ Interchange system.

- Appendix A, "Subscriber Interface Information", compares the differences between the different messaging systems from the subscriber's perspective.

Related Resources

This section describes additional documentation and training available for you to learn more about installation of the INTUITY Interchange product.

Documentation

It is suggested that you obtain and use the following books in conjunction with this book:

- INTUITY™ Interchange Release 5.3 MAP/100P System Installation

- INTUITY Interchange Release 5.3 MAP/100P System Maintenance

- INTUITY™ Interchange Release 5.3 MAP/5P System Installation

- INTUITY™ Interchange Release 5.3 MAP/5P System Maintenance

- Intuity™ Interchange Release 5.3 Administration

- INTUITY™ Interchange Release 5.3 System Upgrades and Software Updates

- INTUITY™ Interchange Release 5.3 Alarm and Log Messages

- INTUITY Interchange Release 5.3 Installation

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It is suggested that you obtain and use the following book for information on security and toll fraud issues:

- *BCS Products Security Handbook*, 555-025-600

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

Training

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

- Organizations within Lucent: (904) 636-3261
- Lucent customers and all others: (800) 255-8988

Trademarks and Service Marks

The following trademarked products are mentioned in this book:

- AUDIX and DEFINITY are registered trademarks of Lucent Technologies.
- INTUITY and Octel are trademarks of Lucent Technologies.
- Ethernet is a trademark of Xerox Corporation.

How to Comment on This Book

We are interested in your suggestions for improving this book. Please send comments to:

- www.lucent.com/octel (World Wide Web)
- octeltechpubs@lucent.com (email)
- +303-538-9625 (fax or voice mail)

Please be sure to mention the name and order number of this book.

Product Support

If you have questions about how to use Intuity Interchange, contact one of the following resources:

- your Lucent Account Representative
- the Lucent Remote Support Center at + 800-242-2121

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INTUITY Interchange Description

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What's in This Chapter?

This chapter provides a description of the Lucent INTUITY™ Interchange. It includes information about architecture, user interface, the AMIS Analog Gateway, OctelNet Analog Gateway, Aria digital and Serenade digital gateways, and system capacities.

What is INTUITY Interchange?

The INTUITY Interchange allows INTUITY networking customers to simplify their network topology and administration by supporting store and forward message protocols. With INTUITY Interchange, you can exchange messages between different voice messaging systems.

The INTUITY Interchange network topology includes:

- A Multi-Application Platform 5P (MAP/5P) or Multi-Application Platform 100P (MAP/100P) with INTUITY Interchange software installed

    ⇒ **NOTE:**
    For specific platform information, see *"INTUITY™ Interchange Release 5.3 MAP/100P System Installation"* or *"INTUITY™ Interchange Release 5.3 MAP/5P System Installation"*.

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- Remote (endpoint) machines that support AUDIX® digital (AUDIX R1, DEFINITY® AUDIX, INTUITY AUDIX, and other INTUITY Interchanges), AMIS analog, OctelNet analog, Aria digital, or Serenade digital networking.

  — 2 to 50 remote (endpoint) machines per MAP/5P

  — 2 to 500 per INTUITY Interchange MAP/100P

INTUITY Interchange Features

Features of the INTUITY Interchange include:

- Compatibility with existing systems that support AUDIX digital networking — including AUDIX R1v3 and greater, DEFINITY AUDIX R3.2, and INTUITY AUDIX release 1.0 and greater.

- Compatibility with existing systems that support OctelNet analog networking —including Aspen Release 4.1, Octel 100 Release 3.10, Aria version 1.0 and greater, Serenade version 2.0 and greater, and Unified Messenger Release 3.0.

  $\Longrightarrow$ **NOTE:**
  Before implementing an Octel 100 system as an endpoint, verify its availability with your Lucent Account Team. Lucent Account Teams can verify the availability in the Interchange Offer Definition found on IntraWorks.

- Compatibility with existing systems that support Serenade TCP/IP digital networking including Serenade (Overture 200 and 300) Release 2.0 and greater.

- Compatibility with existing systems that support Aria TCP/IP digital networking including Aria (Overture 250 and 350) Release 2.03 and greater.

- Transport and protocol conversion — automatically transcodes message formats between all supported networking protocols.

- AMIS analog gateway support — allows INTUITY systems to exchange messages with non-INTUITY messaging systems using the AMIS analog protocol (See "AMIS Analog Gateway").

- OctelNet analog gateway support — allows INTUITY systems to exchange voice and fax messages with Aria OctelNet and Serenade OctelNet messaging systems using the OctelNet analog protocol (See "OctelNet Analog Gateway").

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Also used to exchange voice-only messages with Unified Messenger
Release 3.0.

➯ **NOTE:**
When sending a fax message to a recipient on an OctelNet analog
node or an Aria digital node, the sender must include a voice
message. If the fax is sent without a voice message, the INTUITY
Interchange will add a default voice component to the message.

- Aria digital gateway support— allows INTUITY systems to exchange voice
  and fax messages with Aria digital messaging systems using the Aria
  digital protocol (See "Aria Digital Gateway").

- Serenade digital gateway support— allows INTUITY systems to exchange
  voice and fax messages with Serenade digital messaging systems using
  the Serenade digital protocol (See "Serenade Digital Gateway").

- INTUITY Interchange to INTUITY Interchange configurations — supports an
  INTUITY Interchange to INTUITY Interchange configuration to increase
  network capacities.

- Directory views — allows for a subset of names and subscriber remote
  screens to be downloaded from the Interchange to a specific location.

- Administration support — Enhanced Services provide initial translation
  support for the INTUITY Interchange.

- Voice and fax messaging support.

  ➯ **NOTE:**
  Only INTUITY AUDIX Release 3.3 (IP55) and greater, Aria digital
  version 2.03 (not Aria OctelNet) and greater, and Serenade digital
  version 2.0 (not Serenade OctelNet) and greater support fax
  messaging.

  Unified Messenger Release 3.0 supports voice but not fax messaging
  over an Interchange network.

- E-mail and binary file attachments support.

  ➯ **NOTE:**
  Only INTUITY AUDIX Release 4.3 and greater supports e-mail and
  binary attachments. Aria, Serenade, and Unified Messenger systems
  do not support e-mail and binary file attachments.

- Uses Routing Information Protocol (RIP)--not required if IP address is
  specified.

- Supports hybrid networks — allows a combination of INTUITY Interchange
  and point-to-point networks.

- Automated Nightly Backup — a nightly back-up is completed by the INTUITY Interchange. Messages are queued during the backup downtime. Those messages may be delayed slightly. See "Nightly Backup" in Chapter 12, "Intuity Interchange Backup" of the *"Intuity™ Interchange Release 5.3 Administration"* documentation for more information.

   NOTE:

   If you receive notice that this back-up has not been completed successfully, contact the Maintenance Remote Support Center.

- INTUITY Interchange Enterprise Lists — allows for the creation and administration of Enterprise-wide mailing lists for subscribers that reside on an INTUITY Interchange network. For information on administering Enterprise Lists, see Chapter 4, "Intuity Interchange Enterprise List Administration" in the *"Intuity™ Interchange Release 5.3 Administration"* documentation.

- Call Detail Recording Administration — helps manage message networks which are using the INTUITY Interchange by creating a message history file, that includes: the status of the message, the source and destination of the message, and the time it entered and left the INTUITY Interchange; this history file can be transferred from the INTUITY Interchange on to another system for reporting purposes using the FTP process. For information on administering CDR, see Chapter 5, "Call Detail Recording Administration" in the *"Intuity™ Interchange Release 5.3 Administration"* documentation.

- Simple Network Machine Protocol (SNMP) Support — allows the consolidation of network management of all INTUITY Interchange network machines using TCP/IP LAN or WAN. For information on administering SNMP, see Chapter 8, "Intuity Interchange Simple Network Management Protocol" in the *"Intuity™ Interchange Release 5.3 Administration"* documentation.

- File Transfer Protocol (FTP) Support — allows the transfer of INTUITY Interchange report files and lists using a file transfer protocol (FTP) to and from other systems. For information on administering FTP, see Chapter 10, "Intuity Interchange File Transfer Protocol Support" in the *"Intuity™ Interchange Release 5.3 Administration"* documentation.

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AMIS Analog Gateway

The AMIS Analog Gateway allows INTUITY systems and non-INTUITY systems to exchange messages with other non-INTUITY messaging systems using the AMIS analog protocol. Endpoints, or remote machines, only need to be configured once to communicate with the INTUITY Interchange. The INTUITY Interchange handles the communication to the other types of remote machines. This module simplifies the network topology and the administration required.

The AMIS Analog Gateway supports:

- Digital networks:

  - AUDIX R1

  - INTUITY AUDIX systems using RS-232, DCP Modes 1 and 3, and TCP/IP Networking.

  - Aria digital Release 2.03 and greater and Serenade digital Release 2.0 or greater

- AMIS analog networks:

  - Any vendor's messaging system using AMIS analog Version 1.0.

- OctelNet analog networks:

  - Any vendor's messaging system using Aspen Release 4.1, Octel 100 Release 3.10, Aria Release 1.0. and greater, or Serenade Release 2.0 and greater.

Administration of the AMIS Analog Gateway can be performed either through a screen-based interface or a telephone-based interface. See Chapter 6, "AMIS Analog Gateway Telephone Administration" in the *"Intuity™ Interchange Release 5.3 Administration"* documentation for more information on administration through the telephone interface.

