Intuity™ CONVERSANT® System

Version 7.0

System Description

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January 2000
Issue 2
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AUTOMATIC RE-ATTEMPTS TO THE SAME NUMBER: Some parameters required for compliance with Telecom’s Telepermit requirements are dependent on the equipment (PC) associated with this device. The associated equipment shall be set to operate within the following limits for compliance with Telecom specifications:

- There shall be no more than 10 call attempts to the same number within any 30 minute period for any single manual call initiation, and,

- The equipment shall go on-hook for a period of not less than 30 seconds between the end of one attempts and the beginning of the next attempt.

AUTOMATIC CALLS TO DIFFERENT NUMBERS: Some parameters required for compliance with Telecom’s Telepermit requirements are dependent on the equipment (PC) associated with this device. In order to operate within the limits for compliance with Telecom specifications, the associated equipment shall be set to ensure that automatic calls to different numbers are spaced such that there is not less than 5 seconds between the end of one call attempt and the beginning of the next attempt.

USER INSTRUCTIONS (AUTOMATIC CALL SETUP): This equipment shall not be set up to make automatic calls to the Telecom "111" emergency service.
CALL ANSWERING (AUTOMATIC ANSWERING EQUIPMENT): Some parameters required for compliance with Telecom’s Telepermit requirements are dependent on the equipment (PC) associated with this device. In order to operate within the limits for compliance with Telecom specifications, the associated equipment shall be set to ensure that calls are answered between 3 and 30 seconds of receipt of ringing.

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

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About This Book

Overview

This book answers basic questions about the Intuity CONVERSANT System Version 7.0 and its usage. It provides an overview of the service the system 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, Documentation Guide 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 Audience

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?”

**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**  
Chapter 1, Introduction, contains an overview of the V7.0 system, including its functionality, hardware platforms, software, features, and optional feature packages.

**For Information on Hardware**  
Chapter 2, Hardware, describes 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.
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<td>Glossary defines the terms, abbreviations, and acronyms used in system documentation. Index alphabetically lists the principal subjects covered in the book.</td>
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### Conventions Used in This Book

| Cross References and Hypertext | Blue underlined type indicates a cross reference or hypertext link that takes you to another location in the document when you click on it with your mouse. |
Safety and Security Alert Labels

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

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

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

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

The Intuity CONVERSANT system provides online help to assist you during installation, administration, and application development tasks.

To use the online help:

• Press **F1** (Help) when you are in a menu or window.
  
  The first time you press **F1**, the system displays information about the currently active window or menu.
  
  ~ When you are in a window, the help explains the purpose of the window and describes its fields.
  
  ~ When you are in a menu, the help explains how to use menus.

  If you press **F1** again, the system displays a General Help screen that explains how to use the online help.

• Press **F2** (Choices) when you are in a field.
  
  The system displays valid field choices either in a pop-up window or on the status line directly above the function keys.

• Press **F6** (Cancel) to exit the online help.
Technical Assistance

Web Site
The following customer support web site contains resources where you can find solutions for technical problems:

http://support.lucent.com

Contact Numbers
Technical assistance on the Intuity CONVERSANT product is available through the following telephone contacts:

• In the United States, call 1-800-242-2121.

• In Canada, call one of the following numbers, depending on your location:
  ~ 1-800-363-1882 for assistance in Quebec and eastern Canada
  ~ 1-800-387-4268 for assistance in Ontario and western Canada

• In any other country, call your local distributor or check with your project manager or systems consultant.
Related Resources

Additional documentation and training material is available for you to learn more about the Intuity CONVERSANT product.

Training

To obtain training on the Intuity CONVERSANT product, contact the BCS Education and Training Center at one of the following numbers:

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

You can also view information on Intuity CONVERSANT training at the Global Learning Solutions (GLS) web site at one of the following web links:

- Organizations within Lucent Technologies
  [http://training.gls.lucent.com](http://training.gls.lucent.com)
- Lucent Technologies customers and all others
  [http://www.lucenttraining.com](http://www.lucenttraining.com)

The courses listed below are recommended. Other courses are available.

- For technicians doing repairs on Intuity CONVERSANT V7.0 systems
  - BTT509H, CONVERSANT Installation and Maintenance Voice Information System
About This Book

- For technicians and administrators
  ~ BTC344M, Intuity CONVERSANT V7 Administration Overview (CD-ROM)

- For application developers
  ~ BTC128H, Introduction to Script Builder
  ~ BTC166H, Introduction to Voice@Work
  ~ BTC204H, Intermediate Voice@Work
  ~ BTC301H, Advanced CONVERSANT Programming

Related Resources

Documentation

This document is designed to supplement all other documents in the V7.0 system set.

Appendix A, Documentation Guide, describes in detail all books included in the Intuity CONVERSANT documentation library.

Note: Always refer to the appropriate document for specific information on planning, installing, operating, administering, or maintaining the system.

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
Using the CD-ROM Documentation

Lucent Technologies ships the documentation in electronic form. Using the Adobe Acrobat Reader application, you can read these documents on a Windows PC, on a Sun Solaris workstation, or on an HP-UX workstation. Acrobat Reader displays high-quality, print-like graphics on both UNIX and Windows platforms. It provides scrolling, zoom, and extensive search capabilities, along with online help. A copy of Acrobat Reader is included with the documents.

**Note:** When viewing documents online, it is recommended that you use a separate platform and not the Intuity CONVERSANT system.

You can set your default magnification by selecting `File | Preferences | General`. We recommend the `Fit Page` option.

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About This Book

Using the CD-ROM Documentation

Adjusting the Window Size
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About This Book

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Using the CD-ROM Documentation

Printing the Documentation

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If you would like to read the documentation in paper form rather than on a computer monitor, you can print all or portions of the online screens.

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2 Select File | Print.

3 Enter the page range you want to print, or select All. Note that the print page range is different from the page numbers on the documents (they print two to a page).

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Note:  Direct your correspondence to the attention of the Lucent Technologies Intuity CONVERSANT writing team. Be sure to mention the title of the book on which you are commenting.

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Overview

This chapter provides a high-level overview of the Intuity CONVERSANT system. Its purpose is to:

- Familiarize you with basic types of voice response transactions
- Summarize how the system can automate caller transactions
- Describe how the terms *hardware, software, features,* and *feature packages* are used in relation to the Intuity CONVERSANT system

Topics covered include:

- [Voice Response Basics on page 2](#)
- [A Sample Transaction on page 3](#)
- [System Hardware on page 8](#)
- [System Software on page 9](#)
- [System Features on page 10](#)
- [Feature Packages on page 10](#)
Voice Response Basics

This section explains what a system does and demonstrates 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 or 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 touchtones or by speaking into the telephone. The dialog between the system and the caller is determined by the particular application and its corresponding script.
1 Introduction

A Sample Transaction

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 can accept a caller’s request for information, prompt the caller to provide additional touch-tone or spoken format information, and 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.
Table 1 on page 4 represents a typical conversation, or transaction, between a caller and an operator at a bank.

### Table 1. Sample Nonautomated Transaction

<table>
<thead>
<tr>
<th>Operator:</th>
<th>“Thank you for calling River Bank. How may I help you?”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caller:</td>
<td>“What is the current interest rate on your automobile loans?”</td>
</tr>
<tr>
<td>Operator:</td>
<td>(Refers to a chart of interest rates.) “The interest rate for our auto loans is 7.9%. May I help you with anything else?”</td>
</tr>
<tr>
<td>Caller:</td>
<td>“Yes. I’d like to check my savings account balance.”</td>
</tr>
<tr>
<td>Operator:</td>
<td>“What is your account number?”</td>
</tr>
<tr>
<td>Caller:</td>
<td>“My account number is 0653202782.”</td>
</tr>
<tr>
<td>Operator:</td>
<td>“To verify that this is your account, what are the last four digits of your social security number?”</td>
</tr>
<tr>
<td>Caller:</td>
<td>“9087”</td>
</tr>
<tr>
<td>Operator:</td>
<td>“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?”</td>
</tr>
<tr>
<td>Caller:</td>
<td>“Yes. I’d like to speak to someone about an auto loan.”</td>
</tr>
</tbody>
</table>
1 Introduction

A Sample Transaction

Table 1. Sample Nonautomated Transaction

<table>
<thead>
<tr>
<th>Types of Interactions Between Caller and Operator</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.)</td>
</tr>
</tbody>
</table>

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

In the nonautomated sample call (Table 1 on page 4), 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 Step 2 and Step 3.
Introduction

A Sample Transaction

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.

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 the caller may wish to investigate.
1 Introduction

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 Step 2 and Step 3.
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.
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.

System 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.
1 Introduction

System 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.

For more detailed information on supported features, see Chapter 4, 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.

For more detailed information on each supported feature package, see Chapter 5, Feature Packages.
Overview

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

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

The information in this chapter:

- Distinguishes between standard and optional system hardware
- Explains the uses of all hardware components
- Presents differences between the hardware components of each of the platforms

In addition, this chapter 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 be or is 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.

Standard System Hardware by Platform

Regardless of the type of application 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 (MAPs). Platforms covered include:

- MAP/100C on page 13
- MAP/100P on page 22
- MAP/40P on page 34
- MAP/5P on page 42

This section describes and illustrates these platforms and their standard system hardware components.
The MAP/100C is a central-office rack-mounted unit. It is 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.

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

- Backplane on page 13
- Standard Circuit Cards on page 14
- Standard Bus Cables on page 16
- Peripheral Devices on page 17
- Power Supply on page 18

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 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 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 and voice processing cards, as well as for cards to support local area networks, and so on. 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 six 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 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 standard circuit cards, see Chapter 4, Features and Chapter 5, Feature Packages.
The following standard circuit cards in the MAP/100C are discussed:
- Central Processing Unit Circuit Card on page 15
- External SCSI Connector on page 15
- Video Controller Circuit Card on page 15
- Remote Maintenance Circuit Card on page 16

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 MB of RAM and a maximum of 128 MB of RAM.

External SCSI Connector
The external small computer system interface (SCSI) connector provides access to the SCSI bus that is 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.
2 Hardware

Remote Maintenance Circuit Card
The remote maintenance circuit card provides a method of remote monitoring and access for offsite technicians. This circuit card has a built-in 28.8 modem for all systems in the United States.

Standard Bus Cables
The following two types of standard bus cables for the MAP/100C system are discussed:

- SCSI Bus Cable on page 16
- TDM Bus Cable on page 16

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.
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 and 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 on page 73 and Chapter 4, Features.

The following peripheral devices supported by the MAP/100C platform are discussed:

- Hard Disk Drive on page 17
- Diskette Drive on page 18
- Cartridge Tape Drive on page 18

Hard Disk Drive

A hard disk drive is a peripheral device used to provide storage of 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-GB 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.
2 Hardware

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-MB, 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-GB, 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 1 on page 19 shows the front view of the MAP/100C.
- Figure 2 on page 20 shows the back view.
- Figure 3 on page 21 shows typical, multiple MAP/100Cs rack-mounted in a 5ESS equipment rack.
Figure 1. Front View of a MAP/100C with 4ESS Side-Mounting Brackets
Figure 2. Back View of a MAP/100C with 5ESS Mounting Brackets
Figure 3. MAP/100C Units in a 5ESS Cabinet, Front View
The MAP/100P is available as a freestanding desk-side unit. It is 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.

The following standard hardware components for the MAP/100P are discussed:

- **Backplane on page 23**
- **Standard Circuit Cards on page 24**
- **Standard Bus Cables on page 25**
- **TDM Bus Cable on page 26**
- **Peripheral Devices on page 26**
- **Power Supply on page 28**
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. It 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 and voice processing cards, and so on.

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 bay 1 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.
2 Hardware

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 standard circuit cards in the MAP/100P are discussed:

- Central Processing Unit Circuit Card on page 24
- Video Controller Circuit Card on page 25
- Remote Maintenance Circuit Card on page 25

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 MB 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
The following two types of standard bus cables for the MAP/100P system are discussed:
- [SCSI Bus Cable on page 16](#)
- [TDM Bus Cable on page 16](#)

### 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.
2 Hardware

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 on page 73 and Chapter 4, Features.

The following peripheral devices supported by the MAP/100P platform are discussed:

- Hard Disk Drive on page 27
- Diskette Drive on page 27
- Cartridge Tape Drive on page 27
- External SCSI Connector on page 28
2 Hardware

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-GB 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 is 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-MB, 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-GB of information.

