

# System 25 Integration Overview

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## Overview

This chapter explains how the Intuity AUDIX™ system, the Intuity AUDIX messaging applications, and the System 25 switch work together.

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## Purpose

To provide an overview of the integration between the Intuity AUDIX system and the System 25 switch.

## **Intuity AUDIX Features**

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The Intuity AUDIX system uses the following messaging packages to provide business- oriented, computerized voice and fax messaging services in support of a telecommunication system:

- **INTUITY AUDIX messaging system**

The INTUITY AUDIX voice messaging software application offers the means to record and exchange voice messages with telephone recipients.

The application contains stored voice prompts that guide subscribers in creating, sending, retrieving, answering, saving, or forwarding spoken messages. It also answers calls for subscribers who are busy or unavailable.

The INTUITY AUDIX application can be used as a personal answering service, a messenger to individuals or groups, an information service, an office receptionist, and as an automated attendant service.

- **INTUITY FAX Messaging**

The fax messaging application gives the ability to handle faxes using Intuity AUDIX messaging capabilities.

Besides sending, receiving, and printing a fax over the telephone, a subscriber can also forward a fax, annotate a fax with a voice message, send a fax, broadcast a fax to multiple telephone subscribers, and otherwise handle a fax message just as they would a voice message.

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

- **Avaya Communications INTUITY Message Manager 4.5**

Message Manager is a software application that runs on a Windows-based PC and connects with the INTUITY AUDIX application through a TCP/IP LAN.

The program uses a graphical interface to enable customers to view a list of their messages on the screen of their PC.

Subscribers can choose messages in any order and, by selecting icons with a mouse, perform all messaging tasks. This is everything that can be done using the telephone keypad.

Message Manager 4.5.6 is the current release. It is compatible with Win98, WinNT, and Windows 2000. Message Manager R4.3 is also available for customers using Win95.

- **Intuity AUDIX Call Accounting System**

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

- Intuity AUDIX Lodging

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

- Internet messaging for INTUITY AUDIX allows subscribers to send and receive voice, fax, text (e-mail), and file attachments to individuals over the internet.

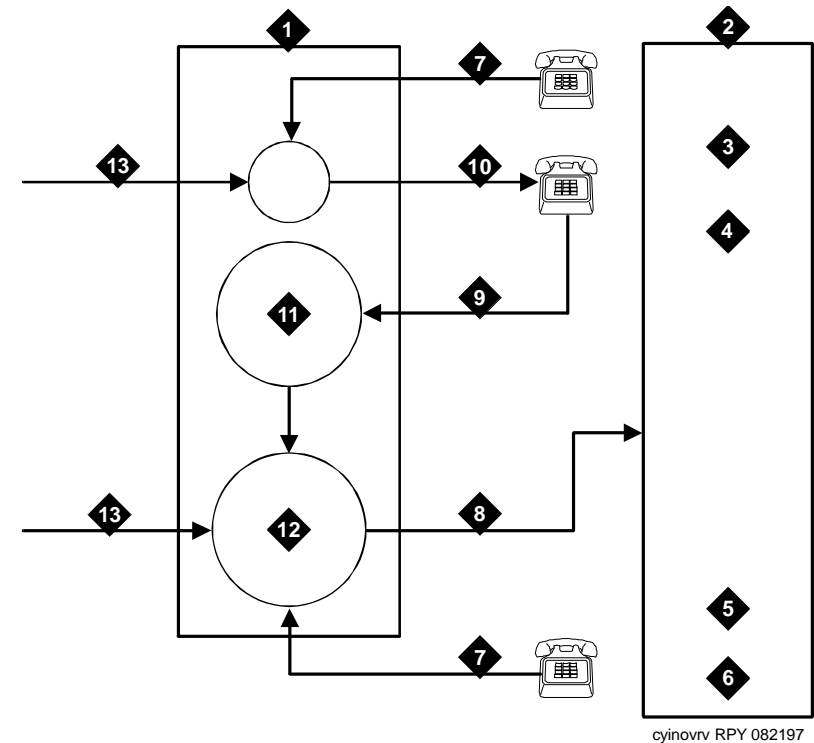
## **Switch Integration Concepts**

*Switch integration* is the sharing of information between a voice messaging system and a switch to provide services to callers and subscribers.

A fully integrated messaging system uses information sent from the switch to determine how to process each incoming telephone call.

Callers reaching an integrated system for call answer do not have to enter telephone extension numbers to leave a message.

The System 25 switch sends call information by touch-tones over the same voice circuits used for call processing (see [Figure 1-1](#)).