The following features are supported by the AMIS Analog Gateway for AMIS analog subscribers:

- Reply to sender of AMIS analog messages

- Play back of name during message addressing and directory searches for subscribers registered as AMIS analog subscribers (for those sending from AUDIX, Aria, or Serenade to AMIS)

- Optional voice name in messages sent from INTUITY AUDIX, OctelNet, Aria digital, and Serenade digital subscribers to AMIS mailboxes

- Optional priority and private message markings in messages sent from INTUITY AUDIX, OctelNet, Aria digital, and Serenade digital subscribers to AMIS mailboxes

- Undeliverable messages automatically returned to sender on INTUITY AUDIX, OctelNet, Aria digital, Serenade digital machines and remote machines

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OctelNet Analog Gateway

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OctelNet Analog Gateway

The OctelNet Analog Gateway allows Aria and/or Serenade OctelNet systems to exchange voice and fax messages with other messaging systems within the INTUITY Interchange network. Such endpoints, or remote machines, use the OctelNet analog networking to communicate with the INTUITY Interchange. The INTUITY Interchange handles the communication to the other remote machines.

The OctelNet Analog Gateway supports these analog systems:

- Aria version 1.0 and greater

- Serenade version 2.0 and greater

- Aspen Release 4.1

- Octel 100 Release 3.10

    ### ➡ NOTE:
    Before implementing an Octel 100 system as an endpoint, verify its availability with your Lucent Account Team. Lucent Account Teams can verify the availability in the Interchange Offer Definition found on IntraWorks.

- Unified Messenger Release 3.0

➡ NOTE:
For information on the administration of an Octel analog remote machine, see the respective networking documents for that machine.

The following features are supported for the OctelNet analog subscribers:

- Reply to sender of analog messages

- Play back of name during message addressing and directory searches for subscribers registered as analog subscribers (for those sending from AUDIX, Aria, or Serenade, not AMIS)

- Automatic directory updates

    ### ➡ NOTE:
    Subscribers are updated on the Interchange from the Unified Messenger directory only if a default record for the subscriber exists in the Interchange directory. For more information about creating default records, contact the Remote Support Center.

- Voice name in messages sent from INTUITY AUDIX, Aria digital, and Serenade digital subscribers to OctelNet analog mailboxes

- Priority and private message markings in messages sent from INTUITY AUDIX, Aria digital and Serenade digital subscribers to OctelNet analog mailboxes will be marked as urgent and private

- Undeliverable messages automatically returned to sender on INTUITY AUDIX machines and other remote machines

Aria Digital Gateway

The Aria digital gateway allows Aria digital systems to exchange voice and fax messages with other messaging systems within the INTUITY Interchange network. Such endpoints, or remote machines, use Aria digital networking to communicate with the INTUITY Interchange. The INTUITY Interchange handles the communication to the other remote machines.

The Aria digital gateway supports these systems:

- Aria version 2.03 and greater

➡ **NOTE:**
For information on the administration of an Aria digital remote machine, see the respective networking documents for that machine.

The following networking features are supported for Aria digital subscribers:

- Uses the same TCP/IP physical card as AUDIX

- Operates similarly to Aria OctelNet analog except over IP

- Connection-oriented protocol

- No Network Turnaround

- Supports voice and fax

- One message for multiple recipients; each recipient receives header information (private, priority, confirmation request)

- Subscriber updates including automatic update on add/change/delete

- Bulk administration, screen adds/changes/deletes are not required for subscribers (like AUDIX)

- Self-registration not supported for Aria/Serenade digital--NameSend should be used instead

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Serenade Digital Gateway

The Serenade digital gateway allows Serenade digital systems to exchange voice and fax messages with other messaging systems within the INTUITY Interchange network. Such endpoints, or remote machines, use Serenade digital networking to communicate with the INTUITY Interchange. The INTUITY Interchange handles the communication to the other remote machines.

The Serenade digital gateway supports these systems:

- Serenade version 2.0 and greater

    ⇒ **NOTE:**
    For information on the administration of a Serenade remote machine, see the respective networking documents for that machine.

The following networking features are supported for Serenade digital subscribers:

- Uses the same TCP/IP physical card as AUDIX and Aria digital

- Connection-oriented protocol

- No network turnaround

- Supports voice and fax

- One message for multiple recipients with header information (private, priority, sender's name)

- Subscriber updates include

    — automatic update on add/change (not delete)

    — automatic update on message delivery (Updates sender on receiving system if sender's spoken name is recorded.)

- Bulk administration, self-registration, screen adds/changes are not required for subscribers. Administrators must delete subscriber information when necessary.

- Serenade digital Sender Dial Plan

    In some Dial Plans, Interchange needs to build back the complete address of the sender (including prefix) before transmitting to a Serenade digital machine

    For example, if the Serenade digital machine prefixes a "1" before the 10-digit network address to a recipient, then the Interchange must be configured to prefix the same "1" before that sender's 10-digit network address when the recipient replies to the Serenade digital machine.

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INTUITY Interchange System Capacities

Table 1-1 shows the system capacities for an INTUITY Interchange MAP/5P and MAP/100P.

Table 1-1. INTUITY Interchange System Capacities

System Attribute	System Capacity	
	MAP/5P	**MAP/100P**
Maximum number of subscribers (without voice name)	75,000	500,000
Maximum number of subscribers (with voice name)	75,000	120,000
⇒ **NOTE:** MAP/5P systems will not work in a network that contains more than 75,000 subscribers. If the total number of subscribers in the network now or in the foreseeable future could approach 75,000 subscribers, recommend only MAP/100P systems.		
Maximum number of remote machines	50	500
Disk mirroring	no	yes
Number of AUDIX digital ports (TCP/IP, RS232, or DCP) ⇒ **NOTE:** DCP and RS232 channels must exist in pairs. If you assign channel 1 as DCP, you also must assign channel 2 as DCP. If you assign channel 1 as RS232, you must assign channel 2 as RS232 for future use. Channel 2 could be unequipped depending on whether or not the switch has secondary data module capability. AUDIX TCP/IP channels always exist in groups of four. If you administer one TCP/IP channel, the remaining three channels in the group become TCP/IP unequipped or TCP/IP equipped if purchased.	8 Maximum of 4 DCP/ RS232 Maximum of 8 TCP/IP	12

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Table 1-1.   **INTUITY Interchange System Capacities**

System Attribute	System Capacity	
	MAP/5P	**MAP/100P**
Maximum number of ports:		
■ AMIS Analog	12	30
■ OctelNet Analog	12	30
■ Aria Digital	8	16
■ Serenade Digital	8	16
Average message delivery time	15 minutes	15 minutes
Maximum number of simultaneous in/out digital networking sessions per AUDIX digital remote machine	2	2
Maximum number of simultaneous in/out analog networking sessions per AMIS analog remote machine	9	9
Maximum number of simultaneous in/out analog networking sessions per OctelNet analog remote machine	12	30
Maximum number of simultaneous in/out digital networking sessions per Aria digital remote machine	2	2
Maximum number of simultaneous in/out digital networking sessions per Serenade digital remote machine	2	2
Maximum number of subscribers per INTUITY Interchange Enterprise List	75,000	500,000

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INTUITY Interchange System Capabilities Comparison

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INTUITY **Interchange System Capabilities Comparison**

The following section is a comparison of some of the capabilities associated with the INTUITY Interchange system and the remote machines within the network.

Subscriber Capabilities

The following lists the subscriber capabilities of an INTUITY Interchange system:

- The INTUITY Interchange system allows a uniform dial plan (the number of digits used when addressing a message). It consists of a 3- to 10-digit network address. It allows a 0- to 21-digit prefix for an INTUITY AUDIX system. The sum of the network address and prefix cannot exceed 24 digits. A 10-digit network address dial plan is recommended.

- A subscriber must be administered on an INTUITY Interchange system in order for that INTUITY Interchange to accept messages for delivery.

- Digitally networked mailboxes sending messages to subscribers on any supported end node type can have the message addressed using the number or name of the subscriber, if the subscriber name has been administered or registered.

  ### ➡ **NOTE:**
  Data must have been previously downloaded to the remote digital sending machine from the INTUITY Interchange.

- Digitally networked mailboxes receiving messages from subscribers on any end node type are treated as though they were coming from another digitally networked mailbox. The caller will hear "Message from *voice or extension*" as they usually would when receiving a message from local subscribers.

- AMIS analog subscriber messages can optionally contain the "private/priority" designation and voiced name of the sender as part of the actual message being sent.

- AMIS analog and OctelNet analog subscribers can be administered through any of the following ways:

  — administration screens

  — touch-tones (AMIS only)

  — bulk files

  — sending a message through the INTUITY Interchange system

  — demand remote update (OctelNet only)

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— sending a message to a pre-defined "subscriber registration" mailbox on the INTUITY Interchange

— Enhanced Services

■ Aria digital and Serenade digital subscribers can be administered through any of the following ways (Refer to Appendix H, "Directory Population", in "Intuity™ Interchange Release 5.3 Administration" for further information about how and when subscribers get added to Interchange.):

— NameSend from Aria/Serenade digital

> ⇒ **NOTE:**
> If subscribers exist who were migrated from an Aspen system to Aria 2.03 or greater, NameSend does not work until each subscriber rerecords their spoken name on the Aria.