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

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 4 on page 29 shows the front view of a deskside MAP/100P.
- Figure 5 on page 30 shows the back view of a deskside MAP/100P.
- Figure 6 on page 31 shows the front view of a rack-mounted MAP/100P.
- Figure 7 on page 32 shows the back view of a rack-mounted MAP/100P.
- Figure 8 on page 33 shows the front view of multiple rack-mounted MAP/100Ps.
Figure 4. Front View of a Deskside MAP/100P

1. Diskette drive
2. Cartridge tape drive
3. Reset push button
4. Hard disk drive 0
5. Hard disk drive 1
6. Hard disk drive 2
7. Hard disk drive 3
8. Hard disk drive 4
9. Hard disk drive 5
10. Circuit card cage fan
11. Fan fault LED for lower fan
12. System fan fault LED
13. Power supply fault LED
14. Power on LED
15. Disk activity indicator (per SCSI ID)
16. Fan fault LED for upper fan
17. SCSI external active terminator
Figure 5. Back View of a Deskside MAP/100P

1. AC Line fuse
2. Line fuse rating label
3. AC power inlet receptacle
4. ON/OFF power switch with protective guard
5. Power supply status LED
6. Power supply 1
7. Power supply 2
8. Keyboard connector
9. COM2 port
10. Video circuit card (PCI slot 1)
11. P5 200 MHz CPU with COM1 (slot 17)
12. Remote maintenance circuit card (ISA slot 16)
Figure 6. Front View of a Rack-Mounted MAP/100P

(per SCSI ID) 9. Diskette drive 15. Hard disk drive 2
4. Power supply fault LED 11. Reset push button 17. Hard disk drive 0
6. Fan fault LED for right fan
Figure 7. Back View of a Rack-Mounted MAP/100P

1. Line fuse
2. Line fuse rating label
3. AC power inlet receptacle
4. ON/OFF power switch with protective guard
5. Power supply status LED
6. Power supply 1
7. Power supply 2
8. Keyboard connector
9. COM2 port
10. Video circuit card (PCI slot 1)
11. P5 200 MHz CPU with COM1 (slot 17)
12. Remote maintenance circuit card (ISA slot 16)
Figure 8. Multiple Rack-Mounted MAP/100Ps, Front View
The MAP/40P platform is a desk-side (tower), PC-sized unit designed for use in a typical office setting.

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

• **Backplane on page 34**
• **Standard Circuit Cards on page 35**
• **Standard Bus Cables on page 36**
• **Peripheral Devices on page 37**
• **Power Supply on page 39**

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, 1 slot is used by the remote maintenance circuit card. The remaining eight slots are available for voice response and voice processing cards as well as cards to support local area networks, host, and so on. 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 standard circuit cards, see Chapter 4, Features and Chapter 5, Feature Packages.

The following standard circuit cards in the MAP/40P are discussed:

- Central Processing Unit Circuit Card on page 35
- External SCSI Connector on page 36
- Video Controller Circuit Card on page 36
- Remote Maintenance Circuit Card on page 36

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 MB of RAM and a maximum of 128 MB of RAM. The CPU includes an on-board SCSI, floppy, and IDE controllers.
2 Hardware

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 offsite technicians. This circuit card has a built-in 28.8 modem for all systems in the United States.

Standard Bus Cables
The following two types of standard bus cables for the MAP/40P system are discussed:

- [SCSI Bus Cable on page 37](#)
- [TDM Bus Cable on page 37](#)
2 Hardware

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

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 on page 73 and Chapter 4, Features.

The following peripheral devices supported by the MAP/40P platform are discussed:

- Hard Disk Drive on page 38
- Diskette Drive on page 38
- Cartridge Tape Drive on page 38
2 Hardware

Hard Disk Drive
A hard disk drive is a peripheral device used to provide storage of 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-GB 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-MB, 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-GB of information.
All new V7.0 MAPs include a single 2-GB, 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 9 on page 40 shows the front view of the MAP/40P.
- Figure 10 on page 41 shows the back view.
Figure 9. Front View of the MAP/40P

1. Cartridge tape drive
2. Diskette drive
3. Power indicator
4. Disk activity indicator
5. Reset switch
6. Power switch
Figure 10. Back View of the MAP/40P

1. AC power inlet receptacle
2. AC power supply outlet
3. External SCSI I/O connector
4. Parallel port
5. COM2
6. Keyboard connector
7. Power supply fan exhaust
8. Mouse connector
9. Video connector
10. COM1
The MAP/5P platform is a deskside unit in a mini-tower configuration. It is a PC-sized unit designed for use in a typical office setting.

The following standard hardware components of the MAP/5P are discussed:

- Riser Card on page 42
- Motherboard on page 43
- Standard Circuit Cards on page 43
- Standard Bus Cables on page 44
- Peripheral Devices on page 45
- Power Supply on page 46

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 four ISA slots, two PCI slots, and one combination ISA/PCI slot.
The MAP/5P motherboard contains:
- P5 200 MHz CPU
- Video interface
- Keyboard connector
- Mouse connector
- Two serial ports and one parallel port
- 64 MB of memory
- Riser card connector

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 standard circuit cards for the MAP/5P are discussed:
- **SCSI Controller Circuit Card on page 44**
- **Remote Maintenance Circuit Card on page 44**

For more information about software associated with these circuit cards, see Chapter 4, Features and Chapter 5, Feature Packages.
2 Hardware

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

Remote Maintenance Circuit Card
The remote maintenance circuit card provides a method of remote monitoring and access for offsite technicians. This circuit card has a built-in 28.8 modem for all systems in the United States.

Standard Bus Cables

There following two types of standard bus cables for the MAP/5P system are discussed:

• SCSI Bus Cable on page 44
• TDM Bus Cable on page 44

SCSI Bus Cable
The SCSI bus cable serves as the interface from the SCSI controller to SCSI devices such as a hard disk drive 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 on page 73 and Chapter 4, Features.

The following peripheral devices supported by the MAP/5P platform are discussed:

- Hard Disk Drive on page 45
- Diskette Drive on page 46
- Cartridge Tape Drive on page 46

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-GB SCSI hard disk drive. The MAP/5P can support up to two SCSI hard disk drives. This disk is a half-height peripheral.
2 Hardware

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-MB, 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 11 on page 47 shows the front view of the MAP/5P.
- Figure 12 on page 48 shows the back view of the MAP/5P.
Figure 11. Front View of the MAP/5P with Dress Cover Removed

1. Cartridge tape drive
2. Diskette drive
3. Circuit card cage fan
4. Reset switch
5. Power switch
6. Power indicator
7. Speed indicator
8. Disk activity indicator
Figure 12. Back View of the MAP/5P

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

The following categories of optional circuit cards are discussed:

- Analog Circuit Cards on page 50
- Digital Circuit Cards on page 52
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 CCA
- 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 on page 222* 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.
2 Hardware

<table>
<thead>
<tr>
<th>Optional System Hardware</th>
</tr>
</thead>
</table>

**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 United States 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.
2 Hardware

Optional System Hardware

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 on page 55 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. SSP Card Channel Capacities

<table>
<thead>
<tr>
<th>Feature</th>
<th>Number of Simultaneous Transactions Supported</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full call classification analysis (available in the US only)</td>
<td>42</td>
</tr>
<tr>
<td>Text-to-speech</td>
<td>60</td>
</tr>
<tr>
<td>FlexWord™ speech recognition</td>
<td>15</td>
</tr>
<tr>
<td>WholeWord speech recognition without barge-in</td>
<td>15</td>
</tr>
<tr>
<td>Voice or background music recorded in 64-Kbps PCM format with automatic gain control (AGC)</td>
<td>120</td>
</tr>
<tr>
<td>Voice or background music recorded in 24-Kbps or 16-Kbps SBC format with automatic gain control (AGC)</td>
<td>100</td>
</tr>
<tr>
<td>Voice or background music recorded in 32-Kbps or 15-Kbps ADPCM format</td>
<td>120</td>
</tr>
<tr>
<td>16-Kbps CELP for coding</td>
<td>60</td>
</tr>
<tr>
<td>16-KBPS CELP for single-speed playback</td>
<td>120</td>
</tr>
<tr>
<td>Dial pulse recognition</td>
<td>60</td>
</tr>
</tbody>
</table>
Platform Maximums
Up to seven SSP circuit cards are supported on MAP/40P platforms. 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 on page 222 in Chapter 5, Feature Packages.

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Table 2. SSP Card Channel Capacities

<table>
<thead>
<tr>
<th>Feature</th>
<th>Number of Simultaneous Transactions Supported</th>
</tr>
</thead>
<tbody>
<tr>
<td>Echo cancellation (used to support barge-in)</td>
<td>32</td>
</tr>
<tr>
<td>Fax</td>
<td>32</td>
</tr>
</tbody>
</table>

Note: Speech recognition simultaneous transaction counts are independent of language and country.
Data Communications Circuit Cards

The following types of data communications circuit cards are discussed:

- **Synchronous Circuit Card on page 57**
- **Asynchronous 8-Port Circuit Cards on page 58**
- **Token Ring Circuit Card on page 58**
- **Ethernet LAN Circuit Card on page 59**

**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 on page 235 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, onsite and remote monitoring systems, or extra modems.

The asynchronous 8-port serial circuit card that is installed in new V7.0 systems 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 on page 208 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 the 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 on page 235 and Local Area Network Connectivity on page 207 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 on page 207 in Chapter 5, Feature Packages.

**Other Optional Circuit Cards**

The following optional circuit cards are discussed:

- [External Alarms Interface Circuit Card on page 60](#) (MAP/100C only)
- [RAID Controller Circuit Card on page 60](#) (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 on page 196 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 (in other words, it allows you to “hot swap” the disks).

For more information about use of this circuit card and the feature package it supports, see Hardware RAID on page 126 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 here is not an exhaustive list of all devices capable of interfacing with MAPs. If you have compatible or like equipment you want to use with a V7.0 system, 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.

The following optional peripheral equipment is discussed:

- **Monitor** on page 61
- **Terminal Emulation** on page 62
- **Keyboard** on page 62
- **Serial Mouse** on page 62
- **Printer** on page 62
- **Modem** on page 63

**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 systems:
- 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 paper copies of system screens and reports. Table 3 on page 63 lists the printers recommended for V7.0 systems by country.
Note: Some countries have more than one recommended printer.

### Table 3. Printers Recommended for V7.0 System by Country

<table>
<thead>
<tr>
<th>Printer</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>220V Okidata OL810E</td>
<td>Argentina, Australia, Belgium, Brazil, France, Germany, Luxembourg, Netherlands, New Zealand, Spain, Thailand, United Kingdom</td>
</tr>
<tr>
<td>110V Okidata OL810E</td>
<td>Brazil, Canada, Columbia, Mexico, United States</td>
</tr>
<tr>
<td>(Laser printer)</td>
<td></td>
</tr>
<tr>
<td>110V Epson VP1800</td>
<td>Japan</td>
</tr>
<tr>
<td>110V Okidata OL810E</td>
<td>United States</td>
</tr>
<tr>
<td>Microline 320 (Dot matrix)</td>
<td></td>
</tr>
</tbody>
</table>

### 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 United States, an internal modem is dedicated to the remote maintenance circuit card. It is required by Lucent Technologies technical support personnel. Customers can also supply an additional modem for their own use (for example, for file transfer).

Table 4 on page 64 lists the modems recommended for V7.0 system by country.

Table 4. Modems Recommended for V7.0 System by Country

<table>
<thead>
<tr>
<th>Paradyne Modem (Model No.)</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>3810</td>
<td>Japan, Thailand, United Kingdom, Brazil</td>
</tr>
<tr>
<td>3820</td>
<td>Argentina, Canada, Columbia, Germany, Mexico</td>
</tr>
<tr>
<td>3910</td>
<td>Belgium, France, Luxembourg, Netherlands</td>
</tr>
<tr>
<td>3911</td>
<td>Australia, New Zealand, Spain</td>
</tr>
<tr>
<td>US Robotics Sportster 33.6</td>
<td>United States</td>
</tr>
</tbody>
</table>
Resource Assignments, Limitations, and Maximums

The following hardware reference information is provided:

- Hardware Resource Allocator on page 65
- Resource Assignments for Hardware Components on page 69
- Guidelines for the Addition of SCSI Devices on page 73
- Circuit Card Maximums on page 75

Hardware Resource Allocator

The hardware resource allocator is a planning tool 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.

The hardware 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 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)
2 Hardware Resource Assignments, Limitations, and Maximums

~ 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.
2 Hardware

Resource Assignments, Limitations, and Maximums

Configuration Data Files

The following data files are associated with the hardware resource allocator. These files reside in the /vs/data directory. Any reference to data files assumes 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 is 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.
2 Hardware Resource Assignments, Limitations, and Maximums

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 for your platform.

Resource Assignments for Hardware Components

Table 5 on page 70 lists the resource assignments for each standard and optional hardware component supported in V7.0. Values appear for each resource in descending order of preference (first choice, followed by second choice, third choice, and so on).