- |                                     |                                  |
|-------------------------------------|----------------------------------|
| 1. System 25 switch                 | 7. Local call                    |
| 2. Intuity AUDIX system             | 8. Tip/Ring station line         |
| 3. Coverage, #02, local mode code   | 9. Coverage path                 |
| 4. Coverage, #03, outside mode code | 10. Station                      |
| 5. Direct, #01, outside mode code   | 11. Coverage group               |
| 6. Direct, #00, local mode code     | 12. Integrated VMI calling group |
|                                     | 13. Trunk call                   |

**Figure 1-1. Call Routing with Switch Integration**

The Intuity AUDIX system also interprets switch-hook flashes and call progress tones.

The following information may help you to understand how Intuity AUDIX system applications are integrated with the System 25 switch. More detailed definitions are provided with the System 25 Switch):

- Coverage path

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

- The INTUITY AUDIX calling group

An INTUITY AUDIX calling group has the following characteristics:

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

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

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



**NOTE:**

For complete information on the Intuity AUDIX system, see *Avaya INTUITY Messaging Solutions Release 4, 585-310-235*.

## **Intuity AUDIX Feature Operation**

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This section describes the operation of the features of most interest for customers integrating a System 25 switch with an Intuity AUDIX system.

### **INTUITY AUDIX Voice Mail Services**

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

#### **Call Answer**

When callers dial an extension that is busy or does not answer, the INTUITY AUDIX Call Answer feature allows them to leave a message, transfer to another extension, or transfer to an attendant. System subscribers may record a personal greeting to inform their callers that he or she is unavailable, or select a standard system greeting that callers will hear. Subscribers can record up to nine different greetings for different call types, for example, a call received after business hours or when a subscriber is out of the office.

Subscribers set up a password to protect against unauthorized access to their messages. With this password, messages can be picked up from the office or from an outside telephone.

An optional INTUITY AUDIX feature known as *outcalling* allows the INTUITY AUDIX application to call a subscriber when a new message arrives. The subscriber can specify the telephone or pager number to be called.

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

The system administrator can decide, for security or other reasons, to disable the outcalling feature on a system-wide basis or for selected subscribers.

#### **Voice Mail**

Voice mail services allow subscribers to send voice messages to other subscribers, listen to received messages, forward messages received with comments attached, reply to messages, and return calls to other subscribers who

left messages. Subscribers can create and edit group lists and send messages to one or more groups. Voice mail services also allow the system manager to send broadcast messages to everyone on the system.

When subscribers receive voice messages in their mailbox, voice mail turns on the message waiting indicator (MWI) on their telephone.

Voice mail can be accessed from internal telephones by dialing the extension for the calling group that contains the Intuity AUDIX system voice ports. From outside, subscribers call in on a trunk that is administered to ring at the Intuity AUDIX system voice port calling group.

## Automated Attendant

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

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

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

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

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

A phantom multi-button extension has to be created for the automated attendant feature. If you do not want the telephone to ring, and want all calls to be directly transferred to the automated attendant, remove the system-access buttons from the telephone station and give the telephone an automated-attendant class of service.

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

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

## Bulletin Board Service

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

The call is passed from the System 25 switch to the Intuity AUDIX system with call information. This information allows the Intuity AUDIX system to provide information service processing based on the covered extension on which the call is received.

Alternately, Bulletin Board service can provide multiple messages by using a menu within an automated-attendant.

## General Call Handling by the Intuity AUDIX System: Routing Table

Calls for the INTUITY AUDIX application are processed through DNIS\_SVC. The INTUITY AUDIX application then processes the call based on the called number as follows. If the called number is defined as a(n):

- Regular voice mailbox, call answer service is provided.
- Bulletin Board extension, bulletin board service is provided.
- Auto-attendant mailbox, automated-attendant service is provided.

To expand upon the possibilities for incoming calls, a special table is used. The following discussion describes the process illustrated in [Figure 1-2](#).

### ■ Routing Table

The routing table is provided to:

- Specify automated-attendant menus for calls on trunks or specified covered extensions
- specify different call handling by automated-attendants based on a business, holiday, or alternate service schedule
- Provide voice mail login service



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

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

## **Incoming Called Number**

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

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

### **NOTE:**

The substitution is from the holiday schedule.

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

### **NOTE:**

The substitution is based on the business schedule, but it is from the routing table, and not from the business schedule.

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



**NOTE:**

The substitution is based on the business schedule, but it is from the routing table, and not from the business schedule.

## Business Schedule

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A maximum of four business schedules can be defined. The name or number of one of these business schedules is placed in the Business Schedule column of the routing table. This associates the particular business schedule with a called number or range specified in the Incoming Called Number column of the routing table.

Each business schedule has the following fields and columns:

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



**NOTE:**

These fields and columns are used for matching only. The automated -attendant extensions associated with a match are taken from the routing table.

