

Lucent Technologies
Bell Labs Innovations



INTUITY[™] CONVERSANT[®] System
Version 7.0
System Description

585-313-204
Comcode 108178682
Issue 1
April 1998

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

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- A busy tone is received
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Low-Voltage Directive 73/23/EEC



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Acknowledgment

This document was prepared by Product Documentation, Lucent Technologies, Columbus, OH.

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About This Book

Purpose

The Lucent Technologies *INTUITY™ CONVERSANT® System Version 7.0 System Description*, 585-313-204, answers basic questions about the INTUITY CONVERSANT System Version 7.0 and its usage. It provides an overview of the service it provides, as well as a technical description of the current system hardware, software, features, and feature packages, including requirements, specifications, and performance information. [Appendix A](#) is a V7.0 documentation guide. If you need more detailed system information, you are referred to other documents in the V7.0 system set.

Intended Audiences

There are many audiences, both internal and external to Lucent Technologies that use this document. The target audience includes anyone associated with the marketing, sales, sales support, technical support, development, or purchase of a system who requires basic information about the functionality or content of the platform.

The primary audiences for this document include sales and sales-support organizations, administrators, product design organizations, and account executives. These primary audiences are most interested in answering questions about the product and its features, such as “What is it?” and “How does it work?”

Secondary audiences for the document include the Technical Service Center (TSC), training, and development. These secondary audiences are most interested in answering questions such as “How would the system best be supported?” and “How would the system best be serviced?”

Release History

This book is the first release for version 7.0.

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How To Use This Book

This book is designed to provide you with a detailed description of all aspects of the INTUITY CONVERSANT system.

For an Overview

Read [Chapter 1, "Introduction"](#) for a brief overview of the V7.0 system, including its functionality, hardware platforms, software, features, and optional feature packages.

For Information on Hardware

Read [Chapter 2, "Hardware"](#) for a description of the major hardware components of the system, including standard hardware by platform, optional circuit cards, voice processing circuit cards, asynchronous and synchronous communication circuit cards, and peripheral equipment.

For Information on Software

Read [Chapter 3, "Software"](#) for a description of the UnixWare operating system software and the V7.0 base system software and optional software packages.

For Information on Features and Feature Packages

Read [Chapter 4, "Features"](#) and [Chapter 5, "Feature Packages"](#) for a description of the base functionality of the system and the optional feature packages available with the system.

To Locate Specific Topics

This book includes an alphabetical index at the end for quick access to specific topics.

Conventions Used in This Book

This section describes the conventions used in this book.

Typography

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

Example 1:

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

Example 2:

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

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, or service interruptions:



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.

Related Resources

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

Documentation

This document is designed to supplement all other documents in the V7.0 system set. Always refer to the appropriate document for specific information on planning, installing, operating, administering, or maintaining the system. A brief description of each document in the set is included in [Appendix A](#).

Additional Suggested Documentation

It is suggested that you also 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 INTUITY CONVERSANT documentation.

Training

The following training class is available to help you maintain a V7.0 INTUITY CONVERSANT system:

- INTUITY CONVERSANT Installation and Maintenance Voice Information System
 - Course No. BTT509H (for US audiences)
 - Course No. BTE509H2 (for audiences outside the US)

The following training classes are available to aid you in developing an application on a V7.0 INTUITY CONVERSANT system:

- INTUITY CONVERSANT VIS Advanced Script Builder
 - Course No. BTC301H (for US audiences)
 - Course No. BTK301H2 (for audiences outside the US)
- INTUITY CONVERSANT Script Builder Host Application Development Workshop — Course No. BTC201H

For more information and availability of INTUITY CONVERSANT training courses, call one of the following numbers:

- For customer training in the US: 1 800 255-8988
- For sales and services training in the US: 1 904 636-3261
- For customer or sales training outside the US: Call your local Lucent Technologies Center of Excellence (COE)

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You may also fax you comments to the attention of the Lucent Technologies INTUITY CONVERSANT writing team at 1 303 538-1741.

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Lucent Technologies—formed as a result of AT&T's planned restructuring—designs, builds, and delivers a wide range of public and private networks, communications systems and software, consumer and business telephone systems, and microelectronic components. The world-renowned Bell Laboratories is the research and development arm for the company.

Introduction

1

Overview

This chapter provides a high-level overview of the system, including:

- Voice response basics
- Description of the system, including hardware, software, features, and feature packages

Purpose

The purpose of this chapter is to

- Familiarize you with basic types of voice response transactions.
- Give you an overview of how the system can automate caller transactions.
- Briefly describe how the terms *hardware*, *software*, *features*, and *feature packages* are used in this book.

Voice Response Basics

This section discusses voice response basics first by explaining what a system does and then by demonstrating how an automated transaction can replace a nonautomated transaction.

What the INTUITY™ CONVERSANT® System Does

The INTUITY CONVERSANT system is an interactive voice response system for automatic telephone transactions. Using synthesized or prerecorded speech, the system can:

- Respond to (answer) an incoming call
- Request specific information from the caller
- Provide information or services to the caller based on data from the caller

The system allows either full or partial automation of telephone transactions that would otherwise be performed by an operator/attendant. These automated transactions are known as *applications*. Each application is designed and developed to meet a specific customer's need. An application *script* is a set of instructions written for the system that informs it how to carry out the automated transaction. Scripts define the flows of calls and determine what callers hear and how callers respond to the system.

When an incoming call is connected to the system, the system prompts the caller with synthesized or prerecorded speech. The caller responds by entering touch-tones or by speaking into the telephone. The dialog between the system and the caller is determined by the particular application and its corresponding script.

The application script can be simple or complex, depending on the purpose of the call. For example, a simple script may accept a caller's request for information, perform a quick search of a local database, and then respond to the caller with that information. A more complex script may accept a caller's request for information, prompt the caller to provide additional touch-tone or spoken format information, and then access a remote host computer database to retrieve information related to the caller. The script then forwards the call to an operator/attendant who uses the information previously acquired to respond and interact with the caller.

A Sample Transaction

This section describes a simple, nonautomated transaction between an operator and caller and then describes how the system can automate that same transaction.

Nonautomated Transaction

A bank has several operators whose duties include providing callers with certain information, such as account balances and current interest rates for different types of accounts. The operators also answer a variety of questions. Some of the information, such as interest rates, is located on a sheet of paper in front of the operator. Other information, such as account balances, must be obtained from the bank's computer.

When necessary, these operators can also transfer callers to specialized customer service representatives for further information. The following represents a typical conversation, or transaction, between a caller and an operator at a bank:

Operator: "Thank you for calling River Bank. How may I help you?"

Caller: "What is the current interest rate on your automobile loans?"

Operator: (referring to a chart of interest rates)
"The interest rate for our auto loans is 7.9%. May I help you with anything else?"

Caller: "Yes. I'd like to check my savings account balance."

Operator: "What is your account number?"

Caller: "My account number is 0653202782."

Operator: "To verify that this is your account, what are the last four digits of your social security number?"

Caller: "9087"

Operator: "One moment, please."

(Accesses account balance using a computer terminal)

"Your savings account balance is \$2,010.27. May I help you with anything else?"

Caller: "Yes. I'd like to speak to someone about an auto loan."

Operator: "I'll transfer you to one of our loan office representatives. One moment, please."
(Transfers caller to loan officer, who must then access the computer to gain the customer's credit history)

Types of Interactions Between Caller and Operator

You can better understand how calls are automated if you break down the nonautomated call sequences into its more basic steps.

In the nonautomated sample call above, you can see the following types of interactions between the caller and the operator:

1. The operator greets the caller.
2. The operator prompts the caller and receives a request for information. In the sample call, this includes interest rate and account balance information.
3. The operator takes the following actions at the caller's request:
 - If necessary, the operator prompts the caller for further information (type of rate, type of account, ID number, and so forth).
 - The operator looks up the information.
 - The operator reports the information.
4. The operator repeats Steps 2 and 3 above.
5. The caller requests information that can only be provided by someone other than the operator.
6. The operator transfers the caller.

Virtually all transactions consist of the basic steps listed above. The caller's "request for information" shown in Step 2 above may be as simple as the need to hear a checking account balance or the latest stock market value. More complex requests might include placing a sales order or requesting information on a particular product via a fax.

In the sample banking transaction, when the caller asks for an interest rate, the operator simply looks at a chart and reads the information to the caller. However, when the caller wants to know account balance information, the operator must ask for additional information (the caller's account number and social security number), and then use a computer terminal to enter the caller information and read the balance displayed on the screen.

Finally, when the caller requests information on automobile loans, the operator must transfer the call to a loan officer who has the means to further investigate and service the inquiry.

Automated Transaction Using the System

Think in terms of the application script replacing the operator when you automate a transaction using the system. The transaction steps remain the same, but the caller interacts with the system instead of an operator. The system follows the same basic steps as the nonautomated transaction. It uses the application script for instructions about the setting, what to say during a transaction, and possible options that the caller may wish to investigate.

Types of Interactions Between Caller and System

In an automated call, you can see the following types of interactions between the caller and the system:

1. The system greets the caller.
2. The system prompts the caller and receives a request for information. In the sample call, this includes interest rate and account balance information.
3. The system takes the following action on the caller request:
 - If necessary, the system prompts the caller for further information (type of rate, type of account, ID number, and so forth). In this sample call, the caller is asked to enter the last four digits of his or her social security number.
 - The system looks up the information from the bank database.
 - The system reports the information to the caller.
4. The system repeats Steps 2 and 3 above.
5. The caller requests information that can only be provided by a nonautomated operation.
6. The system transfers the caller to a loan office representative.

Description of the System

This section provides a brief overview of the hardware, software, features, and feature packages of the system.

Hardware

System software operates on a hardware system called a Multi-Application Platform (MAP). Four different hardware platforms are available as the physical basis of the system. These platforms have different capacities and can present system resources in various configurations. This allows each system to be tailored to match each customer's projected call volumes and office arrangement.

This hardware platforms are as follows:

- MAP/100C — A central-office rack-mounted hardware platform that accommodates customers who need a system that meets central office telecommunications standards.
- MAP/100P — A deskside or rack-mountable hardware platform that accommodates business customers with moderate to large amounts of system activity.
- MAP/40P — A PC-sized unit, in a deskside tower configuration, that accommodates customers with small or moderate amounts of system activity.
- MAP/5P — A PC-sized unit, mounted in a deskside mini-tower configuration, that accommodates customers with small amounts of system activity.

Certain applications require multiple systems to provide transaction automation for cases when the maximum number of simultaneous calls is exceeded for a single platform. Multiple platforms then may be necessary to support increased capacity requirements.

For more detailed information on each platform, as well as supported hardware components, see [Chapter 2, "Hardware"](#).

Software

At its most basic level, the system is a computer consisting of controlling and speech processing hardware, a UnixWare operating system, and system application software.

Prerecorded speech files are usually present on the system disk(s). These speech files are used to construct prompting phrases that the system uses to instruct the caller during the automated transaction. The amount of custom application software and speech present on a particular system is based on your specific needs.

For more information on standard UnixWare operating system software, base software, and optional software, see [Chapter 3, "Software"](#).

Features

A *feature* can be either software and/or hardware in nature. It is standard with each system purchase. Some features require nothing additional to be completely functional. However, some features may require the addition of a *feature package* to be more complete or more advanced.

See [Chapter 4, "Features"](#) for more detailed information on supported features.

Feature Packages

A *feature package* can be hardware and/or software in nature and provides specific functions that enhance the operation or capacities of the base system. Feature packages are not standard with each system purchase. If you require capabilities beyond what the base system provides, you can purchase one or more feature packages to meet these needs. These optional packages provide enhancements such as data network interfaces or additional basic hardware resources.

See [Chapter 5, "Feature Packages"](#) for more detailed information on each supported feature package.

Hardware

2

Overview

This chapter describes V7.0 system hardware, including descriptions, platform capacities, and supported and orderable devices for the following:

- Standard system hardware by platform
- Optional system hardware, including circuit cards and peripheral equipment

In addition, this chapter also discusses resource assignments for the described hardware components and provides circuit card maximums by platform.

NOTE:

The modular design of the V7.0 system permits the components described in this chapter to be configured in different ways to satisfy the requirements of many different applications. Not all of the hardware described in this chapter can or will be used simultaneously in a single platform.

The base and optional software running on the platform controls the operation of the equipment. The software associated with some of the hardware components is listed and described in [Chapter 3, "Software."](#) The features and feature packages associated with some hardware components are described in detail in [Chapter 4, "Features,"](#) and [Chapter 5, "Feature Packages."](#)

Purpose

The purpose of this chapter is to

- Make distinctions between standard and optional system hardware.
- Explain the uses of all hardware components.
- Present differences between the hardware components of each of the platforms.

Standard System Hardware by Platform

Regardless of the type of application and/or features being supported, all platforms require a minimum set of hardware components to function properly.

The V7.0 system can operate on four different multi-application platforms:

- MAP/100C
- MAP/100P
- MAP/40P
- MAP/5P

This section describes these platforms and their standard system hardware components.

MAP/100C Standard System Hardware

The MAP/100C is a central-office rack-mounted unit used primarily to provide services that enhance the functionality of large central-office telecommunication switches and services operated by local and long-distance telephone companies. The MAP/100C can be mounted in either a 24-inch 4ESS® or 5ESS® equipment rack. It cannot be mounted in an equipment rack used to mount the MAP/100P unit.

Standard hardware components for the MAP/100C include the following:

- Backplane
- Standard circuit cards
- Standard bus cables
- Peripheral devices
- Power supply

Backplane

Each platform contains a backplane that provides circuit card mounting positions called *slots*. The MAP/100C backplane resides inside the front chassis in the card cage area.

The backplane configuration supported in the MAP/100C for V7.0 is an ISA/PCI MAP/100C backplane. This backplane has a total of 24 slots, consisting of 1 dedicated CPU slot (a PCI/ISA combination), 20 ISA slots, and 3 PCI slots. This backplane replaces the older, full ISA MAP/100C backplane without PCI slots.

Of the 20 ISA slots, one slot is usually occupied by a remote maintenance circuit card, and the 19 remaining ISA slots are available for voice response/processing cards, as well as for cards to support local area networks, and so forth. Of the three PCI slots, one slot is dedicated to the video circuit card, one is for PCI LAN, and the remaining slot is available for a second PCI LAN or other PCI cards.

The MAP/100C platform is equipped with 6 half-height disk bays. In the standard configuration, one half-height bay is occupied by the cartridge tape drive, and another is occupied by a hard disk drive, with four bays remaining.

Standard Circuit Cards

Standard circuit cards provide the central processing, video, and peripheral functions, and certain basic communication functions of the system.

In the MAP/100C, all circuit cards are mounted vertically with all I/O interface cables exiting from the top of the platform. A hinged door on the front of the platform provides access to the circuit cards and backplane.

For more information about software associated with the following circuit cards, see [Chapter 4, "Features"](#) and [Chapter 5, "Feature Packages"](#).

The following are standard hardware components in the MAP/100C:

- Central processing unit circuit card
- External SCSI connector
- Video controller circuit card
- Remote maintenance circuit card

Central Processing Unit Circuit Card

The central processing unit (CPU) circuit card for the MAP/100C for V7.0 is a P5 processor operating at 200-MHz with a minimum of 64 Mbytes of RAM and a maximum of 128 Mbytes of RAM.

External SCSI Connector

The external Small Computer System Interface (SCSI) connector provides access to the SCSI bus external to the MAP/100C. When the SCSI connector is not used for access purposes, an active termination must be plugged on for terminating the SCSI bus. A PS/2 mouse connector is provided but not supported; the CONVERSANT V7.0 system supports a serial mouse only.

Video Controller Circuit Card

The video controller circuit card provides the interface between the system processor and the video monitor. For the MAP/100C, this circuit card is a PCI bus circuit card.

Remote Maintenance Circuit Card

The remote maintenance circuit card provides a method of remote monitoring and access for off-site technicians. This circuit card has a built-in 28.8 modem for all systems in the U.S.

Standard Bus Cables

There are two types of standard bus cable for the system:

- SCSI bus cable
- TDM bus cable

SCSI Bus Cable

The SCSI bus cable serves as the interface from the SCSI controller to SCSI devices, such as the hard disk drive and tape devices.

TDM Bus Cable

The TDM bus cable is used by the voice processing cards (Tip/Ring, T1/ E1, and SSP) when they send digitized speech to other cards in the system. For example, it is used to connect SSP resources to telephone network connections for speech playback, voice coding, speech recognition, or for bridging one telephone connection to another.

A TDM bus cable is supplied with each V7.0 system purchased.

Peripheral Devices

V7.0 system platforms support storage devices including hard disk, diskette, and cartridge tape drives. The MAP/100C is supplied with data storage/transfer devices in the SCSI format.

For more information on the capabilities and use of SCSI peripherals, see [“Guidelines for the Addition of SCSI Devices”](#) later in this chapter and [Chapter 4, “Features”](#).

The MAP/100C platform supports the following peripheral devices:

- Hard disk drive
- Diskette drive
- Cartridge tape drive

Hard Disk Drive

A hard disk drive is a peripheral device used to provide storage and random access to large amounts of data for the system. This data can include the operating system, application software, speech data, and database tables.

All new MAP/100C platforms are equipped with at least one 2-Gbyte SCSI hard disk drive. The MAP/100C can support up to five SCSI hard disk drives. This disk is a half-height peripheral and is mounted in the peripheral bay in designated bay positions.

Diskette Drive

The diskette drive is a peripheral device used to load and back up system software. All new MAPs include a single diskette drive. This unit uses standard 3.5-inch, 1.44-Mbyte, high-density diskettes. It is located in the front chassis area and is accessible from the user interface panel.

Cartridge Tape Drive

The cartridge tape drive is a peripheral device used to back up and restore files using a tape cartridge, thereby eliminating the need to install and back up files using diskettes. A single cartridge tape can store up to 2-Gbytes of information.

All new V7.0 MAPs include a single 2-Gbyte, SCSI-format cartridge tape drive. It is located below the diskette drive, inside the disk bay.

Power Supply

The MAP/100C is available in a -48 VDC power supply.

Views of the MAP/100C

[Figure 2-1](#) shows the front view of the MAP/100C and [Figure 2-2](#) shows the back view. [Figure 2-3](#) shows typical, multiple MAP/100Cs rack-mounted in a 5ESS equipment rack.

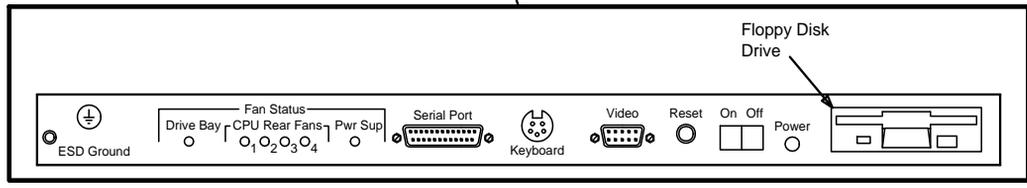
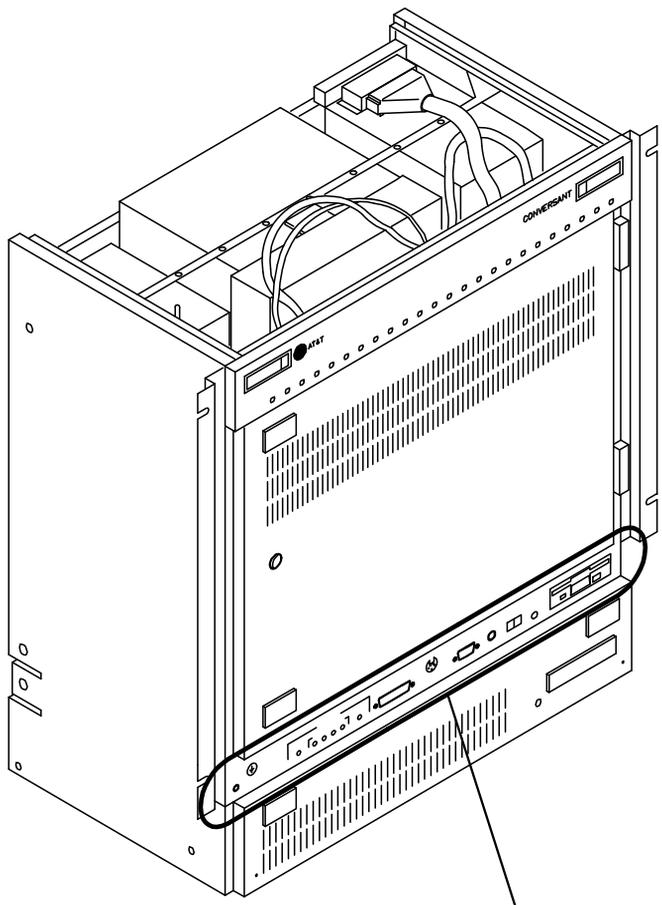


Figure 2-1. Front View of a MAP/100C with 4ESS Side-Mounting Brackets

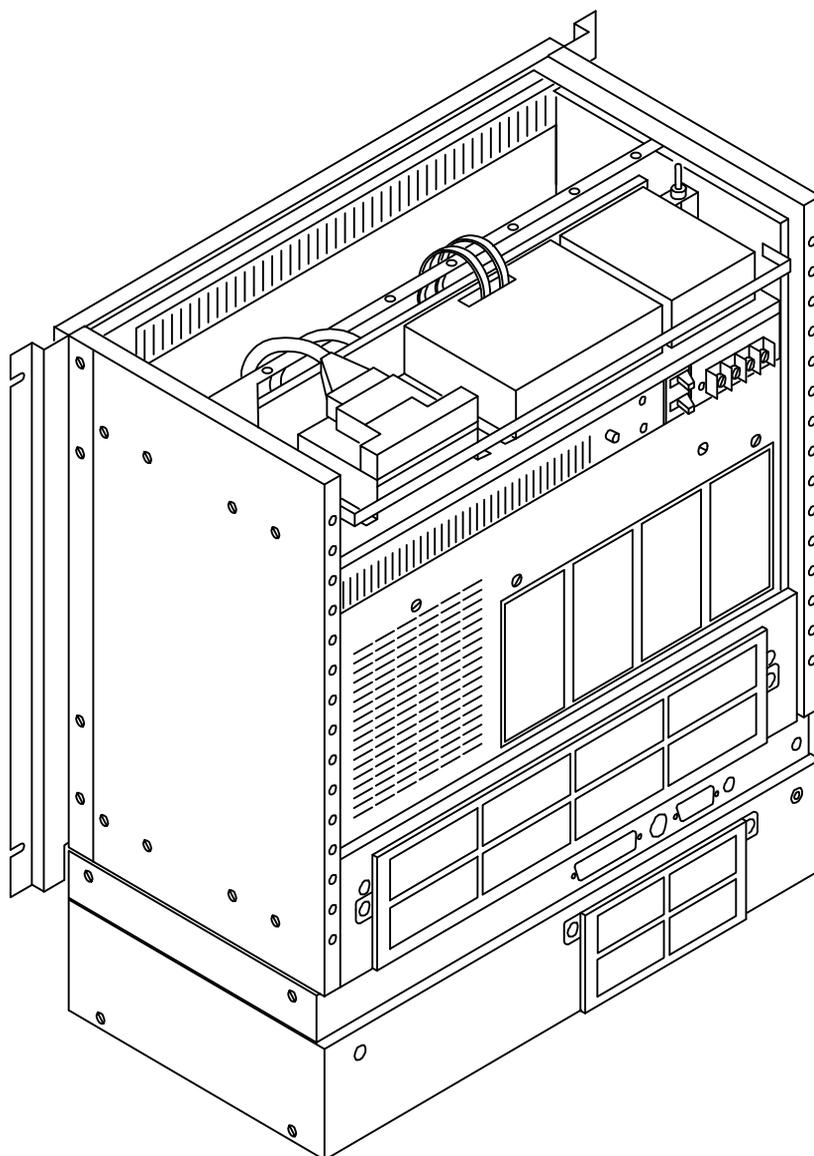


Figure 2-2. Back View of a MAP/100C with 5ESS Mounting Brackets

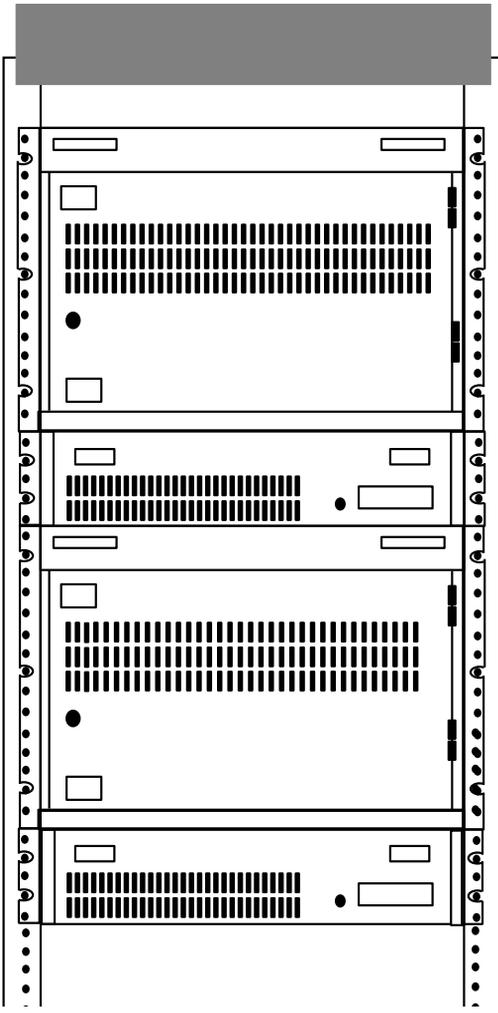


Figure 2-3. MAP/100C Units in a 5ESS Cabinet, Front View

MAP/100P Standard System Hardware

The MAP/100P is available as a freestanding desk-side unit, equipped with four casters that allow you to roll the chassis around as required. The MAP/100P can also be ordered as a rack-mounted unit (a factory-installed component). Multiple units can only be mounted in a 19-inch-panel commercial equipment rack. The MAP/100P cannot be mounted in the equipment racks used to mount the MAP/100C.

The platform consists of one physical unit with three main areas: the card backplane, a peripheral bay (disk bay), and power supply units mounted in the rear.

Standard hardware components for the MAP/100P include the following:

- Backplane
- Standard circuit cards
- Standard bus cables
- Peripheral devices
- Power supply

Backplane

Each platform contains a backplane that provides circuit card mounting positions called *slots*. The MAP/100P has a PCI/ISA backplane that resides inside the chassis. This backplane is installed in all new V7.0 systems and has a total of 20 slots, consisting of 1 dedicated CPU slot, 16 ISA slots, and 3 PCI slots.

Of the 16 ISA slots, one slot is occupied by a remote maintenance circuit card. The 15 remaining ISA slots are available for voice response/processing cards, and so forth.

Of the three PCI slots, one slot is dedicated to the video circuit card. The remaining two are available for a PCI LAN circuit card, a RAID controller circuit card, or other PCI cards.

This platform is equipped with 6 half-height, hard-disk bays and four peripheral bays. In the standard configuration, peripheral bay1 is occupied by the external SCSI connector, bay 3 is occupied by the cartridge tape drive, and bay 4 is occupied by a diskette drive.

Standard Circuit Cards

Standard circuit cards provide the standard central processing, video, and peripheral functions, and certain basic communication functions of the system.

In the MAP/100P deskside unit, all circuit cards are mounted horizontally with the PCI cards at the top. Any I/O interface cables exit from the back of the platform. An access panel on the left side of the platform provides entry to the backplane. In the MAP/100P rack-mounted unit, all circuit cards are installed vertically with the PCI cards to the right. The access panel is located on the top of the unit.

For more information about software associated with the following circuit cards, see [Chapter 4, "Features"](#) and [Chapter 5, "Feature Packages"](#). The following circuit cards are standard hardware components in the MAP/100P:

- Central processing unit circuit card
- Video controller circuit card
- Remote maintenance circuit card

Central Processing Unit Circuit Card

The MAP/100P for V7.0 supports a central processing unit (CPU) circuit card with a P5 processor operating at 200-MHz with a minimum of 64 Mbytes of RAM and a maximum of 128 Mbytes of RAM. The CPU includes an on-board wide SCSI, floppy, and IDE controllers.

Video Controller Circuit Card

The video controller circuit card provides the interface between the system processor and the video monitor. For the MAP/100P, this circuit card is a PCI bus circuit card.

Remote Maintenance Circuit Card

The remote maintenance circuit card provides a method of remote monitoring and access for off-site technicians. This circuit card has a built-in 28.8 modem for all systems in the U.S.

Standard Bus Cables

There are two types of standard bus cables for the system:

- SCSI bus cable
- TDM bus cable

SCSI Bus Cable

The SCSI bus cable serves as the interface from the SCSI controller to a SCSI device such as a hard disk, external I/O, and tape drive.

TDM Bus Cable

The TDM bus cable is used by the voice processing cards (Tip/Ring, T1/ E1, and SSP) when they send digitized speech to other cards in the system. For example, it is used to connect SSP resources to telephone network connections for speech playback, voice coding, speech recognition, or for bridging one telephone network connection to another. A TDM bus cable is supplied with each V7.0 system purchased.

Peripheral Devices

V7.0 system platforms support storage devices including hard disk, diskette, and cartridge tape drives. The MAP/100P is supplied with data storage/transfer devices in the Small Computer System Interface (SCSI) format.

For more information on the capabilities and use of SCSI peripherals, see [“Guidelines for the Addition of SCSI Devices”](#) later in this chapter and [Chapter 4, “Features”](#).

The MAP/100P platform supports the following peripheral devices:

- Hard disk drive
- Diskette drive
- Cartridge tape drive
- External SCSI connector

Hard Disk Drive

A hard disk drive is a peripheral device used to provide storage and random access to large amounts of data within the system. This data can include the operating system, application software, speech data, and database tables.

All new MAP/100P platforms are equipped with at least one 2-Gbyte Single Connector Architecture (SCA)-SCSI hard-disk drive. If the system is equipped with a RAID controller card, at least three hard disk drives are provided. The MAP/100P can support up to six SCA-SCSI hard disk drives. The disks are mounted in the drive bay; orientation of the disk and drive bays are determined by the type of unit (deskside or rack-mounted).

Diskette Drive

The diskette drive is a peripheral device used to load and back up system software. All new MAPs include a single diskette drive. This unit uses standard 3.5-inch, 1.44-Mbyte, high-density diskettes. It is located in peripheral bay position 4.

Cartridge Tape Drive

The cartridge tape drive is a peripheral device used to back up and restore files from a tape cartridge. This unit eliminates the need to install and back up files using diskettes and thus streamlines the process. A single cartridge tape can store up to 2-Gbytes of information.

All new V7.0 MAPs include a single 2-Gbyte, SCSI-format cartridge tape drive. The cartridge tape drive is located below the diskette drive, in peripheral bay position 3.

External SCSI Connector

On the MAP/100P, a P5200 CPU SCSI controller provides an interface to an external SCSI connector. When the SCSI connector is not used for access purposes, an active termination must be plugged on for terminating the SCSI bus. External SCSI devices are installed only for maintenance purposes and are not supported for permanent connection.

Because of the faster, wide SCSI bus speed, special requirements exist for connecting external hardware.

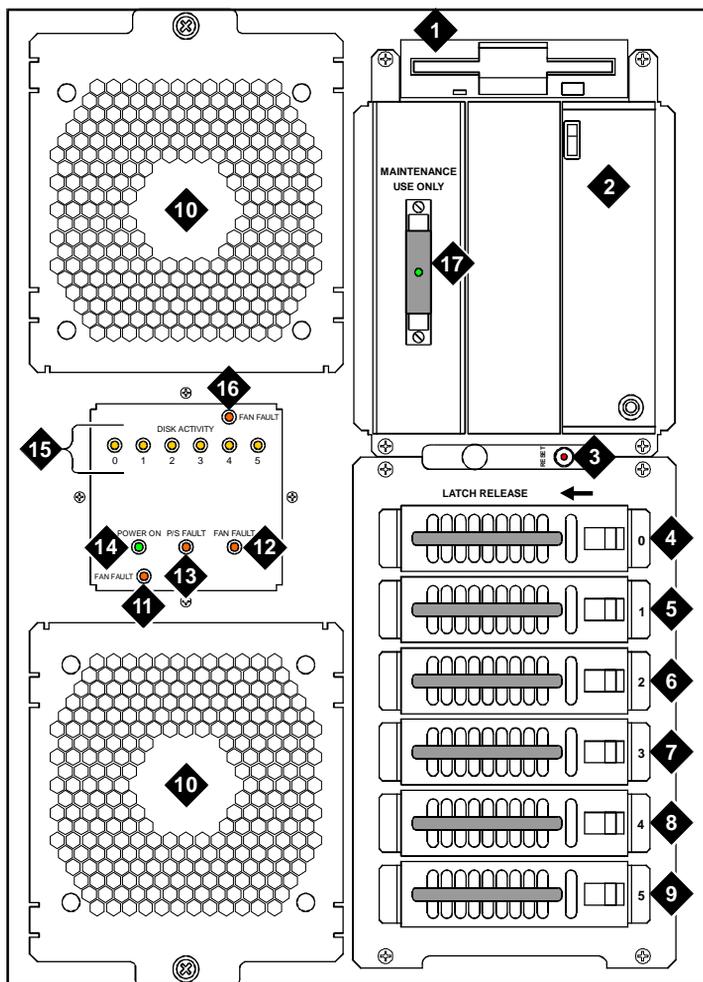
Power Supply

All new sales of the MAP/100P are supplied with two AC (110V/220V) hot-swappable power supply modules. An external uninterruptable power supply (UPS) can be ordered.