Note: This list is included for reference only. 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 in Hardware Resource Allocator on page 65 has the complete set of values and determines appropriate settings based on the system configuration.
## 2 Hardware

### Resource Assignments, Limitations, and Maximums

#### Table 5. Resource Assignments for V7.0 System Hardware Components

<table>
<thead>
<tr>
<th>Component</th>
<th>IRQ</th>
<th>I/O Ports</th>
<th>RAM</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU circuit card</td>
<td>13</td>
<td>00 (256), 370</td>
<td>E0000–FFFFFF (128K)</td>
<td></td>
</tr>
<tr>
<td>Diskette drive</td>
<td>6</td>
<td>3F0 (8)</td>
<td></td>
<td>DMA</td>
</tr>
<tr>
<td>PCI Video controller</td>
<td>14†</td>
<td>3B0 (48)</td>
<td>A0000 (128K), C0000 (32K)</td>
<td></td>
</tr>
<tr>
<td>Remote maintenance circuit card (RMB V2)</td>
<td>4, 3</td>
<td>180 (8)</td>
<td>D[1–F]000 (4K)</td>
<td></td>
</tr>
<tr>
<td>CPU card parallel port</td>
<td>7</td>
<td>378 (8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CPU card serial port #1 (COM1)</td>
<td>4</td>
<td>3F8 (8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CPU card serial port #2 (COM2)</td>
<td>3</td>
<td>2F8 (8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>On-board PCI SCSI</td>
<td>14</td>
<td></td>
<td>C8000 (16K)</td>
<td></td>
</tr>
</tbody>
</table>
# Hardware

## Resource Assignments, Limitations, and Maximums

Table 5. Resource Assignments for V7.0 System Hardware Components

<table>
<thead>
<tr>
<th>Component</th>
<th>IRQ</th>
<th>I/O Ports</th>
<th>RAM</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>IVC6, NGTR circuit card</td>
<td>2, 15, 5, 3</td>
<td>[1–3, 5–7, 9–B, D-F]00 (32/card)</td>
<td></td>
<td>Boards 0-11</td>
</tr>
<tr>
<td>SSP circuit card</td>
<td>11</td>
<td>(all are 8/card)</td>
<td>D20–D3F 920–93F 520–53F 120–13F</td>
<td>Boards 0–3 4–7 8–11 12–15</td>
</tr>
<tr>
<td>E1/T1 circuit card</td>
<td>12</td>
<td>(both are 2/card)</td>
<td>22[0246ACE] 23[0246ACE]</td>
<td>Boards 0-7</td>
</tr>
<tr>
<td>SuperSerial asynchronous circuit card</td>
<td></td>
<td></td>
<td>C[8C]000, D[048C]000 (16K)</td>
<td></td>
</tr>
<tr>
<td>FIFO/SIB synchronous circuit card</td>
<td>10, 3, 5, 2, 11, 12</td>
<td>380, 2[BE]0, 3[AE]0 (16)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# 2 Hardware

## Resource Assignments, Limitations, and Maximums

### Table 5. Resource Assignments for V7.0 System Hardware Components

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

* IRQ 14 is shared between video, on-board PCI SCSI, and PCI RAID controller.
† C8000-CBFFFF 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 the 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.
## Hardware

### Resource Assignments, Limitations, and Maximums

<table>
<thead>
<tr>
<th>Addition of SCSI Devices to the MAP/100P</th>
<th>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.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Addition of SCSI Devices to the MAP/40P</td>
<td>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.</td>
</tr>
<tr>
<td>Addition of SCSI Devices to the MAP/5P</td>
<td>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.</td>
</tr>
</tbody>
</table>
### Circuit Card Maximums

Table 6 on page 75 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 6 on page 75 are in many cases logical limits and do not necessarily represent the actual physical limits on the system.

<table>
<thead>
<tr>
<th>Circuit Card</th>
<th>MAP/5P</th>
<th>MAP/40P</th>
<th>MAP/100C and MAP/100P</th>
<th>Connect to TDM Bus?</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>P5 200-MHz CPU</td>
<td>N/A</td>
<td>1</td>
<td>1</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Video</td>
<td>N/A</td>
<td>1</td>
<td>1</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Remote maintenance</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>PCI Ethernet LAN</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>FIFO/SIB</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Token ring</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>
## 2 Hardware

### Resource Assignments, Limitations, and Maximums

Table 6. Circuit Card Maximums

<table>
<thead>
<tr>
<th>Circuit Card</th>
<th>MAP/5P</th>
<th>MAP/40P</th>
<th>MAP/100C and MAP/100P</th>
<th>Connect to TDM Bus?</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi-port asynchronous</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Tip/Ring</td>
<td>4</td>
<td>8</td>
<td>12</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>T1</td>
<td>N/A</td>
<td>5</td>
<td>5</td>
<td>Yes</td>
<td>Must be AYC21</td>
</tr>
<tr>
<td>E1</td>
<td>N/A</td>
<td>3</td>
<td>3</td>
<td>Yes</td>
<td>Must be AYC21</td>
</tr>
<tr>
<td>SSP</td>
<td>N/A</td>
<td>7</td>
<td>8</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>External alarms</td>
<td>N/A</td>
<td>N/A</td>
<td>1</td>
<td>No</td>
<td>Only available on the MAP/100C</td>
</tr>
<tr>
<td>RAID controller card</td>
<td>N/A</td>
<td>N/A</td>
<td>1</td>
<td>No</td>
<td>Only available on the MAP/100P</td>
</tr>
</tbody>
</table>
3 Software

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 system software for the Intuity CONVERSANT system V7.0, and lists the software packages media, and installation status for each type of software.

Topics covered include:

• UnixWare 2.1.2 Operating System on page 78
• V7.0 System Base Software on page 80
• V7.0 System Optional Software on page 82

Note: To see a list of the software 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.
UnixWare 2.1.2 Operating System

All of the UnixWare software listed in Table 7 on page 78 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 7 on page 78 lists the UnixWare 2.1.2 base software packages.

Table 7. UnixWare 2.1.2 Base Software

<table>
<thead>
<tr>
<th>Package Name</th>
<th>Media</th>
<th>Installation Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intuity CONVERSANT UnixWare 2.1.2 Boot Floppies</td>
<td>Diskette</td>
<td>Required</td>
</tr>
</tbody>
</table>

1 of 2
### Intuity UnixWare 2.1.2 Image Tape for CONVERSANT

Now also includes:

- 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

<table>
<thead>
<tr>
<th>Package Name</th>
<th>Media</th>
<th>Installation Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intuity UnixWare 2.1.2 Image Tape for CONVERSANT now also includes:</td>
<td>Tape</td>
<td>Required</td>
</tr>
<tr>
<td>• Installit Utility for Intuity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Intuity Platform CONVERSANT Tuning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• VERITAS File Manager</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• VERITAS Volume Manager</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• SMC ISA/PCI LAN Drivers (in Network Interface Card Support)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Token Ring Driver (in Network Interface Card Support)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• All X-windows packages (Graphics Display Support, Graphics Supplemental Fonts, and Graphics Utilities)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• UnixWare 2.1.2 Desktop Manager</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Network File Systems Utilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turbo Token Ring Hardware Support</td>
<td>Diskette</td>
<td>Optional</td>
</tr>
</tbody>
</table>
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 8 on page 81 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 8. Intuity CONVERSANT System V7.0 Base Software

<table>
<thead>
<tr>
<th>Package Name</th>
<th>Installation Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intuity CONVERSANT VIS V7.0 Set</td>
<td>Required</td>
</tr>
<tr>
<td>• Utilities Package</td>
<td>Required</td>
</tr>
<tr>
<td>• Runtime Processing Package</td>
<td>Required</td>
</tr>
<tr>
<td>• Maintenance Package</td>
<td>Required</td>
</tr>
<tr>
<td>• Logger/Alerter Package</td>
<td>Required</td>
</tr>
<tr>
<td>• AUDIX Logger Package</td>
<td>Required</td>
</tr>
<tr>
<td>• Base ORACLE RDBMS 7.3.2</td>
<td>Required</td>
</tr>
<tr>
<td>• ORACLE 7 Integration Package</td>
<td>Required</td>
</tr>
<tr>
<td>• Administration Screens Package</td>
<td>Required</td>
</tr>
<tr>
<td>• Transaction State Machine Package</td>
<td>Required</td>
</tr>
<tr>
<td>• Switch Utilities Package</td>
<td>Required</td>
</tr>
<tr>
<td>• License Modification Package</td>
<td>Required</td>
</tr>
</tbody>
</table>
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 9 on page 83 lists the optional V7.0 system software packages available for use with the system. Most of these packages are directly related to a specific system feature package. The relationship between features and feature packages is discussed in Chapter 4, Features, and Chapter 5, Feature Packages.

**Note:** System releases before V6.0 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 9. Intuity CONVERSANT System V7.0 Optional Software

<table>
<thead>
<tr>
<th>Package Name</th>
<th>Media</th>
</tr>
</thead>
<tbody>
<tr>
<td>FlexWord Toolkit</td>
<td>Diskette</td>
</tr>
<tr>
<td>Adjunct/Switch Application Interface (ASAI) Package</td>
<td>Diskette</td>
</tr>
<tr>
<td>Lucent Technologies CALLVISOR PC ASAI</td>
<td>Diskette</td>
</tr>
<tr>
<td>Lucent Technologies CALLVISOR PC ISDN</td>
<td>Diskette</td>
</tr>
<tr>
<td>Lucent Technologies CALLVISOR PC ITT</td>
<td>Diskette</td>
</tr>
<tr>
<td>Lucent Technologies CALLVISOR PC LAN GATEWAY</td>
<td>Diskette</td>
</tr>
<tr>
<td>ASP Driver Package</td>
<td>Diskette</td>
</tr>
<tr>
<td>CSG Asynchronous Host Toolkit</td>
<td>Diskette</td>
</tr>
<tr>
<td>ASYNC_TEST Transactions Script Builder Backup</td>
<td></td>
</tr>
<tr>
<td>ASYNC_TEST Speech Script Builder Backup</td>
<td></td>
</tr>
</tbody>
</table>
### Table 9. Intuity CONVERSANT System V7.0 Optional Software

<table>
<thead>
<tr>
<th>Package Name</th>
<th>Media</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAX Set</td>
<td></td>
</tr>
<tr>
<td>SoftFAX(r) Facsimile system</td>
<td>Tape</td>
</tr>
<tr>
<td>FAX Integration Package</td>
<td></td>
</tr>
<tr>
<td>ICV6 Device Interface for softFAX</td>
<td></td>
</tr>
<tr>
<td>SSP Device Interface for softFAX</td>
<td></td>
</tr>
<tr>
<td>Script Builder Fax Actions for Lucent Technologies Cards</td>
<td></td>
</tr>
<tr>
<td>FAX_Zapper</td>
<td></td>
</tr>
<tr>
<td>SB FAX Actions FAX Zapper Application Database for Lucent Technologies</td>
<td>Diskette</td>
</tr>
<tr>
<td>SB FAX Actions FAX Zapper Application Speech Disk 1 for Lucent Technologies</td>
<td>Diskette</td>
</tr>
<tr>
<td>SB FAX Actions FAX Zapper Application Speech Disk 2 for Lucent Technologies</td>
<td>Diskette</td>
</tr>
<tr>
<td>SB FAX Actions FAX Zapper Application Transaction for Lucent Technologies</td>
<td>Diskette</td>
</tr>
<tr>
<td>Call Classification Analysis Package</td>
<td>Diskette</td>
</tr>
</tbody>
</table>
### Table 9. Intuity CONVERSANT System V7.0 Optional Software

<table>
<thead>
<tr>
<th>Package Name</th>
<th>Media</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Collection Toolkit</td>
<td>Diskette</td>
</tr>
<tr>
<td>Form Filler Application</td>
<td>Diskette</td>
</tr>
<tr>
<td>3270 Enhanced File Transfer Package</td>
<td>Diskette</td>
</tr>
<tr>
<td>Feature Test Script Package</td>
<td>Diskette</td>
</tr>
<tr>
<td>Graphical Speech Editor</td>
<td>Diskette</td>
</tr>
<tr>
<td>T1 E&amp;M Interface Package</td>
<td>Diskette</td>
</tr>
<tr>
<td>Line Side E1 Package – DEFINITY</td>
<td>Diskette</td>
</tr>
<tr>
<td>Line Side T1 Package – DEFINITY</td>
<td>Diskette</td>
</tr>
<tr>
<td>Line Side T1 Package – GALAXY</td>
<td>Diskette</td>
</tr>
<tr>
<td>E1 CAS R2 Interface Package – Australia</td>
<td>Diskette</td>
</tr>
<tr>
<td>E1 CAS R2 MFC Interface Package – Mexico</td>
<td>Diskette</td>
</tr>
<tr>
<td>3270 NetView Alarm Interface Package</td>
<td>Diskette</td>
</tr>
<tr>
<td>Advanced PRI Package</td>
<td>Diskette</td>
</tr>
</tbody>
</table>

*3 of 11*
### Software V7.0 System Optional Software

#### Table 9. Intuity CONVERSANT System V7.0 Optional Software

<table>
<thead>
<tr>
<th>Package Name</th>
<th>Media</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nortel ISDN PRI Package</td>
<td>Diskette</td>
</tr>
<tr>
<td>ISDN Primary Rate Interface Package</td>
<td>Diskette</td>
</tr>
<tr>
<td>Platform Upgrade Assistance Package</td>
<td>Diskette</td>
</tr>
<tr>
<td>External Alarms Package</td>
<td>Diskette</td>
</tr>
<tr>
<td>Hardware RAID Integration Package</td>
<td>Diskette</td>
</tr>
<tr>
<td>RAID Configuration Utilities</td>
<td>Diskette</td>
</tr>
<tr>
<td>Global Array Manager Package</td>
<td>Diskette</td>
</tr>
<tr>
<td>RMB V2 set</td>
<td>Tape</td>
</tr>
<tr>
<td>Remote Maintenance Board Package (AYC54/55)</td>
<td></td>
</tr>
<tr>
<td>RMB Integration Software Version 2.0</td>
<td></td>
</tr>
<tr>
<td>Script Builder</td>
<td>Diskette</td>
</tr>
<tr>
<td>Synchronous Host Interface Package</td>
<td>Diskette</td>
</tr>
<tr>
<td>T1/E1 Board Driver</td>
<td>Diskette</td>
</tr>
<tr>
<td>Tip/Ring Board Driver</td>
<td>Diskette</td>
</tr>
</tbody>
</table>
### Table 9. Intuity CONVERSANT System V7.0 Optional Software