— For Aria, Demand Remote Update from Interchange is supported

■ Can be done by "all" or an extension range

■ Takes an average of 2 seconds per subscriber

■ Is less efficient than Aria NameSend

— Aria/Serenade digital will automatically inform Interchange when a new subscriber is added

■ Similar to AUDIX directory updates

— Duplicate names from the same Serenade system will have "Node #D#" appended to the name to make it unique

— 5.3 supports only one mailbox length per endpoint

■ For subscribers residing on AUDIX digital remote machines, a "delivered" status means the message was delivered to the INTUITY Interchange successfully. This message may be returned to the sending subscriber if the INTUITY Interchange can not deliver the message to the receiving subscriber successfully for some reason.

■ A "scheduled message" status for AUDIX indicates that delivery has not been successfully completed, nor has it failed yet.

■ Senders receive notification of failed messages in two ways, including:

— An error message indicating each mailbox that failed to receive the sent message. This can be an optional "priority" message

— A copy of the failed original message from the "failed message delivery manager"

> ⇒ **NOTE:**
> For more information about administration options for failed messages, see "Administering Remote Machine Parameters" in the Intuity Interchange Administration book.

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- For AUDIX, failed message IDs can be viewed using INTUITY Message Manager.

- Notification of failure to deliver a message component because the recipient is not enabled to receive a component type (voice, fax, text, binary) is the same as on the INTUITY AUDIX Release 4 system. The component that could not be delivered is stripped and the following is prefixed to the original message: "One or more components could not be delivered, please contact the sender" <pause><voice message>.

- "Accessed" status indicates that the subscriber has received and accessed a message for both the INTUITY Interchange and INTUITY AUDIX systems.

- For AUDIX, the machine name of the receiving machine in INTUITY Message Manager is that of the INTUITY Interchange delivering the message.

- The remote subscriber ASCII name contains a 2-8 character suffix at the end of the name field indicating the INTUITY Interchange node ID for the remote machine on which that subscriber resides.

- With Enterprise Lists, if requested, delivery status is sent to the sender of the list message as a voice, fax, or text message rather than being indicated in the outgoing mailbox of the sender.

Lists Capabilities

Table 1-2 compares the capabilities of an INTUITY AUDIX system, an INTUITY AUDIX system with the Enhanced List Application (ELA), an INTUITY Interchange system with Enterprise Lists, and Octel analog and digital systems with System Distribution Lists capabilities.

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Table 1-2. INTUITY Interchange Lists Capabilities Comparison

Functionality	INTUITY AUDIX (personal lists)	INTUITY AUDIX with ELA (system lists)	INTUITY Interchange with Enterprise Lists	Aria, Aspen, Octel 100[1], Serenade, and Unified Messenger
Configuration	Can be used only by subscribers on the same system as the list owner	Co-resident with INTUITY AUDIX application. Can be used as a single system or within a network	Available as an application	Can be used only by subscribers on the same system as the list owner
Delivery Status Location	Outgoing mailbox	Administrative log	Optional reporting to message originator	N/A
Embedded Lists	Not supported	Supported	Supported	Supported only within a single layer
List Content	Individual subscribers, fax numbers, AMIS analog subscribers, including ELA and/or INTUITY Interchange	Individual subscribers, call-delivery or fax numbers, AMIS analog subscribers. Circular list references blocked within ELA lists	Individual subscribers, address ranges, partial text strings, community IDs, and remote machines. Circular list references blocked within lists	Individual subscribers, call-delivery or fax numbers, AMIS analog subscribers, Octel end node subscribers, AUDIX, and Aria or Serenade digital subscribers

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Table 1-2. INTUITY Interchange Lists Capabilities Comparison

Functionality	INTUITY AUDIX (personal lists)	INTUITY AUDIX with ELA (system lists)	INTUITY Interchange with Enterprise Lists	Aria, Aspen, Octel 100[1], Serenade, and Unified Messenger
List Management	Sequential creation and editing of lists available by telephone Text listing and editing available by INTUITY Message Manager	Management by administration screen	Management by administration screen Can use FTP files as input	Sequential creation and editing of personal lists available by telephone by subscriber Management by administration screen of system lists
Number of Lists	100 lists per user 250 members per list	100 lists per system 1,500 members per list	Unlimited number of lists per system 500,000 subscribers per list for MAP/100P or MAP/5P	100 lists per user 300 members per list
Maximum Number of Recipients per Single Message Transmission (inbound to Interchange)	250	250	250	OctelNet analog: 99 times number of attempts count under Node Profile (max. is 9900) UM: unlimited Aria digital: unlimited Serenade digital: 10

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Table 1-2. INTUITY Interchange Lists Capabilities Comparison

Functionality	INTUITY AUDIX (personal lists)	INTUITY AUDIX with ELA (system lists)	INTUITY Interchange with Enterprise Lists	Aria, Aspen, Octel 100[1], Serenade, and Unified Messenger
Maximum Number of Recipients per Single Message Transmission (outbound from Interchange)	250	250	250	Octel analog: 250, but tunable to fewer (Serenade OctelNet--still stores in groups of 10)
				UM: 250
				Aria digital: 250, but tunable to fewer
				Serenade digital: 10
Ownership/ Maintenance	Subscriber	System administrator	System administrator	Subscriber or System Administrator
Number of Recipients	250 per list	Entire network	Entire enterprise network	300 per list
Reply	Allows the ability to reply to the sender	Allows the ability to reply to the sender of the message if the recipient is on INTUITY AUDIX release 4.1 and greater	Allows the ability to reply, no reply, or reply all to the sender	Allows the ability to reply to the sender

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Table 1-2. INTUITY Interchange Lists Capabilities Comparison

Functionality	INTUITY AUDIX (personal lists)	INTUITY AUDIX with ELA (system lists)	INTUITY Interchange with Enterprise Lists	Aria, Aspen, Octel 100[1], Serenade, and Unified Messenger
Reporting	Owner may play back list by telephone or display list using INTUITY Message Manager	System administrator may print a list of lists or the contents of selected lists	Various detailed and summary reports available to system administrator and subscribers in voice, text, or fax format	System administrator may print a list of lists or the contents of selected lists
Sender identification	Sender identification information is contained in the header ⟹ **NOTE:** AUDIX to OctelNet message does not support sender's name.	Sender identification information is contained in the header if the message recipient is on INTUITY AUDIX release 4.1 and greater	Sender identification information is contained in the header	Sender identification information is contained in the header
Used For	Small groups for list owner and subscribers on the same system	Large groups or hierarchal organizations	Large groups or hierarchal organizations	Large groups or hierarchal organizations

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1. Before implementing an Octel 100 system as an endpoint, verify its availability with your Lucent Account Team. Lucent Account Teams can verify the availability in the Interchange Offer Definition found on IntraWorks.

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INTUITY Interchange Networking Features

Table 1-3 outlines the support of INTUITY Interchange features relative to the INTUITY AUDIX, AMIS analog, OctelNet analog, Aria digital and Serenade digital messaging systems.

Table 1-**3.** **INTUITY Interchange Networking Features Comparison**

INTUITY Interchange Features	INTUITY AUDIX	AMIS analog	All OctelNet machines and Aria Digital	Serenade Digital
Analog Encryption	not supported	not supported	supported for OctelNet	not supported
Annotation	supported release 4.0 and higher	not supported	not supported	not supported
Automatic Forwarding a Message	not supported	supported as determined by the endpoint	supported	supported as determined by endpoint
Automatic Update of Remote Subscriber Records on Endpoints	supported	not supported	for Aria and Serenade OctelNet, add and change supported; delete not supported. UM: not supported for Aria digital, add/change/ delete/message delivery supported.	add/change/ message delivery supported; delete not supported.

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Table 1-3.   **INTUITY Interchange Networking Features Comparison**

INTUITY Interchange Features	INTUITY AUDIX	AMIS analog	All OctelNet machines and Aria Digital	Serenade Digital
Automatic Update of Subscriber Records on Interchange	supported	not supported	for Aria and Serenade OctelNet, add and change supported; delete not supported. UM: if "default" record exists on the Interchange[1] for Aria digital, add/change/ delete/message delivery supported.	add and change supported; delete not supported (in general, oriented toward sender validation)
Binary	supported release 4.0 and higher	not supported	not supported	not supported
Bulk Subscriber Additions/ Changes/ Deletions by File Ranges	not supported; not required for digital	supported	supported; not required for digital	not required
Call Detail Recording (CDR)	supported	supported	supported	supported
Component Delivery	sends what components Interchange can deliver with an earcon to the recipient indicating that one or more components were undeliverable	sends what components Interchange can deliver with an earcon to the recipient indicating that one or more components were undeliverable	sends what components Interchange can deliver with an earcon to the recipient indicating that one or more components were undeliverable	sends what components Interchange can deliver with an earcon to the recipient indicating that one or more components were undeliverable

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Table 1-3. INTUITY Interchange Networking Features Comparison

INTUITY Interchange Features	INTUITY AUDIX	AMIS analog	All OctelNet machines and Aria Digital	Serenade Digital
Data/ Message Encryption	not supported	not supported	supported for Aria digital	not supported
Demand Remote Updates	supported	N/A	supported by range; preferred method is with"NameSend" from Aria node	performed by executing push from end node--called "NameSend"
Dial by ASCII Name	supported	supported as determined by the endpoint	supported	supported
Dial Plan Mapping	supported	supported	supported	supported
Directory Views (dynamic, with voiced name option)	supported	N/A	supported	supported
Directory Views (static, with voiced name option)	supported (with remote machine pull from INTUITY AUDIX at initialization)	N/A	supported with Interchange; remote machine push at initialization for Aria digital	supported with Interchange; remote machine push at initialization
Enterprise Lists	supported	supported (no fax/text support)	supported except for text reports	supported except for text reports
Failed Message Delivery from Interchange	supported with two incoming messages: ■ failed message notification ■ original copy of message	supported with two incoming messages: ■ failed message notification ■ original copy of message	supported with two incoming messages: ■ failed message notification ■ original copy of message	supported with two incoming messages: ■ failed message notification ■ original copy of message