Views of the MAP/100P

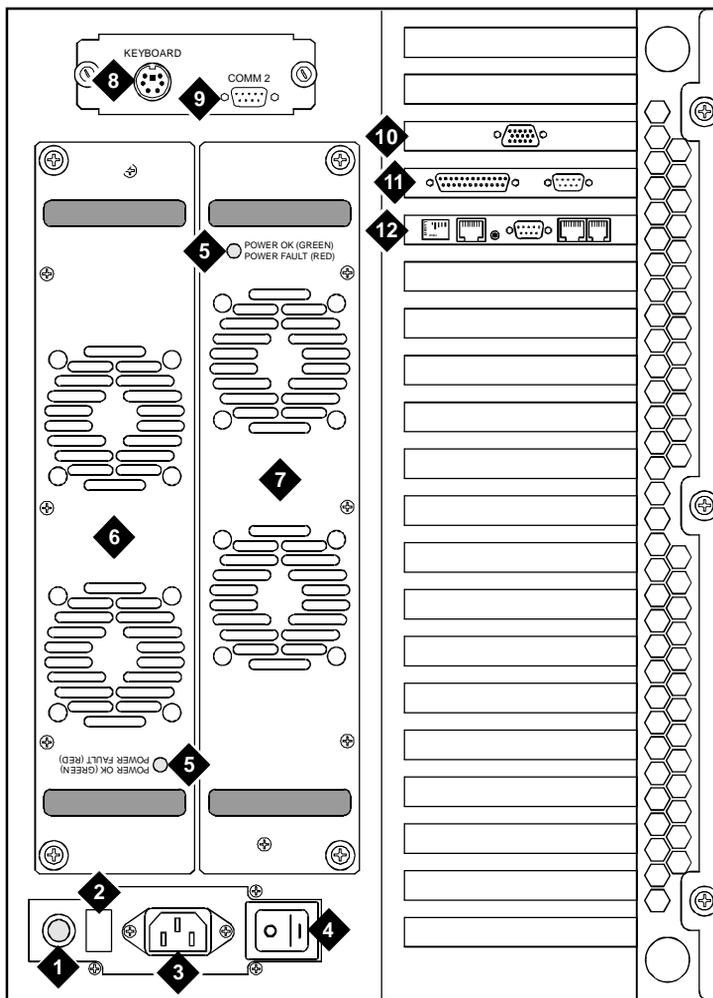
[Figure 2-4](#) shows the front view of a deskside MAP/100P and [Figure 2-5](#) shows the back view.

[Figure 2-6](#) shows the front view of a rack-mounted MAP/100P and [Figure 2-7](#) shows the back view. [Figure 2-8](#) shows the front view of multiple rack-mounted MAP/100Ps.



- | | | | |
|----|----------------------|-----|---------------------------------------|
| 1. | Diskette drive | 10. | Circuit card cage fan |
| 2. | Cartridge tape drive | 11. | Fan fault LED for lower fan |
| 3. | Reset push button | 12. | System fan fault LED |
| 4. | Hard disk drive 0 | 13. | Power supply fault LED |
| 5. | Hard disk drive 1 | 14. | Power on LED |
| 6. | Hard disk drive 2 | 15. | Disk activity indicator (per SCSI ID) |
| 7. | Hard disk drive 3 | 16. | Fan fault LED for upper fan |
| 8. | Hard disk drive 4 | 17. | SCSI external active terminator |
| 9. | Hard disk drive 5 | | |

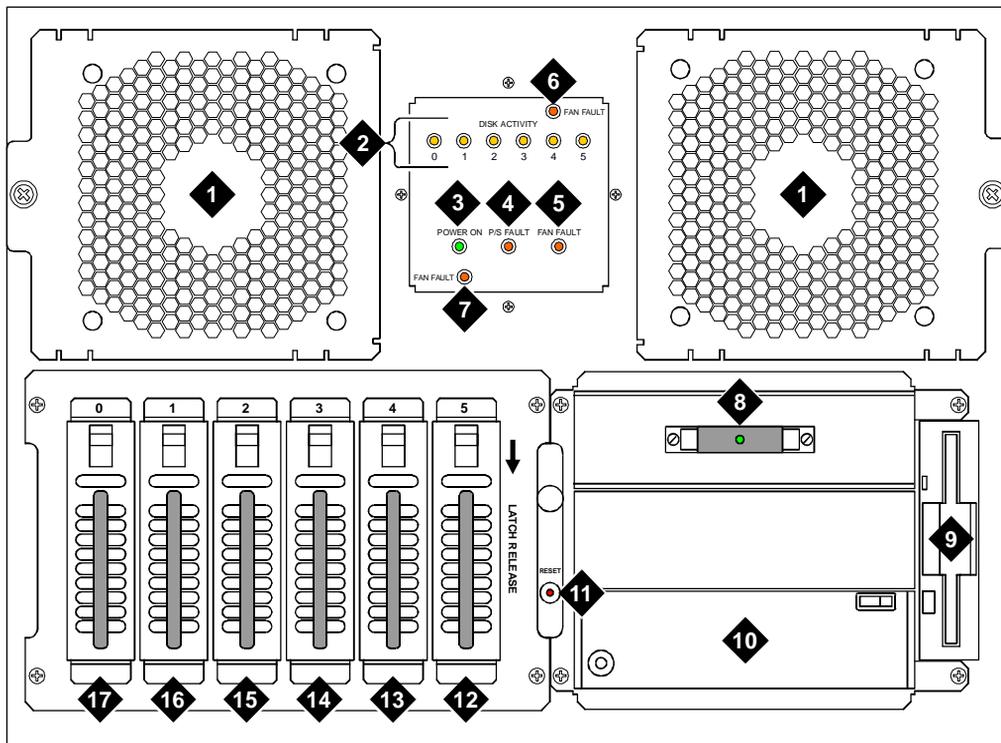
Figure 2-4. Front View of a Deskside MAP/100P



scinp003 KLC 032398

- | | |
|--|---|
| 1. AC Line fuse | 7. Power supply 2 |
| 2. Line fuse rating label | 8. Keyboard connector |
| 3. AC power inlet receptacle | 9. COM2 port |
| 4. ON/OFF power switch with protective guard | 10. Video circuit card (PCI slot 1) |
| 5. Power supply status LED | 11. P5 200 MHz CPU with COM1 (slot 17) |
| 6. Power supply 1 | 12. Remote maintenance circuit card (ISA slot 16) |

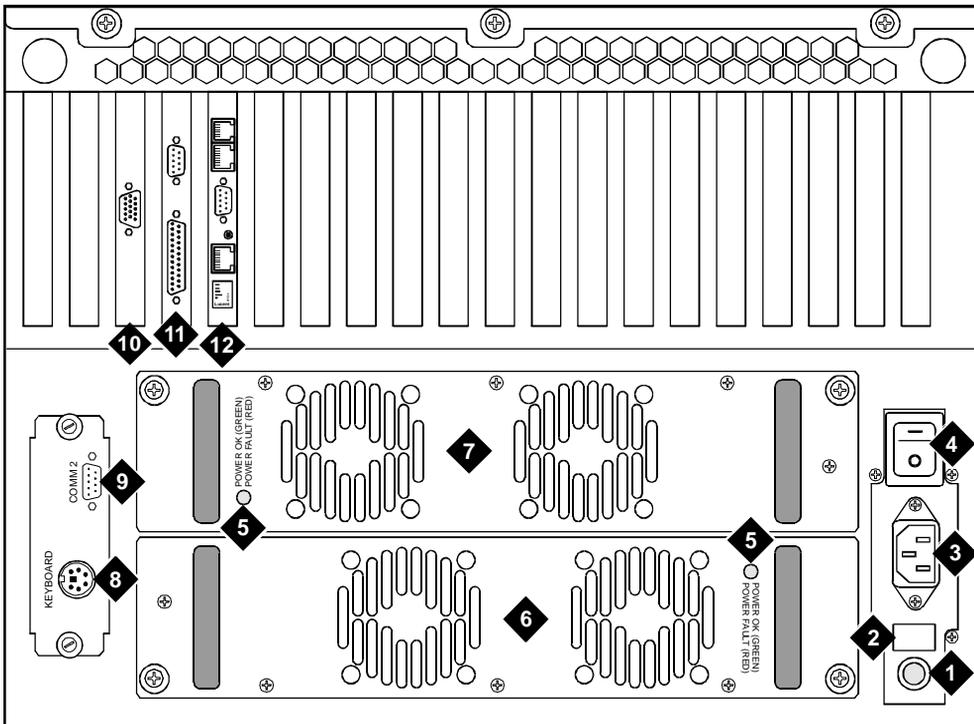
Figure 2-5. Back View of a Deskside MAP/100P



scinp007 KLC 021798

- | | |
|--|--------------------------|
| 1. Circuit card cage fan assembly | 10. Cartridge tape drive |
| 2. Disk activity indicator (per SCSI ID) | 11. Reset push button |
| 3. Power on LED | 12. Hard disk drive 5 |
| 4. Power supply fault LED | 13. Hard disk drive 4 |
| 5. Card cage fan fault LED | 14. Hard disk drive 3 |
| 6. Fan fault LED for right fan | 15. Hard disk drive 2 |
| 7. Fan fault LED for left fan | 16. Hard disk drive 1 |
| 8. SCSI external active terminator | 17. Hard disk drive 0 |
| 9. Diskette drive | |

Figure 2-6. Front View of a Rack-Mounted MAP/100P



scinp006 KLC 032398

- | | |
|--|---|
| 1. Line fuse | 7. Power supply 2 |
| 2. Line fuse rating label | 8. Keyboard connector |
| 3. AC power inlet receptacle | 9. COM2 port |
| 4. ON/OFF power switch with protective guard | 10. Video circuit card (PCI slot 1) |
| 5. Power supply status LED | 11. P5 200 MHz CPU with COM1 (slot 17) |
| 6. Power supply 1 | 12. Remote maintenance circuit card (ISA slot 16) |

Figure 2-7. Back View of a Rack-Mounted MAP/100P

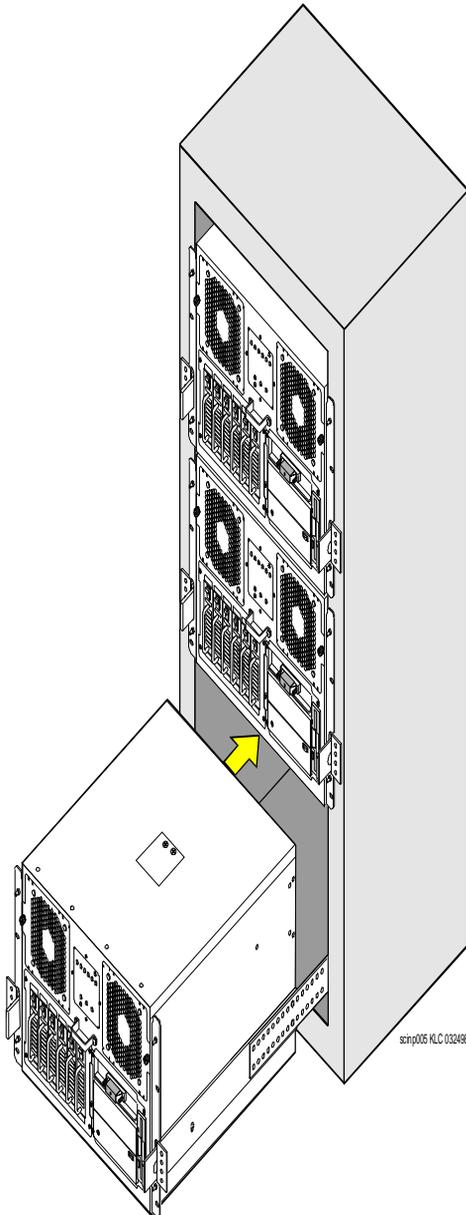


Figure 2-8. Multiple Rack-Mounted MAP/100Ps, Front View

MAP/40P Standard System Hardware

The MAP/40P platform is a desk-side (tower), PC-sized unit designed for use in a typical office setting.

Standard hardware components for the MAP/40P include the following:

- Backplane
- Standard circuit cards
- Standard bus cables
- Peripheral devices
- Power supply

Backplane

Each platform contains a backplane that provides circuit card mounting positions called *slots*. The MAP/40P has a PCI/ISA backplane that resides inside the left side of the chassis. This backplane is installed in all new V7.0 systems and has a total of 13 slots, consisting of 1 dedicated CPU slot, 9 ISA slots, and 3 PCI slots.

Of the 9 ISA slots, one slot is used by the remote maintenance circuit card. The remaining 8 slots are available for voice response/processing cards as well as cards to support local area networks, host, and so forth. The external SCSI connector resides in the rear I/O position 14.

Of the three PCI slots, one slot is dedicated to the video circuit card. The remaining two are available for PCI LAN or other PCI cards.

Standard Circuit Cards

Standard circuit cards provide the standard central processing, video, and peripheral functions, and certain basic communication functions of the system.

In the MAP/40P, all circuit cards are mounted horizontally with the PCI cards to the top and I/O interface cables exiting from the back of the platform. Access to the backplane is provided by removing an exterior dress cover.

For more information about software associated with the following circuit cards, see [Chapter 4, "Features"](#) and [Chapter 5, "Feature Packages"](#).

The following are standard hardware components in the MAP/40P:

- Central processing unit circuit card
- External SCSI connector
- Video controller circuit card
- Remote maintenance circuit card

Central Processing Unit Circuit Card

The central processing unit (CPU) circuit cards for the MAP/40P for V7.0 is a P5 processor operating at 200-MHz with a minimum of 64 Mbytes of RAM and a maximum of 128 Mbytes of RAM. The CPU includes an on-board SCSI, floppy and IDE controllers.

External SCSI Connector

The external SCSI connector provides an external SCSI connection. When the SCSI connector is not used for access purposes, an active termination must be plugged on for terminating the SCSI bus. A PS/2 mouse connector is provided but not supported; the CONVERSANT V7.0 system supports a serial mouse only.

Video Controller Circuit Card

The video controller circuit card provides the interface between the system processor and the video monitor. For the MAP/40P, this circuit card is a PCI bus circuit card.

Remote Maintenance Circuit Card

The remote maintenance circuit card provides a method of remote monitoring and access for off-site technicians. This circuit card has a built-in 28.8 modem for all systems in the U.S.

Standard Bus Cables

There are two types of standard bus cable for the system:

- SCSI bus cable
- TDM bus cable

SCSI Bus Cable

The SCSI bus cable serves as the interface from the SCSI controller to SCSI devices such as a hard disk or tape drive.

TDM Bus Cable

The TDM bus cable is used by the voice processing cards (Tip/Ring, T1/ E1, and SSP) when they send digitized speech to other cards in the system. For example, it is used to connect SSP resources to telephone network connections for speech playback, voice coding, speech recognition, or for bridging one telephone connection to another. A TDM bus cable is supplied with each V7.0 system purchased.

Peripheral Devices

V7.0 system platforms support storage devices including hard disk, diskette, and cartridge tape drives. The MAP/40P is supplied with data storage/transfer devices in the Small Computer System Interface (SCSI) format.

For more information on the capabilities and use of SCSI peripherals, see [“Guidelines for the Addition of SCSI Devices”](#) later in this chapter and [Chapter 4, “Features”](#).

The MAP/40P platform supports the following peripheral devices:

- Hard disk drive
- Diskette drive
- Cartridge tape drive

Hard Disk Drive

A hard disk drive is a peripheral device used to provide storage and random access to large amounts of data within the system. This data can include the operating system, application software, speech data, and database tables.

All new MAP/40P platforms are equipped with at least one 2-Gbyte SCSI hard disk drive. The MAP/40P can support up to two SCSI hard disk drives. These disks are mounted in the peripheral bay behind the front-mounted air filter and in front of the cooling fans.

Diskette Drive

The diskette drive is a peripheral device used to load and back up system software. All new MAP/40Ps include a single diskette drive. This unit uses standard 3.5-inch, 1.44-Mbyte, high-density diskettes. It is located in the front behind the swinging door.

Cartridge Tape Drive

The cartridge tape drive is a peripheral device used to back up and restore files using a tape cartridge, thereby eliminating the need to install and back up files using diskettes. A single cartridge tape can store up to 2-Gbytes of information.

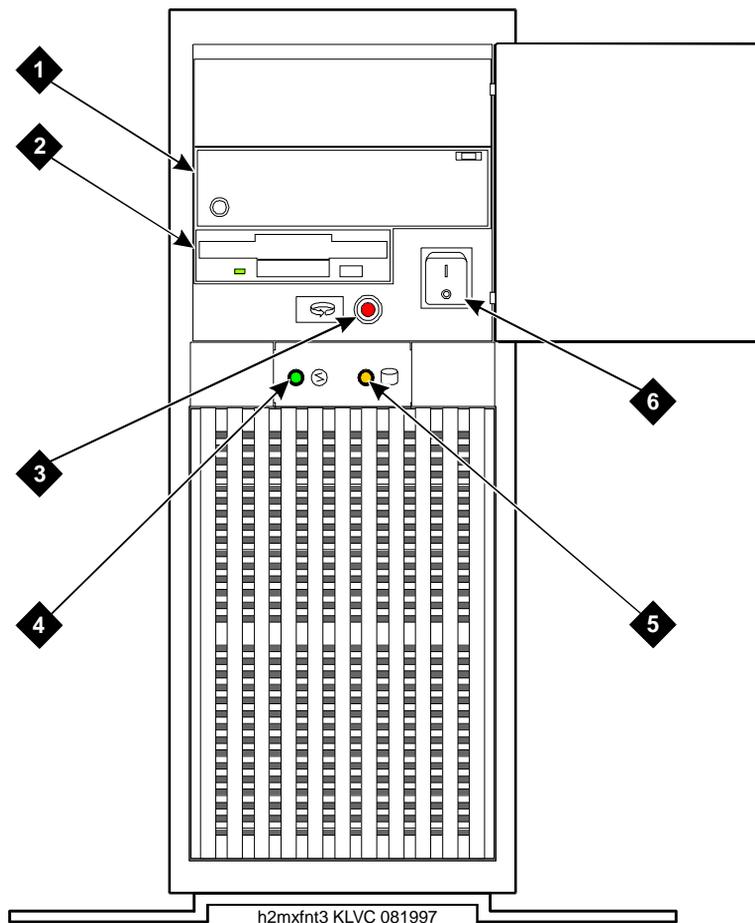
All new V7.0 MAPs include a single 2-Gbyte, SCSI-format cartridge tape drive. A swinging door provides access. Tapes can be purchased from several different vendors.

Power Supply

The MAP/40P operates from an autoswitching 110/220 VAC power supply.

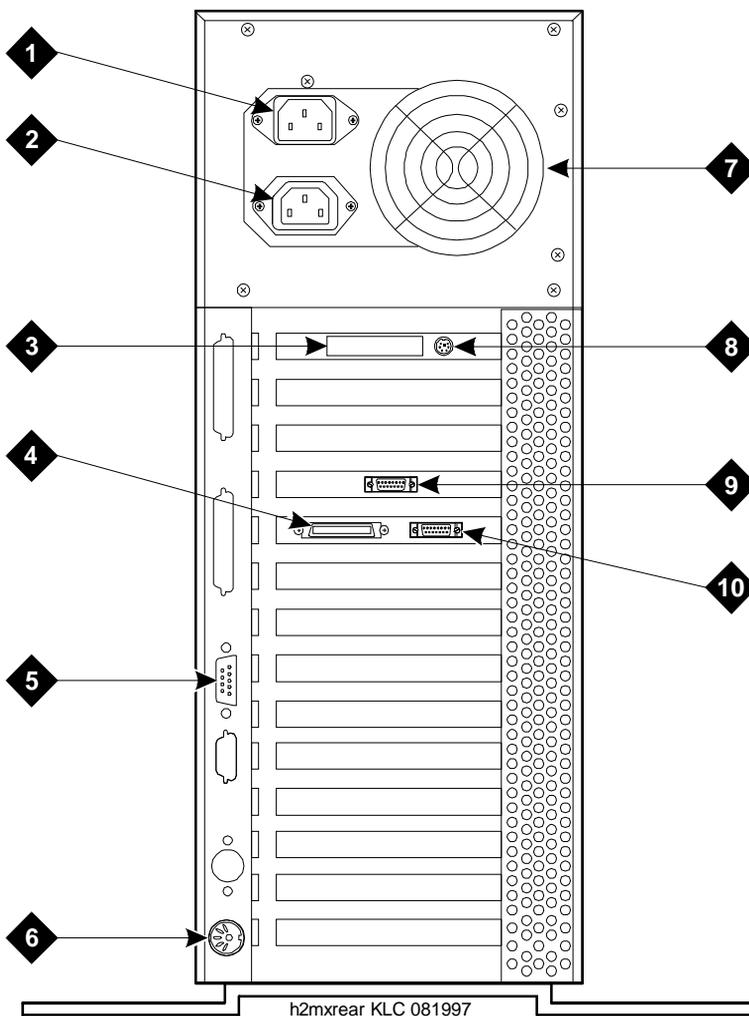
Views of the MAP/40P

[Figure 2-9](#) shows the front view of the MAP/40P and [Figure 2-10](#) shows the back view.



- | | |
|-------------------------|----------------------------|
| 1. Cartridge tape drive | 4. Disk activity indicator |
| 2. Diskette drive | 5. Reset switch |
| 3. Power indicator | 6. Power switch |

Figure 2-9. Front View of the MAP/40P



- | | |
|--------------------------------|-----------------------------|
| 1. AC power inlet receptacle | 6. Keyboard connector |
| 2. AC power supply outlet | 7. Power supply fan exhaust |
| 3. External SCSI I/O connector | 8. Mouse connector |
| 4. Parallel port | 9. Video connector |
| 5. COM2 | 10. COM1 |

Figure 2-10. Back View of the MAP/40P

MAP/5P Standard System Hardware

The MAP/5P platform is a desktide unit in a mini-tower configuration. It is a PC-sized unit designed for use in a typical office setting.

Standard hardware components for the MAP/5P include the following:

- Riser card
- Motherboard
- Standard circuit cards
- Standard bus cables
- Peripheral devices
- Power supply

Riser Card

Each platform contains a riser card that provides circuit card mounting positions called *slots*. The MAP/5P riser card resides inside the chassis.

The MAP/5P riser card supports 4 ISA slots, 2 PCI slots, and one combination ISA/PCI slot.

Motherboard

The MAP/5P motherboard contains:

- P5 200 MHz CPU
- Video interface
- Keyboard connector
- Mouse connector
- Two serial ports and one parallel port
- 64 Mbyte of memory
- Riser card connector

Standard Circuit Cards

Standard circuit cards provide certain basic communication functions of the system. In the MAP/5P, all circuit cards are mounted horizontally with any interface cables exiting from the back of the platform. Access to the riser card is provided by removing an exterior dress cover.

The following circuit cards are standard hardware components in the MAP/5P:

- SCSI controller circuit card
- Remote maintenance circuit card

For more information about software associated with these circuit cards, see [Chapter 4, "Features"](#) and [Chapter 5, "Feature Packages"](#).

SCSI Controller Circuit Card

The SCSI controller circuit card is a PCI card and provides an interface between the system processor located on the motherboard and SCSI peripheral devices.

Remote Maintenance Circuit Card

The remote maintenance circuit card provides a method of remote monitoring and access for off-site technicians. This circuit card has a built-in 28.8 modem for all systems in the U.S.

Standard Bus Cables

There are two types of standard bus cable for the system:

- SCSI bus cable
- TDM bus cable

SCSI Bus Cable

The SCSI bus cable serves as the interface from the SCSI controller to SCSI devices such as a hard disk or tape drive.

TDM Bus Cable

The TDM bus cable is used by the voice processing cards (Tip/Ring) when they send digitized speech to other cards in the system. For example, it is used to bridge one telephone connection to another. A TDM bus cable is supplied with each V7.0 system purchased.

Peripheral Devices

V7.0 system platforms support storage devices including hard disk, diskette, and cartridge tape drives. The MAP/5P is supplied with data storage/transfer devices in the Small Computer System Interface (SCSI) format.

For more information on the capabilities and use of SCSI peripherals, see ["Guidelines for the Addition of SCSI Devices"](#) later in this chapter and [Chapter 4, "Features"](#).

The MAP/5P platform supports the following peripheral devices:

- Hard disk drive
- Diskette drive
- Cartridge tape drive

Hard Disk Drive

A hard disk drive is a peripheral device used to provide storage and random access to large amounts of data within the system. This data can include the operating system, application software, speech data, and database tables.

All new MAP/5P platforms are equipped with at least one 2-Gbyte SCSI hard disk drive. The MAP/5P can support up to two SCSI hard disk drives. This disk is a half-height peripheral.

Diskette Drive

The diskette drive is a peripheral device used to load and back up system software. All new MAP/5Ps include a single diskette drive. This unit uses standard 3.5-inch, 1.44-Mbyte, high-density diskettes. It is accessible from the front behind a swinging door.

Cartridge Tape Drive

The cartridge tape drive is a peripheral device used to back up and restore files using a tape cartridge, thereby eliminating the need to install and back up files using diskettes. A single cartridge tape can store up to 2-Gbytes of information.

All new V7.0 MAPs include a single 2-Gbyte, SCSI-format cartridge tape drive. Tapes can be purchased from several different vendors.

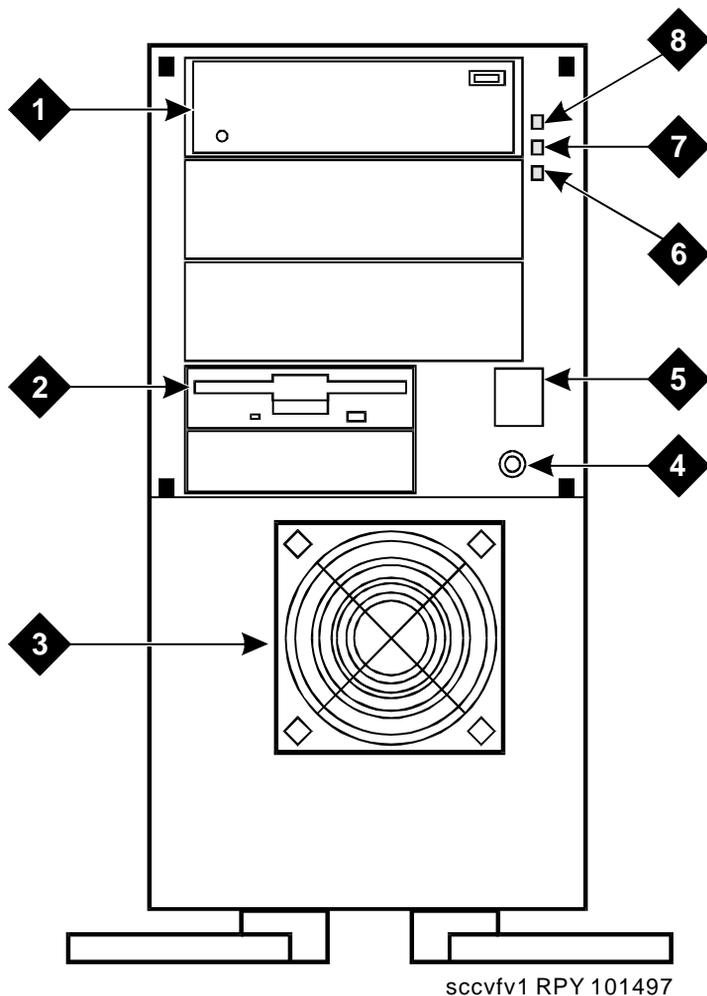
The cartridge tape drive is located in bay position 1 of the MAP/5P behind the swinging door.

Power Supply

The MAP/5P operates from a switchable 110/220 VAC power supply.

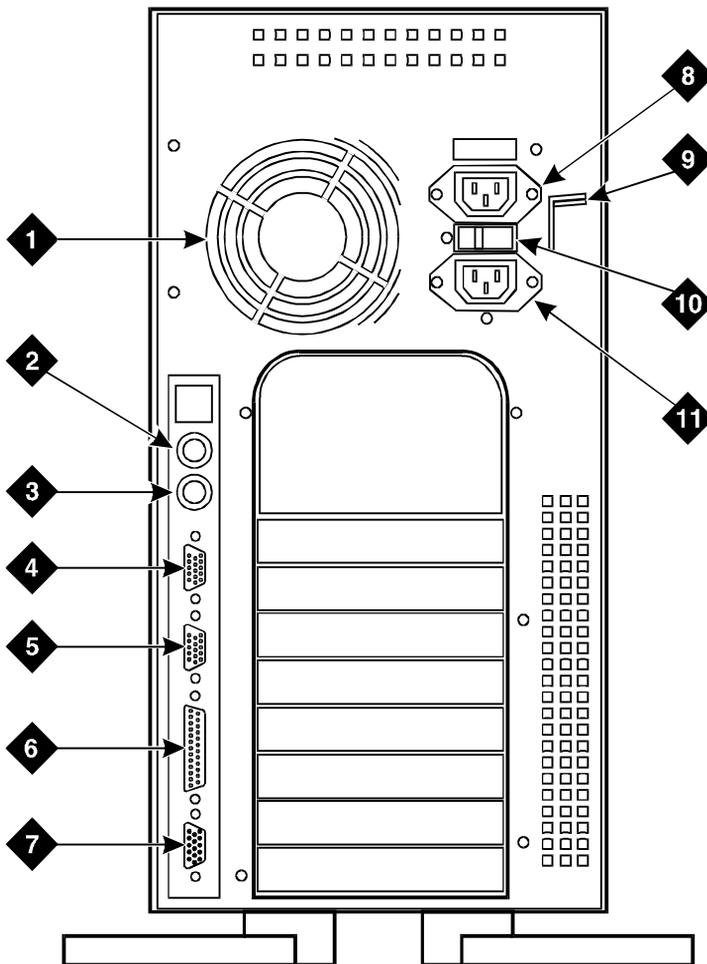
Views of the MAP/5P

[Figure 2-11](#) shows the front view of the MAP/5P and [Figure 2-12](#) shows the back view.



- | | |
|--------------------------|----------------------------|
| 1. Cartridge tape drive | 5. Power switch |
| 2. Diskette drive | 6. Power indicator |
| 3. Circuit card cage fan | 7. Speed indicator |
| 4. Reset switch | 8. Disk activity indicator |

Figure 2-11. Front View of the MAP/5P with Dress Cover Removed



sccvm5pb CJL 012197

- | | |
|-----------------------------|--------------------------------|
| 1. Power supply fan exhaust | 7. Video connector |
| 2. Keyboard connector | 8. AC power supply outlet |
| 3. Mouse connector | 9. Dress cover lock |
| 4. COM1 | 10. AC voltage selector switch |
| 5. COM2 | 11. AC power inlet receptacle |
| 6. Parallel port | |

Figure 2-12. Back View of the MAP/5P

Optional System Hardware

Optional hardware is not required for the basic platform to function, yet many operations, features, and functions cannot be accomplished without some of these optional components. For example, a keyboard and monitor are not required for the basic MAP to function, but these components are necessary if you want to view files stored on your hard disk drive. If you have multiple systems, for example, many of them may not have a keyboard and monitor.

Optional Circuit Cards

The types of optional circuit cards within each platform vary depending on the different functions and features in each system.

NOTE:

At least one E1/ T1 or Tip/Ring circuit card is required to provide telephone connections to the system.

Optional circuit cards are used to perform unique functions. These cards provide functions such as analog and digital interfaces to the public switched (telephone) network, remote alarming, network communications, and speech processing capabilities.

For more information concerning software associated with the following circuit cards, see [Chapter 4, "Features"](#) and [Chapter 5, "Feature Packages"](#).

This section describes five categories of optional circuit cards:

- Analog circuit cards
- Digital circuit cards
- Signal processing circuit cards
- Data communications circuit cards
- Other optional circuit cards

Analog Circuit Cards

Analog circuit cards provide an analog telephony interface to the system. This section describes the Tip/Ring analog circuit card.

Tip/Ring Circuit Cards

Tip/Ring circuit cards provide an analog interface to the system over a telephone line. All Tip/Ring circuit cards installed in a system can be used to process incoming calls and outgoing calls, bridge incoming calls to outgoing calls, or any combination of both. All Tip/Ring circuit cards may be connected to the TDM bus. There are six ports per card.

The following maximum number of Tip/Ring slots are available for each platform:

- A MAP/100C or MAP/100P — 12 Tip/Ring slots
- A MAP/40P — 8 Tip/Ring slots
- A MAP/5P — 4 Tip/Ring slots

V7.0 supports the following Tip/Ring circuit cards:

- Next Generation Tip/Ring (NGTR - AYC30) – This is the latest version Tip/Ring circuit card. It is functionally equivalent to the IVC6 Tip/Ring circuit card and, in addition, can be tuned to meet global standards.
- IVC6 (AYC10 and AYC29) – The Tip/Ring circuit cards support coding, playback, intelligent call classification analysis (CCA), and CELP coding.