<table>
<thead>
<tr>
<th>Package Name</th>
<th>Media</th>
</tr>
</thead>
<tbody>
<tr>
<td>Text-to-Speech Package</td>
<td>Diskette</td>
</tr>
<tr>
<td>Software Text-to-Speech Package</td>
<td>Diskette</td>
</tr>
<tr>
<td>Call Bridge Application Package</td>
<td>Diskette</td>
</tr>
<tr>
<td>Equinox SST Loadable STREAMS Device Driver (EISA/ISA/MCA/PCI)</td>
<td>Diskette</td>
</tr>
<tr>
<td>Dial Pulse Recognition Package</td>
<td>Diskette</td>
</tr>
<tr>
<td>CLEO 4.1.</td>
<td>Tape</td>
</tr>
<tr>
<td>cleo_3270, Feature Level 1 (4.1.2.0)</td>
<td></td>
</tr>
<tr>
<td>cleo_hle, Feature Level 2 (4.1.2.0)</td>
<td></td>
</tr>
<tr>
<td>cleo_mgmt, Feature Level 1 (4.1.2.0)</td>
<td></td>
</tr>
<tr>
<td>cleo_netman, Feature Level 1 (4.1.2.0)</td>
<td></td>
</tr>
<tr>
<td>cleo_sib, Link Level (4.1.2.0)</td>
<td></td>
</tr>
<tr>
<td>cleo_sna_128lu, SNA Level (4.1.2.0)</td>
<td></td>
</tr>
<tr>
<td>cleo_tkm, Link Level (4.1.2.0)</td>
<td></td>
</tr>
</tbody>
</table>
### Table 9. Intuity CONVERSANT System V7.0 Optional Software

<table>
<thead>
<tr>
<th>Package Name</th>
<th>Media</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORACLE Development Tools</td>
<td>Tape</td>
</tr>
<tr>
<td>PRO*C v2.2.0.0</td>
<td></td>
</tr>
<tr>
<td>SQL*FORMS/MENU 4.5.8.0.17</td>
<td></td>
</tr>
<tr>
<td>ORACLE*ReportWriter 2.5.6.3.0</td>
<td></td>
</tr>
<tr>
<td>SQL*NET TCP/IP V2 for ORACLE 7.3.2</td>
<td>Diskette</td>
</tr>
<tr>
<td>Backup/Restore Utilities</td>
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<td>Unix Management Screens Package</td>
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<tr>
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<tr>
<td>Universal Call ID</td>
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<tr>
<td>WholeWord Recognition – Base</td>
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<tr>
<td>WholeWord Recognition – Dutch</td>
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</tr>
<tr>
<td>WholeWord Recognition – Australian English</td>
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<tr>
<td>WholeWord Recognition – UK English</td>
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</tbody>
</table>
### Table 9. Intuity CONVERSANT System V7.0 Optional Software

<table>
<thead>
<tr>
<th>Package Name</th>
<th>Media</th>
</tr>
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<tbody>
<tr>
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<tr>
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<td>WholeWord Recognition – Japanese</td>
<td>Diskette</td>
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<td>WholeWord Recognition – Brazilian Portuguese</td>
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<tr>
<td>WholeWord Recognition – Castilian Spanish</td>
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</tr>
<tr>
<td>WholeWord Recognition – Latin-American Spanish</td>
<td>Diskette</td>
</tr>
<tr>
<td>FlexWord Recognition – Base</td>
<td>Diskette</td>
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<tr>
<td>FlexWord Recognition – US English</td>
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<td>FlexWord Recognition – French</td>
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<tr>
<td>FlexWord Recognition – German</td>
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<table>
<thead>
<tr>
<th>Package Name</th>
<th>Media</th>
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<tbody>
<tr>
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<tr>
<td>FlexWord Recognition – Spanish</td>
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<td>FlexWord Recognition – Brazilian Portuguese</td>
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<tr>
<td>Enhanced Basic Speech (male voice) – US English</td>
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<tr>
<td>Enhanced Basic Speech (female voice) – French</td>
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<td>Enhanced Basic Speech (female voice) – Canadian French</td>
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<td>Enhanced Basic Speech (female voice) – German</td>
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<table>
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<th>Package Name</th>
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<tr>
<td>Enhanced Basic Speech (female voice) – Indonesian</td>
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<td>Enhanced Basic Speech (female voice) – Japanese</td>
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<td>Enhanced Basic Speech (female voice) – Malay</td>
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<tr>
<td>Enhanced Basic Speech (female voice) – Thai</td>
<td>Diskette</td>
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<tr>
<td>Enhanced Basic Speech (female voice) – Hungarian</td>
<td>Diskette</td>
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<tr>
<td>Enhanced Basic Speech (female voice) – Korean</td>
<td>Diskette</td>
</tr>
<tr>
<td>Enhanced Basic Speech (female voice) – Slovak</td>
<td>Diskette</td>
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<tr>
<td>Enhanced Basic Speech (female voice) – Polish</td>
<td>Diskette</td>
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<table>
<thead>
<tr>
<th>Package Name</th>
<th>Media</th>
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</thead>
<tbody>
<tr>
<td>Enhanced Basic Speech (female voice) – Czech</td>
<td>Diskette</td>
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<tr>
<td>Analog Switch Interface Package – Argentina</td>
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<td>Analog Switch Interface Package – Columbia</td>
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<td>Analog Switch Interface Package – France</td>
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<td>Analog Switch Interface Package – Hong Kong</td>
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<td>Analog Switch Interface Package – Ireland</td>
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<td>Analog Switch Interface Package – Japan</td>
<td>Diskette</td>
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</table>
### Intuity CONVERSANT System V7.0 Optional Software

<table>
<thead>
<tr>
<th>Package Name</th>
<th>Media</th>
</tr>
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<tbody>
<tr>
<td>Analog Switch Interface Package – Luxembourg</td>
<td>Diskette</td>
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<tr>
<td>Analog Switch Interface Package – Mexico</td>
<td>Diskette</td>
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<td>Analog Switch Interface Package – Netherlands</td>
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<td>Analog Switch Interface Package – New Zealand</td>
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<td>Analog Switch Interface Package – UK</td>
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</tbody>
</table>
4 Features

Overview

A feature can be software and/or hardware and is standard with each V7.0 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 chapter explains the standard features of the V7.0 system.

Topics covered include:

• Open Interface on page 95
• User Interfaces on page 98
• Application Development Tools on page 100
• Voice Response Functions on page 103
• System Status and Monitoring on page 111
• Speech on page 114
• Communications on page 119
• Database Environment on page 122
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 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:


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 on 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 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:

- 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 Tools on page 100](#) 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 a 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 data interface processes (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 discusses 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 provide a GUI. The following packages run on the 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 on page 62** 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 on page 201** and **FlexWord Toolkit on page 197** 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 on page 244** in **Chapter 5, Feature Packages** for more information.
4 Features

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. 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 you into a series of menus and screens from which you 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 Tools

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 to work with more than one language.

For more information, see Chapter 5, Feature Packages and Intuity CONVERSANT Version 7.0 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 who are familiar with the specific application and 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.
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 touchtone digits, answer incoming calls, generate outgoing calls, and so on—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 and Voice@Work application development tools simplifies 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. See *Voice@Work*, 585-313-207, for more information on Voice@Work.

### Announce

The system uses the Announce action step (Script Builder) or Announcement node (Voice@Work) 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 or the Answer Call node in Voice@Work.

### 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 United States 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 PBX.

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

Transfers are accomplished by using the tic script instructions (with several different options), the Transfer Call action step (Script Builder) or node (Voice@Work).

For more information on AYC21 circuit card call transfer capabilities, see Intelligent Transfer.
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, and Voice@Work, 585-313-207.

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 United States 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: For this call progress tone to be recognized, the system must be connected to a 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 a DEFINITY Enterprise Communications Server or other PBX)
- Ring no answer
- Touchtone 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:** For this call progress tone to be recognized, the system must be connected to a 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
- Touchtone entry detected
- Internal hardware or software error, dialing error, or unexpected PBX response
- Timeout
- Illegal dial string
For PBXs 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 PBXs 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 application continues. The call bridge feature is used most often when call transfer is not available on the PBX or central office.

This connection to a third party is accomplished through the **hbbridge** TAS script instruction, the Call_Bridge action step in Script Builder, or the Call_Bridge external function in Voice@Work.

**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 (Script Builder) or node (Voice@Work).

**Note:** Disconnecting the call does not stop the execution of the application script. An application terminates execution when it reaches a Quit instruction.
Features  Voice Response Functions

Originate

An application may be set up to place or originate calls. Originate is accomplished using the tic('O') and tic('o') script instructions, the Make Call action step in Script Builder, or the Make_Call external function in Voice@Work. 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.
This functionality is provided in Voice@Work by the Conv_data external function.


**System Status and Monitoring**

The Intuity CONVERSANT 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 messages 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.)
4 Features

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 the ability to create a compiled list of system statistics. This information can include the number of calls made to the system, transfer attempts, or call information for a specific day.

The Reports Administration screen gives 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 10 on page 113 illustrates the capacity information regarding system reports.

<table>
<thead>
<tr>
<th>Report</th>
<th>Maximum Storage Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Call Data Detail Report</td>
<td>7 days of data</td>
</tr>
<tr>
<td>Call Classification Report</td>
<td>365 days of data</td>
</tr>
<tr>
<td>Call Data Summary Report</td>
<td>7 days of data</td>
</tr>
</tbody>
</table>

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.

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

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

The number of telephone network connections that support simultaneous use of either speech playback or voice coding are listed in Table 11 on page 117. 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 11 on page 117 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.
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 11. Speech Channel Capacities

<table>
<thead>
<tr>
<th>Circuit Card</th>
<th>ADPCM 16/32 Kbps Playback/Record</th>
<th>CELP 16 Kbps Playback/Record</th>
<th>SBC 16/24 Kbps Playback/Record</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSP (AYC43)</td>
<td>120/120</td>
<td>120/60</td>
<td>100/100</td>
</tr>
<tr>
<td>NGTR (AYC30)</td>
<td>6/6</td>
<td>6/6</td>
<td>6/6</td>
</tr>
<tr>
<td>IVC6 (AYC10 and AYC29)</td>
<td>6/6</td>
<td>6/6</td>
<td>6/6</td>
</tr>
</tbody>
</table>
Table 12 on page 118 shows sample speech storage capacities for different disk configurations. Your system can have space allocated on both primary and secondary disks.

Table 12. Sample Speech Storage Capacities

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

Table 13 on page 119 illustrates the capacities associated with recording speech from the speech administration screens.
Communications

Table 13. Speech Administration Capacities

<table>
<thead>
<tr>
<th>Item</th>
<th>Maximum Capacity</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phrase length when recorded in Script Builder, in seconds</td>
<td>240</td>
<td>Playing phrases consecutively eliminates the constraint</td>
</tr>
<tr>
<td>Phrase tag length (characters)</td>
<td>50</td>
<td></td>
</tr>
</tbody>
</table>

The Intuity CONVERSANT 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.
Analog Telephony Interface

When the right combination of base and optional features is used, analog interfaces can be 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
Features Communications

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 Telephony Interface**

When the right combination of base and optional features is used, digital telephony interfaces can be 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.

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

The Intuity CONVERSANT V7.0 system 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 14 on page 124 illustrates the database capacities used within a Script Builder application script.
### Table 14. Database Capacities

<table>
<thead>
<tr>
<th>Item</th>
<th>Max. Capacity</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local database (LDB) table name</td>
<td>11 characters</td>
<td></td>
</tr>
<tr>
<td>Length of LDB field names</td>
<td>24 characters</td>
<td></td>
</tr>
<tr>
<td>LDB field size – char</td>
<td>50 characters</td>
<td></td>
</tr>
<tr>
<td>LDB field size – num</td>
<td>11 digits</td>
<td></td>
</tr>
<tr>
<td>LDB field size – date</td>
<td>10 characters</td>
<td>Fixed size</td>
</tr>
<tr>
<td>LDB field size – time</td>
<td>11 characters</td>
<td>Fixed size</td>
</tr>
<tr>
<td>Number of open cursors on the system</td>
<td>255, default size</td>
<td>This can be tuned higher. See <em>Intuity CONVERSANT System Version 7.0 Administration</em>, 585-313-501, for more details on tuning the open cursor number.</td>
</tr>
<tr>
<td>Different database tables accessed per application</td>
<td>Infinite number</td>
<td></td>
</tr>
<tr>
<td>Different database tables owned per application</td>
<td>10</td>
<td>Includes both local and remote tables</td>
</tr>
</tbody>
</table>
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 for 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.
5 Feature Packages

Overview

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

This chapter provides:

• Detailed descriptions of the feature packages available with V7.0 systems
• Software and hardware requirements for each feature package
• Capabilities and capacities of each feature package

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

Note: The sections titled “Software and Hardware Requirements” for each feature package assume that the base application software and platform-required hardware (such as the central processing unit) are already installed.
Topics covered include:

- Adjunct/Switch Application Interface on page 165
- Asynchronous Host Interface Toolkit on page 170
- Call Center Application Solutions on page 173
- Call Classification Analysis on page 186
- Country-Specific Analog Switch Integration Packages on page 188
- Dial Pulse Recognition on page 190
- Enhanced Basic Speech on page 192
- Enhanced File Transfer on page 194
- External Alarms on page 196
- FlexWord Toolkit on page 197
- Form Filler Plus on page 199
- Graphical Speech Editor on page 201
- Line Side E1-DEFINITY on page 202
- Line Side T1-DEFINITY on page 205
- Local Area Network Connectivity on page 207
- Multi-Port Asynchronous Communications Interface on page 208
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.

Note: The V7.0 system does not support the AUDIX® Voice Power® or FAX Attendant System™.
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 ASAI Protocol Reference, 555-230-221
5 Feature Packages

Adjunct/Switch Application Interface

Software and Hardware Requirements

Software Requirements
The following software packages must be installed for implementation of the ASAI feature:

- 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 15 on page 169 lists ASAI capacities.