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    INTUITY Interchange Networking Features

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Table 1-3. INTUITY Interchange Networking Features Comparison

INTUITY Interchange Features	INTUITY AUDIX	AMIS analog	All OctelNet machines and Aria Digital	Serenade Digital
Failed Message Delivery to Interchange	supported	supported	supported	supported
Fax	supported release 3.0 and higher	not supported	supported release 2.03 and higher for Aria digital not supported for Unified Messenger	supported release 2.0 and higher
Forwarding a Message	supported	supported as determined by the endpoint	supported	supported; Serenade to Serenade or Aria "forwarded" messages have this indicated in message header
Forward and Reply Indication to Recipient	supported when sender is a Serenade OctelNet subscriber	supported when sender is a Serenade OctelNet subscriber	supported when sender is a Serenade OctelNet subscriber	supported Serenade digital to Serenade digital

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Table 1-3. INTUITY Interchange Networking Features Comparison

INTUITY Interchange Features	INTUITY AUDIX	AMIS analog	All OctelNet machines and Aria Digital	Serenade Digital
Future Delivery	supported	supported as determined by the endpoint	■ supported for Serenade OctelNet, and Aria digital ■ not supported for Aria OctelNet to Intuity AUDIX ■ not supported for Serenade Digital	supported
Inbound Analog Fallback	not supported	N/A	not supported	not supported
Maximum Number of Recipients per Single Message Transmission (inbound)	250	1	Aria OctelNet: 100 times bad connection count in System Parameter Networking screen; UM: unlimited; Aria digital: unlimited; Serenade OctelNet: 10	10
Maximum Number of Recipients per Single Message Transmission (outbound)	250 ➡ NOTE: 250 using Enterprise Lists also	1	Aria OctelNet: 250 but tunable to fewer; UM: 250; Serenade OctelNet: 250 but tunable to fewer (still stores in groups of 10) Aria digital: 250 (not tunable)	10

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Table 1-**3.**   **INTUITY Interchange Networking Features Comparison**

INTUITY Interchange Features	INTUITY AUDIX	AMIS analog	All OctelNet machines and Aria Digital	Serenade Digital
Message Delivery Confirmation	supported	not supported	supported	supported
Multi-Language Message Responses from Interchange Network	voice support only Standard American English only	voice support only Standard American English only	voice support only Standard American English only	voice support only Standard American English only
Multiple Simultaneous Remote Machine Inbound Connections from the same Remote Machine	not supported	supported as determined by endpoint	supported for OctelNet; not supported for Aria digital	not supported
Multiple Simultaneous Remote Machine Outbound Connections to the same Remote Machine	not supported	supported for up to 9 sessions	supported for OctelNet; not supported for Aria digital	not supported
Name Confirmation (spoken)	supported	supported as determined by the endpoint	supported	supported
Network Turnaround	supported	N/A	not supported	not supported
Outbound Analog Fallback	not supported	N/A	not supported	not supported

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Table 1-**3.   INTUITY Interchange Networking Features Comparison**

INTUITY Interchange Features	**INTUITY AUDIX**	**AMIS analog**	**All OctelNet machines and Aria Digital**	**Serenade Digital**
Overlapping Prefixes/ Multiple Prefixes per Location	supported	supported as determined by the endpoint	supported	supported
Priority Message Indication	supported	supported, except for priority message originating from an AMIS sender	supported	supported
Private or Urgent Message Indication	supported	supported, except for private message originating from an AMIS sender	supported (User hears "priority" as earcon vs. urgent)	supported (User hears "priority" as earcon vs. urgent)
Receiving a Voice Message	supported	supported	supported	supported
Receiving Voiced Name of Sender	sender's name is in message header	sender's name is in message body	sender's name is in message body	sender's name is in message header
Recipient Name Confirmation when Addressing a Message	supported	supported as determined by the endpoint	supported	supported
Remote Machine Reports	supported	supported	supported	supported

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Table 1-3.   INTUITY Interchange Networking Features Comparison

INTUITY Interchange Features	INTUITY AUDIX	AMIS analog	All OctelNet machines and Aria Digital	Serenade Digital
Reply to a Network Message	supported	supported as determined by endpoint	supported	supported; "replied to" messages have this indicated in message header
Accessed Return-Receipt/ Confirmation	See Table 1-5 or Table 1-6	N/A	See Table 1-5 or Table 1-6	See Table 1-5 or Table 1-6
Self-Registration Agent	not required	supported	not supported for digital	not supported for digital
Sending a Message to an Aria Recipient with Extended Absence Greeting (EAG) block activated	sender receives a failed message	sender receives a failed message	sender receives a failed message	sender receives a failed message
Sending a Message to an Aria Recipient with Extended Absence Greeting (EAG) warning activated	sender receives an EAG warning message	sender receives an EAG warning message	sender receives an EAG warning message	sender receives an EAG warning message
Sending a Voice Message	supported	supported	supported	supported
SNMP (from Interchange's perspective only)	supported	supported	supported	supported

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Table 1-3.   **INTUITY Interchange Networking Features Comparison**

INTUITY Interchange Features	INTUITY AUDIX	AMIS analog	All OctelNet machines and Aria Digital	Serenade Digital
Subscriber Community ID	supported	supported (default is 1)	supported (default is 1)	supported (default is 1)
Subscriber NetName Type	supported; default is u	supported; default is u	supported	supported, default is u
Subscriber Reports	supported	supported	supported	supported
Text Message	supported release 4.0 and higher	not supported	not supported	not supported
Time of Day Routing	supported	not supported	not supported for outbound	not supported for outbound
Traffic Reports				
Network Load	supported	supported	supported	supported
Network Status	supported	supported	supported	supported
Port Utilization	supported with selection by protocol resource type	supported with selection by protocol resource type	supported with selection by protocol resource type (now called Port Utilization Traffic Report)	supported with selection by protocol resource type (now called Port Utilization Traffic Report)
Weekend/ Holiday/ Message Type Routing from Interchange	not supported	not supported	not supported	not supported

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1.   Subscribers are updated on the Interchange from the Unified Messenger directory only if a default record for the subscriber exists in the Interchange directory. For more information about creating default records, contact the Remote Support Center.

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Intuity Interchange Message Component Types

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Intuity Interchange Message Component Types

The endpoints that Interchange networks support different combinations of message component types. These component types can include voice messages, fax messages, text messages, binary file attachments, and message or subject line annotations.

Table 1-4. Interchange Message Component Types

Endpoint	Protocol	Voice	Fax	Text	Bin-ary	Annotation/ Subject
Other Vendor	AMIS	Y	N	N	N	N
Intuity AUDIX pre-Release 3	AUDIX Digital (DCP, RS232)	Y	N	N	N	Y (Release 2 and greater)
Intuity AUDIX Release 3	AUDIX Digital (TCP/IP, DCP, RS232)	Y	Y	N	N	Y
Intuity AUDIX Release 4 and 5	AUDIX Digital (TCP/IP, DCP, RS232)	Y	Y	Y	Y	Y
DEFINITY AUDIX	AUDIX Digital (DCP, RS232)	Y	N	N	N	Y
R1 AUDIX	AUDIX Digital (DCP, RS232)	Y	N	N	N	N
Aria Release 1.0 or greater	Octel Analog	Y	Y	N	N	N
Aria Release 2.03 or greater	Aria Digital TCP/IP	Y	Y	N	N	N
Serenade Release S2.0 or greater	Octel Analog	Y	Y	N	N	N
Serenade Release S2.0 or greater	Serenade Digital TCP/IP	Y	Y	N	N	N
Aspen Release 4.1 and greater	Octel Analog	Y	Y	N	N	N
Unified Messenger	Octel Analog	Y	N	N	N	N
Octel 100 3.10[1]	Octel Analog	Y	N	N	N	N

1. Before implementing an Octel 100 system as an endpoint, verify its availability with your Lucent Account Team. Lucent Account Teams can verify the availability in the Interchange Offer Definition found on IntraWorks.

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Administrator Interface

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Administrator Interface

This section provides an overview of the administrator interface for the INTUITY Interchange.

Adding Remote Machines

Remote machine administration through the INTUITY Interchange administration screens allows you to add digital, AMIS analog, or Octel remote machines to the INTUITY Interchange. For information on adding a remote machine, see "Administering Remote Machines" in Chapter 2, "Intuity Interchange Administration" of the *"Intuity™ Interchange Release 5.3 Administration"* documentation.

Defining Directory Views

A directory view allows you to define, for a particular remote machine, what other remote machines can provide updates to that machine. You may specify a range of mailbox IDs on a remote machine from which to accept update information. Only those mailboxes defined in the directory view are treated as remote subscribers on the local message server. You may also define whether to include a voice name for the subscriber.

A directory view can contain full, static, dynamic or a combination of static and dynamic types of updates for a specific machine or all remote machines. For more information on directory views, see Chapter 3, "Subscriber Administration" in *"Intuity™ Interchange Release 5.3 Administration"*.