You can use all Tip/Ring circuit cards of the same type on a system, or you can have any combination of NGTR and IVC6. The number of simultaneous incoming calls and maximum number of incoming and bridging outgoing telephone network connections depends on the number of Tip/Ring circuit cards used, as well as your platform.

The type of Tip/Ring circuit card you can use also depends upon what country you want to use it in. For more information on suitable Tip/Ring circuit cards, consult your Lucent Technologies account representative.

All supported Tip/Ring circuit cards provide six channels per card.

NOTE:

Optional Tip/Ring distribution hardware is mounted on the top of the MAP/100C chassis, on the rear of the MAP/100P chassis, and external to the MAP/40P chassis.

In addition to their analog interface, the Tip/Ring circuit cards also offer the following features:

- Speech play/code formats
- Volume change
- Simple call classification analysis
- Audio jacks

Fax on the Tip/Ring Circuit Card

The Tip/Ring circuit card provides the specialized analog interface for basic fax capabilities. For more information on fax capabilities on the Tip/Ring circuit card, see [“Script Builder FAX Actions”](#) in [Chapter 5, “Feature Packages”](#).

Digital Circuit Cards

Digital circuit cards provide a digital telephony interface to the system. All digital circuit cards connect to the TDM bus cable.

NOTE:

An SSP circuit card, described later, must be used to support one or more digital circuit cards being used in coding and playback situations.

This section describes the E1/T1 (AYC21) circuit card.

E1/T1 (AYC21) Circuit Card

The AYC21 circuit card is referred to as an E1/T1 circuit card because it can be used globally for E1-rate services and also in the US for T1-rate services. The platform maximum for E1/T1 circuit cards running at the E1-rate is three. The platform maximum for E1/T1 circuit cards running at the T1-rate is five.

E1-Rate Services. At its E1-rate, the AYC21 provides a 32-channel digital interface (30 voice channels and 2 signaling and framing channels) between a telephone switch and the system. An E1 digital circuit carries information at a rate of 2.048 Mbps. It significantly improves system connectivity and reduces the number of circuit cards required to support multiple channels.

NOTE:

All platforms can support up to three E1 circuit cards, for a maximum of 90 telephone network connections.

T1-Rate Services. At its T1-rate, the AYC21 provides a 24-channel digital interface between the switch and the system. A T1 digital circuit carries information at a rate of 1.544 Mbps.

Speech and Signal Processor Circuit Cards

The speech and signal processor circuit card (SSP) is a high-performance signal processor that is capable of simultaneous support for various speech technologies. The SSP circuit card does not connect directly to the telephone network and must be used with at least one Tip/Ring circuit card. AYC43 is the first version of the SSP circuit card.

See *INTUITY™ CONVERSANT® System Version 7.0 Speech Development, Processing, and Recognition*, 585-313-201, for additional information on the use of speech processor circuit cards.

The SSP does all the work previously done by the SP and Companion circuit card set (1 SP + 2 CMPs). The SSP provides processing power to accommodate all of the V7.0 system speech technology features including Text-to-Speech, speech recognition, voice code and play back, dial pulse recognition, and full call classification analysis simultaneously.

One SSP circuit card can support any two WholeWord speech recognition languages and one FlexWord speech recognition language. The SSP circuit card provides the CELP speech encoding algorithm for playback and coding.

[Table 2-1](#) shows SSP circuit card channel capacities.



NOTE:

Channel counts are based on the assumption that the entire SSP circuit card is dedicated to the specified feature.

Table 2-1. SSP Card Channel Capacities

Feature	No. of Simultaneous Transactions Supported
Full call classification analysis ¹	42
Text-to-speech	60
FlexWord™ speech recognition ²	15
WholeWord speech recognition without barge-in ²	15
Voice or background music recorded in 64-Kbps PCM format with automatic gain control (AGC)	120
Voice or background music recorded in 24-Kbps or 16-Kbps SBC format with automatic gain control (AGC)	100
Voice or background music recorded in 32-Kbps or 16-Kbps ADPCM format	120
16-Kbps CELP for coding	60
16-Kbps CELP for single-speed playback	120
Dial pulse recognition	60
Echo cancellation (used to support barge-in)	60
FAX	32

1. Available in US only.

2. Speech recognition simultaneous transaction counts are independent of language and country.

Platform Maximums. Up to seven SSP circuit cards are supported on MAP/40P platforms, and up to eight SSP circuit cards are supported on MAP/100P and MAP/100C platforms.

Fax on the SSP Circuit Card

The SSP circuit card also provides basic fax capabilities. For more information on fax capabilities on the SSP circuit card, see [“Script Builder FAX Actions”](#) in [Chapter 5, “Feature Packages”](#).

Data Communications Circuit Cards

This section describes the following types of data communications circuit cards:

- Synchronous circuit card
- Asynchronous circuit card
- Token Ring circuit card
- Ethernet LAN circuit card

Synchronous Circuit Card

The synchronous circuit card provides additional serial data connections on the system. These connections can be used to implement synchronous data communication between the system and a host computer.

The synchronous host communication circuit card for V7.0 is the FIFO/SIB circuit card. One FIFO/SIB can support up to 128 host sessions or logical units (LUs). Two FIFO/SIB circuit cards are required for two physical links to host machines, although the total number of LUs may not exceed 128.

The synchronous host interface may also require the following equipment:

- RS-232-to-V.35 interface converter
- External modem
- RS-232 extension cable
- Other appropriate cables

For more information about the use of these circuit cards and the feature packages they support, see [“Synchronous Host Interface”](#) in [Chapter 5, “Feature Packages”](#).

Asynchronous 8-Port Circuit Cards

The asynchronous circuit cards provide additional serial data connections on the system. These connections can be used to support asynchronous host computer links, multiple serial printers, on-site and remote monitoring systems, or extra modems.

The asynchronous 8-port serial circuit card that is installed in new V7.0 sales uses the latest integrated circuits and provides greater reliability and system immunity from externally induced voltages that are potentially damaging. Modular (RJ45) connectivity is maintained, but the receptacles are at the end of a

three-foot long octopus cable assembly. The full compliment of eight physical connections per port provides better control over modems.

For more information about the use of these circuit cards and the feature packages they support, see [“Multi-Port Asynchronous Communications Interface”](#) in [Chapter 5, “Feature Packages”](#).

Token Ring Circuit Card

The token ring circuit card provides an open interface to remote system connectivity. The goal of this open interface is to allow your V7.0 system to be compatible with many different network environments. This token ring circuit card provides hardware support for a token ring LAN that enables TCP/IP and 3270 SNA networking protocols.

For more information about the use of this circuit card and the feature packages it supports, see [“Synchronous Host Interface”](#) and [“Local Area Network Connectivity”](#) in [Chapter 5, “Feature Packages”](#).

Ethernet LAN Circuit Card

The Ethernet LAN circuit card provides an interface for communication with other systems connected to a LAN using 10BASE-T (RJ-45 twisted pair connector), 10BASE2 (thin coax BNC connector), and AUI (thick coax DB-15 connector) interfaces. You can also use a 10BASE 5 connector if you attach a transceiver to the attachment unit interface (AUI).

The Ethernet LAN circuit card is software programmable. The Ethernet LAN circuit card takes advantage of the TCP/IP software that is part of the UnixWare operating system.

For more information about the use of this circuit card and the feature package it supports, see [“Local Area Network Connectivity”](#) in [Chapter 5, “Feature Packages”](#).

Other Circuit Cards

This section describes the following circuit cards:

- External alarms interface circuit card (MAP/100C only)
- RAID controller circuit card (MAP/100P only)

External Alarms Interface Circuit Card

This circuit card is used only in the MAP/100C platform. It provides eight alarm relay contact sets for activating external alarms. The external alarm relay contacts are triggered by maintenance messages from the system that are software controlled.

For more information on the use of this circuit card or the feature package it supports, see [“External Alarms”](#) in [Chapter 5, “Feature Packages”](#).

RAID Controller Circuit Card

This circuit card is used only in the MAP/100P platform. It implements the Hardware RAID feature, which ensures that system services are not lost if a hard disk fails. This feature allows you to replace a failed disk drive without disrupting the system (to “hot swap” the disks).

For more information about the use of this circuit card and the feature package it supports, see [“Hardware RAID”](#) in [Chapter 4, “Features”](#).

Optional Peripheral Equipment

The system platforms can interface with various types of standard and optional peripheral equipment.

See Chapter 3, “Making Cable Connections and Powering Up the System,” of *INTUITY™ CONVERSANT® System Version 7.0 New System Installation*, 585-313-106, for more details on peripheral connections to your MAP.

The peripheral equipment described in this section is not an exhaustive list of all devices capable of interfacing with MAPs. If you have compatible or like equipment that you would like to use with V7.0, discuss questions concerning specific peripheral equipment compatibility with a Lucent Technologies representative.

NOTE:

In some cases, Lucent Technologies does not provide or recommend a particular model or brand of each device when ordering. Customers must inform their sales representative about the desired peripheral equipment during the planning of a new system. This section describes five types of optional peripheral equipment:

- Monitor
- Terminal emulation
- Keyboard
- Serial mouse
- Printer
- Modem

Monitor

A color monitor or remote terminal can be connected to any platform to provide a visual user interface.

Terminal Emulation

Terminal emulation packages allow customers to perform remote administration and allow Lucent Technologies personnel to troubleshoot V7.0 systems remotely.

The following terminal emulations are supported for V7.0:

- Terranova 4410
- Terranova 605

Keyboard

Lucent Technologies offers a standard 101-key keyboard.

Serial Mouse

A serial mouse is optional for use with the base system software. The system is completely operable and administrable without a mouse. A mouse is required, however, to take full advantage of the graphical user interface (GUI) features of UnixWare.

A serial mouse is required for the Graphical Speech Editor (GSE) and the FlexWord Toolkit. A three-button serial mouse is supplied with those feature packages. It connects to the second serial port (COM2).

A serial mouse is optional for some capabilities of Agent Assist Suites of Solutions.

Printer

A printer can be used to print hard copies of system screens and reports.

[Table 2-2](#) lists the printers recommended for V7.0 system by country.



NOTE:

Some countries have more than one recommended printer.

Table 2-2. Printers Recommended for V7.0 System by Country

Printer	Country
220V Okidata OL810E	Argentina, Australia, Belgium, Brazil, France, Germany, Luxembourg, Netherlands, New Zealand, Spain, Thailand, United Kingdom

Table 2-2. Printers Recommended for V7.0 System by Country

Printer	Country
110V Okidata OL810E (Laser printer)	Brazil, Canada, Columbia, Mexico, US
110V Epson VP1800	Japan
110V Okidata OL810E Microline 320 (Dot matrix)	US

Modem

An external modem can be connected to the system to allow administrators, operators, or remotely located technical support personnel to initiate commands and remotely monitor the system for installation and maintenance purposes. A modem is also used if asynchronous or synchronous communication with another machine or device is needed. In such cases, a modem is only used if the device is located too far away from the system to use a null-modem.

For new V7.0 systems in the US, an internal modem is dedicated to the remote maintenance circuit card. It is required by Lucent Technologies technical support personnel. A customer may also choose to supply an additional modem for their own use (for example, for file transfer).

[Table 2-3](#) lists the modems recommended for V7.0 system by country.

Table 2-3. Modems Recommended for V7.0 System by Country

Paradyne Modem (Model No.)	Country
3810	Japan, Thailand, UK, Brazil
3820	Argentina, Canada, Columbia, Germany, Mexico
3910	Belgium, France, Luxembourg, Netherlands
3911	Australia, New Zealand, Spain
US Robotics Sportster 33.6	US

Resource Assignments, Limitations, and Maximums

This section provides the following hardware reference information:

- Hardware resource allocator
- Resource assignments for hardware components
- Guidelines for the addition of SCSI devices
- Circuit card maximums

Hardware Resource Allocator

The hardware resource allocator is a planning tool used to help you determine how to best allocate system resources to the hardware in your system. The resource allocator contains the software program, all associated commands, and a "CONFIGURATION DATA" diskette on which you store your system's existing configuration. The resource allocator is installed with the base system software.

What the Hardware Resource Allocator Does

The hardware resource allocator enables you to determine the allocation of resources for all devices to be included in your configuration. Note that the allocator does not have a direct interface with your system—making assignments on the allocator does not assign the configurations to your system. It is a menu-driven planning tool that gives you an automated solution to the problem of allocating a finite set of consumable CPU resources to a given set of devices. After determining the solution with the resource allocator, you must transfer the configurations to your system in a separate step. The allocator also includes some feature-related checking regarding maximum numbers of devices and prerequisites for devices.

The hardware resource allocator is used to create a new configuration. Factory installers also use the hardware resource allocator to determine the initial hardware configuration and resource assignments. The hardware resource allocator works with any supported hardware platform.

CAUTION:

Only those persons familiar with the configurations and hardware platforms should run the hardware resource allocator.

Specifically, the hardware resource allocator helps you select the following resource allocation information for your software and hardware applications:

- System platform
- System memory
- System devices and their attributes including
 - Slot number
 - Interrupt number (IRQ)
 - DMA channel
 - I/O address
 - RAM address
 - Serial port usage
 - Parallel port usage

 **NOTE:**

The hardware resource allocator ensures only that no conflicts exist between selected hardware devices for the parameters listed above.

Configuration Data Diskette

A diskette labeled “CONFIGURATION DATA” accompanies the hardware platform when it is shipped from the factory. This diskette contains the initial hardware configuration information, which you must load into the system.

Whenever you make a change to the current configuration, you must store that information on the “CONFIGURATION DATA” diskette so that the diskette always contains the latest configuration information. By using the “CONFIGURATION DATA” diskette in this manner, you will always have the correct configuration data on which to base subsequent changes to the system.

 **NOTE:**

Be sure to store the “CONFIGURATION DATA” diskette in a safe place.

Configuration Data Files

The following data files are associated with the hardware resource allocator. These files reside in the **lvs/data** directory. Any reference to data files assume this prefix.

 **CAUTION:**

Do not alter the contents of any of the data files below.

- The **confData** file represents a successful configuration. This file is also stored on the “CONFIGURATION DATA” disk after it has been read into the system.
- The **failData** file represents an unsuccessful configuration.
- The **conf_MMDDYY** file contains a copy of the current configuration file (**confData**) saved by the hardware resource allocator before it creates a new configuration. The most recent **confData** file is saved per day. This allows for an historical reference of previous configurations by month (MM), day (DD), and year (YY).
- The **deviceData** file stores all devices and their associated resource requirements that are available for use in updating or creating new configurations.
- The **platData** file contains all platforms, the devices that each supports, and all available resources.
- The **devSetData** file contains rules about device conflicts, dependencies, and so forth.

For more information on the configuration commands you need to retrieve and save configuration information using the “CONFIGURATION DATA” disk, see “Summary of Commands,” in Appendix A of *INTUITY™ CONVERSANT® System Version 7.0 Administration*, 585-313-501.

For more information on how to operate the hardware resource allocator, see “System Configuration” in the maintenance book specific to your platform.

Resource Assignments for Hardware Components

[Table 2-4](#) illustrates the resource assignments for each of the standard and optional hardware components supported in V7.0. This table is included only for reference. Values are listed for each resource in descending order of preference (beginning with first choice, following with second, third, and so forth).

⇒ NOTE:

Only the values supported by the V7.0 system, not the values supported by each hardware component, are listed. The hardware resource allocator program, described earlier in this chapter, has the complete set of values and determines appropriate settings based on the system configuration.

Table 2-4. Resource Assignments for V7.0 System Hardware Components

Component	IRQ	I/O Ports	RAM	Notes
CPU circuit card	13	00(256), 370	E0000–FFFFF (128K)	
Diskette drive	6	3F0 (8)		DMA 2
PCI Video controller	14 ¹ (non-MAP/5P)	3B0 (48)	A0000 (128K), C0000 (32K)	
Remote maintenance circuit card (RMB V2)	4, 3	180 (8)	D[1–F]000 (4K)	
CPU card parallel port	7	378 (8)		
CPU card serial port #1 (COM1)	4	3F8 (8)		
CPU card serial port #2 (COM2)	3	2F8 (8)		
On-board PCI SCSI	14 ¹		C8000 (16K) ²	
IVC6, NGTR circuit card	2, 15, 5, 3	[1–3, 5–7, 9–B, D–F]00 (32/card)		Boards 0-11
SSP circuit card	11	(all are 8/card) D20–D3F 920–93F 520–53F 120–13F		Boards 0–3 4–7 8–11 12–15
E1/T1 circuit card	12	(both are 2/card) 22[0246ACE] 23[0246ACE]		Boards 0-7
SuperSerial asynchronous circuit card			C[8C]000, D[048C]000 (16K)	
FIFO/SIB synchronous circuit card	10, 3, 5, 2, 11,12	380, 2[BE]0, 3[AE]0 (16)		

Continued on next page

Table 2-4. Resource Assignments for V7.0 System Hardware Components — Continued

Component	IRQ	I/O Ports	RAM	Notes
Token/ring circuit card	2, 3	A20 (4)	DC000 (8K), [DC][048C]000 (16K)	
PCI LAN circuit card	12,11,10,2	N/A	N/A	
PCI RAID controller card	14 ¹	N/A	C8000(16K) ²	
Serial mouse	N/A	N/A	N/A	COM port required

1. IRQ 14 is shared between video, on-board PCI SCSI, and PCI RAID controller
2. C8000-CBFFF range is partitioned between on-board PCI SCSI and PCI RAID controller card

Guidelines for the Addition of SCSI Devices

The INTUITY CONVERSANT platforms support a maximum of seven devices on a SCSI bus. (For example, the CPU is counted as the eighth device in the MAP/100P CPU.) Bays are provided for some or all of those seven devices, subject to size and power limitations noted below. The remaining devices may be mounted externally.

⇒ NOTE:

The last device on the SCSI bus *must* be terminated.

Guidelines for the addition of SCSI devices to the MAP/100C, the MAP/100P, and the MAP/40P are as follows:

Addition of SCSI Devices to MAP/100C

The MAP/100C platform is equipped with a disk bay with space for up to six half-height peripherals. In the standard configuration, one half-height bay is occupied by the cartridge tape drive, and one half-height bay is occupied by a hard disk drive, with four bays remaining. The remaining bays may be used for any SCSI device supported by UnixWare, with the following guidelines:

- When installing devices, install only one per vertical shelf pair. If this is not possible, the power dissipation of a device per shelf must not exceed 14 watts. If any device dissipates more than 14 watts, it must reside in the vertical shelf pair alone.
- The total power dissipation within the peripheral bay must not exceed 80 watts for the fans to adequately remove the heat.

Addition of SCSI Devices to MAP/100P

The MAP/100P platform has six half-height, hard-disk bays and four peripheral bays. Of the six hard-disk bays, at least one is occupied in a standard configuration. A RAID configuration requires at least three hard disks. Of the four peripheral bays, one is occupied by a tape drive, one by a floppy drive, and one by the external SCSI connector. One bay (bay 2) can be used for any SCSI device supported by UnixWare.

Addition of SCSI Devices to MAP/40P

The MAP/40P platform has three SCSI bays. One is occupied by a tape drive and another is occupied by a hard disk drive for the standard configuration. The remaining location can be used for any SCSI device supported by UnixWare with the restriction that the device must not have power dissipation in excess of 14 watts.

Addition of SCSI Devices to MAP/5P

The MAP/5P platform supports a tape drive and a hard disk drive for the standard configuration. Optionally, a second hard disk drive can be added.

Circuit Card Maximums

[Table 2-5](#) identifies all of the standard and optional circuit card types and lists how many can be installed in each platform:



NOTE:

The circuit card maximums listed in [Table 2-5](#) are in many cases logical limits and do not necessarily represent the actual physical limits on the system.

Table 2-5. Circuit Card Maximums

Circuit Card	MAP/5P	MAP/40P	MAP/100C and MAP/100P	Connect to TDM Bus?	Notes
P5 200-MHz CPU	N/A	1	1	No	
Video	N/A	1	1	No	
Remote maintenance	1	1	1	No	
PCI Ethernet LAN	1	2	2	No	
FIFO/SIB	1	2	2	No	
Token ring	1	1	1	No	
Multi-port asynchronous	1	1	1	No	
Tip/Ring	4	8	12	Yes	
T1	N/A	5	5	Yes	Must be AYC21
E1	N/A	3	3	Yes	Must be AYC21
SSP	N/A	7	8	Yes	
External alarms	N/A	N/A	1	No	Only available on MAP/100C
RAID controller card	N/A	N/A	1	No	Only available on MAP/100P

Software

3

Overview

A number of software packages, including the UnixWare 2.1.2 operating system and the V7.0 base system, are included when you purchase a V7.0 system. In addition, optional V7.0 feature packages are available and are often implemented with some combination of optional hardware and software.

This chapter describes the following system software for the INTUITY CONVERSANT system Version 7.0:

- UnixWare operating system
- V7.0 system base software
- V7.0 system optional software



NOTE:

To see a list of what software is installed in your system, use the **pkginfo** command. See the **pkginfo** command in Appendix A, "Summary of Commands," in *INTUITY™ CONVERSANT® System Version 7.0 Administration*, 585-313-501.

Purpose

The purpose of this chapter is to

- Describe the operating system software, base software, and optional software.
- List the software packages, media, and installation status for each type of software.

UnixWare 2.1.2 Operating System

All of the UnixWare software listed in [Table 3-1](#) is standard with the V7.0 system. The UnixWare operating system is the software platform upon which all of the system software (including feature packages and applications) runs. Included within UnixWare are additional files including peripheral and networking utilities, software programming packages, and electronic documentation. Two packages from VERITAS are included with the operating system. All of these packages allow the manipulation of the UNIX file system and control of the hard disk drive partitions.

[Table 3-1](#) lists the UnixWare 2.1.2 base software packages:

Table 3-1. UnixWare 2.1.2 Base Software

Package Name	Media	Installation Status
INTUITY™ CONVERSANT® UnixWare 2.1.2 Boot Floppies	Diskette	Required
INTUITY UnixWare 2.1.2 Image Tape for CONVERSANT Now also includes: <ul style="list-style-type: none"> ■ Installit Utility for INTUITY ■ INTUITY Platform CONVERSANT Tuning ■ VERITAS File Manager ■ VERITAS Volume Manager ■ SMC ISA/PCI LAN Drivers (in Network Interface Card Support) ■ Token Ring Driver (in Network Interface Card Support) ■ All X-windows packages (Graphics Display Support, Graphics Supplemental Fonts, and Graphics Utilities) ■ UnixWare 2.1.2 Desktop Manager ■ Network File Systems Utilities 	Tape	Required
Turbo Token Ring Hardware Support	Diskette	Optional

The INTUITY UnixWare 2.1.2 Image tape for CONVERSANT provides the base operating system along with key peripheral and user interface utilities. The Software Development Kit and utilities package are tools that help an application developer create script applications. These files include packaging tools, on-line manuals, command libraries, and demos. The VERITAS File System and VERITAS Volume Manager packages make it possible to change file system sizes

dynamically without disrupting services. This dynamic sizing is useful for increasing and decreasing the database or speech file system sizes after the system is initially configured. Volume Manager also provides support for mirroring by keeping identical copies of individual file systems on disks that are mirrored.

V7.0 System Base Software

This base software acts as a foundation for the rest of the system and provides an environment for the execution of the application software running on the platform. It contains all major process-related, maintenance-related, and operations-related software utilities and subsystems such as: tas, tsm, alerter, logger, mtc, administration, ad, cdh, rm, IRAPI, lib, vrop, and dio.

⇒ NOTE:

All base software packages are licensed on a per-machine basis.

[Table 3-2](#) lists the software packages that are standard with each new or upgraded V7.0 system purchase. Each of these software packages is included on Tape #2.

Table 3-2. INTUITY CONVERSANT System V7.0 Base Software

Package Name	Installation Status
INTUITY CONVERSANT VIS V7.0 Set	Required
■ Utilities Package	Required
■ Runtime Processing Package	Required
■ Maintenance Package	Required
■ Logger/Alerter Package	Required
■ AUDIX Logger Package	Required
■ Base ORACLE RDBMS 7.3.2	Required
■ ORACLE 7 Integration Package	Required
■ Administration Screens Package	Required
■ Transaction State Machine Package	Required
■ Switch Utilities Package	Required
■ License Modification Package	Required

The following packages are also provided on diskettes as part of the INTUITY CONVERSANT system V7.0 base software.

- Hardware Resource Allocator
- Configuration Data Diskette (created during factory assembly)

The Base ORACLE Relational Database Management (RDBMS) System 7.3.2 software package allows a V7.0 system user to establish and maintain a local ORACLE RDBMS on the system. Installation of this package is required. The optional package, SQL*NET TCP/IP V2 for ORACLE 7.3.2, provides remote database connectivity.

V7.0 System Optional Software

[Table 3-3](#) lists the optional V7.0 system software packages available for use with the system. Most of the software packages listed are directly related to a particular system feature package. The relationships between features and feature packages is discussed in [Chapter 4, "Features,"](#) and [Chapter 5, "Feature Packages."](#)

 **NOTE:**

System releases before V6.0 have offered speech technologies on a per system basis. V7.0, like V6.0, offers speech technologies, such as WholeWord Speech Recognition, FlexWord™ Speech Recognition, Text-to-Speech, and Dial Pulse Recognition on a *channels per system* basis. See [Chapter 5, "Feature Packages"](#) for descriptions of some of the optional feature packages.

[Table 3-3](#) lists the optional software packages available for the V7.0 system. All titles begin with INTUITY™ CONVERSANT® System Version 7.0.

Table 3-3. INTUITY CONVERSANT System V7.0 Optional Software

Package Name	Media
FlexWord Toolkit	Diskette
Adjunct/Switch Application Interface (ASAI) Package	Diskette
Lucent Technologies CALLVISOR PC ASAI	Diskette
Lucent Technologies CALLVISOR PC ISDN	Diskette
Lucent Technologies CALLVISOR PC ITT	Diskette
Lucent Technologies CALLVISOR PC LAN GATEWAY	Diskette
ASP Driver Package	Diskette

Continued on next page

Table 3-3. INTUITY CONVERSANT System V7.0 Optional Software — Continued

Package Name	Media
CSG Asynchronous Host Toolkit	Diskette
ASYNC_TEST Transactions Script Builder Backup	Diskette
ASYNC_TEST Speech Script Builder Backup	Diskette
Call Classification Analysis Package	Diskette
Data Collection Toolkit	Diskette
FAX Set	Tape
SoftFAX(r) Facsimile system	
FAX Integration Package	
ICV6 Device Interface for softFAX	
SSP Device Interface for softFAX	
Script Builder Fax Actions for Lucent Technologies Cards	
FAX_Zapper	
SB FAX Actions FAX Zapper Application Database for Lucent Technologies	Diskette
SB FAX Actions FAX Zapper Application Speech Disk 1 for Lucent Technologies	Diskette
SB FAX Actions FAX Zapper Application Speech Disk 2 for Lucent Technologies	Diskette
SB FAX Actions FAX Zapper Application Transaction for Lucent Technologies	Diskette
Form Filler Application	Diskette
3270 Enhanced File Transfer Package	Diskette
Feature Test Script Package	Diskette
Graphical Speech Editor	Diskette
T1 E&M Interface Package	Diskette
Line Side E1 Package – DEFINITY	Diskette
Line Side T1 Package – DEFINITY	Diskette
Line Side T1 Package – GALAXY	Diskette
E1 CAS R2 Interface Package – Australia	Diskette
E1 CAS R2 MFC Interface Package – Mexico	Diskette

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Table 3-3. INTUITY CONVERSANT System V7.0 Optional Software — Continued

Package Name	Media
3270 NetView Alarm Interface Package	Diskette
Advanced PRI Package	Diskette
Nortel ISDN PRI Package	Diskette
ISDN Primary Rate Interface Package	Diskette
Platform Upgrade Assistance Package	Diskette
External Alarms Package	Diskette
Hardware RAID Integration Package	Diskette
RAID Configuration Utilities	Diskette
Global Array Manager Package	Diskette
RMB V2 set Remote Maintenance Board Package (AYC54/55) RMB Integration Software Version 2.0	Tape
Script Builder	Diskette
Synchronous Host Interface Package	Diskette
T1/E1 Board Driver	Diskette
Tip/Ring Board Driver	Diskette
Text-to-Speech Package	Diskette
Software Text-to-Speech Package	Diskette
Call Bridge Application Package	Diskette
Equinox SST Loadable STREAMS Device Driver (EISA/ISA/MCA/PCI)	Diskette
Dial Pulse Recognition Package	Diskette
CLEO 4.1.2 cleo_3270, Feature Level 1 (4.1.2.0) cleo_hte, Feature Level 2 (4.1.2.0) cleo_mgmt, Feature Level 1 (4.1.2.0) cleo_netman, Feature Level 1 (4.1.2.0) cleo_sib, Link Level (4.1.2.0) cleo_sna_128lu, SNA Level (4.1.2.0) cleo_tkrn, Link Level (4.1.2.0)	Tape

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Table 3-3. INTUITY CONVERSANT System V7.0 Optional Software — Continued

Package Name	Media
ORACLE Development Tools PRO*C v2.2.2.0.0 SQL*FORMS/MENU 4.5.8.0.17 ORACLE*ReportWriter 2.5.6.3.0	Tape
SQL*NET TCP/IP V2 for ORACLE 7.3.2	Diskette
Backup/Restore Utilities	Diskette
Unix Management Screens Package	Diskette
QuickStart™ Version 1.0 1997, EST, Inc.	Diskette
SNMP Emanator Agent Diskette	Diskette
Universal Call ID	Diskette
WholeWord Recognition – Base	Diskette
WholeWord Recognition – Dutch	Diskette
WholeWord Recognition – Australian English	Diskette
WholeWord Recognition – UK English	Diskette
WholeWord Recognition – US English	Diskette
WholeWord Recognition – French	Diskette
WholeWord Recognition – Canadian French	Diskette
WholeWord Recognition – German	Diskette
WholeWord Recognition – Italian	Diskette
WholeWord Recognition – Japanese	Diskette
WholeWord Recognition – Brazilian Portuguese	Diskette
WholeWord Recognition – Castilian Spanish	Diskette
WholeWord Recognition – Latin-American Spanish	Diskette
FlexWord Recognition – Base	Diskette
FlexWord Recognition – US English	Diskette
FlexWord Recognition – French	Diskette
FlexWord Recognition – German	Diskette
FlexWord Recognition – Japanese	Diskette
FlexWord Recognition – Spanish	Diskette

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Table 3-3. INTUITY CONVERSANT System V7.0 Optional Software — Continued

Package Name	Media
FlexWord Recognition – Brazilian Portuguese	Diskette
Enhanced Basic Speech (female voice) – Cantonese Chinese	Diskette
Enhanced Basic Speech (female voice) – Mandarin Chinese	Diskette
Enhanced Basic Speech (female voice) – Dutch	Diskette
Enhanced Basic Speech (female voice) – Australian English	Diskette
Enhanced Basic Speech (female voice) – UK English	Diskette
Enhanced Basic Speech (female voice) – US English	Diskette
Enhanced Basic Speech (male voice) – US English	Diskette
Enhanced Basic Speech (female voice) – French	Diskette
Enhanced Basic Speech (female voice) – Canadian French	Diskette
Enhanced Basic Speech (female voice) – German	Diskette
Enhanced Basic Speech (female voice) – Hindi	Diskette
Enhanced Basic Speech (female voice) – Indonesian	Diskette
Enhanced Basic Speech (female voice) – Italian	Diskette
Enhanced Basic Speech (female voice) – Japanese	Diskette
Enhanced Basic Speech (female voice) – Malay	Diskette
Enhanced Basic Speech (female voice) – Brazilian Portuguese	Diskette
Enhanced Basic Speech (female voice) – Castilian Spanish	Diskette
Enhanced Basic Speech (female voice) – Latin-American Spanish	Diskette
Enhanced Basic Speech (female voice) – Thai	Diskette
Analog Switch Interface Package – Argentina	Diskette
Analog Switch Interface Package – Australia	Diskette
Analog Switch Interface Package – Belgium	Diskette
Analog Switch Interface Package – Brazil	Diskette
Analog Switch Interface Package – Canada	Diskette
Analog Switch Interface Package – Columbia	Diskette
Analog Switch Interface Package – France	Diskette
Analog Switch Interface Package – Germany	Diskette
Analog Switch Interface Package – Hong Kong	Diskette

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Table 3-3. INTUITY CONVERSANT System V7.0 Optional Software — Continued

Package Name	Media
Analog Switch Interface Package – Ireland	Diskette
Analog Switch Interface Package – Italy	Diskette
Analog Switch Interface Package – Japan	Diskette
Analog Switch Interface Package – Luxembourg	Diskette
Analog Switch Interface Package – Mexico	Diskette
Analog Switch Interface Package – Netherlands	Diskette
Analog Switch Interface Package – New Zealand	Diskette
Analog Switch Interface Package – Spain	Diskette
Analog Switch Interface Package – Thailand	Diskette
Analog Switch Interface Package – UK	Diskette
Analog Switch Interface Package – US	Diskette

Features

4

Overview

A *feature* can be software and/or hardware and is standard with each system purchase. Some features require nothing additional to be completely functional. However, some features may require the addition of a *feature package* to be more complete or advanced. This section presents a detailed description of the features available with the V7.0 system. See [Chapter 5, "Feature Packages"](#) for details on feature packages.