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

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

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

## **Holiday Schedule(s)**

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

Each holiday schedule has the following fields and columns:

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



### **NOTE:**

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

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

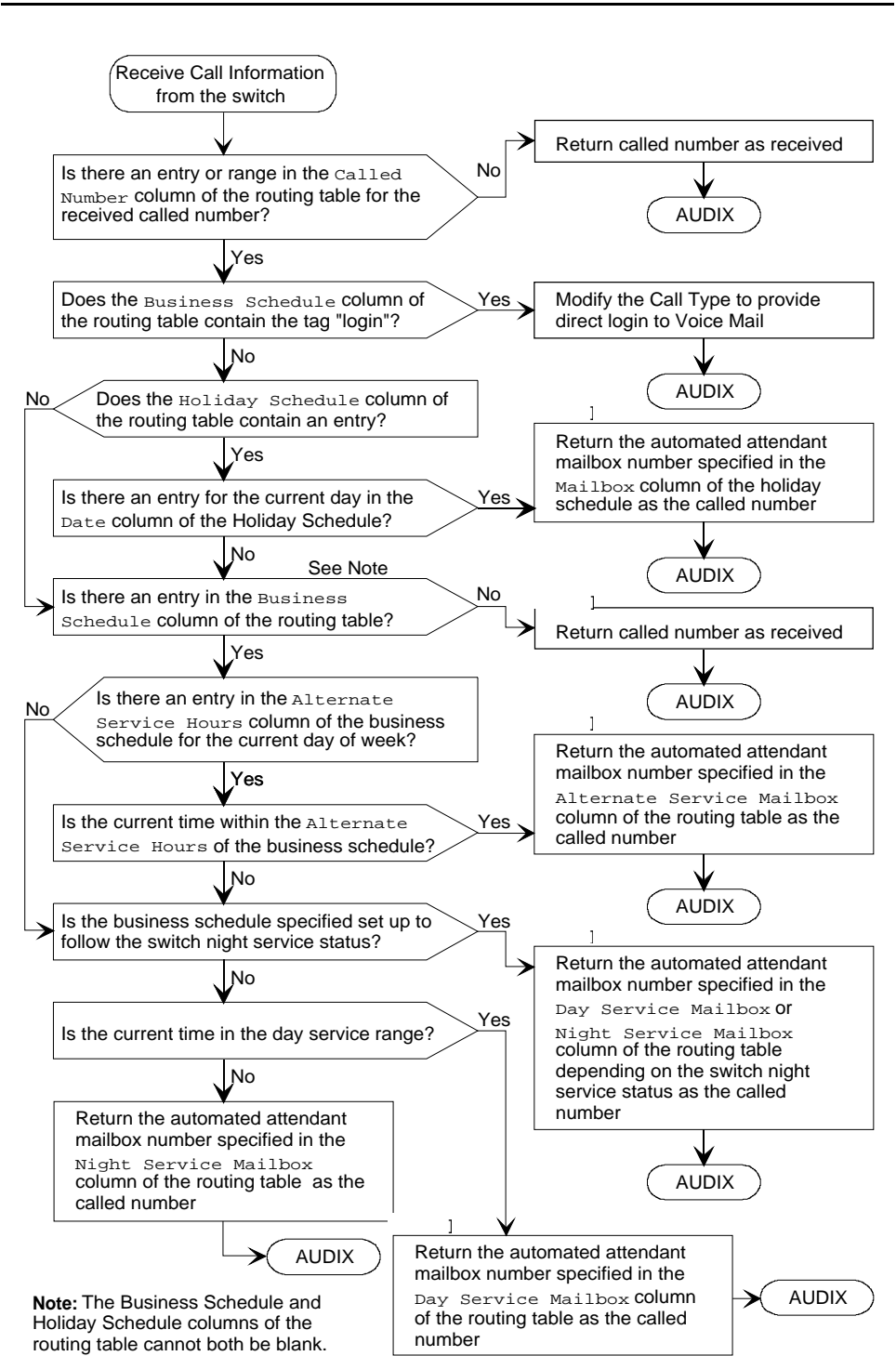


Figure 1-2. Call-processing Flow Chart

## **Functionality Differences for the System 25 Switch**

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The process of integrating the Intuity AUDIX system with the System 25 switch differs from integrations with other switches in the following ways:

- The System 25 switch does not differentiate between busy and no answer. Therefore, it is not possible to play different greetings based on whether the person is out of their office or just on another call.
- High-speed digital networking is not supported.
- DCS networking is not supported.
- Coverage interval is set on a system-wide basis. This has an impact on the implementation of station coverage and automated-attendants.

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