Defining Dial Plan Mapping

Dial plan number mapping allows messages to be delivered to locations with different addressing schemes. For example, a message that is addressed using a 10-digit numbering scheme can be delivered to a location that has 5-digit local addressing automatically using dial plan mapping. An endpoint does not have to modify current addressing practices. For more information on administering dial plan mapping, see "Administering Remote Machine Dial Plan Mapping" in Chapter 2, "Intuity Interchange Administration" of the *"Intuity™ Interchange Release 5.3 Administration"* documentation.

Message Confirmation Comparison

The following tables compare Accessed/Return Receipt/Positive Confirmation and Negative Confirmation Support for messages sent through the INTUITY INTERCHANGE.

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The first table (Table 1-5) lists whether the sender is notified when their message has been played. The second table (Table 1-6) lists whether the sender is notified when the message has not been played after a certain length of time.

Table 1-5. Accessed/Return Receipt/Positive Confirmation Support

Sender:	Receiver:								
	AUDIX	Aria OctelNet	Serenade OctelNet	AMIS Analog	Aspen	Octel 100[1]	Unified Messenger	Aria Digital	Serenade Digital
AUDIX[2]	Y	N	N	N	N	N	N	N	N
Aria OctelNet	N	Y	Y	N	Y	Y	Y	Y	N
Serenade OctelNet	N	Y	Y	N	Y	Y	Y	Y	N
AMIS analog	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Aspen	N	Y	Y	N	Y	Y	Y	Y	N
Octel 100	N	Y	Y	N	Y	Y	Y	Y	N
Unified Messenger	N	Y	Y	N	Y	Y	Y	Y	N
Serenade Digital	N	N	N	N	N	N	N	N	Y
Aria Digital	N	Y	Y	N	Y	Y	Y	Y	N

1. Before implementing an Octel 100 system as an endpoint, verify its availability with your Lucent Account Team. Lucent Account Teams can verify the availability in the Interchange Offer Definition found on IntraWorks.

2. Intuity AUDIX messages are changed to "Accessed" status when they are moved to a different category.

Table 1-6.   Negative Confirmation Support

Sender:	Receiver: AUDIX	Aria OctelNet	Serenade OctelNet	AMIS analog	Aspen	Octel 100[1]	Unified Messen-ger	Aria Digital	Serenade Digital
AUDIX	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Aria OctelNet	N	Y	Y	N	Y	See footnote[2]	N	Y	N
Serenade OctelNet	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AMIS Analog	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Aspen	N	Y	Y	N	Y	See footnote[2]	N	Y	N
Octel 100	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Unified Messenger	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Aria Digital	N	Y	Y	N	Y	See footnote[2]	N	Y	N
Serenade Digital	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

1. Before implementing an Octel 100 system as an endpoint, verify its availability with your Lucent Account Team. Lucent Account Teams can verify the availability in the Interchange Offer Definition found on IntraWorks.

2. When the Octel 100 receives a negative confirmation from the Aspen or Aria systems, it is displayed as a positive confirmation.

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Remote Machine Limitations

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Remote Machine Limitations

The following applies to all end node types:

> **NOTE:**
> ASCII Name Check — if two messages are sent to a subscriber at one network address which has a different ASCII name, the first message will fail because the ASCII mismatch occurred, but the second message will be delivered because the ASCII check is only performed on the first message sent to that network address.

The following are limitations based on the type of remote machine networked through the INTUITY Interchange:

Aria OctelNet

Listed below are limitations of the Aria OctelNet remote machine:

- Aria lists — when sending a message using a distribution list from an Aria OctelNet remote machine to another Aria OctelNet remote machine, the maximum number of subscribers to which the message can be sent is based on the Aria networking parameter which defines the number of attempts the Aria machine will make to deliver a message before giving up on the connection.

  For example, if a message is sent to 3,000 subscribers and the Aria networking parameter is set to 3, the message will be sent in chunks of 100 times the bad connection count. For more information, see your Aria Networking Management documentation.

- Future Delivery — based on the way that the Aria machine sends a future delivery message (the Aria machine will send the message immediately and expect the remote machine to hold the message until time to be delivered), future delivery messages are only supported through the INTUITY Interchange when sent to Aria, Aspen, Octel 100, and Serenade OctelNet remote machines.

Aspen Analog

Listed below are limitations of the Aspen analog remote machine:

- Future Delivery — based on the way that the Aspen machine sends a future delivery message (the Aspen machine will send the message immediately and expect the remote machine to hold the message until time to be delivered), future delivery messages are only supported through the INTUITY Interchange when sent to Aria, Aspen, Octel 100, and Serenade OctelNet remote machines.

- Demand Remote Push — only supported in Release 4.1 and greater

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Octel 100 Analog

> ⟹ **NOTE:**
> Before implementing an Octel 100 system as an endpoint, verify its availability with your Lucent Account Team. Lucent Account Teams can verify the availability in the Interchange Offer Definition found on IntraWorks.

Listed below are limitations of the Octel 100 analog remote machine:

- Demand Remote Push — this remote machine does not support an update by demand remote push from the Interchange.

- Positive Message Confirmation — this remote machine does not send a positive message confirmation to 10-digit dial plans.

- Negative Message Confirmation — if a message is received by an Octel 100 subscriber which was flagged as a negative confirmation, it will be turned into a positive confirmation by the Octel 100 and the sender will receive a positive confirmation message.

- Future Delivery — based on the way that the Octel 100 machine sends a future delivery message (the Octel 100 machine will send the message immediately and expect the remote machine to hold the message until time to be delivered), future delivery messages are only supported through the INTUITY Interchange when sent to Aria, Aspen, Octel 100 analog, and Serenade OctelNet remote machines.

Unified Messenger

Listed below are notes and limitations about Unified Messenger as an endpoint:

- Networking is provided through OctelNet analog, not SMTP/MIME.

- Uses Microsoft Exchange Directory, Release 5.5, which is different from all other directories in the Interchange endpoint list.

- Subscribers must already exist in the Interchange directory to be pulled from Unified Messenger.

- Unified Messenger directory will not accept a push from Interchange.

- ASCII names are not matched in Unified Messenger. Since Unified Messenger directory entries are permanent, changed mailboxes on other Interchange endpoints may then send updates to the wrong subscriber.

- Unified Messenger directory entries are permanent, not usage-based. Entries must be made manually or by Professional Services using bulk adds.

- Only voice components are sent to a Unified Messenger user's mailbox. Faxes are dropped and the receiver hears an "earcon" asking them to contact the sender.

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- To use spoken name confirmation for messages from UM through the Interchange gateway, a custom recipient with an OctelNet address type is required for each Interchange user in the Exchange directory.

- Extended absence greeting messages are not returned to Unified Messenger users.

Aria Digital and Serenade Digital

- Announcements cannot be customized.

- For fax-only messages to Aria remote machines, the following voice component is added by Interchange: "Your fax message is attached."

- The Aria Message Locator feature applies to Interchange delivery

- Large messages to AUDIX from Aria and Serenade will be failed with a "message length" failure message. (AUDIX supports a maximum of 24MB or 20 minutes of voice per message.)

- When Aria senders send a mixed private and/or priority message to multiple Serenade digital recipients on the same remote machine, the message will be marked "priority" and/or "private" for all recipients if even one recipient is marked as such. The sender is not notified that this has happened.

- Reply/Forward Indicator is supported.

    — From Serenade OctelNet to all machine types

    — From Serenade digital to Serenade digital

- Serenade digital Call Processing Features are *not* supported (for example, Immediate Call)

- Note the use of "notices" versus "messages" for Aria/Serenade systems. Historically, notices were used on Aria to convey message delivery failure. However, when messaging using Interchange:

    — Message delivery failures are conveyed using messages

    — Message delivery confirmations are still conveyed as notices

- Enterprise List usage for OctelNet, Aria digital, and Serenade digital senders:

    — List Status Report will not indicate "accessed" for non-AUDIX recipients

    — Positive and Negative Confirmation and Return Receipt is not supported for OctelNet, Aria digital, or Serenade digital senders.

Remote Subscribers

Subscribers are administered and updated differently, depending on the endpoint. This section lists those differences.

Registering AMIS Analog and OctelNet Analog Subscribers on the INTUITY Interchange

AMIS analog and OctelNet analog subscribers can be administered on the Lucent INTUITY Interchange through one of the following ways:

- INTUITY Interchange Administration screen interface — see "Adding a Subscriber Mailbox" or "Deleting a Subscriber Mailbox" in Chapter 3, "Subscriber Administration" in *"Intuity™ Interchange Release 5.3 Administration"*.

- AMIS Analog Gateway telephone administration interface — see Chapter 6, "AMIS Analog Gateway Telephone Administration" in *"Intuity™ Interchange Release 5.3 Administration"*.

- Self-registration mailbox — as set up in the Self-Registration Agent ID field on the General Parameters screen (Figure 2-5) in Chapter 2, "Intuity Interchange Administration" of the *"Intuity™ Interchange Release 5.3 Administration"* documentation.

- Bulk file add or delete — see "Bulk Subscriber Administration" in Chapter 3, "Subscriber Administration" in *"Intuity™ Interchange Release 5.3 Administration"* documentation.

Table 1-7 shows the information available about a subscriber when added to the INTUITY Interchange through one of the administration methods described above. A "√" in a particular box indicates that information is provided when a subscriber is added through that administration method.