Purpose

The purpose of this chapter is to explain the standard features of the system, including:

- Open interface
- Available user interfaces
- Application development options
- Voice response functions
- System status and monitoring
- Available speech capabilities
- Communications interfaces
- Data network options
- Database environment provided by ORACLE
- SCSI disk mirroring feature
- Hardware RAID feature

Open Interface

The V7.0 system moves towards providing you with more open solutions. As used here, the term *open* means both adherence to industry standards and the ability to integrate hardware and software provided by third-party providers.

The benefit to you is that you can enhance system applications by purchasing hardware and software that is not provided with your V7.0 system. The following provides guidelines regarding the specifications for the V7.0 open interfaces.

SCSI

See [“Guidelines for the Addition of SCSI Devices”](#) in [Chapter 2, “Hardware”](#) for specific information on SCSI architecture.

Numerous references on the SCSI interface are available:

- ANSI X3.131. Title: *Information Systems – Small Computer System Interface*
- BS EN 29316. Title: *1991 Information Processing Systems – Small Computer System Interface (SCSI) (ISO 9316: 1989)*
- ISO 9316. Title: *Information Processing Systems – Small Computer System Interface (SCSI)*
- ISO DIS 9316. Title: *Information Processing Systems – Small Computer System Interface (SCSI)*

Users of this interface will also want to consult UnixWare system administration documents that discuss software administration in support of SCSI peripherals.

Finally, users of this interface must make sure that their MAP platform provides adequate physical space, power supply, cooling, and so forth for the SCSI peripherals to be added. These specifications vary for each MAP platform. See [Chapter 6, “Requirements and Specifications”](#) for more information on platform specifications. Consult these specifications and also be familiar with the specifications (power demand and heat dissipation, for example) for the SCSI devices you want to add.

UnixWare

Customers and developers may now more easily tailor and enhance their total system via the interfaces that UnixWare provides. Increased standardization ultimately increases the ability to use and control the product.

At the highest level, UnixWare allows customizing via its system administration capabilities, its shell interfaces, its programming development environments, and its networking interfaces. UnixWare documentation is the starting point for definition of these interfaces. There is also supplemental information available throughout the industry.

A book jointly published by Sybex and SCO, *Guide To UnixWare 1.1*, Chris Negus and Larry Schumer, ISBN 0-7821-1292-7, also provides information regarding UnixWare's open interfaces. The following are actual specifications that define the interfaces provided by UnixWare 1.1.2 and are compatible with 2.1.2:

- IEEE P1003.1-1988 POSIX (Portable Operating Systems Interface for Unix) System V Interface Definition: (various publishers)
- ANSI X3J11 C Language Specifications
- Intel Application Binary Interface Specification (maintained by SCO, adherence to this specification ensures that compiled applications are compatible with UnixWare on Intel platforms)

IRAPI

See [“Application Development”](#) later in this chapter for more information on IRAPI.

ORACLE

See [Chapter 3, “Software”](#) for more information on ORACLE.

HLLAPI

HLLAPI is an IBM-standard interface that allows the user to write a program to communicate with a host computer using the 3270 data stream protocol. The Send and Get Screen Actions in Script Builder are implemented with the HLLAPI interface, and provide most voice system users with a convenient high level interface to their host computer.

A full HLLAPI library, provided by CLEO Communications, is also available for customers who want to create their own custom DIPs. Development of a custom DIP requires INTUITY™ CONVERSANT® system expertise, as well as detailed knowledge of the host application.

Detailed information on the HLLAPI interface can be found in the *HLLAPI Programmer's Guide*, 585-350-912.

User Interfaces

This section discussed the various ways that a user can interface with the system.



NOTE:

Not all user interfaces are available for all software packages.

Graphical User Interface

A graphical user interface (GUI) provides access to applications running on the system through the use of icons and windows. Systems equipped with a mouse provide system administration functions from the desktop GUI.

The V7.0 system has four packages that are GUI. The following three packages run on your CONVERSANT system:

- UnixWare 2.1.2 (a mouse may be used)
- Graphical Speech Editor (a mouse is standard)
- FlexWord™ Toolkit (a mouse is standard)

The following GUI package runs in a Windows environment:

- Voice@Work (a mouse is standard)

UnixWare

A system installed with UnixWare 2.1.2 is fully capable of providing a variety of GUI environments within which to work. All systems are loaded with UnixWare graphics capabilities necessary to support the built-in UnixWare Desktop GUI, or the native X-windows and Motif GUI. On-line documentation is provided through the UnixWare Fingertip Librarian that explains how to make use of these different GUI interfaces.

It is the customer's responsibility to install and configure a mouse to use with UnixWare. See ["Serial Mouse"](#) in [Chapter 2, "Hardware"](#) for more information.

Graphical Speech Editor and FlexWord Toolkit

These packages take advantage of the more advanced GUI capabilities such as X-windows and Motif GUI. See ["Graphical Speech Editor"](#) and ["FlexWord Toolkit"](#) in [Chapter 5, "Feature Packages"](#) for more information.

Voice@Work

With Voice@Work, you can work within a standard GUI environment and create applications on your Windows-based PC, instead of performing application development on your V7.0 system. See [“Voice@Work”](#) in [Chapter 5, “Feature Packages”](#) for more information.

Command Line

The command line user interface is initiated from the system’s UnixWare prompt. Though most operations can be accomplished through the **cvis_menu** screens, you can invoke certain operations from the command line. Valid and supported V7.0 commands are documented in *INTUITY™ CONVERSANT® System Version 7.0 Administration*, 585-313-501.

Screens

The screen user interface is invoked by first using the **cvis_menu** command or **sysadm** command. These commands take users into a series of menus and screens from which they can perform various system operations, such as adding users, running reports, and so forth. This interface is provided also for system administrators who do not have access to or choose not to use a mouse.

Application Development

As discussed in [Chapter 1, “Introduction”](#) automated transactions are known as *applications*. Each application is designed and developed to meet a specific customer’s need. An application *script* is a set of instructions written for the system that informs it how to carry out the automated transaction. Scripts define the flow of the call and determine what the caller hears and how the caller responds to the system.

For more information, see *INTUITY™ CONVERSANT® System Version 7.0 Application Design Guidelines*, 585-310-670.

In V7.0, there are four mechanisms for developing applications:

- Voice@Work
- Script Builder
- TAS Script
- INTUITY Response Application Programming Interface (IRAPI)

Voice@Work

Voice@Work is an optional feature package that allows you to design applications in the V7.0 system by specifying every detail of the interaction between the system and its callers. Once you design your application, you can use the Voice@Work to test, generate, transfer, and install it. In addition, you have the ability to develop language-independent applications, as well as work with more than one language.

For more information, see [Chapter 5, "Feature Packages,"](#) and *INTUITY™ CONVERSANT® Version 7.0 Using Voice@Work, 585-313-207.*

Script Builder

Script Builder is designed to assist in the development of custom voice response applications on the system. It is a menu-driven, screen-oriented tool that can be used by a broad range of customers.

Script Builder is targeted toward designers familiar with the specific application, who also have a knowledge of logical programming concepts. Specifically, the designer should be familiar with typical programming methods used in languages such as BASIC, COBOL, Pascal, and C language. Experience with a database application such as ORACLE, dBASE, LOTUS 1-2-3, or ACCESS is also helpful. Although not required, it is helpful to have some basic knowledge of the UnixWare operating system and telephony when working with the system and Script Builder.

For more information, see *INTUITY™ CONVERSANT® System Version 7.0 Application Development with Script Builder, 585-313-206.*

TAS Script

TAS script, formerly called Native Script, is an assembly-type instruction language. A sequence of instruction calls run within the generic TSM software that manage the low-level interactions required to operate the system. At any time, TAS can be used to assemble, load, change, or replace a script without affecting the other scripts running on TSM or other IRAPI programs running the system.

For more information, see *INTUITY™ CONVERSANT® System Version 7.0 Application Development with Advanced Methods, 585-313-203.*

INTUITY Response API

Sophisticated developers have requested a C-language interface to develop system applications that can be directly integrated with the other features of the UnixWare system. IRAPI is a C-language interface that offers users the capabilities offered by the system script language—the ability to play and code phrases, collect touch-tone digits, answer incoming calls, generate outgoing calls, and so forth—from a C-language program.

In addition, IRAPI *within the system* reduces the role and structure of TSM. The reduced TSM has been completely recoded in terms of the IRAPI, and compatibility with Script Builder and older scripts is maintained. The Resource Manager (RM) manages the resources and the Application Dispatch (AD) process controls the dispatching of applications with some help from the IRAPI library.

IRAPI is delivered with every V7.0 system as a C library. Users write C programs, compile them using the standard C compiler, and link these objects against the IRAPI library to create UnixWare processes. Applications written using the IRAPI co-reside with script applications. IRAPI applications can execute a TSM script language program or Script Builder application. Script Builder applications and script language applications can also execute IRAPI applications.

For more information, see *INTUITY™ CONVERSANT® System Version 7.0 Application Development with Advanced Methods*, 585-313-203.

Voice Response Functions

The system is capable of many voice response functions without the installation of additional software. Although most of these functions can be accomplished through a script instruction in the script language, using the Script Builder package will simplify the writing of the script.

This section discusses the most common functions used in a voice response application. See *INTUITY™ CONVERSANT® System Version 7.0 Application Design Guidelines*, 585-310-670, for more information on script instructions. See *INTUITY™ CONVERSANT® System Version 7.0 Application Development with Script Builder*, 585-313-206, for more information on Script Builder applications.

Announce

The system uses the Announce step in Script Builder to speak to the caller. Up to 15 phrases, values, and/or lines of text (from Text-to-Speech) may be played in succession in a single Announce action step.

NOTE:

Announce may be referred to as *Whisper* when it is used with the intelligent transfer feature.

Answer

The script instruction called **tic('a')** can answer the line or take the line off-hook. This may also be accomplished by using the Answer Phone action step in Script Builder.

Background

The background function connects a caller to background music or speech that has been prerecorded and installed on the system. The Background action step in Script Builder can play background music or speech.

Call Transfers

Call transfer is used to transfer the caller to another telephone number, which is referred to here as a third party. Three types of call transfers are available: blind transfer, intelligent transfer, and Full Call Classification Analysis (Full CCA).

NOTE:

Blind transfer and intelligent transfer types are standard features of the V7.0 system. Full CCA is available as an optional feature package in the U.S. only. For more information on Full CCA, see [Chapter 5, "Feature Packages"](#)

All types of transfers may be used during a single call. All types allow the application to transfer the caller to a third party, using the transfer and/or three-way calling feature of the private branch exchange.

Because the call transfer feature uses the transfer capability of the private branch exchange, you are limited to transferring to telephone numbers within the capacity of the private branch exchange. Consequently, some private branch exchanges are limited in the numbers to which they can transfer.

Transfers are accomplished by using the **tic** script instructions (with several different options) or the Transfer Call action step in Script Builder.

For more information on AYC21 circuit card call transfer capabilities, see the ["Intelligent Transfer"](#) section.

Blind Transfer

In a blind transfer, the application dials the third-party number to start the transfer and then relinquishes all call handling responsibilities. In other words, in a blind transfer, the transfer call is placed and then the caller is released. The caller is left to deal with a busy signal or a no-answer signal. The call is completed as soon as the third-party number is dialed, without waiting to see the outcome.

Intelligent Transfer

In an intelligent transfer, the application dials the third-party number to start the transfer and then listens to the call progress signals to determine if the line is busy, ringing, or has been answered. In other words, in an intelligent transfer, the transfer call is placed and then the system classifies the call. The capabilities provided by intelligent Call Classification Analysis (CCA) are standard with each system purchase, and provide a rudimentary voice-energy detector for identifying answered calls. Intelligent CCA is needed to make call transfers and call bridges, as described in *INTUITY™ CONVERSANT® System Version 7.0 Application Development with Script Builder*, 585-313-206.

Applications created with earlier versions of software that use Intelligent CCA are compatible with V7.0 software.

NOTE:

An enhanced level of call classification, Full CCA, is available as an optional feature package in the U.S. only. It is described in [Chapter 5, “Feature Packages”](#).

Intelligent CCA on Tip/Ring Circuit Cards

Intelligent CCA on Tip/Ring circuit cards recognizes the following call progress tones:

- Answer detected via speech energy detection
- Answer supervision from switch via dual tone multi-frequency Feedback Tones (Note that, in order for this call progress tone to be recognized, the system must be connected to DEFINITY® Enterprise Communications Server, and the optional Sending DTMF Feedback Tones to the VRU feature must be administered.)
- Dial-tone
- Stutter dial-tone
- Busy
- Fast busy (reorder)
- Intercept tone for invalid extension (on DEFINITY Enterprise Communications Server or other private branch exchange)
- Ring no answer
- Touch-tone entry detected
- Internal hardware or software error, dialing error, or unexpected private branch exchange response
- Timeout
- Illegal dial string

Intelligent CCA on Line Side T1 – DEFINITY ECS and Line Side E1 – DEFINITY ECS on the AYC21 Circuit Card

Intelligent CCA on Line Side T1 DEFINITY ECS and Line Side E1 DEFINITY ECS on the AYC21 circuit card recognizes the following call progress tones:

- Answer detected via speech energy detection
- Answer supervision from switch via DTMF Feedback Tones



NOTE:

In order for this call progress tone to be recognized, the system must be connected to DEFINITY Enterprise Communications Server and the optional Sending DTMF Feedback Tones to the VRU feature must be administered.

- Dial-tone
- Stutter dial-tone
- Busy
- Fast busy (reorder)
- Intercept tone for invalid extension
- Ring no answer
- Touch-tone entry detected
- Internal hardware or software error, dialing error, or unexpected private branch exchange response
- Timeout
- Illegal dial string

For private branch exchanges that allow outside transfers, the network tones received may vary and may not be recognized correctly by the intelligent transfer feature. This results in some network tones being recognized as an answer and the caller being dropped from the system. Intercept tones used by private branch exchanges for invalid extensions are included in the V7.0 system.

Call Bridge

Call bridge allows an application to place an outbound call to a third party and maintain the connection while the caller interacts with the third party. When the third party hangs up, the script continues with the next action step. The call bridge feature is used most often when call transfer is not available on the private branch exchange or central office.

This connection to a third party is accomplished through the **hbridge** TAS script instruction or the Call_Bridge action step in Script Builder.

Disconnect

Disconnect or hang-up, disconnects the system from the caller. It is accomplished through the **tic('h')** script instruction or the Disconnect action step in Script Builder.



NOTE:

Disconnecting the call does not stop the execution of the application script. An application terminates execution when it reaches a Quit instruction.

Originate

An application may be set up to place or originate calls. Originate is accomplished using the **tic('O')** and **tic('o')** script instructions or the Make Call action step in Script Builder. As an example, this application can be used by the system to conduct a survey of all customer numbers stored in a database.

Converse Vector Step

Converse vector step (CVS) is used in DEFINITY ECS private branch exchanges to maintain control of a call while capabilities of the system are being used. The system provides a Script Builder external action called *converse_data* that supports the converse vector step capability on Tip/Ring, Line Side E1, and Line Side T1 lines. The converse vector step supports the DEFINITY ECS *call vectoring* (routing) feature by enabling the switch to retain control of vector processing in the system environment. It specifically supports the DEFINITY ECS converse vector command.

The Converse Data Return action step facilitates the creation of a two-way routing mechanism between the switch and the INTUITY CONVERSANT system. This enables data, in the form of touch-tones, to be received from the switch at the beginning of a transaction (*data passing*). Applications residing in the system can be accessed and initiated, and data can be collected and sent back to the switch at the end of the transaction (*data return*).

Without the use of the converse vector command, once a call terminates on a system channel, it is no longer under the control of the switch. It is then up to the system to process the transaction further and route the response back to the switch. With the converse vector command, control over call-routing is retained by the switch.

For detailed information on this feature, see *INTUITY™ CONVERSANT® System Version 7.0 Application Development with Script Builder*, 585-313-206 and *INTUITY™ CONVERSANT® System Version 7.0 Communication Development*, 585-313-202.

System Status and Monitoring

The system is set up with several mechanisms to help customers troubleshoot and correct problems with the system. This section highlights some of those mechanisms. For more information on menus and screens, see *INTUITY™ CONVERSANT® System Version 7.0 Administration*, 585-313-501.

Diagnostics

The diagnose procedure is used to perform diagnostics on Tip/Ring, T1/E1, or SSP circuit cards or the TDM bus. To fully diagnose the system hardware, diagnose all the circuit cards and the bus.

Diagnose is accomplished through the Configuration Management menu or the **diagnose card** and **diagnose bus** commands.

System Monitor

System monitor is used to verify that each incoming telephone line and its associated Tip/Ring or T1/ E1 circuit card is functioning properly. You may display the Voice Channel and Host Session Monitors through the System Monitor menus.

System monitor is accomplished through the System Monitor menus or the **sysmon** command.

Trace

Tracing capabilities allow you to trace the actions of a specified process or channel. Trace messages are stored in a trace buffer for future viewing. The trace capability is one way to view how a call is being handled and therefore is a useful tool when troubleshooting problems in an application.

Trace is accomplished through the Command Menu Trace Service menu or the **trace** command. See *INTUITY™ CONVERSANT® System Version 7.0 Administration*, 585-313-501, for more information.

Local System Status and Alerting

The system uses messages to alert you to problems, potential problems, or a change in the status of the system. These message are collected in the Message Log Report and can be displayed to screen using the Message Log Report Screen. Through the use of this Message Log Report, a customer or technician can detect, report, and fix problems as quickly as possible to minimize disruption to normal service. (For the procedure to run the Message Log Report, see Chapter 8, "Daily Administration," in *INTUITY™ CONVERSANT® System Version 7.0 Administration*, 585-313-501.)

Remote Maintenance Circuit Card

The remote maintenance circuit card is included as standard equipment with all U.S. V7.0 system orders. Via a built-in modem, a technician or remote system administrator can log into the system over Tip/Ring analog lines to observe or administer the platform.

Reports

Reports offers you the ability to create a compiled list of system statistics. This information may include the number of calls made to the system, transfer attempts, or call information for a specific day. The Reports Administration screen gives you access to system reports, including system call classification reports, call data detail reports, call data summary reports, message log reports, and traffic reports. The system enables you to tailor each report to your needs and specifications.

[Table 4-1](#) illustrates the capacity information regarding system reports.

Table 4-1. Report Capacities

Report	Maximum Storage Capacity
Call Data Detail Report ¹	7 days of data
Call Classification Report	365 days of data
Call Data Summary Report	7 days of data
Traffic Summary Report	7 days of data
Event Log Messages	500–20 Kbps messages (compressed)

1. Data from the current day plus previous 7 days is stored, then summarized.

Speech

Speech is stored on the system in talkfiles (speech files). The speech played during a call is the system's main interaction with the caller, and is therefore an important part of any application.

Speech Development

There are several methods for developing speech:

- Record a professional speaker
- Purchase a custom speech package from Lucent Technologies
- Share speech already recorded for another application
- Import speech from another application
- Use one of the following optional feature packages:
 - Script Builder
 - Enhanced Basic Speech
 - Text-to-Speech
 - Graphical Speech Editor
 - Voice@Work

Coding and Storage

Once speech is recorded, it must be encoded and digitized into an acceptable format. There are several methods for digitizing speech. Use one of the following optional feature packages:

- Custom speech packages developed by Lucent Technologies
- Graphical Speech Editor
- Script Builder
- Voice@Work

Digitized speech phrases are stored as digital data. The system then assigns a phrase number and stores the phrases in talkfiles. There are certain talkfile numbers that are reserved for various optional features. For example, talkfiles 8 and 9 are associated with the Form Filler Plus application.

By default, talkfiles are stored in specific places on the system. Systems that have 72 or fewer network connections store talkfiles in **/voice1/vfs/talkfiles**. MAP/100C and MAP/100P systems that have more than 72 telephone network connections have a second hard disk drive (non-RAID) for speech storage. In these systems, talkfiles are stored in **/home3/vfs/talkfiles**.

You can store talkfiles in other locations on the system, as long as you tell the system where to find the speech. You do this by modifying the `/vs/data/irAPI.rc` file.

For more information on developing speech, talkfiles and their location, see *INTUITY™ CONVERSANT® System Version 7.0 Speech Development, Processing, and Recognition*, 585-313-201.

Speech Play and Coding Capacities

The number of telephone network connections that support simultaneous use of either speech playback or voice coding are listed in [Table 4-2](#). The default coding method used for recording speech on the system is adaptive differential pulse code modulation (ADPCM) using a sampling rate of 32 Kbps.

The maximum capacities are the same for the MAP/100C, MAP/100P, and MAP/40P platforms. The constraints occur at the circuit card level, rather than at the system level.

[Table 4-2](#) provides information on the playback and coding channel capacity per SSP and NGTR circuit cards for the various code types. CELP is available on all six channels of the various Tip/Ring circuit cards.

Table 4-2. Speech Channel Capacities

Circuit Card	ADPCM 16/32 Kbps Playback/Record	CELP 16 Kbps Playback/Record	SBC 16/24 Kbps Playback/Record
SSP (AYC43)	120/120	120/60	100/100
NGTR (AYC30)	6/6	6/6	6/6
IVC6 (AYC10 and AYC29)	6/6	6/6	6/6

Speech Storage Capacities

The amount of space allocated for storing speech can vary, depending on your needs and your system. One speech block consists of 8KB. The number of seconds per block depends on the coding rate of the speech-encoding method that you use, such as 16-Kbit CELP, 32-Kbit ADPCM (default), or 64-Kbit PCM.

NOTE:

There is wasted space whenever a speech phrase does not fill a block. For example, enhanced basic speech is stored at 32-Kbit ADPCM, with 2 seconds of speech per block. If a phrase is less than 2 seconds, the remaining space within that speech block is not available for other use.

Table 4-3 shows sample speech storage capacities for different disk configurations. Your system can have space allocated on both primary and secondary disks.

Table 4-3. Sample Speech Storage Capacities

Disk	Number of Speech Blocks (8KB/blk)	16 Kbit CELP/ADPCM (4 sec/blk)	32 Kbit ADPCM (2 sec/blk)	Notes
2.0-Gbyte SCSI (350MB)	44,800	~50 hrs	~25 hrs	Default allocation for speech on V7.0 system is 350MB. You can allocate more space on this disk if you have it, or allocate additional space on a second disk.
Second 2.0-Gbyte SCSI	256,000	~290 hrs	~145 hrs	Amounts shown are for a second disk dedicated entirely to speech.

Speech Administration Capacities

Table 4-4 illustrates the capacities associated with recording speech from the speech administration screens.

Table 4-4. Speech Administration Capacities

Item	Maximum Capacity	Notes
Phrase length when recorded in Script Builder, in seconds	240	Playing phrases consecutively eliminates the constraint
Phrase tag length (characters)	50	

Communications

The system connects to the public switch telephone network (PSTN) to communicate with external callers. This interface to the PSTN uses either an analog or digital connection to send information to callers. In some system applications, it also connects to private data networks in order to access host computer databases for information to complete certain types of calls.

The system supports asynchronous and synchronous private data network interfaces. These interfaces provide connections from the system to other computing devices such as remote monitoring systems as well as host computer databases.

Telephony Interfaces

This section discusses in general terms the analog and digital interface configurations on a V7.0 system.

Analog Interface

This section describes the basic analog telephony interfaces available when the right combination of base and optional features are used. Analog interfaces are accomplished through the Tip/Ring circuit card.

In an analog configuration, the system provides connectivity to private branch exchange and automatic call distribution (ACD) customer-premise equipment. It also supports interfaces to local telephone exchange carriers.

Supported analog connections include:

- Connection to 5ESS® switch
- Connection to the following Lucent Technologies private branch exchanges:
 - DEFINITY ECS
 - DEFINITY G1/G3
 - DEFINITY G2
 - Dimension
 - Merlin Legend
 - System 25
 - System 75
 - System 85
- Connections to other switch facilities that match V7.0 analog requirements

See *INTUITY™ CONVERSANT® System Version 7.0 Communication Development*, 585-313-202, for more information on analog interfaces relative to your system design.

See Chapter 5, “Switch Interfaces,” in *INTUITY™ CONVERSANT® System Version 7.0 Administration*, 585-313-501, for more information on analog connection switch settings.

Digital Interface

This section describes the basic digital telephony interfaces available when the right combination of base and optional features are used. Digital interfaces are accomplished through the E1/T1 (AYC21) circuit card. Supported protocols are T1 E&M, Line Side T1, Line Side E1, and Primary Rate Interface (PRI).

In a digital configuration, the system provides connectivity through an E1/T1 circuit to digital network facilities such as a central office switch. E1/T1 connections also provide dialed number identification service (DNIS) information for automation of incoming calls for customers with multiple 800 or 900 numbers. To have DNIS with Line Side T1, you must use the Adjunct/Switch Application Interface (ASAI) or Converse Vector Step.

Digital E1/T1 interfaces also support Line Side connection of a voice system and a private branch exchange. ASAI is supported on Line Side T1/E1 only when using DEFINITY ECS switches.

See *INTUITY™ CONVERSANT® System Version 7.0 Communication Development*, 585-313-202, for more information on digital interfaces including T1, Line Side E1, Line Side T1, PRI, and ASAI.

See Chapter 5, “Switch Interfaces,” in *INTUITY™ CONVERSANT® System Version 7.0 Administration*, 585-313-501, for more information on digital connection switch settings.

Data Network

The system provides, through base and optional software and hardware, support for several data network communication interfaces including:

- SNA 3270 (see [“Synchronous Host Interface”](#) in [Chapter 5, “Feature Packages”](#))
- TCP/IP (see [“Local Area Network Connectivity”](#) in [Chapter 5, “Feature Packages”](#))
- SQL*Net (see [“Database Environment”](#) in this chapter)
- Asynchronous (see [“Multi-Port Asynchronous Communications Interface”](#) in [Chapter 5, “Feature Packages”](#))

Database Environment

V7.0 works with software provided by ORACLE to provide database features and functionality.

ORACLE Relational Database Management System 7.3.2

The ORACLE RDBMS software package allows you to establish and maintain a local ORACLE RDBMS on the system. Installation of this package is required. This software includes the following ORACLE development packages:

- PRO*C 2.2.2.0.0
- SQL*FORMS/MENU 4.5.8.0.17
- SQL*ReportWriter 2.5.6.3.0

If you want to connect to a remote ORACLE database machine, you must install the optional SQL*Net TCP/IP software. Customers can purchase any other ORACLE software from either the ORACLE Corporation or a third-party vendor.

See *ORACLE7 Installation Guide for Intel SVR4 UNIX®* or vendor-provided installation documents for the specific requirements and installation procedures. ORACLE maintains a list of ORACLE development partners (third-party vendors). Contact ORACLE directly for more information at (800) 542-1170.

Database Capacities

[Table 4-5](#) illustrates the database capacities used within a Script Builder application script.

Table 4-5. Database Capacities

Item	Maximum Capacity	Notes
Local database (LDB) table name	11 characters	
Length of LDB field names	24 characters	
LDB field size – char	50 characters	
LDB field size – num	11 digits	
LDB field size – date	10 characters	Fixed size
LDB field size – time	11 characters	Fixed size

Table 4-5. Database Capacities

Item	Maximum Capacity	Notes
Number of open cursors on the system	255, default size	This can be tuned higher. See <i>INTUITY™ CONVERSANT® System Version 7.0 Administration</i> , 585-313-501, for more details on tuning the open cursor number.
Different database tables accessed per application	Infinite number	
Different database tables owned per application	10	Includes both local and remote tables
Fields specified in one LDB table with Script Builder	15	Includes both local and remote tables
Number of remote databases accessed per system	4	Up to five database interfaces supported; one is dedicated to the local database (requires SQL*Net)
Overall database size		Free space restricted only by the amount of space available in all file systems

SCSI Disk Mirroring

The SCSI disk mirroring feature provides a method of configuring and managing a system so that a SCSI hard disk drive on the platform has an identical back-up copy of its stored data kept on another hard disk drive, which is referred to as a *mirrored* disk.

Mirroring improves system reliability by ensuring that operations and resources are not lost if a hard disk drive fails. It minimizes the impact of losing a disk drive, and provides a more efficient method of replacing the information that is lost because of such a failure.

This feature is supported by all platforms and requires the VERITAS Volume Manager and VERITAS File System packages that are included in the INTUITY UnixWare 2.1.2 Image Tape for CONVERSANT. In addition, the hardware platform must have at least two SCSI hard disk drives. VERITAS also provides the ability to grow or shrink all filesystems except **root**.

See “Replacing a Hard Disk Drive,” in the maintenance book specific to your platform, for more information on mirroring.

Hardware RAID

The Hardware RAID feature ensures that system services are not lost when a hard-disk drive fails. This feature allows you to “hot-swap” failed disk drives, which means that you can replace a failed drive without disrupting any system services; the system will operate normally while you change the drives. This feature is supported only on the MAP/100P platform.

The Hardware RAID feature increases overall system availability by adding redundancy using RAID Level 5 (RAID-5). RAID-5 uses interleaved parity with striping for data storage.

This feature is implemented with a PCI RAID controller and associated RAID software. Hardware RAID requires at least three SCSI disks.

See *INTUITY™ CONVERSANT® System Version 7.0 MAP/100P Maintenance*, 585-313-110, for more information on Hardware RAID.

Feature Packages

5

Overview

This chapter presents a detailed description of the feature packages available with the V7.0 system.

As a general rule, the packages described in this chapter are installed in addition to the V7.0 system application software.

When you read about a feature package, the sections titled “Software and Hardware Requirements” assume that the base application software and platform-required hardware (such as the central processing unit) are already installed.

Purpose

The purpose of this chapter is to

- Describe each feature package
- State software and hardware requirements
- List any optional equipment that may be used with the feature package
- Present the capabilities and capacities of each feature package

V7.0 System Feature Packages

Feature packages can be hardware and/or software in nature and provide specific functions that enhance the operation or capacities of the base system. They are not required for the basic voice system to function, and are not supplied with the base system. These feature packages are purchased separately. They provide enhancements such as data network interfaces or additional basic hardware resources.

⇒ NOTE:

The V7.0 system will not support AUDIX® Voice Power® or FAX Attendant System™.

The following sections describe each of the V7.0 feature packages.

Adjunct/Switch Application Interface

The Adjunct/Switch Application Interface (ASAI) provides a local area network interface between DEFINITY® Generic 3 and adjuncts. The ASAI feature package provides a set of pre-defined capabilities. These capabilities are built on top of the ASAI interface and allow the user to adjust certain application parameters within a prepackaged context.

This digital signaling interface allows the voice system to monitor and route calls on the DEFINITY Generic 3. This interface operates over an Ethernet TCP/IP link connected to a DEFINITY LAN Gateway. When used in conjunction with Tip/Ring, digital Line Side T1, or Line Side E1 interfaces, the ASAI interface allows the voice system to monitor and control incoming calls. It also allows access to ANI and DNIS and supports ASAI transfer which is faster and more reliable than a flash transfer.

The ASAI package now includes the following capabilities:

- Universal Call ID (UCID) — UCID provides a unique identifier (8-byte binary or 20-character ASCII) for every call in a DEFINITY Call Center customer environment. UCID allows for uniform data-tracking for all call-related data in a Call Center, regardless of the system. DEFINITY uses the ASAI interface to pass the UCID to adjuncts.
- ANI Information Indicator (ANI-II) — ANI-II provides a number that indicates the class of service of the customer who is calling, such as residential, coin, or wireless.
- User-to-User Information element (UUI) — UUI allows for the customer to specify additional information to be passed in external function arguments, which can contain up to 32 bytes of information.

The full CallVisor PC library of ASAI interface software is also provided with the ASAI feature package to facilitate building ASAI applications in C code. Professional Services provides development expertise in ASAI and the system, and the Solutions Delivery Organization (SDO) and other independent software vendors can develop custom applications using the full library, thereby providing the optimum solution when you require full ASAI integration with the application.

Refer to the following documentation for additional information about CallVisor PC:

- *DEFINITY Enterprise Communications Server Release 6 CallVisor PC ASAI Installation and Reference*, 555-230-227.
- *DEFINITY Enterprise Communications Server Release 6 CallVisor ASAI Technical Reference*, 555-230-220.
- *DEFINITY Enterprise Communications Server Release 6 CallVisor ASAI Protocol Reference*, 555-230-221

Software and Hardware Requirements

The ASAI feature package requires the following software and hardware components:

Software Requirements

In order for the ASAI feature package to be implemented, the following software packages must be installed:

- Lucent Technologies CALLVISOR PC ISDN
- Lucent Technologies CALLVISOR PC LAN GATEWAY
- Lucent Technologies CALLVISOR PC ASAI
- INTUITY™ CONVERSANT® System V7.0 Adjunct/Switch Application Interface Package

The Lucent Technologies CALLVISOR PC ITT package is optional and contains software for those who plan to do custom development.

Hardware Requirements

The ASAI feature package requires that the LAN circuit card be installed and operational. This circuit card supports 1 signalling connection with the DEFINITY Generic 3 over an Ethernet LAN connection.

The DEFINITY Generic 3 must also have a DEFINITY LAN Gateway that connects to the Ethernet LAN.