Table 15. ASAI Capacities

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Max. Number</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tip/Ring lines between private branch exchange and the voice system</td>
<td>72</td>
<td>Representatives the equivalent of 48 or 96 incoming analog channels</td>
</tr>
<tr>
<td>Line-side T1 lines between private branch exchange and the voice system</td>
<td>• MAP/40P – 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• MAP/100P – 4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• MAP/100C – 4</td>
<td></td>
</tr>
<tr>
<td>Line-side E1 lines between private branch exchange and the voice system</td>
<td>• MAP/40P – 2</td>
<td>Representatives the equivalent of 60 or 90 incoming analog channels</td>
</tr>
<tr>
<td></td>
<td>• MAP/100P – 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• MAP/100C – 3</td>
<td></td>
</tr>
</tbody>
</table>

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 about the LAN Gateway see Installation, Administration, and Maintenance of CallVisor ASAI over the DEFINITY LAN Gateway, 555-230-223.

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

The asynchronous host interface 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 on page 208.

Table 16 on page 172 lists asynchronous host interface toolkit capacities.
### Table 16. Asynchronous Host Interface Toolkit Capacities

<table>
<thead>
<tr>
<th>Item</th>
<th>Max. Number</th>
<th>Comments</th>
</tr>
</thead>
</table>
| 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 |
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:
  ~ Australian English (female voice)
  ~ Brazilian Portuguese (female voice)
  ~ Canadian French (female voice)
~ Cantonese Chinese (female voice)
~ Castilian Spanish (female voice)
~ Czech (female voice)
~ Dutch (female voice)
~ French (female voice)
~ German (female voice)
~ Hindi (female voice)
~ Hungarian (female)
~ Indonesian (female voice)
~ Italian (female voice)
~ Japanese (female voice)
~ Korean (female voice)
~ Latin-American Spanish (female voice)
~ Malay (female voice)
~ Mandarin Chinese (female voice)
~ Polish (female voice)
~ Slovak (female voice)
~ Thai (female voice)
~ United Kingdom (UK) English (female voice)
~ United States (US) English (male and female voices)
For more information on Enhanced Basic Speech, see Enhanced Basic Speech on page 192 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 on page 229 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 on page 190 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)
Feature Packages

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)

Call Center Application Solutions

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.
5  Feature Packages  Call Classification Analysis

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.
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.

A single SSP card can handle up to 42 simultaneous channels of CCA if it is dedicated exclusively to CCA. See Table 17 on page 188.

### Table 17. Full CCA Capacities

<table>
<thead>
<tr>
<th>Item</th>
<th>Max. Number</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concurrent instances of full CCA on one dedicated SSP card</td>
<td>42</td>
<td>SSP board dedicated exclusively to CCA</td>
</tr>
</tbody>
</table>
| Concurrent instances of full CCA on one dedicated AYC2C SP card | 6           | • An error is generated if a script attempts to use full CCA and the maximum number of CCA instances are running.  
• No further attempts are made after the error is logged. |

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.

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.
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.
5 Feature Packages

Enhanced Basic Speech

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:

- Australian English (female voice)
- Brazilian Portuguese (female voice)
- Canadian French (female voice)
- Cantonese Chinese (female voice)
- Castilian Spanish (female voice)
- Czech (female voice)
- Dutch (female voice)
- French (female voice)
- German (female voice)
- Hindi (female voice)
- Hungarian (female)
- Indonesian (female voice)
- Italian (female voice)
Feature Packages

Enhanced Basic Speech

- Japanese (female voice)
- Korean (female voice)
- Latin-American Spanish (female voice)
- Malay (female voice)
- Mandarin Chinese (female voice)
- Polish (female voice)
- Slovak (female voice)
- Thai (female voice)
- United Kingdom (UK) English (female voice)
- United States (US) English (male and female voices)

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 18 on page 195 lists enhanced file transfer capacities.
## Feature Packages

### Enhanced File Transfer

Table 18. Enhanced File Transfer Capacities

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

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.

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

Table 19 on page 197 lists the external alarms capacities.
## Table 19. External Alarms Capacities

<table>
<thead>
<tr>
<th>Item</th>
<th>Max. Number</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time between system sanity checks</td>
<td>60 seconds</td>
<td>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.</td>
</tr>
<tr>
<td>Current capacity of external alarm interface hardware</td>
<td>5 amperes</td>
<td>Operating at 250 VAC</td>
</tr>
<tr>
<td></td>
<td>1 ampere</td>
<td>Operating at 125 VAC</td>
</tr>
<tr>
<td></td>
<td>5 amperes</td>
<td>Operating at 30 VAC</td>
</tr>
</tbody>
</table>

For more information on this feature package, see *Intuity CONVERSANT System Version 7.0 Communication Development*, 585-313-202.
5 Feature Packages

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.
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.
5 Feature Packages

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 20 on page 200 lists Form Filler Plus capacities.

Table 20. Form Filler Plus Capacities

<table>
<thead>
<tr>
<th>Item</th>
<th>Max. Number</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Channels simultaneously using Form Filler Plus or transcribe script, or some combination of</td>
<td>96</td>
<td></td>
</tr>
<tr>
<td>Coding rates supported</td>
<td>4</td>
<td>16 SBC, 24 SBC, 16 ADPCM</td>
</tr>
<tr>
<td>Responses recorded per call session (or application)</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Coded phrase length, in seconds</td>
<td>999</td>
<td>Default is 20 seconds.</td>
</tr>
</tbody>
</table>

1 of 2
Table 20. Form Filler Plus Capacities

<table>
<thead>
<tr>
<th>Item</th>
<th>Max. Number</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Talkfiles coded and stored</td>
<td>1</td>
<td>• Talkfile 8 is dedicated to storage.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Talkfile 9 is dedicated to transcription.</td>
</tr>
<tr>
<td>Initial time-out to detect speech during a code session, in seconds</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Interword time-out to detect silence during a code session, in seconds</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

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 21 on page 202 lists Graphical Speech Editor capacities.

### Table 21.  Graphical Speech Editor Capacities

<table>
<thead>
<tr>
<th>Item</th>
<th>Max. Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of speech phrase stored in buffer, in minutes</td>
<td>4</td>
</tr>
</tbody>
</table>

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 ASAI 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
5 Feature Packages

- 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
5 Feature Packages

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

Table 22 on page 206 lists Line Side T1 capacities.
5 Feature Packages

Local Area Network Connectivity

Table 22. Line Side T1 Capacities

<table>
<thead>
<tr>
<th>Item</th>
<th>Max. Number</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telephone network connections</td>
<td>24</td>
<td>Per T1 circuit card (AYC21)</td>
</tr>
<tr>
<td>T1 circuit cards</td>
<td>2–5</td>
<td>• 2 per MAP/40P</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 5 per MAP/100C or MAP/100P</td>
</tr>
</tbody>
</table>

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.

This feature package requires that the SuperSerial STREAMS device driver and the asynchronous 8-port circuit card be installed and operational. Table 23 on page 209 lists multi-port asynchronous communications capacities.

Table 23. Multi-Port Asynchronous Communications Capacities

<table>
<thead>
<tr>
<th>Item</th>
<th>Max. Number</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional physical</td>
<td>8</td>
<td>These connections are in addition to the standard system COM1 and COM2 serial ports.</td>
</tr>
<tr>
<td>asynchronous ports</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data speed, in Kbps</td>
<td>9.6</td>
<td></td>
</tr>
</tbody>
</table>

For more information on asynchronous communications, see Intuity CONVERSANT System Version 7.0 Communication Development, 585-313-202.
5  Feature Packages

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 24 on page 210 lists NetView Alarms Interface capacities.
Table 24. NetView Alarms Interface Capacities

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

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

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 25 on page 214* lists primary rate interface capacities.
### Feature Packages

#### Primary Rate Interface

**Table 25. Primary Rate Interface Capacities**

<table>
<thead>
<tr>
<th>Item</th>
<th>Max. Number</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data channels on AYC21, per system</td>
<td>5</td>
<td>For example, up to five 23B+D interfaces are supported when at least four use an AYC21.</td>
</tr>
<tr>
<td>Supported voice channels per system at the T1 rate</td>
<td>119</td>
<td>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.</td>
</tr>
<tr>
<td>Supported voice channels per system at the E1 rate</td>
<td>90</td>
<td>One, two, or three 30B+D interfaces are supported.</td>
</tr>
<tr>
<td>SSP card required to support PRI</td>
<td>1 or more</td>
<td>An SSP is required for voice coding or playback with all E1/ T1 boards.</td>
</tr>
</tbody>
</table>

**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).
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.
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 26 on page 216.

Table 26. Script Builder Application-Related Capacities

<table>
<thead>
<tr>
<th>Item</th>
<th>Max. Number</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Characters in application name</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Characters in field names</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>Applications on system</td>
<td>Restricted only by disk space</td>
<td></td>
</tr>
</tbody>
</table>
### Table 26. Script Builder Application-Related Capacities

<table>
<thead>
<tr>
<th>Item</th>
<th>Max. Number</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Call data events per application</td>
<td>100</td>
<td>For numeric or 12-character fields</td>
</tr>
<tr>
<td></td>
<td>50</td>
<td>For 7-character strings (telephone numbers)</td>
</tr>
<tr>
<td></td>
<td>33</td>
<td>For 8-character dates</td>
</tr>
<tr>
<td></td>
<td>25</td>
<td>For 14-character credit card numbers</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>For 24-character names</td>
</tr>
<tr>
<td>Transaction statements</td>
<td>1000</td>
<td>Action steps (for example, “Answer Phone,” “Announce only”) recommended; not currently enforced in software</td>
</tr>
<tr>
<td>Script labels per application</td>
<td>2400</td>
<td>Label maximum per application</td>
</tr>
<tr>
<td>Length of comment line (characters)</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Arguments passed between external function and transaction</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>
### Table 26. Script Builder Application-Related Capacities

<table>
<thead>
<tr>
<th>Item</th>
<th>Max. Number</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Label name length (characters)</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Digits accepted for a prompt and collect action step</td>
<td>64</td>
<td>Either touch tones or spoken</td>
</tr>
<tr>
<td>Tries to collect in prompt and collect</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Initial time-out in prompt and collect</td>
<td>60 sec</td>
<td></td>
</tr>
<tr>
<td>Interdigit time-out in prompt and collect</td>
<td>60 sec</td>
<td></td>
</tr>
<tr>
<td>Cases of correct input within the non-standard checklist of a prompt and collect</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Touch tones accepted for call transfer</td>
<td>16</td>
<td>Minimum is 1</td>
</tr>
</tbody>
</table>
### Table 26. Script Builder Application-Related Capacities

<table>
<thead>
<tr>
<th>Item</th>
<th>Max. Number</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Channels that can simultaneously use background feature</td>
<td>48</td>
<td>See <em>Intuity CONVERSANT System Version 7.0 Application Development with Script Builder</em>, 585-313-206, for more information</td>
</tr>
<tr>
<td>Digits used in phone number of call bridge</td>
<td>24/16</td>
<td>T1 (all types) has a limit of 15 digits for outdialing; minimum is 1</td>
</tr>
<tr>
<td>Digits used in DNIS number passed from central office</td>
<td>16</td>
<td>Incoming DNIS limited to 15 for PRI; configured in switch administration screens; see <em>Intuity CONVERSANT System Version 7.0 Administration</em>, 585-313-501</td>
</tr>
<tr>
<td>Arguments passed between applications using “Execute External Action”</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Data space available per channel using “Execute External Action,” in bytes</td>
<td>552</td>
<td>Characters used in argument passing</td>
</tr>
</tbody>
</table>
Table 26. Script Builder Application-Related Capacities

<table>
<thead>
<tr>
<th>Item</th>
<th>Max. Number</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>External function names length (characters)</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Phrase length for coding messages, in seconds</td>
<td>999</td>
<td>If 0 is specified, coding continues indefinitely</td>
</tr>
<tr>
<td>Phrases coded per system</td>
<td>48,000</td>
<td></td>
</tr>
<tr>
<td>Talkfiles coded and stored</td>
<td>256</td>
<td></td>
</tr>
<tr>
<td>Initial time-out to detect speech during a code session, in seconds</td>
<td>30</td>
<td>Minimum is 0; default is 5</td>
</tr>
<tr>
<td>Completion time-out to detect silence during a code session, in seconds</td>
<td>30</td>
<td>Minimum is 0; default is 5</td>
</tr>
</tbody>
</table>

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.
5 Feature Packages

- 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.

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.
5  Feature Packages

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
5 Feature Packages

Speech Recognition

- 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.
Swain™ CONVERSANT® System Version 7.0 System Description

Feature Packages

Speech Recognition

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 on page 233* 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.
5 Feature Packages

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 27 on page 232 lists WholeWord speech recognition capacities.

Table 27. WholeWord Speech Recognition Capacities

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

* 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 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 on page 197 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 28 on page 235 lists FlexWord speech recognition capacities.

**Table 28. FlexWord Speech Recognition Capacities**

<table>
<thead>
<tr>
<th>Item</th>
<th>Max. Number</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Words in a wordlist</td>
<td>500</td>
<td></td>
</tr>
<tr>
<td>Wordlists</td>
<td>200</td>
<td></td>
</tr>
</tbody>
</table>
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
5 Feature Packages

Synchronous Host Interface

- 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 29 lists host interface capacities.