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Table 1-7.   AMIS Analog/OctelNet Analog Subscriber Information

Field	Administration Method					
	Screen Interface	Telephone Interface (AMIS only)	Self-Registration	Sending a Message	Bulk from File	Bulk from Range
`Network Address`	√	√	√	√	√	√
`Mailbox ID`	√	√	√	√	√	√
`ASCII Name`	√			√ (OctelNet)	√	
`Remote Machine`	√	√	√	√	√	√
`Type`	AMIS or OctelNet Analog	AMIS	AMIS or OctelNet Analog	AMIS or OctelNet Analog	AMIS or OctelNet Analog	
`Community ID`	√	Default	Default	Default	√	√
`Voice Name`		√	√	√ (OctelNet)		
`Last Updated`	√	Current time	Current time	Current time	Current time	Current time

Registering Aria Digital and Serenade Digital Subscribers on the INTUITY Interchange

Aria digital and Serenade digital subscribers can be administered on the Lucent INTUITY Interchange in the following way:

- INTUITY Interchange Administration screen interface — see "Adding a Subscriber Mailbox" or "Deleting a Subscriber Mailbox" in Chapter 3, "Subscriber Administration" in *"Intuity™ Interchange Release 5.3 Administration"*.

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Subscriber Updates

The subscriber database must be built when the Interchange network is started or when an endpoint is added. Table 1-8 lists the supported methods.

Table 1-8. Demand Remote Pull/Push/Name Send

Machine type	**Demand Remote Pull on Interchange**	**Demand Remote Push from Interchange**	**Name Send From Endpoint**
AMIS	No	No	No
AUDIX digital	Yes (all mailbox IDs)	No (performed by executing demand remote update from the AUDIX digital endpoint)	No
Octel Analog	Yes (by range)	Yes. Not supported for Octel 100[1] or Unified Messenger	No
Aria Digital	Yes (by range). Preferred method is "Name Send" from Aria Digital	Yes	Yes
Serenade Digital	No (Performed by executing push from Serenade called "Name Send")	Yes	Yes

---

1. Before implementing an Octel 100 system as an endpoint, verify its availability with your Lucent Account Team. Lucent Account Teams can verify the availability in the Interchange Offer Definition found on IntraWorks.

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When Subscriber Updates Occur

After the database is built, subscribers are updated at the endpoint or on the Interchange at different times, depending on the endpoint. This section (Table 1-9) lists those times.

Table 1-9. Subscriber Update Timing

Protocol	Endpoint updates Interchange	Interchange updates endpoint
AMIS	■ N/A for adds and changes ■ When the Interchange attempts to deliver to a non-existent subscriber on an AMIS endpoint, it fails the messages and deletes that subscriber from the Interchange directory	N/A
AUDIX Digital	When the subscriber is added, changed or deleted through administration, the Interchange is automatically notified	When the Interchange detects an add, change or delete of a subscriber, it pushes out the update to the AUDIX digital endpoint

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Table 1-9. Subscriber Update Timing

Protocol	Endpoint updates Interchange	Interchange updates endpoint
OctelNet	■ When the Interchange delivers a message to the endpoint, it does an ASCII match of the recipient (if ASCII name check is set to "yes") ■ If the recipient mismatches, it fails the message and immediately requests a pull from the endpoint (when Updates In is set to "yes" on Interchange and Remote Updates In is set to "yes" on endpoint) ■ If the ASCII name is a default on the Interchange, a comparison is not performed by the Interchange, the message is delivered, and the pull is immediately requested (when Updates In is set to "yes" on Interchange and Remote Updates In is set to "yes" on endpoint) ■ If the subscriber does not exist on the endpoint but does on the Interchange, then the message is failed and the Interchange defaults the ASCII name and nulls the spoken name of the subscriber ■ For any name pull to work, the endpoint must be set to Protocol Level 2 or 3	■ When the endpoint delivers a message to the Interchange, it does an ASCII match on the recipient ■ If the recipient mismatches, it fails the message and deletes the entry; the next time that subscriber is messaged, it requests a pull from the Interchange ■ If the ASCII name is a default on the Interchange, the Interchange will always accept the message, (i.e., it does not perform a name comparison); the Interchange will then schedule a pull ■ If a subscriber does not exist on the Interchange and that subscriber sends a message through the Interchange, the Interchange will add the subscriber as a default and then a name pull is scheduled ■ When the Interchange detects an add or change (not delete) of a subscriber, it pushes out the update

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Table 1-9. Subscriber Update Timing

Protocol	Endpoint updates Interchange	Interchange updates endpoint
Aria Digital	■ When the Interchange delivers a message to the endpoint, it requests that the endpoint perform an ASCII match on the recipient ■ If the recipient mismatches, the endpoint fails the message and the Interchange requests a pull from the endpoint ■ If the ASCII name is a default on the Interchange a comparison is not requested, the message is delivered, and the pull is requested ■ If the subscriber does not exist on the endpoint but does on the Interchange, then the message is failed by the endpoint and the Interchange defaults the ASCII name and nulls the spoken name of the subscriber ■ Aria Digital can automatically push an add, change, or delete of a subscriber when the update occurs	■ When the endpoint delivers a message to the Interchange, the Interchange does an ASCII match on the recipient ■ If the recipient mismatches, the Interchange fails the message and the endpoint deletes the entry; the next time that subscriber is sent a message, it requests a pull from the Interchange ■ When the Interchange detects an add, change, or delete of a subscriber, it pushes out the update

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Table 1-9. Subscriber Update Timing

Protocol	Endpoint updates Interchange	Interchange updates endpoint
Sere-nade Digital	■ When the Serenade Digital system delivers a message to the Interchange, it automatically pushes the sender's ASCII and spoken name (if the spoken name exists) ■ The Serenade Digital can automatically push an add or change, not delete, of a subscriber when the update occurs ■ When the Interchange delivers a message to the endpoint, it does an ASCII match of the recipient (if ASCII name check flag is set to yes) ■ If the recipient mismatches, Interchange fails the message and defaults the ASCII name and nulls the spoken name ■ If the ASCII name is a default on the Interchange a comparison is not performed and the message is delivered ■ If the subscriber does not exist on the endpoint but does on the Interchange, the message is failed and the Interchange defaults the ASCII name and nulls the spoken name of the subscriber	■ When the Interchange delivers a message to the Serenade Digital system, it automatically pushes the sender's ASCII and spoken name (only done when spoken name exists) ■ When the Interchange detects an add or change (not delete) of a subscriber, it pushes out the update ■ When the endpoint delivers a message to the Interchange, it does an ASCII match on the recipient if addressed alphabetically ■ If the recipient mismatches, the Serenade fails the message and deletes the entry
Unified Messen-ger	Interchange requests a Unified Messenger recipient and updates its directory entry only if the entry on the Interchange is a "default" record	Unified Messenger updates the Microsoft Exchange directory when it sends a message if: ■ a custom directory entry is defined for the recipient ■ this is the first time the directory entry is updated

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INTUITY **Interchange Maintenance**

The philosophy behind the maintenance of a Lucent INTUITY™ Interchange that the system provides a single point of reference for troubleshooting a problem regardless of the system configuration. The INTUITY Interchange application does not change this maintenance strategy. All applications use the same alarm log to report errors occurring within an application or in its interaction with other applications. The alarm log receives entries from all areas of the system (including the Interchange-specific modules), prioritizes the alarms according to severity, and makes them accessible. The alarms, their descriptions, and repair actions can be found in Chapter 5, "Intuity Interchange Alarm Codes and Administrator Log Entries'' of the *"INTUITY™ Interchange Release 5.3 Alarm and Log Messages''*documentation.

INTUITY Interchange Networking

2

What's in This Chapter?

This chapter provides an introduction to the basics of Lucent INTUITY™ Interchange networking. It includes definitions of digital networking, Audio Messaging Interchange Specification (AMIS) analog networking, and OctelNet analog networking, types of networking connections, and networking terminology.

What is Networking?

Networking is the transfer of messages between users located on remote machines through the INTUITY Interchange. The types of networking used in conjunction with the INTUITY Interchange are:

■ Digital networking — provides users with the ability to exchange

— voice messages with users on INTUITY AUDIX Release 1 or INTUITY AUDIX Release 2 systems

— voice and fax messages with users on INTUITY AUDIX Release 3 and greater, Aria digital, and Serenade digital systems

— voice, fax, e-mail, and messages containing binary attachments with users on INTUITY AUDIX Release 4 and greater

— voice messages with INTUITY AUDIX Release 1 and greater systems, DEFINITY AUDIX R3.2 and greater systems, and AUDIX R1V3 and greater systems

■ AMIS analog networking — provides users with the ability to exchange voice messages with INTUITY AUDIX users, OctelNet analog users, Aria digital users, Serenade digital users, and users of non-Lucent Technologies systems having the AMIS analog protocol

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- OctelNet analog networking — provides Aria and Serenade OctelNet users with the ability to exchange voice and fax messages with INTUITY AUDIX users, Aria digital users, Serenade digital users, and users of other non-Lucent Technologies systems having analog protocol support. Also provides Unified Messenger users with the ability to exchange voice messages on the same set of systems.

- AUDIX, Aria digital, and Serenade digital networking — provides users with the ability to exchange voice messages with INTUITY AUDIX users, OctelNet analog users, Aria digital users, Serenade digital users, and users of non-Lucent Technologies systems having the AMIS analog protocol.

Digital Networking (AUDIX, Aria, and Serenade)

Digital networking (including INTUITY AUDIX, Aria digital, and Serenade digital) is the transfer of a digital file from a subscriber on one system to a subscriber on a different system. Voice and fax messages are files that are digitally recorded and stored. Digital networking allows these messages to be transferred from one remote machine to another remote machine using the INTUITY Interchange.