[Table 5-1](#) lists ASAI capacities.

Table 5-1. ASAI Capacities

Attribute	Maximum Number	Notes
Tip/Ring lines between private branch exchange and the voice system	72	
Line-side T1 lines between private branch exchange and the voice system	MAP/40P – 2 MAP/100P – 4 MAP/100C – 4	Represents the equivalent of 48 or 96 incoming analog channels
Line-side E1 lines between private branch exchange and the voice system	MAP/40P – 2 MAP/100P – 3 MAP/100C – 3	Represents the equivalent of 60 or 90 incoming analog channels

See the DEFINITY documentation library for information on hardware and software requirements when interfacing the voice system with a DEFINITY system. For more information about connectivity to DEFINITY see *CallVisor ASAI Planning Reference*, 555-230-222. For more information concerning the LAN Gateway see *Installation, Administration, and Maintenance of CallVisor ASAI over the DEFINITY LAN Gateway*, 555-230-223.

For more information on the ASAI feature package, see Chapter 3, “Adjunct/Switch Application Interface,” in *INTUITY™ CONVERSANT® System Version 7.0 Communication Development*, 585-313-202.

Asynchronous Host Interface Toolkit

The asynchronous host interface toolkit provides operational software, source code, and user-level and design-level documentation to develop system applications that access host computers using an asynchronous data communication interface.

The asynchronous host interface toolkit offers these functions:

- Sends messages of application-specified content to the remote host
- Supplies host response data to the application
- Accepts unsolicited messages from the host and makes them available for application processing
- Provides these services simultaneously to independent hosts on multiple asynchronous lines
- Multiplexes messages from multiple channels onto the asynchronous lines
- Performs normal transaction processing functions while handling multiple asynchronous messages on a fully loaded system

Software and Hardware Requirements

This feature package requires that the following be installed and operational:

- The CSG Asynchronous Host Interface Toolkit
- The proper asynchronous communications hardware and software, like the Multi-Port Asynchronous Communications card and driver package

⇒ NOTE:

Two asynchronous communication ports are provided as standard equipment, labeled as COM1 and COM2. The remote maintenance circuit card is standard equipment on the system (in the US only), and the serial port/modem interface of the remote maintenance circuit card uses one serial port (COM1). If you need two physical asynchronous host connections, you need the Multi-Port Asynchronous Communication Interface. For more information, see [“Multi-Port Asynchronous Communications Interface”](#) in this chapter.

[Table 5-2](#) lists asynchronous host interface toolkit capacities.

Table 5-2. Asynchronous Host Interface Toolkit Capacities

Item	Maximum Number	Comments
Physical asynchronous connections allowed to the system	1 without the multi-port card 9 with the multi-port card	The maximum number of connections assumes that the remote maintenance circuit card is required and installed. COM1 is always used by the remote maintenance circuit card.
Host systems to which asynchronous connections may be made	2	Can be increased by custom modification and the use of an 8-port asynchronous communications interface
Multiplexed channels (sessions) allowed per link	24	48 channels is the maximum number per system (two links)
Transfer rate, in bits/second (bps)	9600	
Message size, in characters	127	
Messages recognized by the system per link, per second	2	At 9.6-Kbps with capacity reserved for normal processing functions

Consult your Lucent Technologies account representative for more information about this feature package.

Call Center Application Solutions

Call Center application solutions provides a combination of applications for call centers. These applications enhance information exchange, provide access to pertinent caller information, and allow routing to help manage call traffic. Through automation, these solutions provide services to callers even when live agents are unavailable. The applications also make the automated approach more appealing for callers who are waiting on hold.

The call center application solutions include:

- Customer Assist — Features an application solution called the Customer Assist Care Center. It contains queue and resource management tools and provides customer self-service options to the caller.
- Agent Assist — Features personal productivity application solutions and tools for call center agents and managers.

Customer Assist Solutions

The Customer Assist solutions feature the Customer Assist Care Center application. This application consists of five integrated software modules. It is a queue and resource management tool for the Call Center. Each module can be tailored to the needs of your particular call center using administrative screens, menus, and predefined commands or “actions.”

Customer Assist Care Center consists of the following modules:

- Queue management with custom call routing

This module allows call centers to more effectively manage their queues by automatically routing callers to the appropriate agents. This can help reduce the time that callers spend in queue. This module also enables personalized service based on various caller information such as their telephone number, account number, or type of services needed, such as help desk or account inquiries.
- Announcement management

This module enables callers to listen to a variety of announcements including:

 - Standard announcement — Allows callers to find out more about the products and services that interest them.
 - Delay announcement — Provides callers with estimated wait times (EWT) in the queue so they can make informed decisions as to how long they will wait.
 - Dynamic announcement — Uses caller ID information to select messages tailored to particular customers’ interests and buying patterns.

- Message in queue

This module gives callers the convenience of leaving a message rather than waiting for an agent. This module offers two options:

- Immediate call back — The callback message waits in the queue so the caller does not have to. When an agent becomes available, the call back message is delivered to the agent, and the customer's phone number is dialed automatically.
- Scheduled call back — The caller messages are stored in a mailbox and delivered to agents based on a predetermined time schedule or on call volume activity.

- Bulletin board

This module allows callers to help themselves to bulletin boards that contain menus of pre-recorded informative messages. Bulletin boards also give callers self-service access to service-related information and lists of documents. In addition, callers are given the option to request delivery of this information by various means, including phone, mail, and fax.

- Automated information collection

This module is a self-service option that uses auto attendant-like menus to assist callers in gathering information, such as account information or survey questions.

- Dial Plan

This module accepts commands from the voice system application to perform telephone actions, such as transfers and place calls. Dial Plan allows the application to add numbers to a telephone number, such as access codes and accounting codes.

For more information on Customer Assist solutions, contact your Lucent Technologies account team.

Agent Assist Solutions

The Agent Assist solutions are personal productivity tools for call center agents and managers. These tools provide a Windows-based graphical interface to call center PC-based workstations, giving agents and their managers flexible capabilities.

The Agent Assist solutions provide the following applications:

- Agent Observing

This application allows automatic scheduling, monitoring, and recording of agent conversations. It also allows message playback and storage at any time, which is convenient to both the agent and supervisor.

- Malicious Call Recording

This application provides on-demand recording of caller conversations. You can take notes with an on-screen notepad and store calling party information, such as ANI, extension number, trunk id, or other pertinent information.

- Spontaneous Telephony Agent Recording (STAR)

This application enables agents to turn call recording on and off and to use the on-screen notepad to record details about a particular recording.

- Customer Experience Observation (CEO)

This application monitors calls from the time that callers enter the call center until they hang up. Everything the caller hears, presses, and says is recorded for later retrieval and management.

- Agent Now!

This application allows a supervisor to record calls for assigned agents on an on-demand basis.

For more information on the availability of Agent Assist solutions and its application solutions, contact your Lucent Technologies account team.

Optional Feature Package Enhancements

Enhanced Basic Speech, WholeWord speech recognition, and Dial Pulse Recognition may be purchased as optional feature packages to enhance your call center application packages.

These optional enhancements include the following capabilities:

- Support for Enhanced Basic Speech (with multiple languages on a single V7.0 system) in the following languages:
 - Cantonese Chinese (female voice)
 - Mandarin Chinese (female voice)
 - Dutch (female voice)
 - Australian English (female voice)
 - UK English (female voice)
 - US English (male and female voices)
 - French (female voice)
 - Canadian French (female voice)
 - German (female voice)
 - Hindi (female voice)
 - Indonesian (female voice)

- Italian (female voice)
- Japanese (female voice)
- Malay (female voice)
- Brazilian Portuguese (female voice)
- Castilian Spanish (female voice)
- Latin-American Spanish (female voice)
- Thai (female voice)

For more information on Enhanced Basic Speech, see [“Enhanced Basic Speech”](#) in this chapter.

- Support for WholeWord speech recognition of both connected digits and isolated digits (0-9, and Yes and No) in the following languages:
 - Dutch
 - Australian English
 - UK English
 - US English
 - Canadian French
 - French
 - German
 - Italian
 - Japanese
 - Brazilian Portuguese
 - Castilian Spanish
 - Latin-American Spanish

For more information about WholeWord speech recognition, see [“Speech Recognition”](#) in this chapter.

- Support for Dial Pulse Recognition

Since dial pulse recognition and speech recognition can be administered as options, four modes of caller input are possible, as listed below:

- Touch-tone only (no speech recognition or dial pulse recognition)
- Touch-tone and speech recognition (no dial pulse recognition)
- Touch-tone and dial pulse recognition (no speech recognition)
- Touch-tone, speech recognition, and dial pulse recognition

For more information on Dial Pulse Recognition, see [“Dial Pulse Recognition”](#) in this chapter.

Software and Hardware Requirements

Some software and hardware requirements are common to both the Customer Assist and Agent Assist solutions applications. Other software and hardware requirements are specific to a certain call center application or to a module within a suite.

The following sections describe:

- Requirements for all call center applications (required for all Agent Assist solutions and Agent Assist solutions applications)
- Additional requirements for Agent Assist solutions (all modules)
- Hardware requirements for PC (required for all Agent Assist solutions modules)
- Software requirements for PC (required for all Agent Assist solutions modules)
- Optional speech recording equipment (required for some Agent Assist solutions modules)
- Optional equipment for transferring applications over a network (required for some Agent Assist solutions modules)

Software and Hardware Requirements for All Call Center Applications

Some hardware and software requirements apply to both the Customer Assist and Agent Assist solutions call center applications.

All applications require the following to be installed and operational:

- Customer Assist solutions and/or Agent Assist solutions software feature package(s)



NOTE:

The INTUITY CONVERSANT system must be running on V7.0 version software for these call center applications.

- One of the following versions of the DEFINITY switches:
 - DEFINITY G3V4 or DEFINITY ECS (G3V5) for domestic installations
 - DEFINITY ECS (G3V5) for global installations

- TCP/IP connectivity between the clients (PCs) and the INTUITY CONVERSANT system. You need a standard Ethernet LAN circuit card or Token/Ring circuit card and a WinSock driver (winsock.dll) installed on your personal computer. These tools also require TCP/IP software and a sound card. TCP/IP software is part of UnixWare 2.1.2 and is offered as part of the base system software. However, you must have installed the INTUITY CONVERSANT SQL*Net TCP/IP package in order to access the database on a remote system.

Additional Software and Hardware Requirements for Agent Assist Solutions

This section includes all additional, required hardware and software requirements for the Agent Assist solutions. These software and hardware requirements are in addition to the software and hardware requirements for all call center applications discussed above. This section also includes performance issues and a list of optional equipment for the Agent Assist solutions.

NOTE:

All Agent Assist solutions applications use a PC-based graphical user interface.

Hardware Requirements for PC

The hardware listed below is required for the installation and operation of Agent Assist solutions applications:

- VGA monitor (or better)
- Microsoft-compatible mouse
- 486DX 33-MHz personal computer (or higher)

Your personal computer requires at least 8-MB of RAM and a hard drive with at least 5-MB of available space for the applications to function. However, 16-MB of RAM and a hard drive with at least 20-MB of available space is recommended for optimal results.

The required amount of available disk space depends on the number and complexity of the applications you plan to develop on your personal computer and whether or not you plan to record speech.

You should plan on considerably more disk space than previously mentioned above if you plan to record speech. For help on determining the hard drive requirements for your application, contact the Technical Support Center.

- 3 1/2-inch diskette drive designed for reading 1.44-Mbyte diskettes

Software Requirements for PC

Your personal computer must have the following software installed:

- MS-DOS Version 3.1 or higher
- Microsoft Windows 95, Microsoft Windows NT 3.51 (or higher), or Microsoft Windows Version 3.1



NOTE:

Graphical System Monitor can also run on Microsoft Windows for Workgroups 3.11, but is not recommended for use with Microsoft Windows Version 3.1.

- Microsoft Excel 5.0 (or higher) – required for customer satisfaction survey only

Optional Speech Recording Equipment

This section includes information about equipment for recording speech.

- Sound Blaster compatible card

A Sound Blaster compatible card is recommended for use with customer satisfaction survey and graphical system monitor.

The sound card allows you to listen to speech that you record. You can use this speech during simulation, as well as on the system. You can run some call center applications without a sound card; however, you will not be able to record or listen to speech during the simulation mode.



NOTE:

Speech that you record may not have the fidelity of the professionally recorded speech available from Lucent Technologies. If you are interested in professionally recorded speech once you have installed your application on your system, contact your local Lucent Technologies account team.

- Microphone

Although any microphone is sufficient for recording speech with Agent Assist solutions, the quality of the microphone you choose dramatically affects the fidelity of your recorded speech.

- Speaker

Although any speaker is sufficient for listening to recorded speech with Agent Assist solutions, the quality of the speaker you choose affects the fidelity of your recorded speech.

Call Classification Analysis

Call Classification Analysis (CCA) allows application developers to classify the disposition of originated and transferred calls. Some of the dispositions include busy, answered, ring no-answer, and reorder.

The standard level of call classification analysis, intelligent CCA, is included with the base V7.0 system software. Intelligent CCA is needed to make call transfers and call bridges, as described in *INTUITY™ CONVERSANT® System Version 7.0 Application Development with Script Builder*, 585-313-206.

An enhanced level of call classification analysis, *Full CCA* is available as an optional feature package in V7.0. Full CCA is the feature package discussed in this section.



NOTE:

Full Call Classification Analysis is supported only in the US and Canada.

Full CCA

Full CCA provides a more complete interpretation of network progress tones than does base intelligent CCA. Tip/Ring, T1, Line Side T1, and PRI lines can be used for Full CCA.

Full CCA provides the following advantages over intelligent call classification analysis:

- Better answer detection using a more sophisticated voice-energy detector
- Detection of busy and ringback tones generated by older or faulty equipment that does not conform to precise tone-plan standards
- Detection of special information tones (SITs) that indicate why an originated call failed (this feature package allows for reliable call classification over the public switched network)
- Detection of modem tones
- Tip/Ring, T1, Line-side T1, and PRI lines can be used

Full CCA can be activated when a call is dialed out during a flash transfer, a call bridge (internal transfer), or a call origination.

Software and Hardware Requirements

This feature package requires the V7.0 Call Classification Analysis package software and at least one speech and signal processor (SSP) circuit card to be installed and operational.



NOTE:

The SSP card must be installed in the system before you install the CCA software.

SSP Channel Capacities

A single SSP card can handle up to 42 simultaneous channels of CCA if it is dedicated exclusively to CCA.

For more information on this feature package, see *INTUITY™ CONVERSANT® System Version 7.0 Application Development with Script Builder*, 585-313-206, and *INTUITY™ CONVERSANT® System Version 7.0 Communication Development*, 585-313-202.

Country-Specific Analog Switch Integration Packages

The V7.0 system can interface with other switches if differences in communication protocols and parameter settings are taken into account. The proper setting of these parameters on both the switch and the V7.0 system is essential for establishing communications between the two devices.

Each package allows the tuning of the Tip/Ring interface to operate properly with a DEFINITY switch or the telephone network in the specific country. With a switch integration package, you can select the installed switch from the analog switch administration menu to be the current switch with which the system is interfacing. You can modify key parameters that affect the system-to-switch interface. Without an analog switch integration package, the system relies on system defaults.

[Chapter 3, "Software,"](#) provides a listing of available country-specific analog switch packages.

Software and Hardware Requirements

In order to support this feature, at least one of the country-specific analog switch integration feature packages must be installed and operational.

NOTE:

Multiple switch integration packages can reside on a system, but only one package may be in use by the system at any one time.

For an extended list of table parameters and additional information on switch integration, see Chapter 5, "Switch Interface Administration," in *INTUITY™ CONVERSANT® System Version 7.0 Administration*, 585-313-501. For specific values for each parameter, contact your technical support organization.

Dial Pulse Recognition

The Dial Pulse Recognition (DPR) feature package allows users with rotary telephones or push-button telephones that generate dial pulses to interact with system applications. DPR is available via either the speech and signal processing card (SSP) or the Tip/Ring card. DPR is available to all channels on the platform, both analog and digital, via an SSP card; it is available to analog channels via an AYC10, AYC30, or AYC29 Tip/Ring card. DPR is accessible through Script Builder applications.

DPR accepts caller input from a telephone, as with touch tone input. DPR processes the caller input by using a recognizer that requires SSP or Tip/Ring resources, rather than using resources on the telephony interface circuit card as is done with touch tone input.

DPR recognizes the digits on a rotary phone, which consists of 0 through 9 but not the asterisk (*) or pound sign (#).

DPR can work simultaneously with either WholeWord or FlexWord™ speech recognition. The WholeWord and FlexWord recognizers are unable to work together. However, each of these recognizers can independently work with DPR. Combining DPR with a speech recognizer gives the caller the choice of using dial pulse or touch tone input, as well as spoken input.

The application developer selects individual recognition types. If the standard recognition types with this feature package do not meet your needs, Lucent Technologies can develop custom recognition types for you. For additional information, contact your Lucent Technologies representative.

⇒ NOTE:

Previous system releases have offered speech technologies on a per system basis. V7.0 offers speech technologies on a *channels per system* basis. DPR can be added on a channels per system basis to all supported analog and digital interfaces.

Barge-in, also referred to as “dial-through,” allows callers to interrupt system prompts for faster menu access by entering dial pulse input. At the initial release of the V7.0 system, barge-in is not supported for DPR. However, there are plans to enhance the capability of this feature in the future. Contact your Lucent Technologies representative for information on further development of this feature.

Software and Hardware Requirements

This feature package requires that you have the INTUITY CONVERSANT System V7.0 Dial Pulse Recognition feature package and that one of the following be installed and operational:

- SSP card
- AYC10, AYC30, or AYC29 Tip/Ring card

For more information, see *INTUITY™ CONVERSANT® System Version 7.0 Speech Development, Processing, and Recognition*, 585-313-201, and *INTUITY™ CONVERSANT® System Version 7.0 Application Development with Script Builder*, 585-313-206.

Enhanced Basic Speech

The enhanced basic speech vocabulary package (called standard speech in previous releases) includes simple words that are frequently used to provide information to callers during transactions. In V7.0, enhanced basic speech has been standardized to include the phrases needed to speak numeric, date, and monetary quantities. The range of numeric, date, and monetary quantities that can be spoken is the same as in previous releases.

⇒ NOTE:

A maximum of one language may be used per application—multiple languages can be installed on a system, and multiple applications can be running simultaneously, but only one language can be active per each application.

Applications that you wish to convert from one language to another *must be* developed first with the US English enhanced basic speech package, and then converted to the other language(s) of your choice.

Enhanced basic speech is available in the following languages and voices:

- Cantonese Chinese (female voice)
- Mandarin Chinese (female voice)
- Dutch (female voice)
- Australian English (female voice)
- US English (female and male voices)
- UK English (female voice)
- French (female voice)
- Canadian French (female voice)
- German (female voice)
- Hindi (female voice)
- Indonesian (female voice)
- Italian (female voice)
- Japanese (female voice)
- Malay (female voice)
- Brazilian Portuguese (female voice)
- Castilian Spanish (female voice)
- Latin-American Spanish (female voice)
- Thai (female voice)

Software Requirements

This feature requires that at least one INTUITY CONVERSANT Enhanced Basic Speech optional software language package be installed and operational.

For more detailed information on Enhanced Basic Speech, see *INTUITY™ CONVERSANT® System Version 7.0 Speech Development, Processing, and Recognition*, 585-313-201.

Enhanced File Transfer

The Enhanced File Transfer feature package uses the file transfer system to interactively or directly transfer files between the system and a synchronous host processor on a designated logical unit (LU). File transfer can be performed directly from the UNIX system command line, a shell script, or a program using the system call. This feature package allows the transfer of speech, applications, and database data, and adds significant enhancements to the existing file transfer capabilities provided by the standard Synchronous Host Interface package.

Software and Hardware Requirements

This feature package requires that the 3270 Enhanced File Transfer software be installed and operational. Inherently, communications between the system and a host processor must be established through the installation of the Synchronous Host Interface package.

[Table 5-3](#) lists enhanced file transfer capacities.

Table 5-3. Enhanced File Transfer Capacities

Item	Max. Number	Notes
Simultaneous enhanced file transfer sessions	1	Enhanced file transfer may only be initiated on a single logical unit of one link.
Transmission speed, in Kbps	56	Transmission speed is dependent on the actual hardware connections between the machines, operating at between 4.8 Kbps and 56 Kbps.

For more information on this feature package, see *INTUITY™ CONVERSANT® System Version 7.0 Communication Development*, 585-313-202.

External Alarms

The External Alarms Interface package, used only on the MAP/100C, provides a means for administering external alarms in a central-office environment. The alarm can use lights or audible alarm indicators, depending on the hardware that is installed.

Most central-office telecommunications equipment separate their system maintenance and alarm messages into three classes: critical, major, and minor. This feature package allows a programmer to classify each system message into one of the three previous classes, and to subsequently trigger a separate alarm corresponding to each alarm class.

The circuit card included with the External Alarms feature package includes eight relay contacts. One relay contact operates as a sanity timer control jumper and another relay contact operates as a power failure indicator. The remaining contacts are used to trigger specific alarms.

Software and Hardware Requirements

This feature requires the V7.0 External Alarms Package and External Alarms circuit card be installed and operational.

[Table 5-4](#) lists the external alarms capacities.

Table 5-4. External Alarms Capacities

Item	Max. Number	Notes
Time between system sanity checks	60 seconds	Any integer value, in seconds, can be specified in the UNIX file controlling this function, although 60 is the recommended maximum. 20 seconds is default.
Current capacity of external alarm interface hardware	5 amperes	Operating at 250 VAC
	1 ampere	Operating at 125 VDC
	5 amperes	Operating at 30 VDC

For more information on this feature package, see *INTUITY™ CONVERSANT® System Version 7.0 Communication Development*, 585-313-202.

FlexWord Toolkit

The system provides enhancements to the FlexWord recognition feature package by providing a FlexWord Toolkit that separates FlexWord vocabularies from the FlexWord Recognition package.

This toolkit allows you to create your own words, wordlists, and vocabularies. The FlexWord Toolkit consists of the tools and documentation necessary to create FlexWord wordlists, to verify and fine-tune the phonetic definitions of the words in the wordlists, and to package and install the customer-defined vocabularies.

The FlexWord Toolkit is a separate installable package from the FlexWord Speech Recognition package. You can purchase the toolkit and create your own FlexWord vocabularies, or you can purchase custom vocabularies from a custom vocabulary provider.

The FlexWord Toolkit can run with the system still running. It is no longer a requirement to shut down the voice system to run the toolkit.

NOTE:

If you have the Text-to-Speech (TTS) feature package, it is recommended that you use this package when developing a US English FlexWord vocabulary to ensure that errors are not introduced while editing the FlexWord phoneme strings. This checking helps avoid minor errors in FlexWord phoneme strings that can introduce a large degradation in recognition accuracy.

Software and Hardware Requirements

This feature package requires the following to be installed and operational:

- INTUITY CONVERSANT System V7.0 FlexWord Toolkit package
- INTUITY CONVERSANT System V7.0 Text-to-Speech (required for US English only)
- At least one SSP card and the ASP driver (required for US English only)
- Tip/Ring circuit card and Tip/Ring card driver
- Serial mouse

For more information on the FlexWord Toolkit, see *INTUITY™ CONVERSANT® System Version 7.0 Speech Development, Processing, and Recognition*, 585-313-201.

Form Filler Plus

The Form Filler Plus feature package allows application scripts to record callers' responses to prompts for later transcription and review. As many as ten 1-second through 999-second responses can be recorded per call session. Caller responses are recorded and then stored in the Form Filler Plus database, where they can be retrieved at a later time using the form retriever transcription script.

Application voice "forms" that prompt for and record caller input for Form Filler Plus are available through a high-level Script Builder application template, FFtemplate, provided with the Form Filler Plus package. Customized Form Filler Plus applications are developed by copying and modifying this template to suit individual needs.

Software and Hardware Requirements

This feature package requires that the INTUITY CONVERSANT System V7.0 Form Filler Plus and INTUITY CONVERSANT System V7.0 Script Builder software be installed and operational. [Table 5-5](#) lists Form Filler Plus capacities.

Table 5-5. Form Filler Plus Capacities

Item	Maximum Number	Notes
Channels simultaneously using Form Filler Plus or transcribe script, or some combination of	96	
Coding rates supported	4	16 SBC, 24 SBC, 16 ADPCM, 32 ADPCM
Responses recorded per call session (or application)	10	
Coded phrase length, in seconds	999	Default is 20 seconds.
Talkfiles coded and stored	1	Talkfile 8 is dedicated to storage. Talkfile 9 is dedicated to transcription.
Initial time-out to detect speech during a code session, in seconds	5	
Interword time-out to detect silence during a code session, in seconds	5	

For more information on this feature package, see *INTUITY™ CONVERSANT® System Version 7.0 Application Development with Script Builder*, 585-313-206.

Graphical Speech Editor

This feature package provides a simple way of making changes to existing speech phrases by allowing you to cut, copy, and paste speech segments in either a speech file or across multiple speech files. You can also change the volume of individual speech segments.

You can build your own graphical speech editing environment. Use any environment that allows you to produce telephone PCM speech so that you can edit speech phrases for use in your application. The GSE uses X-Windows and Motif graphical user interface provided with UnixWare 2.1.2.

Software and Hardware Requirements

The GSE toolkit can be supported on any V7.0 platform. The V7.0 Graphical Speech Editor package must be installed and operational. This feature package requires the following:

- Tip/Ring card — Used to receive audio input for recording and to output audio speech. Speech recording can be performed over a telephone line. The GSE supports all V7.0 supported Tip/Ring circuit cards.
- Serial mouse — Required because of the user interface in the Graphical Speech Editor. A serial mouse is supplied with the package and connects to the second serial port.
- Video controller circuit card — Must be configured for the correct number of colors.

[Table 5-6](#) lists Graphical Speech Editor capacities.

Table 5-6. Graphical Speech Editor Capacities

Item	Max. Number
Length of speech phrase stored in buffer, in minutes	4

For more information on this feature package, see *INTUITY™ CONVERSANT® System Version 7.0 Speech Development, Processing, and Recognition*, 585-313-201.

Line Side E1-DEFINITY

The Line Side E1-DEFINITY feature package provides a 32-channel interface (30 voice + 2 signaling) between a customer-based DEFINITY and the V7.0 system. It significantly improves system connectivity and reduces the number of cards required to support multiple channels. It also provides ASA1 compatibility with DEFINITY and detection of "forward disconnect" from far end.

Feature highlights include:

- Support for 30 telephone network connections with touch-tone detection
- Support for Line Side E1 facilities of DEFINITY
- Call Transfer capability
- Script Builder compatibility
- Voice Response Integration (VRI) compatibility with DEFINITY private branch exchanges using the converse vector step
- Call origination support for DEFINITY private branch exchanges
- Support for intelligent call transfer by detecting secondary dial-tone and call progress tones produced by DEFINITY

⇒ NOTE:

Line Side E1 uses international channel associated signaling (CAS) HDB3 protocol level software. As implemented by DEFINITY, channel 16 is used for CAS, channel 0 is used for framing and other related data. The other 30 channels are used for voice.

Software and Hardware Requirements

This feature package requires that one or more of each of the following software packages and hardware components be installed and operational:

- INTUITY CONVERSANT System V7.0 Line Side E1 Interface Package — DEFINITY
- E1/T1 board driver
- ASP board driver
- AYC21 circuit card
- SSP circuit card

Platform Maximums

Platform maximums, if the system is all E1, are:

- MAP/40P — Two E1 cards, for a maximum of 60 telephone network connections
- MAP/100P — Three E1 cards, for a maximum of 90 telephone network connections
- MAP/100C — Three E1 cards, for a maximum of 90 telephone network connections

For more information on this feature package, see *INTUITY™ CONVERSANT® System Version 7.0 Communication Development, 585-313-202*.

Line Side T1-DEFINITY

The Line Side T1-DEFINITY feature package provides a 24-channel, digital interface between a customer-based PBX and the system. Line Side T1 uses existing T1 circuit card technology with new protocol-level software and user-interface modifications to significantly improve system connectivity and reduce the amount of hardware required to support 24 channels of digital service. This feature package is compatible with DEFINITY Generic 3 and Galaxy 8 and 9 Automatic Call Distributing (ACD) systems.

The highlights of the Line Side T1-DEFINITY feature package include:

- Call Transfer capability
- Script Builder compatibility
- Intelligent or simple Call Classification Analysis (CCA) compatibility, including detection of intercept tones used by private branch exchanges for invalid extensions
- ASAI compatibility with DEFINITY switches
- Voice Response Integration compatibility with DEFINITY switches

Software and Hardware Requirements

This feature package requires that one or more of each of the following software packages and hardware components be installed and operational:

- Either of the following:
 - INTUITY CONVERSANT System V7.0 Line Side T1 Interface Package
— DEFINITY
 - INTUITY CONVERSANT System V7.0 Line Side T1 Interface Package
— Galaxy

5 Feature Packages

Local Area Network Connectivity

- E1/T1 board driver
- ASP board driver
- SSP circuit card

[Table 5-7](#) lists Line Side T1 capacities.

Table 5-7. Line Side T1 Capacities

Item	Max. Number	Notes
Telephone network connections	24	Per T1 circuit card (AYC21)
T1 circuit cards	2-5	2 per MAP/40P 5 per MAP/100C or MAP/100P

For more information on this feature package, see *INTUITY™ CONVERSANT® System Version 7.0 Communication Development, 585-313-202*.

Local Area Network Connectivity

In order to accommodate the flexibility needs for data connectivity and host interface, the data connectivity architecture of the system was changed in V5.0 to separate the physical connectivity from the access protocols. This change allows you to independently choose both a physical connectivity type (for example, SDLC) and an access method (for example, TCP/IP or SNA) in combinations that are compatible with their current data networks.

Transmission Control Protocol/Internet Protocol (TCP/IP) is a process-to-process protocol. TCP/IP within the system provides high speed data transmission over an Ethernet or Token Ring network.

Software and Hardware Requirements

This feature package requires the driver specific to the card be installed and operational:

- EtherPower Device Driver PCI — supports the SMC PCI Ethernet LAN circuit card
- Token Ring Hardware Support — supports the Token Ring circuit card

The hardware required on your system for using the TCP/IP protocol depends on your physical link layer (both can be installed in the same system, but both are not needed):

- Elite 16 Ultra Combo Adapter (EtherCard)
- PCI Ethernet LAN circuit card (10 Mbps or 10/100 Mbps versions)

For more information on this feature package, see *INTUITY™ CONVERSANT® System Version 7.0 Communication Development*, 585-313-202.

Multi-Port Asynchronous Communications Interface

This feature package provides hardware and software for additional asynchronous serial data connections to the platform. These connections can be used to support asynchronous host computers, serial printers, on-site and remote monitoring systems, or an extra modem in addition to the modem connected to the remote maintenance board.

The system provides two asynchronous communication ports as standard equipment. These ports, labeled COM1 and COM2, are separate and fully functional in addition to the eight ports provided by this feature package.

Software and Hardware Requirements

This feature package requires that the SuperSerial STREAMS device driver and the asynchronous 8-port circuit card be installed and operational.

[Table 5-8](#) lists multi-port asynchronous communications capacities.

Table 5-8. Multi-Port Asynchronous Communications Capacities

Item	Max. Number	Notes
Additional physical asynchronous ports	8	These connections are in addition to the standard system COM1 and COM2 serial ports.
Data speed, in Kbps	9.6	

For more information on asynchronous communications, see *INTUITY™ CONVERSANT® System Version 7.0 Communication Development*, 585-313-202.

NetView Alarm Interface

The NetView Alarm Interface feature package interacts with V7.0 system software to allow you to monitor the system message as part of your current NetView environment. The system logs alarms and events that occur during voice system operations. The maintenance transmitter process scans this log to determine when the errors occurred and transmits critical, major, or minor errors to the host as operator-generated alerts (OGAs) over the 3270 host link.

Software and Hardware Requirements

This feature package requires the INTUITY CONVERSANT System V7.0 3270 NetView Alarm Interface package be installed and operational.

[Table 5-9](#) lists NetView Alarms Interface capacities.

Table 5-9. NetView Alarms Interface Capacities

Item	Max. Number	Notes
OGAs accepted by the FIFO/SIB circuit card, per second	1	The maintenance transmitter sends OGAs as soon as possible in a first-in/first-out order.
Time between status checks when host connection is lost	5	Status checks are initiated by the maintenance transmitter.
Time required to resume sending OGAs once a connection is established	5	Transmission is controlled by the maintenance transmitter.
OGAs that the maintenance transmitter can spool during period of host disconnection	100	The oldest spooled OGA will be discarded for each OGA over the first 100 received.

For more information on this feature package, see *INTUITY™ CONVERSANT® System Version 7.0 Communication Development*, 585-313-202.

Primary Rate Interface

The primary rate interface feature package allows the system to communicate directly with a Lucent Technologies or AT&T private branch exchange or switch using the AT&T ISDN Primary Rate Interface (PRI). The ISDN PRI is a digital interface and therefore only supports E1 or T1 line usage.

Supported switches include:

- 4ESS®
- 5ESS®



NOTE:

5ESS does not support Non-Facility Associated Signalling (NFAS).