Table 29. Host Interface Capacities

<table>
<thead>
<tr>
<th>Item</th>
<th>Max. Number</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Host screen initial time-out</td>
<td>300 sec</td>
<td>Amount of time to wait for any screen to arrive from host (10 is recommended; default is 60)</td>
</tr>
<tr>
<td>Logical Unit availability time-out</td>
<td>300 sec</td>
<td>Time to wait for Logical Unit to become available while phone rings before answering</td>
</tr>
<tr>
<td>Unrecognized screen time-out</td>
<td>300 sec</td>
<td>Time to wait for valid screens to become available after GET_HOST (returns invalid screen)</td>
</tr>
<tr>
<td>Number of Logical Units</td>
<td>128</td>
<td>Requires 1 FIFO/SIB circuit card</td>
</tr>
<tr>
<td>Logins/passwords for host interface</td>
<td>128</td>
<td>Must have same amount as Logical Units specified</td>
</tr>
<tr>
<td>Shared host applications</td>
<td>8</td>
<td>Multiple applications sharing same host application</td>
</tr>
</tbody>
</table>
### Table 29. Host Interface Capacities

<table>
<thead>
<tr>
<th>Item</th>
<th>Max. Number</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Host screen identifier length in characters when defining host screens</td>
<td>128</td>
<td></td>
</tr>
<tr>
<td>Field length in characters when used in host screens</td>
<td>128</td>
<td></td>
</tr>
<tr>
<td>Data passed per host screen, in bytes</td>
<td>988 - X</td>
<td>X = no. of fields defined (application dependent). Define a second screen if additional bytes required.</td>
</tr>
</tbody>
</table>

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.
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.

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.
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. Standard TTS 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. Thus, 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.

Proxy Text-to-Speech
In applications where the demand for TTS is very high or where a language is needed that is not supported on the SSP circuit card, speech processing must be done using one or more auxiliary computers connected to the Intuity CONVERSANT system in a client/server configuration. This capability is called Proxy Text-to-Speech (PTTS).

The current release of the PTTS feature supports two basic classes of languages:

- Japanese
- Microsoft Speech Application Programming Interface (SAPI) compliant languages, which typically include English and most western European and Latin American languages

With the open architecture provided by this feature, you can also add other customized languages, possibly with the assistance of an independent software vendor (ISV).
Currently, PTTS is supported only on Intuity CONVERSANT Version 7.0 systems, MAP/40P and MAP/100P platforms.

Software and Hardware Requirements
The standard TTS 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 PTTS feature package also requires that an SSP circuit card be installed and operational.

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

For more information on the standard TTS feature package, see *Intuity CONVERSANT System Version 7.0 Speech Development, Processing, and Recognition*, 585-313-201.

For more information on the PTTS feature package, see the *Proxy Text-to-Speech (PTTS) User Guide*, 585-350-115.
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.
<table>
<thead>
<tr>
<th>Hardware Requirements for PC</th>
</tr>
</thead>
<tbody>
<tr>
<td>This section includes all necessary hardware and software requirements, as well as performance issues, and a list of optional equipment.</td>
</tr>
</tbody>
</table>

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 30 on page 247 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
5 Feature Packages

Table 30. Minimum and Recommended PC Requirements

<table>
<thead>
<tr>
<th>Operating System</th>
<th>Processor Minimum</th>
<th>Processor Recommended</th>
<th>RAM Minimum</th>
<th>RAM Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows NT 4.0</td>
<td>90 MHz</td>
<td>200 MHz</td>
<td>32 Mb</td>
<td>64 Mb</td>
</tr>
<tr>
<td>Windows 95</td>
<td>90 MHz</td>
<td>166 MHz</td>
<td>16 Mb</td>
<td>32 Mb</td>
</tr>
</tbody>
</table>

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 31 on page 249.
## Table 31. Voice@Work Application-Related Capacities

<table>
<thead>
<tr>
<th>Item</th>
<th>Max. Number</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Characters in application name</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Characters in field names</td>
<td>any length</td>
<td>Make only as long as is needed to be useful</td>
</tr>
<tr>
<td>Applications on system</td>
<td>Restricted only by disk space</td>
<td></td>
</tr>
<tr>
<td>Call data events per application</td>
<td>100</td>
<td>For numeric or 12-character fields</td>
</tr>
<tr>
<td></td>
<td>50</td>
<td>For 7-character strings (telephone numbers)</td>
</tr>
<tr>
<td></td>
<td>33</td>
<td>For 8-character dates</td>
</tr>
<tr>
<td></td>
<td>25</td>
<td>For 14-character credit card numbers</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>For 24-character names</td>
</tr>
<tr>
<td>Length of node name</td>
<td>any length</td>
<td>Make only as long as is needed to be useful</td>
</tr>
<tr>
<td>Arguments passed between external function and transaction</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>
## Table 31. Voice@Work Application-Related Capacities

<table>
<thead>
<tr>
<th>Item</th>
<th>Max. Number</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digits accepted for a prompt and collect action step</td>
<td>64</td>
<td>Either touch tones or spoken</td>
</tr>
<tr>
<td>Tries to collect in prompt and collect</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Initial time-out in prompt and collect</td>
<td>60 sec</td>
<td></td>
</tr>
<tr>
<td>Interdigit time-out in prompt and collect</td>
<td>60 sec</td>
<td></td>
</tr>
<tr>
<td>Touch tones accepted for call transfer</td>
<td>30</td>
<td>The number is limited by the Tip/Ring card, which accepts a maximum of 30</td>
</tr>
<tr>
<td>Channels that can simultaneously use background feature</td>
<td>48</td>
<td>See Intuity CONVERSANT System Version 7.0 Application Development with Script Builder, 585-313-206, for additional information</td>
</tr>
<tr>
<td>Digits used in phone number of call bridge</td>
<td>24/16</td>
<td>T1 (all types) has a limit of 15 digits for outdialing; minimum is 1</td>
</tr>
</tbody>
</table>
Table 31. Voice@Work Application-Related Capacities

<table>
<thead>
<tr>
<th>Item</th>
<th>Max. Number</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digits used in DNIS number passed from central office</td>
<td>16</td>
<td>Incoming DNIS limited to 15 for PRI; configured in switch administration screens; see <em>Intuity CONVERSANT System Version 7.0 Administration</em>, 585-313-501</td>
</tr>
<tr>
<td>Arguments passed between applications using “Execute External Action”</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Data space available per channel using “Execute External Action,” in bytes</td>
<td>552</td>
<td>Characters used in argument passing</td>
</tr>
<tr>
<td>External function names length (characters)</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Phrase length for coding messages, in seconds</td>
<td>999</td>
<td>If 0 is specified, coding continues indefinitely</td>
</tr>
<tr>
<td>Phrases coded per system</td>
<td>48,000</td>
<td></td>
</tr>
<tr>
<td>Talkfiles coded and stored</td>
<td>256</td>
<td></td>
</tr>
</tbody>
</table>

3 of 4
### Table 31. Voice@Work Application-Related Capacities

<table>
<thead>
<tr>
<th>Item</th>
<th>Max. Number</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial time-out to detect speech during a code session, in seconds</td>
<td>30</td>
<td>Minimum is 0; default is 5</td>
</tr>
<tr>
<td>Completion time-out to detect silence during a code session, in seconds</td>
<td>30</td>
<td>Minimum is 0; default is 5</td>
</tr>
</tbody>
</table>
6 Requirements and Specifications

Overview

This chapter provides information on the requirements and specifications necessary to each V7.0 system for proper operation.

Topics covered include:

- Platform Specifications on page 218
  ~ Power Requirements on page 218
  ~ Space Requirements on page 221
  ~ Environmental Considerations on page 223
- Telephone Network Characteristics on page 224
  ~ Tip/Ring Telephony Interface Specifications on page 225
  ~ Digital Telephony Interface Specifications on page 232
- Data Communications Characteristics on page 243
Platform Specifications

Power Requirements

Certain power cabling and requirements are standard across all platforms:

- Each multi-application platform (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 32 on page 218 lists the power that must be available for each MAP/100C, MAP/100P, MAP/40P, or MAP/5P.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>MAP/100C</th>
<th>MAP/100P</th>
<th>MAP/40P</th>
<th>MAP/5P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volts AC (VAC)</td>
<td>110-130 +/- 5%</td>
<td>100–240 VAC Auto Sensing</td>
<td>115-230 Auto Sensing</td>
<td>100-220</td>
</tr>
<tr>
<td>Volts DC (VDC)</td>
<td>-48</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hertz (Hz)</td>
<td>60</td>
<td>50-60</td>
<td>50-60</td>
<td>50-60</td>
</tr>
</tbody>
</table>
### Requirements and Specifications

#### Platform Specifications

**Table 32. Power Requirements for MAPs**

<table>
<thead>
<tr>
<th>Attribute</th>
<th>MAP/100C</th>
<th>MAP/100P</th>
<th>MAP/40P</th>
<th>MAP/5P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase</td>
<td>Single</td>
<td>Single</td>
<td>Single</td>
<td>Single</td>
</tr>
<tr>
<td>Amps (US)</td>
<td>20AC</td>
<td>12 (fused)</td>
<td>4.5A</td>
<td>3A</td>
</tr>
<tr>
<td>AMPS (International)</td>
<td>6.3 (fused)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input cords</td>
<td>NEMA* 5–15P plug; 3 m (9 ft) long</td>
<td>NEMA 5–15P plug; 3 m (9 ft) long</td>
<td>NEMA 5–15P plug; 3 m (9 ft) long</td>
<td>NEMA 5–15P plug; 3 m (9 ft) long</td>
</tr>
<tr>
<td>Unit input receptacles</td>
<td>N/A</td>
<td>IEC-320 inlet</td>
<td>IEC-320 inlet</td>
<td>IEC-320 inlet</td>
</tr>
<tr>
<td>Maximum Power Output</td>
<td>600W</td>
<td>430W</td>
<td>350W</td>
<td>200W</td>
</tr>
<tr>
<td>Heat Dissipation</td>
<td>2500 BTU</td>
<td>2000 BTU</td>
<td>1200 BTU</td>
<td>700 BTU</td>
</tr>
</tbody>
</table>

* National Electrical Manufacturer’s Association
Table 33 on page 220 lists the power that must be available for each optional printer and monitor.

**Table 33. Power Requirements for Printer and Monitor**

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Printer</th>
<th>Monitor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volts AC (VAC)</td>
<td>115 VAC +/- 5%</td>
<td>110–240 VAC auto sensing</td>
</tr>
<tr>
<td>Hertz (Hz) (power)</td>
<td>50–60</td>
<td>50–87 Hz</td>
</tr>
<tr>
<td>Phase</td>
<td>Single</td>
<td>Single</td>
</tr>
<tr>
<td>Amps (US)</td>
<td>4</td>
<td>3.0 (fused)</td>
</tr>
<tr>
<td>Amps (International)</td>
<td></td>
<td>1.5 (fused)</td>
</tr>
<tr>
<td>Input cords</td>
<td>NEMA * 5–15P</td>
<td>NEMA 5-15P</td>
</tr>
<tr>
<td>Unit input receptacles</td>
<td>IEC-320 inlet</td>
<td>IEC-320 inlet</td>
</tr>
</tbody>
</table>

* National Electrical Manufacturer’s Association
Space Requirements

Table 34 on page 221 lists 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 34. Space Requirements for MAPs

<table>
<thead>
<tr>
<th>Platform</th>
<th>Weight</th>
<th>Height</th>
<th>Width</th>
<th>Depth</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAP/5P</td>
<td>13 kg</td>
<td>41 cm</td>
<td>28 cm (11 in.) with stabilizing feet</td>
<td>46 cm (18 in.)</td>
</tr>
<tr>
<td>MAP/40P</td>
<td>20 kg</td>
<td>44.5 cm</td>
<td>33 cm (13 in.) with stabilizing feet</td>
<td>53.4 cm (21 in.)</td>
</tr>
<tr>
<td>MAP/100P Deskside unit</td>
<td>~45.4 kg (~100 lbs)</td>
<td>48.3 cm (19 in.)</td>
<td>30.5 cm (12 in.)</td>
<td>55.9 cm (22 in.)</td>
</tr>
</tbody>
</table>
### Table 34. Space Requirements for MAPs

<table>
<thead>
<tr>
<th>Platform</th>
<th>Weight</th>
<th>Height</th>
<th>Width</th>
<th>Depth</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAP/100P</td>
<td>~36 kg</td>
<td>30.5 cm</td>
<td>48.3 cm</td>
<td>55.9 cm</td>
</tr>
<tr>
<td>Rack mount</td>
<td>(~80 lbs)</td>
<td>(12 in.)</td>
<td>(19 in.)</td>
<td>(22 in.)*</td>
</tr>
<tr>
<td>MAP/100C</td>
<td>63 kg</td>
<td>61 cm</td>
<td>57.4 cm</td>
<td>45.7 cm</td>
</tr>
<tr>
<td></td>
<td>(140 lbs)</td>
<td>(24 in.)</td>
<td>(22.6 in.)</td>
<td>(18 in.)</td>
</tr>
</tbody>
</table>

* 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 35 on page 223.