A digital message is sent in the following manner:

1. A subscriber on a remote machine records a voice message, creates a fax, or e-mail message and addresses it to a subscriber on a different remote machine.

   ### NOTE:
   Fax is only supported on Aria and Serenade digital, and INTUITY AUDIX Release 3 and greater. E-mail is only supported on INTUITY AUDIX Release 4 and greater.

2. Digital networking uses a dial string to place the call to the INTUITY Interchange (or an IP address when the digital protocol is TCP/IP).

3. The INTUITY Interchange answers the call and identifies the remote machine and subscriber to whom the message is being sent.

4. The INTUITY Interchange sends the message, including a message header (remote machine name, sender's name, time message was sent, and length of message), to the remote subscriber.

5. For AUDIX, the subscriber sending the message receives notification that the message was received.

   ### NOTE:
   For more information on digital networking, see *INTUITY Messaging Solutions Release 4.4 Digital Networking, 585-310-567* and the Aria and Serenade System Manager Manuals on networking.

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Types of Digital Networking Connections

Digital networking provides different types of network connections using the following protocols:

- Lucent Technologies Digital Communication Protocol (DCP) — used only when both switches are DCP switches. Data rates can be 56 or 64 Kbps. Switches include:

  — System 75, R1V3 Issue 2.2 and greater

  — System 85, R2V4

  — DEFINITY Communications System Generic 1, 2, or 3

- Electronic Industries Association (EIA) RS-232 Protocol. Data rates can be 9.6 Kbps for standard connections over the public network or 19.2 Kbps for special services, such as Software Defined Data Network (SDDN).

- Transmission Control Protocol/Internet Protocol (TCP/IP) — used to connect INTUITY AUDIX Release 3 (IP42 or greater) or INTUITY AUDIX Release 4 systems over a Local Area Network (LAN) with much higher throughput than DSP or RS-232.

  > **NOTE:**
  > TCP/IP is the protocol used for Aria digital and Serenade digital systems, and between Intuity Interchange systems.

AMIS Analog Networking

AMIS analog networking plays messages as voice files over analog lines to communicate with other AMIS analog systems (Lucent and non-Lucent Technologies AMIS systems).

An AMIS analog message is sent in the following manner:

1. A subscriber on a remote machine records a voice message and addresses the message to an AMIS subscriber on a different remote machine.

2. The AMIS analog protocol sends the message to the INTUITY Interchange.

3. The INTUITY Interchange answers the call and identifies the remote machine and subscriber to whom the message is being sent.

4. The INTUITY Interchange sends the message to the remote subscriber using AMIS analog protocol.

5. The remote AMIS analog machine answers the call, exchanges protocols with the INTUITY Interchange and allows the INTUITY Interchange to play, *not* transfer, the message.

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6. The remote AMIS analog machine records the message, as it is played, into the mailbox of the subscriber receiving the message.

7. The receiver can now listen to the message.

> $\implies$ **NOTE:**
> For more information on AMIS analog networking, see *AMIS ANALOG Networking, 585-300-512*.

OctelNet Analog Networking

OctelNet Gateway networking sends messages as voice or fax files over analog lines to communicate with other analog systems (INTUITY AUDIX, AUDIX R1, DEFINITY AUDIX, Aria, Serenade, Aspen, and non-Lucent Technologies analog systems).

OctelNet can also be used to network with Unified Messenger systems for voice messages only.

A message is sent in the following manner:

1. A subscriber on a remote machine records a voice message and addresses the message to a subscriber on a different remote machine.

2. The OctelNet Gateway protocol sends the message to the INTUITY Interchange.

3. The INTUITY Interchange answers the call and identifies the remote machine and subscriber to whom the message is being sent.

4. The INTUITY Interchange sends the message to the remote subscriber using OctelNet Gateway protocol.

5. The remote machine answers the call, exchanges protocols with the INTUITY Interchange and allows the INTUITY Interchange to play, *not* transfer, the message.

6. The remote machine records the message, as it is played, into the mailbox of the subscriber receiving the message.

7. The receiver can now listen to the message.

TCP/IP Networking's Impact on LAN Traffic

TCP/IP networking has some impact on the amount of traffic over your system's LAN connection. This impact can be calculated by multiplying the number of networked messages by the number of packets and/or number of bytes per message.

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Voice Messages' Impact

Using an average voice message length of 60 seconds (including overhead), traffic generated over the LAN for a single voice message is approximately:

- AUDIX: 135 KB (1 KB data packets)

- Aria digital: 250 KB (16 KB data packets)

- Serenade digital: 250 KB (8 KB data packets)

Fax Messages' Impact

Using an average fax message length of 3 pages (with 90% of all faxes having fine resolution), traffic generated over the LAN for a single fax message is approximately:

- AUDIX: 144 KB

- Aria digital: 260 KB

- Serenade digital: 260 KB

This includes overhead of approximately 100 bytes per packet. In addition, approximately every two data packets are acknowledged with a single 100 byte acknowledge packet.

E-Mail Messages' Impact

For AUDIX, using an average e-mail message length of 5 KB, traffic generated over the LAN for a single e-mail message is approximately 5.5 KB (5.5 1K data packets). This includes overhead of approximately 100 bytes per packet. In addition, approximately every two data packets are acknowledged with a single 100 byte acknowledge packet.

TCP/IP Networking LAN Traffic Example

For AUDIX, during the busy hour, a single remote system generates 150 voice messages, 30 fax messages, and 50 e-mail messages using TCP/IP networking. The impact on the LAN can be calculated as follows:

KB: $[(150 \times 135{,}000) + (150/2 \times 100) + (30 \times 144{,}000) + (30/2 \times 100) + (50 \times 5500) + (50/2 \times 100)] = 24.8$ MB/hour

Packets: $[(150 \times 135) + (30 \times 144) + (50 \times 5.5)] = 24{,}845$ 1K data packets/hour

$[(150 \times 135)/2 + (30 * 144)/2 + (50 * 5.5)/2] = 12{,}423$ 100 byte ACK packets/hour

Total: 37,268 packets/hour

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Networking Terminology

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Networking Terminology

This section provides a definition of some of the terms used in digital and AMIS analog INTUITY Interchange networking.

Machine Types

Machine is a term used for any voice messaging systems. There are two types of machines:

- Local — the machine on which a subscriber is administered as a local user of that machine.

- Remote — any machine connected through the INTUITY Interchange to which a subscriber's local machine can exchange messages.

Subscriber Types

Subscriber is a term used to identify the sender or receiver of a message. There are two types of subscribers:

- Local subscriber— a subscriber administered as a local user on a local machine.

- Remote subscriber — a subscriber identified by a local machine as not residing on the local machine; identified as an administered remote subscriber or non-administered remote subscriber.

    — Administered remote subscriber is any subscriber that has an administered remote subscriber profile on the local machine; digital networking allows automatic sharing of databases; AMIS analog networking requires that subscribers be manually added to an AMIS machine.

    — Non-administered remote subscriber is any subscriber on a remote machine within the INTUITY Interchange cluster for whom no subscriber profile exists.

    $\Longrightarrow$ **NOTE:**
    Digital networking will create a temporary subscriber profile for a non-administered subscriber.

INTUITY Interchange Requirements

3

What's in This Chapter?

This chapter describes the hardware and software requirements for a Lucent INTUITY™ Interchange system.

Cluster Configuration

The following describes the INTUITY Interchange cluster configuration:

- The following type of INTUITY platforms:

  — Multi-Application Platform 5P (MAP/5P) with INTUITY Interchange (5.2 or later) software installed

  — Multi-Application Platform 100P (MAP/100P) with INTUITY Interchange (5.1 or later) software installed

  > **NOTE:**
  > For specific platform information, see *"INTUITY™ Interchange Release 5.3 MAP/5P System Installation"* or *"INTUITY™ Interchange Release 5.3 MAP/100P System Installation"*.

- Remote machines that support AUDIX® digital networking (AUDIX R1, DEFINITY® AUDIX, INTUITY AUDIX), AMIS analog, OctelNet Gateway networking, Aria digital, or Serenade digital networking:

  — 2 to 50 remote (endpoint) machines per MAP/5P platform

  — 2 to 500 remote (endpoint) machines per MAP/100P platform

Figure 3-1 shows the network connectivity for the INTUITY Interchange.

⇒ **NOTE:**
   The transport for all end nodes must utilize a switch transmission path
   adequate for the data rate being used.