- DEFINITY — G3i, System 85, and System 75
- Phase 1 or Phase 2 Service Node Controller
- ISDN Network Controller
- Nortel DMS-100

There are two different versions of the primary rate interface feature package that can be used with V7.0. The versions include:

- ISDN Primary Rate Interface

This version of PRI supports ISDN-PRI at both the E1 and T1 rate and supports E1/T1 board (AYC21). It supports ISDN-PRI interfaces at the Script Builder, Voice@Work, TAS Script, IRAPI, and General PRI library levels.

- Advanced PRI

This version requires the preceding ISDN Primary Rate Interface version and provides a developer's toolkit for more advanced PRI services. It includes support for Flexible Alerting (equivalent to the Flexible Alerting provided in the V5.0 Network PRI version). It includes a developer's guide and sample applications that show how to go beyond the built-in features of the ISDN Primary Rate Interface version. There are sample applications that extend the IRAPI library to get or send additional Information Elements (IEs), exchange additional information messages with the switch, and use the General PRI library to more flexibly exchange messages with the switch.

Due to the potential for signalling errors or fraud, and the development expertise required, this package is limited to Lucent Technologies, AT&T, or others with a need for this level of control. Development organizations within these companies may use the Advanced PRI version to develop other add-on applications that meet specific customer needs.

Universal Call ID (UCID) is available using ISDN-PRI. UCID provides a unique identifier (8-byte binary or 20-character ASCII) for every call in a DEFINITY Call Center customer environment. UCID allows for uniform data-tracking for all call-related data in a Call Center, regardless of the system. Also available is the User-to-User Information element (UUI), which allows for the customer to specify additional information to be passed in external function arguments. For more information on these features, see *INTUITY™ CONVERSANT® System Version 7.0 Application Development with Advanced Methods*, 585-313-203.

Software and Hardware Requirements

The PRI feature package requires that the INTUITY CONVERSANT System V7.0 ISDN Primary Rate Interface package is installed and operational.

This feature package also requires at least one E1 circuit card or T1 circuit card be installed.

ISDN-PRI is supported at the E1-rate on AYC21 circuit cards when using separately purchased protocol converters (by ACULAB Ltd.) for DASS-2 and DPNSS protocols in the UK. A maximum of three AYC21 cards may be used at the E1 rate, each supporting a 30B+D configuration.

[Table 5-10](#) lists primary rate interface capacities.

Table 5-10. Primary Rate Interface Capacities

Item	Max. Number	Notes
Data channels on AYC21, per system	5	For example, up to five 23B+D interfaces are supported when at least four use an AYC21.
Supported voice channels per system at the T1 rate	119	119 B-channels are supported when using 1 D-channel (for example, 119B +D) OR 115 B-channels are supported when using five 23B+D interfaces Depends on the capability of the switch. Not all switches support all PRI configurations.

Continued on next page

Table 5-10. Primary Rate Interface Capacities — Continued

Item	Max. Number	Notes
Supported voice channels per system at the E1 rate	90	One, two, or three 30B+D interfaces are supported.
SSP card required to support PRI	1 or more	An SSP is required for voice coding or playback with all E1/ T1 boards.



NOTE:

PRI on the DEFINITY G3i supports a maximum of 95B+D interfaces and 23B+D. PRI on 5ESS requires a separate D-channel for each T1 (for example, five 23B+D can be used).

For more information on ISDN PRI, see *INTUITY™ CONVERANT® System Version 7.0 Communication Development*, 585-313-202. For more information about Advanced PRI, consult a Lucent Technologies sales representative.

Script Builder

The Script Builder feature package is a menu-driven application generator for the system. With it, you can create applications that run on the V7.0 system. You can create applications with Script Builder using intuitive windows, forms and keys.

Script Builder is targeted toward application designers that are familiar both with the specific application and with programming concepts. Specifically, the designer should be familiar with high-level programming methods used in languages such as BASIC, COBOL, Pascal, and C language. Experience with a database application such as ORACLE, dBASE, LOTUS 1-2-3, or ACCESS is helpful. Although not required, it is helpful to have some basic knowledge of the UnixWare operating system. A basic knowledge of telephony is also beneficial when working with the system and Script Builder.

Script Builder enables you to access Dial Pulse Recognition (DPR) through its application menu if you have purchased the optional DPR feature package. Script Builder also allows you to select intelligent call transfer when the Line Side E1 or Line Side T1 is assigned to the AYC21.

Software and Hardware Requirements

This feature package requires that the INTUITY CONVERSANT System V7.0 Script Builder package be installed and operational. No additional hardware is required.

There are many subtle application capacities that provide limits or constraints while performing application development using Script Builder. These capacities are listed in [Table 5-11](#).

Table 5-11. Script Builder Application-Related Capacities

Item	Maximum Number	Notes
Characters in application name	11	
Characters in field names	24	
Applications on system	Restricted only by disk space	
Call data events per application	100	For numeric or 12-character fields
	50	For 7-character strings (telephone numbers)
	33	For 8-character dates
	25	For 14-character credit card numbers
	14	For 24-character names
Transaction statements	1000	Action steps (for example, "Answer Phone," "Announce only") recommended; not currently enforced in software
Script labels per application	2400	Label maximum per application
Length of comment line (characters)	50	
Arguments passed between external function and transaction	5	
Label name length (characters)	20	
Digits accepted for a prompt and collect action step	64	Either touch tones or spoken
Tries to collect in prompt and collect	9	

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Table 5-11. Script Builder Application-Related Capacities — Continued

Item	Maximum Number	Notes
Initial time-out in prompt and collect	60 sec	
Interdigit time-out in prompt and collect	60 sec	
Cases of correct input within the non-standard checklist of a prompt and collect	12	
Touch tones accepted for call transfer	16	Minimum is 1
Channels that can simultaneously use background feature	48	See <i>INTUITY™ CONVERSANT® System Version 7.0 Application Development with Script Builder</i> , 585-313-206, for additional information
Digits used in phone number of call bridge	24/16	T1 (all types) has a limit of 15 digits for outdialing; minimum is 1
Digits used in DNIS number passed from central office	16	Incoming DNIS limited to 15 for PRI; configured in switch administration screens; see <i>INTUITY™ CONVERSANT® System Version 7.0 Administration</i> , 585-313-501
Arguments passed between applications using “Execute External Action”	10	
Data space available per channel using “Execute External Action,” in bytes	552	Characters used in argument passing
External function names length (characters)	12	
Phrase length for coding messages, in seconds	999	If 0 is specified, coding continues indefinitely
Phrases coded per system	48,000	

Continued on next page

Table 5-11. Script Builder Application-Related Capacities — Continued

Item	Maximum Number	Notes
Talkfiles coded and stored	256	
Initial time-out to detect speech during a code session, in seconds	30	Minimum is 0; default is 5
Completion time-out to detect silence during a code session, in seconds	30	Minimum is 0; default is 5

For more information on this feature package, see *INTUITY™ CONVERSANT® System Version 7.0 Application Development with Script Builder*, 585-313-206.

Script Builder FAX Actions

The Script Builder FAX Action feature package allows you to send faxes to callers of system applications. You can also receive faxes from system application callers.

The Script Builder FAX Actions package is easy to use and can be incorporated into any Script Builder application.

FAX Actions allows you to:

- Transmit a stored graphic image to the caller.
- Transmit dynamically created text information to the caller. (Note that you can have more than one text-to-fax conversion operating at the same time, but performance will decline. More than two simultaneous conversions may not be recommended, depending on the number of channels available.)
- Attach a customized cover page to the fax information requested by the caller.
- Receive a fax from the caller.
- Develop applications that send faxes to callers or receive faxes from callers quickly and easily.
- Integrate fax capabilities into existing INTUITY CONVERSANT applications.
- Automatically retry numbers if the called fax machine is busy.
- Schedule the delivery time for each FAX independently
- Support both Tip/Ring and E1/T1 callers.
- Transmit multiple faxes to callers.

Software and Hardware Requirements

To use the Script Builder FAX Actions package, you will need:

- A functional V7.0 system that can answer incoming calls
- Script Builder
- INTUITY CONVERSANT FAX Set, which includes the Script Builder FAX Actions for Lucent Technologies Cards
- Either a speech and signal processing (SSP) card or a Tip/Ring card

NOTE:

The V7.0 system will not support FAX Attendant. If you currently have FAX Attendant installed, you may upgrade to V7.0, but you must remove the FAX Attendant software package from your system.

The actions that come with Script Builder FAX Actions work like any other Script Builder actions that appear in the Script Builder Actions List. Use the actions to incorporate fax functionality into your system application. You use the Script Builder FAX Actions administrative windows to load the graphical images your application transmits to the caller. Text files can be created in advance or “in real-time” based upon caller input, if desired, and then transmitted to the caller. Faxes can be received from callers and placed into any directory specified by your application.

Some Uses for Script Builder FAX Actions in Your Applications

The following list suggests how to use Script Builder FAX Actions in various applications:

- **Company brochures**

Callers interact with an application to request product brochures by fax transmission. The product brochures may be sent immediately or at a later time when the telephone rates are lower. They may also be sent on the current call if the caller is calling from a fax machine.
- **Bank account records**

Callers enter an account number and then receive a fax of that account status including a list of the last 20 checks that were cleared through the account. Callers can fax their loan application into the system.
- **Real estate information**

Prospective home buyers notice a sign in the front yard of a house they are interested in purchasing. They call the number on the sign, enter the house identification code, then receive a fax of the house data sheet including a floor plan, asking price, and the name of the real estate agent.
- **Company savings plan records**

Employees call the automated administrator of their company savings plan and request the most current account statement. They can then get their latest account statements immediately via fax, instead of waiting until the next quarterly statement.
- **Medical records**

Physicians call a single telephone number and listen via text-to-speech (TTS) to up-to-date patient records supplied by the hospital, pharmacy, or laboratory. They can then have the medical records faxed to them in their automobile or office.

- Customer service information

Customers call an application that allows them to receive faxes about product/system maintenance issues and the resolutions to those issues. They can listen to the issue resolutions via audiotext or TTS or can request a fax of the issue resolution. If they want immediate attention, they can transfer to a customer service agent.

- Hotel/conference services

A hotel simultaneously hosting two industry conferences can provide an automated service to organizers of both conferences. These services allow conference attendees to automatically register and pay for the conference, receive a fax of their confirmed reservation, and receive a fax of a map that provides instructions on how to get to the hotel. The service also allows attendees to hear conference agendas and descriptions of technical sessions, receive faxes about both conferences, register for technical tutorials, receive a faxed registration confirmation, and listen to a replay of the conference keynote speech which is automatically added to their room charge.

- Tax form distribution

Corporate and individual tax payers call into an application that allows them to retrieve tax forms and directions for their use. Callers may also leave their completed tax form on the system.

- Callers queued in ACD

Callers who reach a service bureau are placed in an automatic call distributor (ACD) queue awaiting the availability of an organization representative. While in the ACD, callers listen to information about new products and services and can elect to receive information about these products and services via fax.

- Travel/airline reservations

An airline or travel agency offers customers the option of receiving a fax of all flights that are consistent with their travel needs. Once a reservation is made, the customer can receive a faxed confirmation of the travel arrangement.

- News/wire service

Subscribers to a newspapers, other publications, and wire service can receive late-breaking news reports via fax by dialing a voice-response application.

- Brokerage services

A brokerage house offers its callers a voice-response service that allows the caller to buy and sell stocks and bonds. The caller receives a fax confirming the transaction.

- Shipping

Shipping company customers dial a voice-response application and request a fax with the latest status information about their shipping job and/or a duplicate of their bill of lading.

- Order entry/verification

A manufacturer's representative contacts a supplier via the supplier's voice-response application and requests several spare parts. The representative receives a fax with the order confirmation.

For more information on this feature package, see *INTUITY™ CONVERSANT® System Version 7.0 Application Development with Script Builder*, 585-313-206.

FAX_Zapper

FAX_Zapper is a user-modifiable, remotely administrable fax-back or fax-on-demand application. It uses Script Builder FAX Actions to allow callers to:

- Retrieve faxes of their choosing from a menu of available faxes — Faxes can be sent to any fax machine or directly to the caller, if calling from a fax machine.
- Send voice-annotated faxes to the system fax mailbox
- Reach an attendant
- Transfer to an extension
- Listen to an information announcement

The application can be modified from either the system console via Script Builder and the Script Builder FAX Actions administrative screens, or remotely using a telephone or fax machine. Remotely the user can:

- Retrieve faxes left by callers in the system mailbox
- Broadcast a fax to a broadcast mailing list
- Administer the broadcast mailing list
- Administer the main system prompts
- Change faxes available for callers to retrieve

The FAX_Zapper software is included in the INTUITY CONVERSANT FAX Set as a set of four diskettes.

Speech Recognition

Speech recognition is a capability that allows the system to recognize and respond to spoken voice responses from the caller. Certain applications require minimal or no touch-tone input for a number of reasons, including the fact that the caller does not have access to DTMF facilities (they are using a rotary dialed phone) or would rather utilize a more simple method of data input.

Because of the differences in speech recognition applications, there are two distinct methods of providing this feature package:

- WholeWord speech recognition
- FlexWord speech recognition

NOTE:

Previous system releases have offered speech technologies on a per system basis. V7.0 offers speech technologies on a *channels per system* basis. WholeWord and FlexWord can be added on a channels per system basis.

For more information on both WholeWord and FlexWord speech recognition, see *INTUITY™ CONVERSANT® System Version 7.0 Speech Development, Processing, and Recognition*, 585-313-201.

WholeWord Speech Recognition

WholeWord speech recognition provides a *whole word* method of recognition by comparing an entire spoken word with a statistical model of the same word spoken by thousands of different people.

NOTE:

All WholeWord speech recognition language packages now support connected digit recognition and barge-in.

WholeWord speech recognition is best suited to tasks where the required input is digits or “yes” and “no” responses. If WholeWord is not adequate, FlexWord speech recognition may be more appropriate to your needs. See [“FlexWord Speech Recognition”](#) below for more information on FlexWord. Both WholeWord and FlexWord input can be used in the same application.

WholeWord custom vocabulary packages are also available. If you have special words, such as “checking” or “savings,” that need to be recognized, Lucent Technologies can develop the software to recognize those requested words. Lucent Technologies collects speech samples of the requested words and creates statistical models of each word.

Standard vocabularies for WholeWord speech recognition are available in the following languages:

- Dutch
- Australian English
- UK English
- US English
- French
- Canadian French
- German
- Italian
- Japanese
- Brazilian Portuguese
- Latin-American Spanish
- Castilian Spanish

The V7.0 system supports up to two WholeWord languages. At any given point, input can be collected in one language or the other, but not in both simultaneously.

Software and Hardware Requirements

This software package requires that at least one of the speech recognition software packages, as well as at least one SSP card, be installed and operational. [Table 5-12](#) lists WholeWord speech recognition capacities.

Table 5-12. WholeWord Speech Recognition Capacities

Item	Max. Number	Notes
Supported languages in use per SSP	2	Any two WholeWord packages can be in use simultaneously
Channels of simultaneous speech recognition per SSP card without barge-in	15	SSP dedicated exclusively to WholeWord
Connected digits recognized (using standard recognition types) ¹	10	Application dependent; recognition accuracy improves significantly if fixed length is used

1. 24 connected digits are recognized, using standard recognition types, in *US English only*.

For more information on WholeWord speech recognition capacities, see Chapter 4, “Recognizing WholeWord Speech Input,” in *INTUITY™ CONVERSANT® Speech Development, Processing, and Recognition*, 585-313-201.

FlexWord Speech Recognition

FlexWord speech recognition provides a different method of constructing and recognizing speech vocabularies than WholeWord does. The FlexWord speech recognition package relies on phonemic recognition.

The English language is made of approximately 40 phonemes. These phonemes are units of sound that, when strung together in particular orders, form recognizable words. The word “sales,” for example, consists of four phonemes: “s-A-l-z.” The FlexWord speech recognition package operates on this principle so that custom vocabularies can be created much more easily and cheaply than if done with WholeWord technologies. Other languages are also available for FlexWord speech recognition.

FlexWord vocabularies are produced on a per-customer basis. Because FlexWord vocabularies are much easier and less time consuming to construct, it provides customers with a cost-effective method of designing large, customized vocabularies.

The system also incorporates FlexWord technology improvements, namely, word spotting and phrase screening, into the FlexWord Speech Recognition package. Word spotting provides the ability to search past extraneous speech input during recognition. Phrase screening provides the ability to reject speech that is outside the FlexWord vocabulary.

V7.0 provides enhancements to the FlexWord recognition feature by providing a FlexWord Toolkit feature package that enables customers to define application-specific vocabularies. For more information, see [“FlexWord Toolkit”](#) in this chapter.

FlexWord speech recognition is available in the following languages:

- US English
- French
- German
- Japanese
- Brazilian Portuguese
- Spanish

Software and Hardware Requirements

This software package requires that one of the Speech Recognition software packages, as well as at least one SSP card (for languages new to V7.0 and previously offered languages) and the ASP driver be installed and operational.

[Table 5-13](#) lists FlexWord speech recognition capacities.

Table 5-13. FlexWord Speech Recognition Capacities

Item	Max. Number	Notes
Words in a wordlist	500	
Wordlists	200	
Total words(phrases)	2000	If you have an application that requires more than 2000 words/phrases, contact your Lucent Technologies representative for assistance.
Channels of simultaneous speech recognition per SSP card	15	SSP card dedicated exclusively to FlexWord, without barge-in
Supported languages	1	One language package in use per system: US English, Japanese, French, German, Spanish

For more information on the FlexWord speech recognition feature package, see Chapter 5, "Recognizing FlexWord Speech Input," of *INTUITY™ CONVERSANT® Speech Development, Processing, and Recognition*, 585-313-201.

Synchronous Host Interface

The synchronous host interface is a combination of hardware and software designed to allow the transmission of information over the network. The host interface software allows up to 128 logical units (that is, 3278 Model 2 terminals) connected to it. The host interface card is typically linked to a front-end processor and uses either synchronous data link control (SDLC) or token ring data streams.

The host interface provides the ability for application to get data from the host computer through the use of a host DIP. The customer can develop methods to integrate the system OA&M with network management procedures provided by the host, such as NetView. Additional file transfer capabilities can be obtained with the Enhanced File Transfer feature package.

Software and Hardware Requirements

The software that must be installed are various combinations of the following Host Interface software packages:

- Link levels — The link level package(s) needed depend on the type of protocol that is being used and the type of interface card (hardware).
 - cleo_sib, Link Level — For use with the FIFO/SIB circuit card
 - cleo_tkrn, Link Level — For use with the Token Ring circuit card



NOTE:

The SDLC link level and Token Ring link level packages can be installed and operate on the same system.

- SNA levels (installable only *after* the link level package)
 - cleo_sna_128lu, SNA Level — For support of 128 LUs
- Feature Level 1 packages — The packages below, except for NetView Alarms (netman), are used in all SNA configurations. The NetView package is used only in NetView Alarms monitoring systems.
 - cleo_3270, Feature Level 1 — The CLEO 3270 feature package
 - cleo_netman, Feature Level 1 — The CLEO management utilities feature package
 - cleo_mgmt, Feature Level 1 — The CLEO NetView feature package
- Feature Level 2 packages (installable only *after* the feature level 1 packages)
 - cleo_hte, Feature Level 2 — The CLEO HLLAPI TE feature package
- System host packages (must be installed in this order) — These packages work with the CLEO software to give you host interface capabilities.
 - INTUITY CONVERSANT V7.0 Synchronous Host Interface
 - INTUITY CONVERSANT V7.0 3270 Enhanced File Transfer
 - INTUITY CONVERSANT V7.0 3270 NetView Alarm Interface
- Token Ring Hardware Support — To support the Token Ring circuit card (UnixWare 2.1.2 base software)

The hardware required for this feature package is one of the following combinations:

- One FIFO/SIB circuit card to support 128 LUs
- Two FIFO/SIB circuit cards to support dual host connectivity
- One Token Ring circuit card
- One or two FIFO/SIB circuit cards and one Token Ring circuit card

This feature package may also require the following additional equipment:

- RS-232-to-V.35 interface converter
- External modem
- RS-232 extension cable
- Other appropriate cables

[Table 5-14](#) lists host interface capacities.

Table 5-14. Host Interface Capacities

Item	Maximum Number	Notes
Host screen initial time-out	300 sec	Amount of time to wait for any screen to arrive from host (10 is recommended; default is 60)
Logical Unit availability time-out	300 sec	Time to wait for Logical Unit to become available while phone rings before answering
Unrecognized screen time-out	300 sec	Time to wait for valid screens to become available after GET_HOST (returns invalid screen)
Number of Logical Units	128	Requires 1 FIFO/SIB circuit card
Logins/passwords for host interface	128	Must have same amount as Logical Units specified
Shared host applications	8	Multiple applications sharing same host application
Host screen identifier length in characters when defining host screens	128	
Field length in characters when used in host screens	128	
Data passed per host screen, in bytes	988 - X	X = no. of fields defined (application dependent). Define a second screen if additional bytes required.

For more information on this feature, and other features that use host interface communications, see *INTUITY™ CONVERSANT® System Version 7.0 Administration*, 585-313-501.

T1 E&M Protocol

The T1 E&M protocol feature package provides both T1 and E1 signaling types and three addressing types:

- DTMF
- MF
- Dial pulse



NOTE:

The T1 E&M protocol feature package is no longer included with the E1/T1 driver.

Software and Hardware Requirements

This feature package requires that the INTUITY CONVERSANT System V7.0 T1 E&M package be installed and operational. It supports the AYC21 circuit card.

For more information on this feature and other features that use the T1 E&M protocol, see *INTUITY™ CONVERSANT® System Version 7.0 Communication Development*, 585-313-202.

Text-to-Speech

The Text-to-Speech (TTS) feature package allows you to include speech in an application using ASCII text as input. The text is converted to synthesized speech via the speech and signal processing (SSP) card. Speech is available only in US English, spoken in a male or female voice (male is the default). The text can be used for text retrieved from a database or host, or for prompts, and can be spoken in an application with synthesized speech. TTS application development is supported through the Script Builder and Voice@Work software packages.



NOTE:

Previous system releases have offered speech technologies on a per system basis. V7.0 offers speech technologies on a *channels per system* basis. Text-to-Speech can be added on a channels per system basis.

TTS is an alternative to using prerecorded phrases for voice response. It can be essential in some applications that must speak dynamic text (for example, names and addresses) and that have large amounts of speakable text (for example, electronic news). Without TTS, these types of applications can require many hours of recording and much disk space. These applications can also use TTS for static text for consistency.

The TTS technology can distinguish between different classes of text, such as zip codes and telephone numbers, and will pronounce the text string in the appropriate spoken format. When constructing speech, parameters such as pitch and duration are adjusted to make the outcome sound more natural. In addition, the ASCII text is preprocessed to expand abbreviations. For example, "Dr." would be expanded to "doctor" or "drive," depending on the context.

Software and Hardware Requirements

This feature package requires that the INTUITY CONVERSANT System V7.0 Text-to-Speech package, as well as an SSP circuit card, be installed and operational.

The maximum number of concurrent instances of TTS on one dedicated SSP card is 60.

For more information on this feature package, see *INTUITY™ CONVERSANT® System Version 7.0 Speech Development, Processing, and Recognition*, 585-313-201.

Voice@Work

The Voice@Work service creation environment allows you to design applications for the V7.0 system on a Windows-based PC, within a graphical user interface (GUI) that you can customize. This tool allows you to develop applications by specifying the details of interaction between the V7.0 system and its callers. Voice@Work features standard Windows operations, with right-click menus and enhanced cut/copy/paste capabilities.

The following are examples of parts of an application that you can define and implement with Voice@Work:

- The greeting heard by callers when connecting with a service
- The menu of options offered
- The way callers are prompted for credit card numbers and other pertinent information
- The amount of time to wait for caller responses
- The relevant databases that need to be accessed

In addition, you can develop a full range of interactive voice response services including banking by phone, processing insurance claims, paying bills, purchasing tickets, shopping by catalog, and registering for classes.

Voice@Work includes a set of tools that allow you to design, edit, test, simulate, generate, transfer, and install the applications. In addition, these tools also let you diagnose and debug your applications.

Voice@Work feature package enables you to do the following:

- Create applications on your Windows-based PC, instead of performing application development on your system, reducing the need to dedicate your system to application development.
- Develop complex applications easier and faster by creating subroutines and menus.
- Test call flows and hear what callers will hear if you have recorded speech.
- Use context-sensitive and online help.
- Share application resources with other developers.
- Access remote databases in applications.
- Insert TAS code into your application “as is.”
- Access the Enhanced Basic Speech and Text-to-Speech features.
- Access the WholeWord and FlexWord languages.



NOTE:

Applications developed with Voice@Work cannot be loaded into Script Builder. However, you can bring up the speech for a Voice@Work application in Script Builder. Note that Voice@Work does allow certain features that do not work in Script Builder, such as special characters.

Hardware and Software Requirements

This section includes all necessary hardware and software requirements, as well as performance issues, and a list of optional equipment.

Hardware Requirements for PC

The following hardware is required for installation and operation of Voice@Work:

- VGA monitor (or better)
- Microsoft-compatible mouse
- Pentium personal computer (or equivalent) — See [Table 5-15](#) for minimum and recommended capacities.
- 30-Mbyte free hard-disk space — The required amount of available disk space depends on the number and complexity of the applications you plan to develop on your personal computer and whether or not you plan to record speech. The entire Voice@Work software package requires 10-Mbyte of space on the hard drive. Plan for at least 10-Mbyte of additional free space available for the applications you develop. You should plan on considerably more disk space than previously mentioned above if you plan to record speech. For help on determining the hard drive requirements for your application, contact the Technical Support Center.
- CD-ROM drive, any speed

Table 5-15. Minimum and Recommended PC Requirements

Operating System	Processor		RAM	
	Minimum	Recommended	Minimum	Recommended
Windows NT 4.0	90 MHz	200 MHz	32 Mb	64 Mb
Windows 95	90 MHz	166 MHz	16 Mb	32 Mb

Software Requirements

Your personal computer must have the following software installed:

- Voice@Work Version 2.1
- Microsoft Windows 95 or Microsoft Windows NT 4.0

Optional Equipment

This section includes information about equipment for recording speech and for transferring applications over a network.

- Sound Blaster compatible card

The sound card allows you to listen to speech that you record with the Voice@Work service creation environment. You can use this speech during simulation, as well as on the system. You can run Voice@Work without a sound card; however, you will not be able to record or listen to speech during the simulation mode.

NOTE:

Speech that you record may not have the fidelity of the professionally recorded speech available from Lucent Technologies. If you are interested in professionally recorded speech, contact your local Lucent Technologies account team.

- Microphone

Although any microphone is sufficient for recording speech with the Voice@Work, the quality of the microphone you choose dramatically affects the fidelity of speech you record with Voice@Work.

- Speaker

Although any speaker is sufficient for listening to recorded speech with the Voice@Work, the quality of the speaker you choose affects the fidelity of recorded speech you will hear with Voice@Work.

- Microsoft-standard networking hardware and software and TCP/IP stack for transferring files to the target CONVERSANT
- Digital-audio editing software

Application-Related Capacities

There are many subtle application capacities that provide limits or constraints while performing application development using Voice@Work. These capacities are listed in [Table 5-16](#).

Table 5-16. Voice@Work Application-Related Capacities

Item	Maximum Number	Notes
Characters in application name	8	
Characters in field names	any length	Make only as long as is needed to be useful
Applications on system	Restricted only by disk space	
Call data events per application	100	For numeric or 12-character fields
	50	For 7-character strings (telephone numbers)
	33	For 8-character dates
	25	For 14-character credit card numbers
	14	For 24-character names
Length of node name	any length	Make only as long as is needed to be useful
Arguments passed between external function and transaction	5	
Digits accepted for a prompt and collect action step	64	Either touch tones or spoken
Tries to collect in prompt and collect	5	
Initial time-out in prompt and collect	60 sec	
Interdigit time-out in prompt and collect	60 sec	
Touch tones accepted for call transfer	30	The number is limited by the Tip/Ring card, which accepts a maximum of 30

Table 5-16. Voice@Work Application-Related Capacities — Continued

Item	Maximum Number	Notes
Channels that can simultaneously use background feature	48	See <i>INTUITY™ CONVERSANT® System Version 7.0 Application Development with Script Builder</i> , 585-313-206, for additional information
Digits used in phone number of call bridge	24/16	T1 (all types) has a limit of 15 digits for outdialing; minimum is 1
Digits used in DNIS number passed from central office	16	Incoming DNIS limited to 15 for PRI; configured in switch administration screens; see <i>INTUITY™ CONVERSANT® System Version 7.0 Administration</i> , 585-313-501
Arguments passed between applications using “Execute External Action”	10	
Data space available per channel using “Execute External Action,” in bytes	552	Characters used in argument passing
External function names length (characters)	12	
Phrase length for coding messages, in seconds	999	If 0 is specified, coding continues indefinitely
Phrases coded per system	48,000	
Talkfiles coded and stored	256	
Initial time-out to detect speech during a code session, in seconds	30	Minimum is 0; default is 5
Completion time-out to detect silence during a code session, in seconds	30	Minimum is 0; default is 5

Requirements and Specifications

6

Overview

This chapter provides information on the requirements and specifications that each V7.0 system requires for proper operation.

These requirements include:

- Platform specifications including:
 - Power requirements
 - Space requirements
 - Environmental considerations
- Telephone network characteristics
 - Tip/Ring telephony interface specifications
 - Digital telephony interface specifications
- Data communication characteristics

Purpose

The purpose of this chapter is to present the requirements and specifications for each platform and telephone network and to describe data communications characteristics.

Platform Specifications

This section presents the following specifications:

- Power requirements for platforms, printers, and monitors
- Space requirements
- Environmental specifications, including temperature and humidity requirements

Power Requirements

This section describes the power requirements for each multi-application platform (MAP). Certain power cabling and requirements are standard across all platforms:

- Each MAP, modem, and printer should be located near a power receptacle.
- The AC power output receptacle on the back of each unit is to be used *only* for a monitor. Never plug any other device into this receptacle.
- Communication cables must be kept separate from power cables. Installation of communication and power cables must be in accordance with National Electrical Codes (NEC) and country-specific requirements.

[Table 6-1](#) lists the power that must be available for each MAP/100C, MAP/100P, MAP/40P, or MAP/5P.

Table 6-1. Power Requirements for MAPs

Attribute	MAP/100C	MAP/100P	MAP/40P	MAP/5P
Volts AC (VAC)	110-130 +/- 5%	100–240 VAC Auto Sensing	115-230 Auto Sensing	100-220
Volts DC (VDC)	-48			
Hertz (Hz)	60	50-60	50-60	50-60
Phase	Single	Single	Single	Single
Amps (US)	20AC 25DC	12 (fused)	4.5A	3A
AMPS (International)		6.3 (fused)		
Input cords	NEMA ¹ 5–15P plug; 3 m (9 ft) long	NEMA 5–15P plug; 3 m (9 ft) long	NEMA 5–15P plug; 3 m (9 ft) long	NEMA 5–15P plug; 3 m (9 ft) long
Unit input receptacles	N/A	IEC-320 inlet	IEC-320 inlet	IEC-320 inlet
Maximum Power Output	600W	430W	350W	200W
Heat Dissipation	2500 BTU	2000 BTU	1200 BTU	700 BTU

1. National Electrical Manufacturer's Association

[Table 6-2](#) lists the power that must be available for each optional printer and monitor:

Table 6-2. Power Requirements for Printer and Monitor

Attributes	Printer	Monitor
Volts AC (VAC)	115 VAC +/- 5%	110–240 VAC auto sensing
Hertz (Hz) (power)	50–60	50–87 Hz
Phase	Single	Single
Amps (US)	4	3.0 (fused)
Amps (International)		1.5 (fused)
Input cords	NEMA ¹ 5–15P	NEMA 5-15P
Unit input receptacles	IEC-320 inlet	IEC-320 inlet

1. National Electrical Manufacturer's Association

Space Requirements

Table 6-3 details the space requirements for the MAP/100C, MAP/100P, MAP/40P, and MAP/5P, including the following considerations:

- The MAP/100C is rack-mounted in a standard, 24-inch frame.
- The MAP/100P can be rack-mounted in a 19-inch-panel commercial frame or can sit desk-side on the floor.
- The MAP/40P is a PC-sized unit used in a desk-side, tower configuration.
- The MAP/5P is a PC-sized unit used in a desk-side, mini-tower configuration.

Table 6-3. Space Requirements for MAPs

Platform	Weight	Height	Width	Depth
MAP/5P	13 kg (29 lbs)	41 cm (16 in.)	28 cm (11 in.) with stabilizing feet	46 cm (18 in.)
MAP/40P	20 kg (45 lbs)	44.5 cm (17.5 in.)	33 cm (13 in.) with stabilizing feet	53.4 cm (21 in.)
MAP/100P Deskside unit	~45.4 kg (~100lb)	48.3 cm (19 in.)	30.5 cm (12 in.)	55.9 cm (22 in.)
MAP/100P Rack mount	~36 kg (~80 lb)	30.5 cm (12 in.)	48.3 cm (19 in.)	55.9 cm (22 in.) ¹
MAP/100C	63 kg (140 lbs)	61 cm (24 in.)	57.4 cm (22.6 in.)	45.7 cm (18 in.)