Table 35. Temperature and Humidity Requirements

<table>
<thead>
<tr>
<th>Platform</th>
<th>Operating State</th>
<th>Nonoperating State</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Temperature</td>
<td>Humidity</td>
</tr>
<tr>
<td>MAP/5P</td>
<td>+10 to +35°C (+50 to +95°F)</td>
<td>20 to 80%, noncondensing</td>
</tr>
<tr>
<td>MAP/40P</td>
<td>+10 to +35°C (+50 to +95°F)</td>
<td>20 to 80%, noncondensing</td>
</tr>
<tr>
<td>MAP/100P</td>
<td>+10 to +38°C (+50 to +100°F)</td>
<td>5 to 80%, noncondensing</td>
</tr>
<tr>
<td>MAP/100C</td>
<td>+10 to +38°C (+50 to +100°F)</td>
<td>—</td>
</tr>
</tbody>
</table>
Table 36 on page 224 lists the general telephone network characteristics for the Version 7.0 system.

### Table 36. Telephone Network Characteristics for V7.0 System

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Characteristic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telephone network connections</td>
<td>MAP/100P and MAP/100C:</td>
</tr>
<tr>
<td></td>
<td>• 90 maximum transactions when system is all E1</td>
</tr>
<tr>
<td></td>
<td>• 96 maximum transactions when system is all T1</td>
</tr>
<tr>
<td></td>
<td>• Telephone network connections not used for transactions are available for bridging</td>
</tr>
<tr>
<td></td>
<td>MAP/40P:</td>
</tr>
<tr>
<td></td>
<td>• 90 maximum transactions when system is all E1</td>
</tr>
<tr>
<td></td>
<td>• 96 maximum transactions when system is all T1</td>
</tr>
<tr>
<td></td>
<td>• Telephone network connections not used for transactions are available for bridging</td>
</tr>
</tbody>
</table>
### Tip/Ring Telephony Interface Specifications

Table 37 on page 226 through Table 42 on page 230 list the various Tip/Ring telephony interface specifications.

#### Table 36. Telephone Network Characteristics for V7.0 System

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Characteristic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connectors</td>
<td>Analog: RJ21X or RJ25C</td>
</tr>
<tr>
<td></td>
<td>Digital: AYC21 — RJ48C modular or 75 Ohm BNC Coaxial</td>
</tr>
<tr>
<td>Lines</td>
<td>Analog — (loop start) signaling</td>
</tr>
<tr>
<td></td>
<td>Digital E1 — (CAS) signaling</td>
</tr>
<tr>
<td></td>
<td>Digital T1 — (E&amp;M) signaling</td>
</tr>
<tr>
<td></td>
<td>Line Side E1</td>
</tr>
<tr>
<td></td>
<td>Line Side T1</td>
</tr>
<tr>
<td></td>
<td>Digital ISDN — ISDN PRI Layer 1 signaling</td>
</tr>
</tbody>
</table>
### Table 37. Tip/Ring Circuit Card General Specifications

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of service</td>
<td>Loop-start POTS</td>
</tr>
<tr>
<td>Loop current detection</td>
<td>15 mA minimum</td>
</tr>
<tr>
<td>Ringing voltage detection</td>
<td>88 VRMS at 20 Hz (nominal)</td>
</tr>
<tr>
<td>Ringer equivalence for Tip/Ring</td>
<td>1.0 B for AYC10</td>
</tr>
<tr>
<td>Wink detection*</td>
<td>80–800 msec</td>
</tr>
<tr>
<td>Flash duration*</td>
<td>40–1550 msec</td>
</tr>
<tr>
<td>Register recall*</td>
<td>Timed break/earth recall</td>
</tr>
<tr>
<td>Answer delay*</td>
<td>0–10 rings</td>
</tr>
</tbody>
</table>

* 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 38. Tip/Ring Circuit Card DTMF Tone Detection Specifications

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digits</td>
<td>0–9, asterisk (*), pound sign (#), A–D</td>
</tr>
<tr>
<td>Amplitude*</td>
<td>+1 to -30 dBm total power (nominal tones)</td>
</tr>
<tr>
<td>On/off timing</td>
<td>80 msec minimum on, 23 msec off</td>
</tr>
<tr>
<td>Gaps bridged</td>
<td>23 msec</td>
</tr>
<tr>
<td>Signal/noise ratio</td>
<td>23 dB (nominal tones at -19 dBm total power)</td>
</tr>
<tr>
<td>Twist</td>
<td>+4 to -8 dB (high to low tone)</td>
</tr>
<tr>
<td>Frequency deviation</td>
<td>+/-1.5%</td>
</tr>
</tbody>
</table>

* This attribute is adjustable through analog switch interface (ASI) packages.
### Table 39. Tip/Ring Circuit Card Transmission Level Plan

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input gain</td>
<td>0 dB fixed</td>
</tr>
<tr>
<td>Output gain</td>
<td>0 dB fixed</td>
</tr>
<tr>
<td>IVOL (card voice coding only)</td>
<td>Input gain selectable from -9 to +12 dB</td>
</tr>
<tr>
<td>OVOL (card voice playback only)</td>
<td>Output gain selectable from -9 to +12 dB</td>
</tr>
</tbody>
</table>

### Table 40. Tip/Ring Circuit Card DTMF Addressing Specifications

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digits</td>
<td>0–9, asterisk (*), pound sign (#), A–D</td>
</tr>
<tr>
<td>On/off timing*</td>
<td>100 msec on, 60 msec off</td>
</tr>
<tr>
<td>Frequency</td>
<td>Precise tones</td>
</tr>
</tbody>
</table>
### Requirements and Specifications

#### Telephone Network Characteristics

**Table 40. Tip/Ring Circuit Card DTMF Addressing Specifications**

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Twist*</td>
<td>0 dB</td>
</tr>
<tr>
<td>Amplitude*</td>
<td>-6 dBm per frequency</td>
</tr>
</tbody>
</table>

* These attributes are adjustable through analog switch interface (ASI) packages.

**Table 41. Tip/Ring Circuit Card Dial Pulse Addressing Specifications**

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Break time*</td>
<td>60 msec</td>
</tr>
<tr>
<td>Make time*</td>
<td>40 msec</td>
</tr>
<tr>
<td>Inter-digit time*</td>
<td>600 msec</td>
</tr>
</tbody>
</table>

* These attributes are adjustable through analog switch interface (ASI) packages.
## Table 42. Tip/Ring Circuit Card Default Progress Tone Detection Specifications

<table>
<thead>
<tr>
<th>Tone</th>
<th>Frequency (Hz)</th>
<th>Amplitude (dBm)</th>
<th>S/N Ratio (dB)</th>
<th>Maximum Twist (dB)</th>
<th>Frequency Deviation (%)</th>
<th>Cadence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dial tone</td>
<td>350 + 440</td>
<td>+1 to -24</td>
<td>55</td>
<td>+3</td>
<td>+/-0.5</td>
<td>Present for 1 sec</td>
</tr>
<tr>
<td>Recall dial tone (stutter dial tone)</td>
<td>350 + 440</td>
<td>+1 to -24</td>
<td>55</td>
<td>+3</td>
<td>+/-0.5</td>
<td>3 cycles of 120–150 msec on, 120–150 msec off, followed by 1 sec on</td>
</tr>
<tr>
<td>Ringback</td>
<td>440 + 480</td>
<td>+1 to -24</td>
<td>55</td>
<td>+3</td>
<td>+/-0.5</td>
<td>1000–2000 msec on, 3000–4000 msec off</td>
</tr>
</tbody>
</table>
### Table 42. Tip/Ring Circuit Card Default Progress Tone Detection Specifications

<table>
<thead>
<tr>
<th>Tone</th>
<th>Frequency (Hz)</th>
<th>Amplitude (dBm)</th>
<th>S/N Ratio (dB)</th>
<th>Maximum Twist (dB)</th>
<th>Frequency Deviation (%)</th>
<th>Cadence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Busy</td>
<td>480 + 620</td>
<td>+1 to -24</td>
<td>55</td>
<td>+3</td>
<td>+/-0.5</td>
<td>60 IPM, 350–500 msec on, 500–650 msec off</td>
</tr>
<tr>
<td>Reorder (Fast busy)</td>
<td>480 + 620</td>
<td>+1 to -24</td>
<td>55</td>
<td>+3</td>
<td>+/-0.5</td>
<td>120 IPM, 180–250 msec on, 250–350 msec off</td>
</tr>
</tbody>
</table>

*These attributes are adjustable through analog switch interface (ASI) packages.

6 Requirements and Specifications

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 43 on page 232 through Table 46 on page 242 list the various digital interface specifications for all T1/E1 protocols.

**Table 43. Digital Telephony Interface General Specifications**

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Specifications for AYC21 Circuit Card</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical connector</td>
<td>8-pin modular RJ-48C and BNC jacks</td>
</tr>
<tr>
<td>FCC registration</td>
<td>AS5USA-24091-XD-E</td>
</tr>
<tr>
<td>Safety approval</td>
<td>UL 1459 type approval for US markets</td>
</tr>
<tr>
<td></td>
<td>CSA 22.2 type approval for Canadian markets</td>
</tr>
<tr>
<td></td>
<td>EN 60950 type approval for European markets</td>
</tr>
<tr>
<td></td>
<td>AS3260 and TS-001 for Australian markets</td>
</tr>
<tr>
<td>Signal regeneration</td>
<td>CSU required over 200 meters (655 feet)</td>
</tr>
<tr>
<td>Loopback capability</td>
<td>CSU required for remote capability</td>
</tr>
</tbody>
</table>

1 of 4
### Table 43. Digital Telephony Interface General Specifications

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Specifications for AYC21 Circuit Card</th>
</tr>
</thead>
<tbody>
<tr>
<td>TLP at DS-1 interface</td>
<td>0 ELP, 0 DLP</td>
</tr>
<tr>
<td>TLP at TDM interface</td>
<td>0 ELP, 0 DLP</td>
</tr>
<tr>
<td>Call progress tone frequency*</td>
<td>Precise tone frequencies can be tuned to accommodate local standards</td>
</tr>
<tr>
<td>Call progress tone generation levels*</td>
<td>-10 dBm total (nominal), but can be tuned through digital switch interface packages</td>
</tr>
<tr>
<td>Call progress tone timing*</td>
<td>• Ringing: 2 sec on, 4 sec off</td>
</tr>
<tr>
<td></td>
<td>• Busy: 0.5 sec on, 0.5 sec off</td>
</tr>
<tr>
<td></td>
<td>Can be tuned through digital switch interface packages</td>
</tr>
<tr>
<td>Call progress tone detection*</td>
<td>Supported with Line Side DEFINITY® protocol (either at T1 or E1 transmission rate)</td>
</tr>
<tr>
<td>DS-1 timing source</td>
<td>Slave to DS-1 source (loop timed)</td>
</tr>
<tr>
<td>DS-1 timing (free running)</td>
<td>Stratum 4</td>
</tr>
</tbody>
</table>
### Table 43. Digital Telephony Interface General Specifications

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Specifications for AYC21 Circuit Card</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suggested CSU types</td>
<td>• Paradyne (PEC 21581-ESF) • Verilink 551VST List 2, or equivalent</td>
</tr>
<tr>
<td>Supported configurations</td>
<td>Tie trunk (robbed-bit E&amp;M), E1 (CAS), ISDN-PRI (E1/T1), Line Side E1, Line Side T1</td>
</tr>
<tr>
<td>Dual tone multifrequency (DTMF) output timing</td>
<td>70 msec on, 70 msec off, but is tunable through digital switch interface packages</td>
</tr>
<tr>
<td>DTMF output levels</td>
<td>-8 dBm per frequency (nominal), but is tunable through digital switch interface packages</td>
</tr>
<tr>
<td>DTMF receivers</td>
<td>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.</td>
</tr>
<tr>
<td>Number of receivers: T1</td>
<td>24 (one per DS-0 channel)</td>
</tr>
</tbody>
</table>
6 Requirements and Specifications

**Table 43. Digital Telephony Interface General Specifications**

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Specifications for AYC21 Circuit Card</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of receivers: E1</td>
<td>30 (one per B-channel)</td>
</tr>
</tbody>
</table>

These attributes are adjustable via the digital switch interface (DSI) package.