A second INTUITY Interchange can be added to the first to extend the cluster.
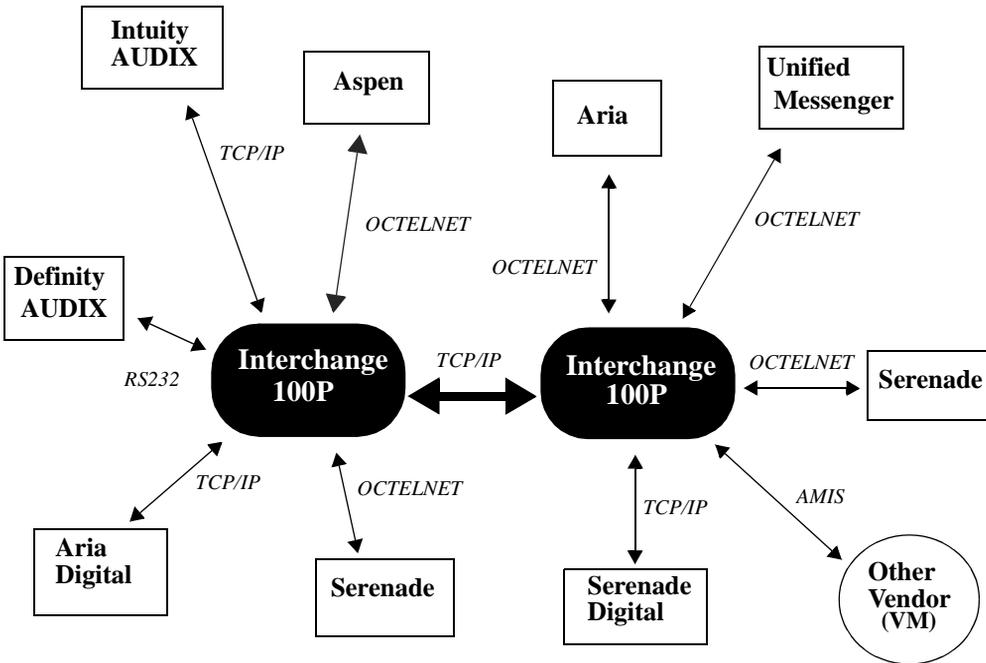
Figure 3-1.   INTUITY Interchange Networking Connectivity Configuration

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INTUITY **Interchange System Requirements**

The following describes the INTUITY Interchange hardware and software requirements. INTUITY Interchange systems are assembled, loaded, and tested prior to shipment to the installation site.

- Hardware requirements:

    — INTUITY MAP/5P platform with at least two IVC6 or *ngtr* circuit cards and one SSP (speech and signal processor) card

    — INTUITY MAP/100P platform with six hard disk drives using disk mirroring and at least two IVC6 or *ngtr* circuit cards and two SSP cards

    > **NOTE:**
    > *ngtr* cards for customers outside the U.S., Canada, and Mexico

    — An Ethernet Workgroup Switch, which is a dedicated LAN segment, with a switched Ethernet hub

    > **NOTE:**
    > You may use any brand/model switch which fulfills these requirements:
    >
    >   — Standards based switched 10BASE-T Hub with standard IEEE 802.3, ISO/IEC 8802-3 Ethernet
    >
    >   — RJ-45 (UTP cable, EIA/TIA categories 3, 4, and 5) interface
    >
    >   — have at least 6 ports
    >
    >   — have diagnostic capabilities (LEDs for network and system monitoring)
    >
    >   — SNMP agent - needed if you use SNMP in your network
    >
    > You may alternatively choose a 10/100BASE-T hub, for which you would also need:
    >
    >   — to ensure that each port automatically senses the speed of the attached device
    >
    >   — to ensure compliance with IEEE 802.3, 802.3u, and ISO/8802.3 standards

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- Software requirements:

    — UNIX SVR4.x

    — A subset of AUDIX Voice Messaging Release 4.4 or greater software modules

    — INTUITY Interchange remote field update, if necessary

    — Oracle 7.1.3 (unique for the INTUITY Interchange)

    — INTUITY Interchange Application software

Installed Systems

The system targeted as the INTUITY Interchange must have INTUITY Interchange software installed. This software should have been assembled, loaded and tested prior to shipment of the platform.

See *"INTUITY™ Interchange Release 5.3 MAP/5P System Installation"* or *"INTUITY™ Interchange Release 5.3 MAP/100P System Installation"* for complete information about hardware and software installation of the platform.

Switch Connections

The INTUITY Interchange connects to a switch (Lucent and non-Lucent switches) via the analog lines from the switch to the IVC6 or ngtr circuit cards in the platform. The INTUITY Interchange supports the following switches:

- Lucent INTUITY System 75/Definity

- Lucent INTUITY System 85/Dimension

- Lucent INTUITY System 25

- NEC NEAX 2400

- Rolm 8000, 9000, 9751

- Northern Telecom SL-1

- Northern Telecom Meridian -1

- Northern Telecom Meridian SL-1

- Mitel SX 200D

- 5ESS

- DMS100

See *"INTUITY™ Interchange Release 5.3 MAP/5P System Installation"* or *"INTUITY™ Interchange Release 5.3 MAP/100P System Installation"* for connection information.

Subscriber Interface Information

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What's in This Appendix?

This appendix provides information about subscriber interface differences that result from the use of INTUITY™ Interchange.

Subscriber Interface Differences

The following items are subscriber interface differences because of the INTUITY Interchange:

- The INTUITY Interchange system allows a uniform length dial plan (the number of digits used when addressing a message). It consists of a 3- to 10-digit network address. It allows a 1- to 21-digit prefix for an INTUITY AUDIX system. The sum of the network address and prefix cannot exceed 24 digits. A 10-digit network address dial plan is recommended.

- "Delivered" status means the message was delivered to the INTUITY Interchange.

- If a message fails, two messages are returned to the sender's incoming mailbox:

  — An error message similar to:

    ```
    Message to [voice name(s)] extension [extension
    number(s)] failed due to [reason]. A copy of this
    message can be found in your incoming mailbox.
    ```

    This error message may have "priority" status if this option was selected through the administration screens.

  — The actual message is returned to the sender so that it may be resent to the destination.

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- If one component of the message fails (for example, fax is not enabled on the receiving machine), the receiver is provided an indication that a component of the message failed.

  For example, if a subscriber from an INTUITY AUDIX® sends a fax-only message through the INTUITY Interchange to a subscriber that is only voice-enabled, the INTUITY Interchange sends a message to the receiving subscriber that one or more components of the message were not received.

- A subscriber must be administered on an INTUITY Interchange system in order for that INTUITY Interchange to accept messages for delivery.

- Failed messaged IDs can be viewed using INTUITY Message Manager.

- Notification of failure to deliver a message component because the recipient is not enabled to receive a component type (voice, fax, text, binary), is the same as on the INTUITY AUDIX Release 4 system. The component that could not be delivered is stripped and the following is prefixed to the original message: "One or more components could not be delivered, please contact the sender" <pause><voice message>.

- OctelNet analog subscriber messages can optionally contain the "private/urgent" designation and voiced name of the sender as part of the actual message being sent.

- The machine name of the receiving machine is that of the INTUITY Interchange delivering the message.

- The remote subscriber name contains a suffix indicating the INTUITY Interchange system ID for the remote machine on which that subscriber resides.

  ⟹ NOTE:

  This suffix can take from 2 to 8 characters at the end of the `name` field.

- With Enterprise Lists, delivery status is sent to the sender of the list message as a voice, fax, or text message rather than being indicated in the outgoing mailbox of the sender.

- When the INTUITY Interchange database is full, subscribers continue to be added but no voice names are added; therefore, no voice name is heard when addressing that subscriber. The MAP/5P platform allows 75,000 voice names; the MAP/100P platform allows 120,000 voice names.

- All Interchange-generated messages (failures following 2 incoming message scheme, list messages, and others) in Standard American English.

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- Sender's Name

    — OctelNet, Aria digital, and Serenade digital messages to Interchange should not be configured to include Sender's Name.

    — OctelNet, Aria digital, and AMIS recipients receive Sender's Name by Interchange Prefixing.

    — AUDIX and Serenade digital recipients receive Sender's Name from the Message Header.

AUDIX Differences

- "Scheduled message" status for AUDIX indicates that delivery has not been successfully completed, nor has it failed yet.

- Failed messages may exist in both incoming and outgoing mailboxes for INTUITY AUDIX.

- "Accessed" status is consistent on both the INTUITY Interchange and INTUITY AUDIX systems.

- Large messages to AUDIX from Aria and Serenade will be failed with a "message length" failure code message. (AUDIX supports a maximum of 2.4MB or 20 minutes of voice per message.)

AMIS Differences

- AMIS messages are marked as "delivered" upon successful delivery to the INTUITY Interchange. AMIS protocol does not support "accessed" status.

- Digital network mailboxes sending messages to AMIS subscribers can have the message addressed using the number or name, if the subscriber name has been administered, of the AMIS subscriber.

    $\Longrightarrow$ **NOTE:**
    The AMIS subscriber voiced name is optional.

- Digital network mailboxes receiving messages from AMIS subscribers are treated as though they were coming from another digital network mailbox. The caller will hear "Message from *voice or extension*" as they usually would when receiving a message.

- AMIS subscriber messages can optionally contain the "private/priority" designation and voiced name of the sender as part of the actual message being sent.

- AMIS Analog subscribers can be administered through administration screens, bulk files, touch-tones, sending a message through the INTUITY Interchange system, sending a message to a pre-defined "subscriber registration" mailbox on the INTUITY Interchange, or through Enhanced Services.

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Aria and Serenade Differences

- For fax-only messages to Aria systems, "Your fax message is attached" is added as a voice component.

- The Aria Message Locator feature applies to Interchange delivery.

- When Aria subscribers send a "mixed" private or priority message to multiple INTUITY recipients on the same remote machine, the message will be marked "priority" or "private" for all recipients even if one recipient is marked as such.

- Reply/Forward Indicator is supported

    — From Serenade OctelNet to All Machine Types

    — From Serenade digital to Serenade digital

- Serenade digital Call Processing Features are NOT supported (for example, Immediate Call).

- The use of "Notices" and "Messages" differs between Aria and Serenade systems.

    — A notice is a positive message confirmation

    — A message is a failure from the Interchange

- Enterprise List usage for OctelNet, Aria digital, and Serenade digital

    — List Status Report will not indicate "accessed" for non-AUDIX recipients

    — Positive/Negative Confirmation and Return Receipt is not supported for OctelNet, Aria digital, or Serenade digital senders.

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