1. Add 7.6 cm (3 in) to accommodate rear chassis cable support bracket. If required, add 10.2 cm (4 in) to accommodate 356B adapter and mounting clip.

Environmental Considerations

Locate each of the platforms in an area able to maintain the temperature and humidity requirements shown in [Table 6-4](#).

Table 6-4. Temperature and Humidity Requirements

Platform	Operating State		Nonoperating State	
	Temperature	Humidity	Temperature	Humidity
MAP/5P	+10 to +35°C (+50 to+95°F)	20 to 80%, noncondensing	-20 to +60°C (-4 to+140°F)	20 to 80%, noncondensing
MAP/40P	+10 to +35°C (+50 to+95°F)	20 to 80%, noncondensing	-20 to +60°C (-4 to+140°F)	20 to 80%, noncondensing
MAP/100P	+10 to +38°C (+50 to+100°F)	5 to 80%, noncondensing	-40 to +60°C (-40 to+140°F)	5 to 95%, noncondensing
MAP/100C	+10 to +38°C (+50 to+100°F)	—	-40 to +60°C (-40 to+140°F)	5 to 92%, noncondensing

Telephone Network Characteristics

[Table 6-5](#) details the general telephone network characteristics for the V7.0 system.

Table 6-5. Telephone Network Characteristics for V7.0 System

Attribute	Characteristic
Telephone network connections	<ul style="list-style-type: none"> ■ MAP/100P and MAP/100C: <ul style="list-style-type: none"> — 90 maximum transactions when system is all E1 — 96 maximum transactions when system is all T1 — Telephone network connections not used for transactions are available for bridging ■ MAP/40P: <ul style="list-style-type: none"> — 60 maximum transactions when system is all E1 — 48 maximum transactions when system is all T1 — Telephone network connections not used for transactions are available for bridging
Connectors	Analog: RJ21X or RJ25C Digital: AYC21 — RJ48C modular or 75 Ohm BNC Coaxial
Lines	Analog — (loop start) signaling Digital E1 — (CAS) signaling Digital T1 — (E&M) signaling Line Side E1 Line Side T1 Digital ISDN — ISDN PRI Layer 1 signaling

Tip/Ring Telephony Interface Specifications

Table 6-6 through Table 6-11 detail the various Tip/Ring telephony interface specifications.

Table 6-6. Tip/Ring Circuit Card General Specifications

Attribute	Value
Type of service	Loop-start POTS
Loop current detection	15 mA minimum
Ringing voltage detection	88 VRMS at 20 Hz (nominal)
Ringer equivalence for Tip/Ring	1.0 B for AYC10
Wink detection ¹	80–800 msec
Flash duration ¹	40–1550 msec
Register recall ¹	Timed break/earth recall
Answer delay ¹	0–10 rings

1. These attributes are adjustable through analog switch interface (ASI) packages.

For more information on changing these attributes via an analog interface screen, see Chapter 5, “Switch Interface Administration,” in *INTUITY™ CONVERSANT® System Version 7.0 Administration*, 585-313-501.

Table 6-7. Tip/Ring Circuit Card DTMF Tone Detection Specifications

Attribute	Value
Digits	0–9, asterisk (*), pound sign (#), A–D
Amplitude ¹	+1 to -30 dBm total power (nominal tones)
On/off timing	80 msec minimum on, 23 msec off
Gaps bridged	23 msec
Signal/noise ratio	23 dB (nominal tones at -19 dBm total power)
Twist	+4 to -8 dB (high to low tone)
Frequency deviation	+/-1.5%

1. This attribute is adjustable through analog switch interface (ASI) packages.

Table 6-8. Tip/Ring Circuit Card Transmission Level Plan

Attribute	Value
Input gain	0 dB fixed
Output gain	0 dB fixed
IVOL (card voice coding only)	Input gain selectable from -9 to +12 dB
OVOL (card voice playback only)	Output gain selectable from -9 to +12 dB

Table 6-9. Tip/Ring Circuit Card DTMF Addressing Specifications

Attribute	Default Value
Digits	0–9, asterisk (*), pound sign (#), A–D
On/off timing ¹	100 msec on, 60 msec off
Frequency	Precise tones
Twist ¹	0 dB
Amplitude ¹	-6 dBm per frequency

1. These attributes are adjustable through analog switch interface (ASI) packages.

Table 6-10. Tip/Ring Circuit Card Dial Pulse Addressing Specifications

Attribute	Default Value
Break time ¹	60 msec
Make time ¹	40 msec
Inter-digit time ¹	600 msec

1. These attributes are adjustable through analog switch interface (ASI) packages.

Table 6-11. Tip/Ring Circuit Card Default Progress Tone Detection Specifications

Tone	Frequency¹ (Hz)	Amplitude¹ (dBm)	S/N Ratio (dB)	Maximum Twist (dB)	Frequency Deviation (%)	Cadence¹
Dial tone	350 + 440	+1 to -24	55	+3	+/-0.5	Present for 1 sec
Recall dial tone (stutter dial tone)	350 + 440	+1 to -24	55	+3	+/-0.5	3 cycles of 120–150 msec on, 120–150 msec off, followed by 1 sec on
Ringback	440 + 480	+1 to -24	55	+3	+/-0.5	1000–2000 msec on, 3000–4000 msec off
Busy	480 + 620	+1 to -24	55	+3	+/-0.5	60 IPM, 350–500 msec on, 500–650 msec off
Reorder (Fast busy)	480 + 620	+1 to -24	55	+3	+/-0.5	120 IPM, 180–250 msec on, 250–350 msec off

1. These attributes are adjustable through analog switch interface (ASI) packages.

See Chapter 2, “Analog Telephony Interfaces” in *INTUITY™ CONVERSANT® System Version 7.0 Communication Development*, 585-313-202, for more information on Tip/Ring circuit card transmission level plans.

See Chapter 5, “Switch Interface Administration,” in *INTUITY™ CONVERSANT® System Version 7.0 Administration*, 585-313-501, for more information on how to change Tip/Ring circuit card attributes via the Analog Switch Interface (ASI) packages.

Digital Telephony Interface Specifications

Table 6-12 through Table 6-17 detail the various digital interface specifications for all T1/E1 protocols.

Table 6-12. Digital Telephony Interface General Specifications

Attribute	Specifications for AYC21 Circuit Card
Physical connector	8-pin modular RJ-48C and BNC jacks
FCC registration	AS5USA-24091-XD-E
Safety approval	<ul style="list-style-type: none"> ■ UL 1459 type approval for US markets ■ CSA 22.2 type approval for Canadian markets ■ EN 60950 type approval for European markets ■ AS3260 and TS-001 for Australian markets
Signal regeneration	CSU required over 200 meters (655 feet)
Loopback capability	CSU required for remote capability
TLP at DS-1 interface	0 ELP, 0 DLP
TLP at TDM interface	0 ELP, 0 DLP
Call progress tone frequency ¹	Precise tone frequencies can be tuned to accommodate local standards
Call progress tone generation levels ¹	-10 dBm total (nominal), but can be tuned through digital switch interface packages
Call progress tone timing ¹	Ringing: 2 sec on, 4 sec off Busy: 0.5 sec on, 0.5 sec off Can be tuned through digital switch interface packages
Call progress tone detection ¹	Supported with Line Side DEFINITY® protocol (either at T1 or E1 transmission rate)
DS-1 timing source	Slave to DS-1 source (loop timed)
DS-1 timing (free running)	Stratum 4
Suggested CSU types	Paradyne (PEC 21581-ESF), Verilink 551VST List 2, or equivalent

Continued on next page

Table 6-12. Digital Telephony Interface General Specifications — Continued

Attribute	Specifications for AYC21 Circuit Card
Supported configurations	Tie trunk (robbed-bit E&M), E1 (CAS), ISDN-PRI (E1/T1), Line Side E1, Line Side T1
Dual tone multifrequency (DTMF) output timing	70 msec on, 70 msec off, but is tunable through digital switch interface packages
DTMF output levels	-8 dBm per frequency (nominal), but is tunable through digital switch interface packages
DTMF receivers	LATA Switching Systems Generic Requirements (LSSGR) compatible. Note: If DTMF muting is on for a call, the DTMF receiver's minimum on time for detection is increased and may not meet LSSGR requirements. DTMF muting does not impact LSSGR. Compatibility of DTMF receivers during call setup (S-digits). Is tunable through digital switch interface packages.
Number of receivers: T1	24 (one per DS-0 channel)
Number of receivers: E1	30 (one per B-channel)

1. These attributes are adjustable via the digital switch interface (DSI) package.

Table 6-13. T1 Telephony Interface Specifications for T1 E&M Type Configurations Only

Attribute	Specifications for AYC21
DS-1 framing	D4
DS-1 line coding	AMI-ZCS
Protocol	Robbed-bit (4-wire) E&M
Alerting in/out	Wink/wink
Wink generation	230 msec default (Selectable: 20–2500 msec)
Wink detection range	100–350 msec
Addressing (outgoing)	DTMF (touch tone) or MF
DTMF output timing	70 msec on, 70 msec off
DTMF output levels	-8 dBm per frequency (nominal)
Number of digits	16-digit maximum
Number of digits for outdialing	15-digit maximum
Addressing (incoming)	DTMF (touch tone) or MF
DTMF receivers	LSSGR compatible
Number of receivers	24 (one per DS-0 channel)
Number of digits (DNIS)	Will wait for up to 15 digits (selectable) Also can be provisioned not to wait for digits
Initial digit timer	Will wait up to 4 seconds for first digit (can be provisioned not to wait for digits)
Interdigital timer	Will wait up to 2 seconds between digits
Audible ring starts	As soon as selected number of digits is received, or when one of the above timers expire (whichever occurs first)
DNIS capacity	0–16 digits
ANI capacity	Not supported
Transfer capability	Not supported

Table 6-14. Digital Telephony Interface Specifications for ISDN-PRI Type Configurations

Attribute	Specifications for AYC21
DS-1 framing	ESF for T1 rate, CEPT for E1
DS-1 line coding	<ul style="list-style-type: none"> ■ B8ZS (with ESF framing only) ■ HDB3 (with CEPT framing only)
B-channel capacities ¹	23 B+D per board for T1, 30 B+D per board for E1
D-channel capacities	Multiple D-channels are supported up to the maximum number of E1/T1 boards (5 channels for 5 T1 boards, 30 channels for E1 boards)
Interface ID	1 (for card with a D-channel, not selectable) 2–5 (for card without a D-channel)
DNIS capacity	0–15 digits
ANI capacity	0–15 digits
D-channel backup	Not supported
Transfer capability	Not supported

1. These configurations are switch dependent as not all switches support all configurations.

See Chapter 3, “Digital Telephony Interfaces,” in *INTUITY™ CONVERSANT® System Version 7.0 Communication Development*, 585-313-202, for additional information on T1 telephony interfaces.

Table 6-15. E1 (AYC21) Telephony Interface Specifications

Attribute	Specification	Notes	ITU No. ¹
Physical connector	<ul style="list-style-type: none"> ■ RJ-48C modular jack with shielded connector shell OR <ul style="list-style-type: none"> ■ 2 75-Ohm BNC jacks 	Receive signal in: pins 1 & 2 Transmit signal out: pins 4 & 5 Connector choice is switch-selectable on AYC21	
Bit rate line coding	2.048 Mbits/second		G.703
Line coding	HDB3		G.703
Framing	256 bits grouped in 32, 8-bit timeslots	16-frame multiframe	G.704
CRC	CRC-4	May be enabled or disabled by the user to match network equipment	G.704
Frame alignment			G.705 G.706
Alarm conditions	Loss of signal and loss of framing	Supports remote alarm indication (RAI)	G.704
Signaling channel	CAS or 1 ISDN-PRI D-channel	In timeslot 16	
Voice channels	30 channels	64 Kbits/second each	
PCM voice encoding	A-law or mu-law	Selectable by user	

1. International Telecommunications Union number

For additional information on T1 telephony interfaces, see Chapter 3, "Digital Telephony Interfaces" in *INTUITY™ CONVERSANT® System Version 7.0 Communication Development*, 585-313-202.

Table 6-16. E1 (CAS) Telephony Interface Specifications

Attribute	Specification	Notes
Line signaling	System R2	Compatible with ITU Q.421
Register signaling	Multifrequency-compelled signaling (supports forward groups I, II, III and backward groups A, B, C)	Compatible with ITU Q.440
Called number (DNIS)	Maximum number of 16 digits received	Expected number of DNIS digits is settable by the user
Calling number (ANI)	Maximum number of 16 digits received or translated	Programmable to request/ignore ANI from network Programmable to send originating ANI if requested by the network on a per-system or a per-call basis
Protocol variations	Table driven line and register signaling	Supports country-specific variations of ITU Q.421 and Q.440

For additional information on T1 telephony interfaces, see Chapter 3, "Digital Telephony Interfaces," in *INTUITY™ CONVERSANT® System Version 7.0 Communication Development, 585-313-202*.

Table 6-17. Digital Telephony Interface Specifications for Line Side Configurations

Attribute	Specification for AYC21
DS-1 framing	CEPT for E1 D4 for T1
DS-1 line coding	HDB3 for E1 ZCS for T1
Wink-disconnect interval	300 msec default (selectable within a range of 10–2500 msec)
Dial-tone delay	1000 msec default (selectable within a range of 20–5100 msec)
Switch-hook-flash duration	700 msec default (selectable within a range of 10–2500 msec)
DNIS capacity	Not supported unless used with converse vector step (CVS) or ASAI
ANI capacity	Not supported unless used with CVS or ASAI
Transfer capability	Flash transfers supported

Data Communications Characteristics

[Table 6-18](#) details the data communications characteristics for the V7.0 system platforms.

Table 6-18. Data Communications Characteristics for V7.0 System Platforms

Attribute	Asynchronous	Synchronous
Ports	1-9	1-2
Ports available for host communication	1-2	1-2
Simultaneous host sessions (LUs)	N/A	0-128
Mode	Full duplex	Half/full duplex
Protocols	Xon/Xoff	3270 SNA <ul style="list-style-type: none"> ■ Token Ring ■ SDLC
Data rates	To 9600 bps	SDLC: 9.6k-56k bps Token Ring: 4/16 Mbyte
Interface	EIA-232C	EIA-232C

Documentation Guide



Overview

The System Description is designed to supplement all other documents in the V7.0 system set. This section provides information about the documentation that supports the V7.0 system.

Purpose

The purpose of this section is to refer you to the appropriate document for specific information on

- Installation and maintenance
- Alarms and log messages
- Administration
- Application design and development
- Speech and communication development
- Software tools

V7.0 Documentation Set Listing

Each document in the V7.0 set is listed in [Table A-1](#) and a brief description of each document is provided following the table.



NOTE:

All document titles begin with *INTUITY™ CONVERSANT® System Version 7.0*.

Table A-1. V7.0 System Documentation Set Listing

Title	Language	Document Number	Comcode
<i>System Description</i>	English	585-313-204	108178682
<i>New System Installation</i>	English	585-313-106	108197971
<i>MAP/100P Maintenance</i>	English	585-313-110	108178666
<i>MAP/100C Maintenance</i>	English	585-313-109	108178658
<i>MAP/40P Maintenance</i>	English	585-313-108	108178641
<i>MAP/5P Maintenance</i>	English	585-313-107	108178633
<i>Administration</i>	English	585-313-501	108231960
<i>System Reference</i>	English	585-313-205	108197914
<i>Application Design Guidelines</i>	English	585-310-670	107852345
<i>Application Design Guidelines</i>	French	585-310-670FR	107852352
<i>Application Design Guidelines</i>	Spanish	585-310-670SP	107852360
<i>Application Design Guidelines</i>	Brazilian Portuguese	585-310-670PTB	107852378
<i>Application Design Guidelines</i>	Dutch	585-310-670NL	107852386
<i>Application Design Guidelines</i>	Japanese	585-310-670JA	107852394
<i>Application Design Guidelines</i>	German	585-310-670DE	107852402
<i>Application Development with Script Builder</i>	English	585-313-206	108197922
<i>Application Development with Advanced Methods</i>	English	585-313-203	108178674
<i>Speech Development, Processing, and Recognition</i>	English	585-313-201	108231986
<i>Communication Development</i>	English	585-313-202	108173626

Continued on next page

Table A-1. V7.0 System Documentation Set Listing — Continued

Title	Language	Document Number	Comcode
<i>Using Voice@Work</i>	English	585-313-207	108198102
<i>CLEO Documentation Set</i>	English	585-310-907	407299072
<i>ORACLE Product Documentation Library</i>	English	585-310-920	108242819

V7.0 Documentation Set Descriptions

- *System Description*

Document number 585-313-204
 Issue 1.0
 April 1998

Provides a technical description of the V7.0 system. This document is intended primarily for sales and sales support organizations, administrators, product design organizations, and account executives. Other audiences include the Technical Service Center (TSC), training, and development.

Topics include: voice response basics, hardware, software, feature and feature package descriptions, requirements and specifications, and a documentation guide.

- *New System Installation*

Document number 585-313-106
 Issue 2.0
 April 1998

Describes procedures to install the MAP/100C, MAP/100P, MAP/40P, and MAP/5P platforms and peripherals, make connections, and perform initial administration and acceptance testing of the system. This document is intended primarily for on-site technical personnel who are responsible for installing the system and performing initial administration and acceptance testing.

Topics include: getting started (including a system installation checklist), assembling the computer, connecting peripherals, making cable connections and powering up, and completing the system installation.

Appendices include: troubleshooting procedures, cable connectivity, and returning defective hardware.

- *MAP/100P Maintenance*

Document number 585-313-110
Issue 1.0
April 1998

Provides a single source of information and procedures needed to maintain a MAP/100P platform. This document is intended primarily for the personnel responsible for installing the system and performing routine and scheduled maintenance. This book is also useful to the system administrator who wants to troubleshoot the system.

Topics include: getting inside the computer, installing or replacing circuit cards, replacing the hard disk drive and other components, installing base system software, INTUITY CONVERSANT system software, and optional feature system software.

Appendices include: system configuration, component ordering numbers, how to build a system, disaster recovery, and returning defective hardware.

- *MAP/100C Maintenance*

Document number 585-313-109
Issue 1.0
April 1998

Provides a single source of information and procedures needed to maintain a MAP/100C platform. This document is intended primarily for the personnel responsible for installing the system and performing routine and scheduled maintenance. This book is also useful to the system administrator who wants to troubleshoot the system.

Topics include: getting inside the computer, installing or replacing circuit cards, replacing the hard disk drive and other components, installing Tip/Ring distribution hardware, base system software, INTUITY CONVERSANT system software, and optional feature system software.

Appendices include: system configuration, component ordering numbers, how to build a system, disaster recovery, and returning defective hardware.

- *MAP/40P Maintenance*

Document number 585-313-108
Issue 1.0
April 1998

Provides a single source of information and procedures needed to maintain a MAP/40P platform. This document is intended primarily for the personnel responsible for installing the system and performing routine and scheduled maintenance. This book is also useful to the system administrator who wants to troubleshoot the system.

Topics include: getting inside the computer, installing or replacing circuit cards, replacing the hard disk drive and other components, installing Tip/Ring distribution hardware, base system software, INTUITY CONVERSANT system software, and optional feature system software.

Appendices include: system configuration, component ordering numbers, how to build a system, disaster recovery, and returning defective hardware.

- *MAP/5P Maintenance*

Document number 585-313-107
Issue 2.0
April 1998

Provides a single source of information and procedures needed to maintain a MAP/5P platform. This document is intended primarily for the personnel responsible for installing the system and performing routine and scheduled maintenance. This book is also useful to the system administrator who wants to troubleshoot the system.

Topics include: getting inside the computer, installing or replacing circuit cards, replacing the hard disk drive and other components, installing base system software, INTUITY CONVERSANT system software, and optional feature system software.

Appendices include: system configuration, component ordering numbers, how to build a system, disaster recovery, returning defective hardware, and MAP/5P platform alarms.

- *System Reference*

Document number 585-310-205
Issue 1.0
April 1998

An online help system providing information on troubleshooting and diagnosing problems associated with the INTUITY CONVERSANT system. This document is intended primarily for the on-site service technician and system administrators. Other audiences include Technical Service Organization (TSO) and helpline personnel.

Topics include: troubleshooting, diagnostics, common system procedures, and alarm and log messages.

- *Administration*

Document number 585-313-501
Issue 2.0
April 1998

(Formerly "Operations" and "Command Reference" documents in V5.0 documentation.) Provides ongoing administration, operations, and command reference information about the system. This document is intended primarily for the customer who uses the administrative interface screens and menus. Other audiences include field support, Technical Service Organization, Sales and Technical Response Center, and helpline personnel.

Topics include administration of: UNIX, the voice system, feature packages, switch interfaces, databases, and daily operations.

Appendices include a summary of commands and a listing of country switch packages.

- *Application Design Guidelines*

Available in English, French, Spanish, Brazilian Portuguese, Dutch, Japanese, and German. (See [Table A-1](#) for specific document and comcode numbers.)

Issue 1.0
December 1996

Provides introductory information to an end-user about the capabilities of the system and guidelines for designing a voice response application. This document is intended primarily for end-users who are new to the product. Other audiences include development, sales support, service support, and training.

Topics include: general considerations, caller inputs, system processes, outputs to callers, designing the transaction, and deploying the transaction.

- *Application Development with Script Builder*

Document number 585-313-206
Issue 1.0
April 1998

Provides detailed procedures for using the Script Builder feature to create application programs, including external functions that can be activated by Script Builder. This document is intended primarily for application developers who are responsible for creating and maintaining application programs. Other audiences include development, sales support, service support, and training.

Topics include: Script Builder overview, Script Builder user interface, Script Builder data management, defining the host interface, creating database tables, defining parameters, defining the transaction, using optional features, speech administration, application administration, and using advanced features.

Appendices include: sample application, enhanced basic speech formats, and developing language implementations.

- *Application Development with Advanced Methods*

Document number 585-313-203
Issue 1.0
April 1998

Serves as a reference for those who develop applications for the system using the TSM script level language and/or C-language, and provides information about designing software applications, processing speech, and writing programs that integrate the application and the generic software. This book is intended primarily for those who write application scripts. Other audiences include development, sales and service support, and training.

Topics include: application design and structure, TAS script instructions, data interface processes, IRAPI programming, and the message logger.

Appendices include: summary of TAS script instructions and C-library functions.

- *Speech Development, Processing, and Recognition*

Document number 585-313-201
Issue 2.0
April 1998

Serves as a reference for those who develop applications for the system using speech development features. This book is intended primarily for application developers. Other audiences include service support technicians, research and development teams, and marketing and sales groups.

Topics include: developing and editing speech, recognizing speech input, including WholeWord Speech Recognition, FlexWord™ Speech Recognition, and Dial Pulse Recognition, and how to put it all together.

Appendices include: enhanced basic speech formats, speech file formats, calculating O.S. index, Test-to-Speech formats, and advanced Text-to-Speech features.

- *Communication Development*

Document number 585-313-202
Issue 1.0
April 1998

Serves as a reference for those who are responsible for establishing the communication interface between the caller, administrators, and the system. This book is intended primarily for application developers. Other audiences include field support, Technical Service Organization (TSO), helpline personnel, and voice processing comarketers.

Topics include: analog telephony interfaces, digital telephony interfaces, the adjunct/switch application interface, converse vector step routing, call classification analysis, data network communications, and data network connectivity alarms.

An appendix contains transmission level adjustment information.

- *Using Voice@Work*

Document number 585-313-207
Issue 1.0
April 1998

Provides end-users with information about installing Voice@Work, creating call flow applications, generating the source code, and transferring the application to the target system. This document is intended primarily for application developers. Other audiences include field support and Technical Service Organization (TSO).

Topics include information on: menus and commands, palettes, globals, tools, nodes, and sharing resources.

Appendices include information on: icons, standard external functions, manipulating variables, and the Service Creation Installation (SCI) tool.

- *CLEO Documentation Set*

Document number 585-310-907
October 1997

Provides the following information:

- *Hardware Installation* — describes the steps involved in installing and configuring CLEO's PC/SIB board in an IBM AT-style 386.
- *Administration Guide* — explains the procedures for installing and configuring the product, installation troubleshooting, setting up system files, and monitoring and tracing program execution.
- *Common Service Verbs Programmer's Guide* — contains the information needed to incorporate CLEO's Common Service Verbs (CSV) API in C-language application programs.
- *3270 User's Guide* — describes product features, architecture, connectivity, configuration options, and the 3270 user interface.
- *HLLAPI Programmer's Guide* — provides information about writing transaction programs, testing and troubleshooting, HLLAPI functions, OIA image, and the hapi_c.h header file.
- *NetView User's Guide* — lists NetView commands and describes the network management API.

■ *ORACLE Product Documentation Library, Release 1.0.16*

Document number 585-310-920
1996

Provides the following documentation on CD-ROM:

- *Oracle7 Server Concepts, 7.3*
- *Oracle7 Server Administrator's Guide, 7.3*
- *Server Application Developer's Guide, 7.3*
- *Server SQL Reference Manual, 7.3*
- *Server Utilities Guide*
- *Server Messages, 7.3*
- *Server Reference*
- *PL/SQL User's Guide and Reference, 2.3*
- *Programmer's Guide to the Oracle Call Interfaces*
- *Programmer's Guide to the Oracle Pro*C/C++ Precompiler*
- *Programmer's Guide to Oracle Precompilers*
- *SQL*Plus User's Guide and Reference*
- *Oracle Network Manager Administrator's Guide, 2.3*
- *Oracle Network Product Troubleshooting Guide, 2.3*
- *Understanding SQL*Net, 2.3*

Glossary

Numerics

23B+D
23 bearer (communication) and 1 data (signaling) channel on a T1 PRI circuit card.

30B+D
30 bearer (communication) and 1 data (signaling) channel (plus framing channel 0) on an E1 PRI circuit card.

3270 interface
A link between one or more INTUITY™ CONVERSANT® machines and a host mainframe. In INTUITY CONVERSANT system documentation, the 3270 interface specifically means the link between one or more system machines and an IBM host mainframe.

47B+D
47 bearer (communication) and 1 data (signaling) channel on two T1 PRI circuit cards.

4ESS®
A large Lucent central office switch used to route calls through the telephone network.

A

AC
alternating current

ACD
[automatic call distributor](#)

AD
application dispatch

AD-API
application dispatch application programming interface

adaptive differential pulse code modulation
A means of encoding analog voice signals into digital signals by adaptively predicting future encoded voice signals. This adaptive modulation method reduces the number of bits required to encode voice. See also "[pulse code modulation](#)."

adjunct products

Products (for example, the Adjunct/Switch Application Interface) that the INTUITY system administers via cut-through access to the inherent management capabilities of the product itself; this is in opposition to the ability of the INTUITY CONVERSANT system to administer the switch directly.

Adjunct/Switch Application Interface

An optional feature package that provides an Integrated Services Digital Network-based interface between Lucent Technologies PBXs and adjunct processors.

ADPCM

[adaptive differential pulse code modulation](#)

ADU

[asynchronous data unit](#)

advanced speech recognition

A speech recognition ability that allows the system to understand WholeWord and FlexWord™ inputs from callers.

affiliate

A business organization that Lucent controls or with which Lucent is in partnership.

AGL

application generation language

alarm relay unit

A unit used in central office telecommunication arrangements that transmits warning indicators from telephone communications equipment (such as an INTUITY CONVERSANT system) to audio.

ALERT

System alerter process

alerter

A system process that responds to patterns of events logged by the "logdaemon" process.

American Standard Code for Information Interchange

A standard code for data representation that represents alphanumeric characters as binary numbers. The code includes 128 upper- and lowercase letters, numerals, and special characters. Each alphanumeric and special character has an ASCII code (binary) equivalent that is 1 byte long.

analog

An analog signal, such as voice or music, that varies in a continuous manner. An analog signal may be contrasted with a digital signal, which represents only discrete states.

ANI

[automatic number identification](#)

announcement

A message the system plays to the caller to provide information. The caller is not asked to give a response. Compare to "[prompt](#)."

API

Application programming interface

application

The automated transaction (interactions) among the caller, the voice response system, and any databases or host computers required for your business. See also "[application script](#)."

application administration

The component of the INTUITY CONVERSANT system that provides access to the applications currently available on your system and helps you to manage and administer them.

application installation

A two-step process in which the INTUITY CONVERSANT system invokes the TSM script assembler for the specific application name and moves files to the appropriate directories.

application script

The computer program that controls the application (the transaction between the caller and the system). The INTUITY CONVERSANT system provides several methods for creating application scripts, including Voice@Work, Script Builder, Transaction Assembler Script (TAS) language, and the Intuity Response Application Programming Interface (IRAPI).

application verification

A process in which the INTUITY CONVERSANT system verifies that all the components needed by an application are complete.

ASCII

[American Standard Code for Information Interchange](#)

ASI

analog switch integration

ASR

[advanced speech recognition](#)

asynchronous communication

A method of data transmission in which bits or characters are sent at irregular intervals and spaced by start and stop bits rather than by time. Compare to "[synchronous communication](#)."

asynchronous data unit

An electronic communications device that allows computer systems to communicate over asynchronous lines more than 50 feet (15 m) in length.

automatic call distributor

That part of a telephone system that recognizes and answers incoming calls and completes these calls based on a set of instructions contained in a database. The ACD can send the call to an operator or group of operators as soon as the operator has completed a previous call or after the system has played a message to the caller.

automatic number identification

A method of identifying the calling party by automatically receiving a string of digits that identifies the calling station of a particular customer.

AYC5B

The IVP6 Tip/Ring (analog) circuit card.

AYC10

The IVC6 Tip/Ring (analog) circuit card.

AYC21

The E1/T1 (digital) circuit card.

AYC30

The [NGTR](#) (analog) circuit card.

AYC43

The speech and signal processor (SSP) circuit card.

B

back up

The preservation of the information in a file in a different location, so that the data is not lost in the event of hardware or system failure.

backing up an application

Using a utility that makes an archive copy of a completed application or an interim copy of an application in progress. The back-up copy can be restored to the system if the on-line version is damaged, or if you make revisions and want to go back to the previous version.

barge-in

A capability provided by WholeWord speech recognition and Dial Pulse Recognition (DPR) that allows callers to speak or enter their responses during the prompt and have those responses recognized (similar to the Speak with Interrupt capability). See also "[echo cancellation](#)."

batch file

A file containing one or more lines, each of which is a command executable by the UNIX shell.

BB

bulletin board

binary synchronous communications

A character-oriented synchronous link protocol.

blind transfer protocol

A protocol in which a call is completed as soon as the extension is dialed, without having to wait to see if the telephone is busy or if the caller answered.

bps

bits per second

BRDG

call bridging process

bridging

The process of connecting one telephone network connection to another over the INTUITY CONVERSANT system TDM bus. Bridging decreases the processing load on the system since an active bridge does not require speech processing, database access, host activity, etc., for the transaction.

BSC

[binary synchronous communications](#)

bundle

In the context of the Enhanced File Transfer package, this term is used to denote a single file, a group of files (package), or a combination of both.

byte

A unit of storage in the computer. On many systems, a byte is 8 bits (binary digits), which is the equivalent of one character of text.

C

call classification analysis

A process that enables application designers to use information available within the system to classify the disposition of originated and transferred calls. Intelligent CCA is provided with the system. Full CCA is an optional feature package.

call data event

A parameter that specifies a list of variables that are appended to a call data record at the end of each call.

call data handler process

A software process that accumulates generic call statistics and application events.

called party number

The number dialed by the person making a telephone call. Telephone switching equipment can use this number to selectively route an incoming call to a particular department or agent.

caller

The party who calls for a service, gets connected to the INTUITY CONVERSANT system, and interacts with it. As the INTUITY CONVERSANT system can also make outbound calls for service, the caller can also be the person who responds to those outbound calls.

call flow

See "[transaction](#)."

call progress tones

Standard telephony sounds that indicate the status of the call. These sounds include busy, fast busy, ringback, reorder, etc.

card cage

An area within a INTUITY CONVERSANT system platform that contains and secures all of the standard and optional circuit cards used in the system.

cartridge tape drive

A high-capacity data storage/retrieval device that can be used to transfer large amounts of information onto high-density magnetic cartridge tape based on a predetermined format. This tape can be removed from the system and stored as a backup, or used on another system.

CAS

channel associated signalling

caution

An admonishment or advisory statement used in INTUITY CONVERSANT system documentation to alert the user to the possibility of a service interruption or a loss of data.

CCA

[call classification analysis](#)

CDH

[call data handler process](#)

CELP

[code excited linear prediction](#)

central office

An office or location in which large telecommunication devices such as telephone switches and network access facilities are maintained. These locations follow strict installation and operation requirements.

central processing unit

See "[processor.](#)"

CGEN

Voice system general message class

channel

See "[port.](#)"

channel associated signaling

A type of signaling that can be used on E1 circuit cards. It occurs on channel 16.

CICS

[Customer Information Control System](#)

circuit card upgrade

A new circuit card that replaces an existing card in the platform. Usually the replacement is an updated version of the original circuit card to replace technology made obsolete by industry trends or a new system release.

cluster controller

A bisynchronous interface that provides a means of handling remote communication processing.

CMS

Call Management System

CO

[central office](#)

code excited linear prediction

A means of encoding analog voice signals into digital signals that provides excellent quality with use of minimum disk space.

command

An instruction or request the user issues to the system software to make the system perform a particular function. An entire command consists of the command name and options.

configuration

The arrangement of the software and hardware of a computer system or network. The INTUITY CONVERSANT system configuration includes either a standard or custom processor, peripheral equipment (for example, printers and modems), and software applications. Configuration also refers to the way the switch network is set up; that is, the types of products that are in the network and how those products communicate.

configuration management

The component of the system that allows you to manage the current configuration of voice channels, host sessions, and database connections, assign scripts to run on specific voice channels or host sessions, assign functionality to SSP and E1/T1 circuit cards, and perform various maintenance functions.

connect and disconnect (C and D) tones

DTMF tones that inform the system when the attendant has been connected (C) and when the caller has been disconnected (D).

connected digits

A sequence of digits that the system can process as a group, rather than requiring the caller to enter the digits one at a time.

Converse Data Return (conv_data)

A Script Builder action that supports the DEFINITY® call vectoring (routing) feature by enabling the switch to retain control of vector processing in the system environment. It supports the DEFINITY “converse” vector command to establish a two-way routing mechanism between the switch and the system to facilitate data passing and return.

controller circuit card

A circuit card used on a computer system that controls its basic functionality and makes the system operational. These circuit cards are used to control magnetic peripherals, video monitors, and basic system communications.

copying an application

A utility in which information from a source application is directed into the destination application.

coresidency

The ability of two products or services to operate and interact with each other on a single hardware platform. An example of this is the use of an INTUITY CONVERSANT system along with a package from a different vendor on the same system platform.

CPE

customer provided equipment or customer premise equipment

CPN

[called party number](#)

CPT

[call progress tones](#)

CPU

[central processing unit](#)

crash

An interactive utility for examining the operating system core and for determining if system parameters are being exceeded.

CSU

channel service unit

custom speech

Unique words or phrases to be used in INTUITY CONVERSANT system voice prompts that Lucent Technologies custom records on a per-customer basis.

custom vocabulary

A specialized package of unique words or phrases created on a per-customer basis and used by WholeWord or FlexWord speech recognition.

Customer Information Control System

Part of the operating system that manages resources for running applications (for example, IND\$FILE). Note that [TSO](#) and CMS provide analogous functionality in other host environments.

CVS

converse vector step

D

danger

An admonishment or advisory statement used in INTUITY CONVERSANT system documentation to alert the user to the possibility of personal injury or death.

data interface process

A software process that communicates with Script Builder applications.

database

A structured set of files, records, or tables.

database field

A field used to extract values from a local database and form the structure upon which a database is built.

database record

The information in a database for a person, product, event, etc. The database record is made up of individual fields for each information item.

database table

A structure, made up of columns and rows, that holds information in a database. Database tables provide a means of storing information that changes too often to "hard-code," or store permanently, in the transaction outline.

dB

decibel

DB

database

DBC

database checking process

DBMS

database management system

DC

direct current

DCE

data communications equipment

DCP

digital communications protocol

debug

The process of locating and correcting errors in computer programs; also referred to as "[troubleshooting](#)."

default

The way a computer performs a task in the absence of other instructions.

default owner

The owner of a channel when no process takes ownership of that channel. The default owner holds all idle, in-service channels. In terms of the IRAPI, this is typically the Application Dispatch process.

diagnose

The process of performing diagnostics on a bus or on Tip/Ring, E1/T1, or SSP circuit cards.

dial ahead

The ability to collect and process touch-tone inputs in sequence, even when they are received before the prompts.

dial pulse recognition

A method of recognizing caller pulse inputs from a rotary telephone.

dialed number identification service

A service that allows incoming calls to contain information about the telephone number for which it is destined.

dial through

A capability provided by touch-tone and dial pulse recognition that allows callers to enter their responses during the prompt and have those responses recognized (similar to the Speak with Interrupt capability). See also "[barge-in](#)" and "[echo cancellation](#)".

dictionary

A reference book containing an alphabetical list of words, with information given for each word including meaning, pronunciation, and etymology.

DIMM

dual in-line memory module

DIO

disk input and output process

DIP

[data interface process](#)

directory

A type of file used to group and organize other files or directories.

display errdata

A command that displays system errors sent to the logger.

DMA

direct memory address

DNIS

[dialed number identification service](#)

DPR

[dial pulse recognition](#)

DSP

digital signal processor

DTE

data terminal equipment

DTMF

[dual tone multi-frequency](#)

DTR

data terminal ready

dual 3270 links

A feature that provides an additional physical unit (PU) for a cost-effective means of connecting to two host computers. The customer can connect a system to two separate FEPs or to a single FEP shared by one or more host computers. Each link supports a maximum of 32 LUs.

dual tone multi-frequency

A touch-tone sound that is an audio signal including two different frequencies. *DTMF feedback* is the process of the “switch” providing this information to the system. *DTMF muting* is the process of ignoring these tones (which might be simulated by human speech) when they are not needed for the application.

dump space

An area of the disk that is fixed in size and should equal the amount of RAM on the system. The operating system “dumps” an image of core memory when the system crashes. The dump can be fetched after rebooting to help in analyzing the cause of the crash.

E

E&M

[Ear and Mouth](#)

E1 / T1

Digital telephony interfaces, commonly called *trunks*. E1 is an international standard at 2.048 Mbps. T1 is a North American standard at 1.544 Mbps.

Ear and Mouth

A common T1 trunking protocol for connection between two “switches.”

EBCDIC

Extended Binary Coded Decimal Interexchange Code

echo cancellation

The process of making the channel quiet enough so that the system can hear and recognize WholeWord and dial pulse inputs during the prompt. See also “[barge-in](#).”

ECS

[Enterprise Communications Server](#)

editor system

A system that allows speech phrases to be displayed and edited by a user. See “[Graphical Speech Editor](#).”

EFT

[Enhanced File Transfer](#)

EIA

Electronic Industries Association

EISA

Extended Industry Standard Architecture

EMI

electromagnetic interference

Enhanced Basic Speech

Pre-recorded speech available from Lucent Technologies in several languages. Sometimes called "[standard speech](#)."

Enhanced File Transfer

A feature that allows the transferring of files automatically between the INTUITY CONVERSANT system and a synchronous host processor on a designated logical unit.

Enhanced Serial Data Interface

A software- and hardware-controlled method used to store data on magnetic peripherals.

Enterprise Communications Server

The telephony equipment that connects your business to the telephone network. Sometimes called a "switch."

error message

A message on the screen indicating that something is wrong with a possible suggestion of how to correct it.

ESD

electrostatic discharge

ESDI

[Enhanced Serial Data Interface](#)

ESS

electronic switching system

EST

Enhanced Software Technologies, Inc.

ET

error tracker

Ethernet

A name for a local area network that uses 10BASE5 or 10BASE2 coaxial cable and InterLAN signaling techniques.

event

The notification given to an application when some condition occurs that is generally not encountered in normal operation.

EXTA

external alarms feature message class

external actions

Specific predefined system tasks that Script Builder can call or *invoke* to interact with other products or services. When an external action is invoked, the systems displays a form that provides choices in each field for the application developer to select. Examples are Call_Bridge, Make_Call, SP_Allocate, SR_Prompt, etc. In Voice@Work, external actions are treated as "[external functions](#)."

external functions

Specific predefined (or customer-created) system tasks that Voice@Work or Script Builder can call or *invoke* to interact with other products or services. The function allows the application developer to enter the argument(s) for the function to act on. Examples are concat, getarg, length, substring, etc. See also "[external actions](#)."

F

FAX Actions

An optional feature package that allows the system to send fax messages.

FCC

Federal Communications Commission

FDD

floppy disk drive

feature

A function or capability of a product or an application within the INTUITY CONVERSANT system.

feature package

An optional package that may contain both hardware and software resources to provide additional functionality to a standard system.

feature_tst script package

A standard INTUITY CONVERSANT system software program that allows a user to perform self-tests of critical hardware and software functionality.

FEP

front end processor

FFE

Form Filler Plus feature message class

field

See "[database field](#)."

FIFO

first-in-first-out processing order

file

A collection of data treated as a basic unit of storage.

file transfer

An option that allows you to transfer files interactively or directly to and from UNIX using the file transfer system (FTS).

filename

Alphabetic characters used to identify a particular file.

FlexWord™ speech recognition

A type of speech recognition based on subword technology that recognizes phonemes or parts of words in a specific language. See also "[subword technology](#)."

foos

facility out-of-service state

Form Filler Plus

An optional feature package that provides the capability for application scripts to record a caller's responses to prompts for later transcription and review.

FTS

file transfer process message class

Full CCA

A feature package that augments the types of call dispositions that Intelligent CCA can provide.

function key

A key, labeled F1 through F8, on your keyboard to which the INTUITY CONVERSANT system software gives special properties for manipulating the user interface.

G

GEN

PRISM logger and alerter general message class

grammar

The inputs that a recognizer can match (identify) from a caller.

Graphical Speech Editor

A window-driven, X Windows/Motif based, graphical user interface (GUI) that can be accessed to perform different functions associated with the creation and editing of speech files for applications. The editing is done on the INTUITY CONVERSANT system.

GSE

[Graphical Speech Editor](#)

GUI

graphical user interface

H

hard disk drive

A high-capacity data storage/retrieval device that is located inside a computer platform. A hard disk drive stores data on nonremovable high-density magnetic media based on a predetermined format for retrieval by the system at a later date.

hardware

The physical components of a computer system. The central processing unit, disks, tape, and floppy drives, etc., are all hardware.

Hardware Resource Allocator

A software program that resolves or blocks the allocation of CPU and memory resources for controlling and optional circuit cards.

hardware upgrade

Replacement of one or more fundamental platform hardware components (for example, the CPU or hard disk drive), while the existing platform and other existing optional circuit cards remain.

HDD

[hard disk drive](#)

High Level Language Applications Programming Interface

An application programming interface that allows a user to write custom applications that can communicate with a host computer via an API.

HLLAPI

[High Level Language Applications Programming Interface](#)

HOST

host interface process message class

host computer

A computer linked to a network to provide a range of services, such as database access and computation. The host computer operates in a time-sharing manner with other computers linked to it via the network.

hwoos

hardware out-of-service state

Hz

Hertz

I

IBM

International Business Machines

iCk or ICK

The system integrity checking process.

ID

identification

IDE

integrated disk electronics

idle channel

A channel that either has no owner or is owned by its default owner and is onhook.

IE

information element

IND\$FILE

The standard SNA file transfer utility that runs as an application under CICS, TSO, and CMS. IND\$FILE is independent of link-level protocols such as BISYNC and SDLC.

independent software vendor

A company that has an agreement with Lucent Technologies to develop software to work with the INTUITY CONVERSANT system to provide additional features required by customers.

indexed table

A table that, unlike a nonindexed table, can be searched via a field name that has been indexed.

industry standard architecture

A PC bus standard that allows processors and other circuit cards to communicate with each other.

INIT

voice system initialization message class

initialize

To start up the system for the first time.

inserv

in-service state

Integrated Services Digital Network

A network that provides end-to-end digital connectivity to support a wide range of voice and data services.

Integrated Voice Processing (IVP) circuit card

The IVP6 circuit card that provides Tip/Ring connections. The NGTR (AYC30) card also provides the same functions.

intelligent CCA

Monitoring the line after dialing is complete to determine whether a busy, reorder (fast busy), or other failure has been encountered. It also recognizes when the extension is answered or if the extension is not answered after a specified number of rings. The monitoring capabilities are dependent on the network interface circuit card and protocol used

interface

The access point of a system. With respect to the INTUITY CONVERSANT system, the interface is designed to provide you with easy access to the software capabilities.

interrupt

The termination of voice and/or telephony functions when some condition occurs.

INTUITY Response Application Programming Interface

A library of commands that provide a standard development interface for voice-telephony applications.

IPC

interprocess communication

IPC

intelligent ports card (IPC-900)

IPCI

integrated personal computer interface

IRAPI

[Intuity Response Application Programming Interface](#)

IRQ

interrupt request

ISA

[industry standard architecture](#)

ISDN

[Integrated Services Digital Network](#)

ISV

[independent software vendor](#)

ITAC

International Technical Assistance Center

IVC6 circuit card (AYC10)

A Tip/Ring (analog) circuit card with six channels.

IVP6 circuit card (AYC5B)

A Tip/Ring (analog) card with six channels.

K

Kbps

kilobytes per second

Kbyte

kilobyte

keyboard mapping

In emulation mode, this feature enables the keyboard to send 3270 keyboard codes to the host according to a configuration table set up during installation.

keyword spotting

A capability provided by WholeWord speech recognition that allows the system to recognize a single word in the middle of an entire phrase spoken by a caller in response to a prompt.

L

LAN

[local area network](#)

LDB

[local database](#)

LED

light-emitting diode

library states

The state information about channel activities maintained by the IRAPI.

LIFO

last-in-first-out processing order

line side E1

A digital method of interfacing an INTUITY CONVERSANT system to a PBX or "switch" using E1-related hardware and software.

line side T1

A digital method of interfacing an INTUITY CONVERSANT system to a PBX or "switch" using T1-related hardware and software.

listfile

An ASCII catalog that lists the contents of one or more talkfiles. Each application script is typically associated with a separate listfile. The listfile maps speech phrase strings used by application scripts into speech phrase numbers.

local area network

A data communications network in a limited geographical area. The LAN provides communications between computers and peripherals.

local database

A database residing on the INTUITY CONVERSANT system.

LOG
INTUITY CONVERSANT system logger process message class

logical unit
A type of SNA Network Addressable Unit.

logdaemon
A UNIX system information and error logging process.

logger
See "[logdaemon](#)."

logging on/off
Entering or exiting the INTUITY CONVERSANT system software.

LSE1
[line side E1](#)

LST1
[line side T1](#)

LU
[logical unit](#)

M

magnetic peripherals
Data storage devices that use magnetic media to store information. Such devices include hard disk drives, floppy disk drives, and cartridge tape drives.

main screen
The INTUITY CONVERSANT system screen from which you are able to enter either the System Administration or Voice System Administration menu.

maintenance process
A software process that runs temporary diagnostics and maintains the state of circuit cards and channels.

manoos
manually out-of-service state

MAP/100P
multi application platform 100P

MAP/100C
multi application platform 100C

MAP/40P
multi application platform 40P

MAP/5P
multi application platform 5P

masked event
An event that an application can ignore (that is, the application can request not to be informed of the event).

master

A circuit card that provides clock information to the TDM bus.

Mbps

megabits per second

MByte

[megabyte](#)

megabyte

A unit of memory equal to 1,048,576 bytes (1024 x 1024). It is often rounded to one million.

menu

Options presented to a user on a computer screen or with voice prompts.

MF

[multifrequency](#)

MHz

megahertz

Microsoft

A manufacturer of software products, primarily for IBM-compatible computers.

mirroring

A method of data backup that allows all of the data transactions to the primary hard disk drive to be copied and maintained on a second identical drive in near real time. If the primary disk drive crashes or becomes disabled, all of the data stored on it (up to 1.2 billion bytes of information) is accessible on the second mirrored disk drive.

ms

millisecond

msec

millisecond

MS-DOS

A personal computer disk operating system developed by the Microsoft Corporation.

MTC

[maintenance process](#)

multifrequency

Dual tone digit signalling (similar to DTMF), used for trunk addressing between network switches or by network operators.

multithreaded application

A single process/application that controls several channels. Each thread of the application is managed explicitly. Typically this means state information for each thread is maintained and the state of the application on each channel is tracked.

N

NCP

Network Control Program

NEBS

Network Equipment Building Standards

NEMA

National Electrical Manufacturers Association

netoos

network out-of-service state

NetView

An optional feature package that transmits high-priority (major or critical) messages to the host as operator-generated alerts (OGAs) over the 3270 host link. The NetView Alarm feature package does not require a dedicated LU.

next generation Tip/Ring (AYC30) circuit card

An analog circuit card with six channels.

NFAS

non-facility associated signalling

NFS

network file sharing

NGTR

[next generation Tip/Ring \(AYC30\) circuit card](#)

NM-API

Network Management - Application Programming Interface

NMVT

network management vector transport

nonex

nonexistent state

nonindexed table

A table that can be searched only in a sequential manner and not via a field name.

nonmasked event

An event that must be sent to the application. Generally, an event is nonmaskable if the application would likely encounter state transition errors by trying to it.

NRZ

non return to zero

NRZI

non return to zero inverted

null value

An entry containing no value. A field containing a null value is normally displayed as blank and is different from a field containing a value of zero.

O

obsolete hardware

Hardware that is no longer supported on the INTUITY CONVERSANT system.

OEM

original equipment manufacturer

OGA

[operator-generated alert](#)

on-line help

Messages or information that appear on the user's screen when a "function key" (F1 through F8) is pressed.

operator-generated alert

A system-monitoring message that is transmitted from the INTUITY CONVERSANT system or other computer system to an IBM host computer and is classified as critical or major.

option

An argument used in a command line to modify program output by modifying the execution of a command. When you do not specify any options, the command executes according to its default options.

ORACLE

A company that produces relational database management software. It is also used as a generic term that identifies a database residing on a local or remote system that is created and maintained using an ORACLE RDBMS product.

P

P&C

Prompt and Collect Script Builder action step

PBX

[private branch exchange](#)

PC

personal computer

PCB

printed circuit board

PCI

[peripheral component interconnect](#)

PCM

[pulse code modulation](#)

PEC

price element code

peripheral (device)

Equipment such as printers or terminals that is in addition to the basic processor.

peripheral component interconnect

A newer, higher speed PC bus that is gradually displacing ISA for many components.

permanent process

A process that starts and initializes itself before it is needed by a caller.

phoneme

A single basic sound of a particular spoken language. For example, the English language contains 40 phonemes that represent all basic sounds used with the language. The English word "one" can be represented with three phonemes, "w" - "uh" - "n." Phonemes vary between languages because of guttural and nasal inflections and syllable constructs.

phrase filtering (screening)

The rejection of unrecognized speech. The WholeWord and FlexWord speech recognition packages can be programmed to reprompt the caller if the INTUITY CONVERSANT system does not recognize a spoken response.

phrase tag

A string of up to 50 characters that identifies the contents of a speech phrase used by an application script.

platform migration

See "[platform upgrade](#)."

platform upgrade

The process of replacing the existing platform with a new platform.

pluggable

A term usually used with speech technologies, in particular standard speech, to indicate that a basic algorithmic technique has been implemented to accept one or more sets of parameters that tailors the algorithm to perform in one or more languages.

poll

A message sent from a central controller to an individual station on a multipoint network inviting that station to send if it has any traffic.

polling

A network arrangement whereby a central computer asks each remote location whether it wants to send information. This arrangement enables each user or remote data terminal to transmit and receive information on shared facilities.

port

A connection or link between two devices that allows information to travel to a desired location. See "[telephone network connection](#)."

PRI

[Primary Rate Interface](#)

Primary Rate Interface

An ISDN term for connections over E1 or T1 facilities that are usually treated as trunks.

private branch exchange

A private switching system, either manual or automatic, usually serving an organization, such as a business or government agency, and usually located on the customer's premises.

processor

In INTUITY CONVERSANT system documentation, the computer on which UnixWare and INTUITY CONVERSANT system software runs. In general, the part of the computer system that processes the data. Also known as the "[central processing unit](#)."

prompt

A message played to a caller that gives the caller a choice of selections in a menu and asks for a response. Compare to "[announcement](#)."

prompt and collect (P and C)

A message played to a caller that gives the caller a choice of selections in a menu and asks for a response. The responses is collected and the script progresses based on the caller's response.

pseudo driver

A driver that does not control any hardware.

PS&BM

power supply and battery module

PSTN

public switch telephone network

pulse code modulation

A digital modulation method of encoding voice signals into digital signals. See also "[adaptive differential pulse code modulation](#)."

R

RAID

redundant array of independent disks

RAID array

An assembly of disk drives configured to provide some level of RAID functionality.

RAM

random access memory

RDMBS

ORACLE relational database management system

RECOG

speech recognition feature message class

recognition type

The type of input the recognizer can understand. Available types include touch-tone, dial pulse, and Advanced Speech Recognition (ASR), which includes WholeWord and FlexWord speech recognition.

recognizer

The part of the system that compares caller input to a grammar in order to correctly match (identify) the caller input.

record

See "[database record](#)."

recovery

The process of using copies of the INTUITY CONVERSANT system software to reconstruct files that have been lost or damaged. See also "[restore](#)."

remote database

Information stored on a system other than the INTUITY CONVERSANT system that can be accessed by the INTUITY CONVERSANT system.

remote maintenance circuit card

An INTUITY CONVERSANT system circuit card, available with a built-in modem, that allows remote personnel (for example, field support) to access all INTUITY CONVERSANT system machines. This card is standard equipment on all new MAP/100, MAP/40, and MAP/5P purchases.

REN

ringer equivalence number

reports administration

The component of INTUITY CONVERSANT system that provides access to system reports, including call classification, call data detail, call data summary, message log, and traffic reports.

restore

The process of recovering lost or damaged files by retrieving them from available back-up tapes or from another disk device. See also "recovery."

restore application

A utility that replaces a damaged application or restores an older version of an application.

reuse

The concept of using a component from a source system in a target system after a software upgrade or platform migration.

RFS

remote file sharing

RM

resource manager

RMB

[remote maintenance circuit card](#)

roll back

To cancel changes to a database since the point at which changes were last committed.

rollback segment

A portion of the database that records actions that should be undone under certain circumstances. Rollback segments are used to provide transaction rollback, read consistency, and recovery.

RTS

request to send

S

SBC

sub-band coding

screen pop

A method of delivering a screen of information to a telephone operator at the same time a telephone call is delivered. This is accomplished by a complex chain of tasks that include identifying the calling party number, using that information to access a local or remote ORACLE database, and pulling a "form" full of information from the database using an ORACLE database utility package.

script

The set of instructions for the INTUITY CONVERSANT system to follow during a transaction.

Script Builder

An optional software package that provides a menu-oriented interface designed to assist in the development of custom voice response applications on the INTUITY CONVERSANT system (see also "[Voice@Work](#)").

SCSI

[small computer system interface](#)

SDLC

synchronous data link control

SDN

software defined network

shared database table

A database table that is used in more than one application.

shared speech

Speech that is a part of more than one application.

shared speech pools

A parameter that allows the user of a voice application to share speech components with other applications.

SID

station identification

signal processor circuit card (AYC2, AYC2B, AYC2C, or AYC9d)

A speech processing circuit card that is an older, lower-capacity version of the speech and signal processor (SSP) circuit card (AYC43).

SIMMs

[single inline memory modules](#)

single inline memory modules

A method of containing random access memory (RAM) chips on narrow circuit card strips that attach directly to sockets on the CPU circuit card. Multiple SIMMs are sometimes installed on a single CPU circuit card.

single-threaded application

An application that runs on a single voice channel.

slave

A circuit card that depends on the TDM bus for clock information.

SLIP

serial line interface protocol

small computer system interface

A disk drive control technology in which a single SCSI adapter circuit card plugged into a PC slot is capable of controlling as many as seven different hard disks, optical disks, tape drives, etc.

SNA

systems network architecture

SNMP

simple network management protocol

software

The set or sets of programs that instruct the computer hardware to perform a task or series of tasks — for example, UnixWare software and the INTUITY CONVERSANT system software.

software upgrade

The installation of a new version of software in which the existing platform and circuit cards are retained.

source system

The system from which you are upgrading (that is, your system as it exists *before* you upgrade).

speech and signal processor circuit card (AYC43)

The high-performance signal processing circuit card introduced in V6.0 capable of simultaneous support for various speech technologies.

speech energy

The amount of energy in an audio signal. Literally translated, it is the output level of the sound in every phonetic utterance.

speech envelope

The linear representation of voltage on a line. It reflects the sound wave amplitude at different intervals of time. This envelope can be plotted on a graph to represent the oscillation of an audio signal between the positive and negative extremes.

speech file

A file containing an encoded speech phrase.

speech filesystem

A collection of several talkfiles. The filesystem is organized into 16-Kbyte blocks for efficient management and retrieval of talkfiles.

speech modeling

The process of creating WholeWord speech recognition algorithms by collecting thousands of different speech samples of a single word and comparing them all to obtain a statistical average of the word. This average is then used by a WholeWord speech recognition program to recognize a single spoken word.

speech space

An area that contains all digitized speech used for playback in the applications loaded on the system.

speech phrase

A continuous speech segment encoded into a digital string.

speech recognition

The ability of the system to understand input from callers.

SPIP

signal processor interface process

SPPLIB

speech processing library

SQL

[structured query language](#)

SR

[speech recognition](#)

SSP

[speech and signal processor circuit card \(AYC43\)](#)

standard speech

The speech package available in several languages containing simple words and phrases produced by Lucent Technologies for use with the INTUITY CONVERSANT system. This package includes digits, numbers, days of the week, and months, each spoken with initial, medial, and falling inflection. The speech is in digitized files stored on the hard disk to be used in voice prompts and messages to the caller. This feature is also called Enhanced Basic Speech.

standard vocabulary

A standard package of simple word speech models provided by Lucent Technologies and used for WholeWord speech recognition. These phrases include the digits "zero" through "nine," "yes," "no," and "oh," or the equivalent words in a specific local language.

string

A contiguous sequence of characters treated as a unit. Strings are normally bounded by white spaces, tabs, or a character designated as a separator. A string value is a specified group of characters symbolized by a variable.

structured query language

A standard data programming language used with data storage and data query applications.

subword technology

A method of speech recognition used in FlexWord recognition that recognizes phonemes or parts of words. Compare to "[WholeWord speech recognition](#)."

switch

A software and hardware device that controls and directs voice and data traffic. A customer-based switch is known as a "[private branch exchange](#)."

switch hook

The device at the top of most telephones that is depressed when the handset is resting in the cradle (in other words, is *on hook*). The device is raised when the handset is picked up (in other words, when the telephone is *off hook*).

switch hook flash

A signaling technique in which the signal is originated by momentarily depressing the "switch hook."

switch interface administration

The component of the INTUITY CONVERSANT system that enables you to define the interaction between the INTUITY CONVERSANT system and switches by allowing you to establish and modify switch interface parameters and protocol options for both analog and digital interfaces.

switch network

Two or more interconnected telephone switching systems.

synchronous communication

A method of data transmission in which bits or characters are sent at regular time intervals, rather than being spaced by start and stop bits. Compare to "[asynchronous communication](#)."

SYS

UNIX system calls message class

sysgen

system generation

System 75

An advanced digital switch supporting up to 800 lines that provides voice and data communications for its users.

System 85

An advanced digital switch supporting up to 3000 lines that provides voice and data communications for its users.

system administrator

The person assigned the responsibility of monitoring all INTUITY CONVERSANT system software processing, performing daily system operations and preventive maintenance, and troubleshooting errors as required.

system architecture

The manner in which the INTUITY CONVERSANT system software is structured.

system message

An event or alarm generated by either the INTUITY CONVERSANT system or end-user process.

system monitor

A component of the INTUITY CONVERSANT system that tests to verify that each incoming telephone line and its associated Tip/Ring or T1 circuit card is functional. Through the "System Monitor" component, you are able to see displays of the Voice Channel and Host Session Monitors.

T

T1

A digital transmission link with a capacity of 1.544 Mbps.

table

See "[database table](#)."

talkfile

An ASCII file that contains the speech phrase tags and phrase tag numbers for all the phrases of a specific application. The speech phrases are organized and stored in groups. Each talkfile can contain up to 65,535 phrases, and the speech filesystem can contain multiple talkfiles.

talkoff

The process of a caller interrupting a prompt, so the prompt message stops playing.

target system

The system to which you are upgrading (that is, your system as you expect it to exist *after* you upgrade).

TAS

[transaction assembler script](#)

TCC

Technology Control Center

TCP/IP

transmission control protocol/internet protocol

TDM

time division multiplexing

TE

[terminal emulator](#)

telephone network connection

The point at which a telephone network connection terminates on an INTUITY CONVERSANT system. Supported telephone connections are Tip/Ring, T1, and E1.

terminal emulator

Software that allows a PC or UNIX process to look like a specific type of terminal. In particular, it allows the INTUITY CONVERSANT system to temporarily transform itself into a "look alike" of an IBM 3270 terminal. In addition to providing full 3270 functionality, the terminal emulator enables you to transfer files to and from UNIX.

Text-to-Speech

An optional feature that allows an application to play US English speech directly from ASCII text by converting that text to synthesized speech. The text can be used for prompts or for text retrieved from a database or host, and can be spoken in an application with prerecorded speech. Text-to-Speech application development is supported through Voice@Work and Script Builder.

ThickNet

A 10-mm (10BASE5) coaxial cable used to provide interLAN communications.

ThinNet

A 5-mm (10BASE2) coaxial cable used to provide interLAN communications.

time-division multiplex

A method of serving a number of simultaneous channels over a common transmission path by assigning the transmission path sequentially to the channels, with each assignment being for a discrete time interval.

Tip/Ring

Analog telecommunications using four-wire media.

token ring

A ring type of local area network that allows any station in the network to communicate with any other station.

trace

A command that can be used to monitor the execution of a script.

traffic

The flow of information or messages through a communications network for voice, data, or audio services.

transaction

The interactions (exchanges) between the caller and the voice response system. A transaction can involve one or more telephone network connections and voice responses from the INTUITY CONVERSANT system. It can also involve one or more of the system optional features, such as speech recognition, 3270 host interface, FAX Actions, etc.

transaction assembler script

The computer program code that controls the application operating on the voice response system. The code can be produced from Voice@Work, Script Builder, or by writing directly in TAS code.

transaction state machine process

A multi-channel IRAPI application that runs applications controlled by TAS script code.

transient process

A process that is created dynamically only when needed.

TRIP

Tip/Ring interface process

troubleshooting

The process of locating and correcting errors in computer programs. This process is also referred to as debugging.

TSO

Technical Services Organization

TSO

time share operation

TSM

[transaction state machine process](#)

TTS

[Text-to-Speech](#)

TWIP

T1 interface process

U

UK

United Kingdom

US

United States of America

UNIX Operating System

A multiuser, multitasking computer operating system originally developed by Lucent Technologies.

UNIX shell

The command language that provides a user interface to the UNIX operating system.

upgrade scenario

The particular combination of current hardware, software, application and target hardware, software, applications, etc.

usability

A measurement of how easy an application is for callers to use. The measurement is made by making observations and by asking questions. An application should have high usability to be successful.

USOC

universal service ordering code

UVL

unified voice library

V

VDC

video display controller

vi editor

A screen editor used to create and change electronic files.

virtual channel

A channel that is not associated with an interface to the telephone network (Tip/Ring, T1, LSE1/LST1, or PRI). Virtual channels are intended to run "data-only" applications which do not interact with callers but may interact with DIPs. Voice or network functions (for example, coding or playing speech, call answer, origination, or transfer) will not work on a virtual channel. Virtual channel applications can be initiated only by a "virtual seizure" request to TSM from a DIP.

vocabulary

A collection of words that the INTUITY CONVERSANT system is able to recognize using either WholeWord or FlexWord speech recognition.

vocabulary activation

The set of active vocabularies that define the words and wordlists known to the FlexWord recognizer.

vocabulary loading

The process of copying the vocabulary from the system where it was developed and adding it to the target system.

Voice@Work

An optional software package that provides a graphical interface to assist in development of voice response applications on the INTUITY CONVERSANT system (see also "[Script Builder](#)").

voice channel

A channel that is associated with an interface to the telephone network (Tip/Ring, T1, E1, LSE1/LST1, or PRI). Any INTUITY CONVERSANT system application can run on a voice channel. Voice channel applications can be initiated by being assigned to particular voice channels or dialed numbers to handle incoming calls or by a "soft seizure" request to TSM from a DIP or the **soft_srz** command.

voice processing co-marketer

A company licensed to purchase voice processing equipment, such as the INTUITY CONVERSANT system, to market and sell based on their own marketing strategies.

voice response output process

A software process that transfers digitized speech between system hardware (for example, Tip/Ring and SSP circuit cards) and data storage devices (for example, hard disk, etc.)

voice response unit

A computer connected to a telephone network that can play messages to callers, recognize caller inputs, access and update a databases, and transfer and monitor calls.

voice system administration

The means by which you are able to administer both voice- and nonvoice-related aspects of the system.

VPC

[voice processing co-marketer](#)

VROP

voice response output process

VRU

[voice response unit](#)

W

warning

An admonishment or advisory statement used in INTUITY CONVERSANT system documentation to alert the user to the possibility of equipment damage.

WholeWord speech recognition

An optional feature, available in several languages, based on whole-word technology that can recognize the numbers one through zero, “yes”, and “no” (the key words). This feature is reliable, regardless of the individual speaker. This feature can identify the key words when spoken in phrases with other words. A string of key words, called *connected digits*, can be recognized. During the prompt announcement, the caller can speak or use touch tones (or dial pulses, if available). See also “[whole-word technology](#).”

whole-word technology

The ability to recognize an entire word, rather than just the phoneme or a part of a word. Compare to “subword technology.”

wink signal

An interruption of current to a busy lamp indicating that there is a line on hold.

word

A unique utterance understood by the recognizer.

wordlist

A set of words available for FlexWord recognition by an application during a Prompt & Collect action step.

word spotting

The ability to search through extraneous speech during a recognition.

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