**Table 1. T1 Telephony Interface Specifications for T1 E&M Type Configurations Only**

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Specifications for AYC21 Circuit Card</th>
</tr>
</thead>
<tbody>
<tr>
<td>DS-1 framing</td>
<td>D4</td>
</tr>
<tr>
<td>DS-1 line coding</td>
<td>AMI-ZCS</td>
</tr>
<tr>
<td>Protocol</td>
<td>Robbed-bit (4-wire) E&amp;M</td>
</tr>
<tr>
<td>Alerting in/out</td>
<td>Wink/wink</td>
</tr>
<tr>
<td>Wink generation</td>
<td>230 msec default (Selectable: 20–2500 msec)</td>
</tr>
<tr>
<td>Wink detection range</td>
<td>100–350 msec</td>
</tr>
</tbody>
</table>
### Requirements and Specifications

#### Telephone Network Characteristics

Table 1. T1 Telephony Interface Specifications for T1 E&M Type Configurations Only

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Specifications for AYC21 Circuit Card</th>
</tr>
</thead>
<tbody>
<tr>
<td>Addressing (outgoing)</td>
<td>DTMF (touch tone) or MF</td>
</tr>
<tr>
<td>DTMF output timing</td>
<td>70 msec on, 70 msec off</td>
</tr>
<tr>
<td>DTMF output levels</td>
<td>-8 dBm per frequency (nominal)</td>
</tr>
<tr>
<td>Number of digits</td>
<td>16-digit maximum</td>
</tr>
<tr>
<td>Number of digits for outdialing</td>
<td>15-digit maximum</td>
</tr>
<tr>
<td>Addressing (incoming)</td>
<td>DTMF (touch tone) or MF</td>
</tr>
<tr>
<td>DTMF receivers</td>
<td>LSSGR compatible</td>
</tr>
<tr>
<td>Number of receivers</td>
<td>24 (one per DS-0 channel)</td>
</tr>
<tr>
<td>Number of digits (DNIS)</td>
<td>• Will wait for up to 15 digits (selectable)</td>
</tr>
<tr>
<td></td>
<td>• Can be provisioned not to wait for digits</td>
</tr>
<tr>
<td>Initial digit timer</td>
<td>• Will wait up to 4 seconds for first digit</td>
</tr>
<tr>
<td></td>
<td>• Can be provisioned not to wait for digits</td>
</tr>
<tr>
<td>Interdigital timer</td>
<td>Will wait up to 2 seconds between digits</td>
</tr>
</tbody>
</table>

*Intuity™ CONVERSANT® System Version 7.0 System Description 585-313-204  Issue 2 January 2000  236*
### Requirements and Specifications

#### Telephone Network Characteristics

#### Table 1. T1 Telephony Interface Specifications for T1 E&M Type Configurations Only

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Specifications for AYC21 Circuit Card</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audible ring starts</td>
<td>As soon as selected number of digits is received, or when one of the above timers expire (whichever occurs first)</td>
</tr>
<tr>
<td>DNIS capacity</td>
<td>0–16 digits</td>
</tr>
<tr>
<td>ANI capacity</td>
<td>Not supported</td>
</tr>
<tr>
<td>Transfer capability</td>
<td>Not supported</td>
</tr>
</tbody>
</table>

#### Table 2. Digital Telephony Interface Specifications for ISDN-PRI Type Configurations

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Specifications for AYC21</th>
</tr>
</thead>
<tbody>
<tr>
<td>DS-1 framing</td>
<td>ESF for T1 rate, CEPT for E1</td>
</tr>
<tr>
<td>DS-1 line coding</td>
<td>• B8ZS (with ESF framing only)</td>
</tr>
<tr>
<td></td>
<td>• HDB3 (with CEPT framing only)</td>
</tr>
<tr>
<td>B-channel capacities*</td>
<td>• 23 B+D per board for T1</td>
</tr>
<tr>
<td></td>
<td>• 30 B+D per board for E1</td>
</tr>
</tbody>
</table>
### Table 2. Digital Telephony Interface Specifications for ISDN-PRI Type Configurations

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Specifications for AYC21</th>
</tr>
</thead>
<tbody>
<tr>
<td>D-channel capacities</td>
<td>Multiple D-channels are supported up to the maximum number of E1/T1 boards:</td>
</tr>
<tr>
<td></td>
<td>• 5 channels for 5 T1 boards</td>
</tr>
<tr>
<td></td>
<td>• 30 channels for E1 boards)</td>
</tr>
<tr>
<td>Interface ID</td>
<td>• 1 (for card with a D-channel, not selectable)</td>
</tr>
<tr>
<td></td>
<td>• 2–5 (for card without a D-channel)</td>
</tr>
<tr>
<td>DNIS capacity</td>
<td>0–15 digits</td>
</tr>
<tr>
<td>ANI capacity</td>
<td>0–15 digits</td>
</tr>
<tr>
<td>D-channel backup</td>
<td>Not supported</td>
</tr>
<tr>
<td>Transfer capability</td>
<td>Not supported</td>
</tr>
</tbody>
</table>

* These configurations are switch dependent as not all switches support all configurations.

### Table 44. E1 (AYC21) Telephony Interface Specifications

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Specification</th>
<th>Notes</th>
<th>ITU No. *</th>
</tr>
</thead>
</table>
| Physical connector     | RJ-48C modular jack with shielded connector shell OR 2 75-Ohm BNC jacks | • Receive signal in: pins 1 and 2  
• Transmit signal out: pins 4 and 5  
• Connector choice is switch-selectable on AYC21 | G.703     |
| 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                                  | Can 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     |
### Table 44. E1 (AYC21) Telephony Interface Specifications

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Specification</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signaling channel</td>
<td>CAS or 1 ISDN-PRI D-channel</td>
<td>In timeslot 16</td>
</tr>
<tr>
<td>Voice channels</td>
<td>30 channels</td>
<td>64 Kbits/second each</td>
</tr>
<tr>
<td>PCM voice encoding</td>
<td>A-law or mu-law</td>
<td>Selectable by user</td>
</tr>
</tbody>
</table>

* 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 45. E1 (CAS) Telephony Interface Specifications

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Specification</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Line signaling</td>
<td>System R2</td>
<td>Compatible with ITU Q.421</td>
</tr>
</tbody>
</table>
### Requirements and Specifications

#### Telephone Network Characteristics

Table 45. E1 (CAS) Telephony Interface Specifications

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Register signaling</td>
<td>Multifrequency-compelled signaling (supports forward groups I, II, III and backward groups A, B, C)</td>
<td>Compatible with ITU Q.440</td>
</tr>
<tr>
<td>Called number (DNIS)</td>
<td>Maximum number of 16 digits received</td>
<td>Expected number of DNIS digits is settable by the user</td>
</tr>
</tbody>
</table>
| 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 46. Digital Telephony Interface Specifications for Line Side Configurations

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Specification for AYC21</th>
</tr>
</thead>
<tbody>
<tr>
<td>DS-1 framing</td>
<td>• CEPT for E1</td>
</tr>
<tr>
<td></td>
<td>• D4 for T1</td>
</tr>
<tr>
<td>DS-1 line coding</td>
<td>• HDB3 for E1</td>
</tr>
<tr>
<td></td>
<td>• ZCS for T1</td>
</tr>
<tr>
<td>Wink-disconnect interval</td>
<td>300 msec default (selectable within a range of 10–2500 msec)</td>
</tr>
<tr>
<td>Dial-tone delay</td>
<td>1000 msec default (selectable within a range of 20–5100 msec)</td>
</tr>
<tr>
<td>Switch-hook-flash duration</td>
<td>700 msec default (selectable within a range of 10–2500 msec)</td>
</tr>
<tr>
<td>DNIS capacity</td>
<td>Not supported unless used with converse vector step (CVS) or ASAI</td>
</tr>
<tr>
<td>ANI capacity</td>
<td>Not supported unless used with CVS or ASAI</td>
</tr>
<tr>
<td>Transfer capability</td>
<td>Flash transfers supported</td>
</tr>
</tbody>
</table>
Data Communications Characteristics

Table 47 on page 243 lists the data communications characteristics for the V7.0 system platforms.

Table 47. Data Communications Characteristics for V7.0 System Platforms

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Asynchronous</th>
<th>Synchronous</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ports</td>
<td>1–9</td>
<td>1–2</td>
</tr>
<tr>
<td>Ports available for host communication</td>
<td>1–2</td>
<td>1–2</td>
</tr>
<tr>
<td>Simultaneous host sessions (LUs)</td>
<td>N/A</td>
<td>0–128</td>
</tr>
<tr>
<td>Mode</td>
<td>Full duplex</td>
<td>Half/full duplex</td>
</tr>
<tr>
<td>Protocols</td>
<td>Xon/Xoff</td>
<td>3270 SNA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Token Ring</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• SDLC</td>
</tr>
<tr>
<td>Data rates</td>
<td>To 9600 bps</td>
<td>• SDLC: 9.6k–56k bps</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Token Ring: 4/16 Mbyte</td>
</tr>
<tr>
<td>Interface</td>
<td>EIA-232C</td>
<td>EIA-232C</td>
</tr>
</tbody>
</table>
Overview

This book is designed to supplement all other documents in the Intuity CONVERSANT V7.0 system set. This chapter provides information about the documentation that supports the V7.0 system. The system documentation covers the areas of installation and maintenance, alarms and log messages, administration, application design and development, speech and communication development, and software tools.

- **V7.0 Documentation Set Listing on page 245** is a table that lists each document in the V7.0 set and its document number.
- **V7.0 Documentation Set Descriptions on page 247** describes the contents of the documents in some detail and provides the current issue numbers.
## V7.0 Documentation Set Listing

Each document in the V7.0 set is listed in Table 48 on page 245. A brief description of each document is provided following the table.

**Note:** All document titles begin with *Intuity CONVERSANT System Version 7.0.*

### Table 48. V7.0 System Documentation Set Listing

<table>
<thead>
<tr>
<th>Title</th>
<th>Language</th>
<th>Document Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>System Description</td>
<td>English</td>
<td>585-313-204</td>
</tr>
<tr>
<td>New System Installation</td>
<td>English</td>
<td>585-313-106</td>
</tr>
<tr>
<td>MAP/100P Maintenance</td>
<td>English</td>
<td>585-313-110</td>
</tr>
<tr>
<td>MAP/100C Maintenance</td>
<td>English</td>
<td>585-313-109</td>
</tr>
<tr>
<td>MAP/40P Maintenance</td>
<td>English</td>
<td>585-313-108</td>
</tr>
<tr>
<td>MAP/5P Maintenance</td>
<td>English</td>
<td>585-313-107</td>
</tr>
<tr>
<td>Administration</td>
<td>English</td>
<td>585-313-501</td>
</tr>
<tr>
<td>System Reference</td>
<td>English</td>
<td>585-313-205</td>
</tr>
</tbody>
</table>
### Table 48. V7.0 System Documentation Set Listing

<table>
<thead>
<tr>
<th>Title</th>
<th>Language</th>
<th>Document Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application Design Guidelines</td>
<td>English</td>
<td>585-310-670</td>
</tr>
<tr>
<td>Application Design Guidelines</td>
<td>French</td>
<td>585-310-670FR</td>
</tr>
<tr>
<td>Application Design Guidelines</td>
<td>Spanish</td>
<td>585-310-670SP</td>
</tr>
<tr>
<td>Application Design Guidelines</td>
<td>Brazilian Portuguese</td>
<td>585-310-670PTB</td>
</tr>
<tr>
<td>Application Design Guidelines</td>
<td>Dutch</td>
<td>585-310-670NL</td>
</tr>
<tr>
<td>Application Design Guidelines</td>
<td>Japanese</td>
<td>585-310-670JA</td>
</tr>
<tr>
<td>Application Design Guidelines</td>
<td>German</td>
<td>585-310-670DE</td>
</tr>
<tr>
<td>Application Development with Script Builder</td>
<td>English</td>
<td>585-313-206</td>
</tr>
<tr>
<td>Application Development with Advanced Methods</td>
<td>English</td>
<td>585-313-203</td>
</tr>
<tr>
<td>Speech Development, Processing, and Recognition</td>
<td>English</td>
<td>585-313-201</td>
</tr>
<tr>
<td>Communication Development</td>
<td>English</td>
<td>585-313-202</td>
</tr>
</tbody>
</table>
V7.0 Documentation Set Descriptions

• System Description
  Document number 585-313-204
  Issue 2
  October 1999

  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.
A Documentation Guide

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 3
  October 1999
  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.
  Appendixes include: troubleshooting procedures, cable connectivity, and returning defective hardware.
• **MAP/100P Maintenance**
  Document number 585-313-110
  Issue 2
  October 1999
  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.
  Appendixes 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 2
  October 1999
  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, and 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 2
  October 1999

  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, and installing tip/ring distribution hardware, base system software, Intuity CONVERSANT system software, and optional feature system software.
Appendixes 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 3
  October 1999

  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, and installing base system software, Intuity CONVERSANT system software, and optional feature system software.

  Appendixes 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 2
October 1999

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 3
October 1999

(Formerly “Operations” and “Command Reference” documents in CONVERSANT Version 5.0 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.

Appendixes 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 48 on page 245 for specific document 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 2
October 1999

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.

Appendixes include: sample application, enhanced basic speech formats, and developing language implementations.
• Application Development with Advanced Methods
   Document number 585-313-203
   Issue 2
   October 1999
   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. Appendixes include: summary of TAS script instructions and C-library functions.

• Speech Development, Processing, and Recognition
   Document number 585-313-201
   Issue 3
   October 19998
   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 combining the use of these feature packages.

Appendixes include: enhanced basic speech formats, speech file formats, calculating O.S. index, text-to-speech formats, and advanced text-to-speech features.

- Communication Development

Document number 585-313-202
Issue 2
October 1999

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, the 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 4
July 1999

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 the Technical Service Organization (TSO).

Topics include information on: menus and commands, palettes, globals, tools, nodes, and sharing resources.

Appendixes 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.
**A Documentation Guide**

- 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.
- 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
A Documentation Guide

- 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.

**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.
Glossary

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
### Glossary

**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.
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
<table>
<thead>
<tr>
<th>Glossary</th>
<th>binary synchronous communications</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>binary synchronous communications</strong></td>
<td>A character-oriented synchronous link protocol.</td>
</tr>
<tr>
<td><strong>blind transfer protocol</strong></td>
<td>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.</td>
</tr>
<tr>
<td><strong>bps</strong></td>
<td>bits per second</td>
</tr>
<tr>
<td><strong>BRDG</strong></td>
<td>call bridging process</td>
</tr>
<tr>
<td><strong>bridging</strong></td>
<td>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.</td>
</tr>
<tr>
<td><strong>BSC</strong></td>
<td>binary synchronous communications</td>
</tr>
</tbody>
</table>
**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.

**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 an 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

cautions
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.
**Glossary**

**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.
Glossary

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
<table>
<thead>
<tr>
<th>Glossary</th>
<th>DIP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DIP</strong></td>
<td>data interface process</td>
</tr>
<tr>
<td>directory</td>
<td>A type of file used to group and organize other files or directories.</td>
</tr>
<tr>
<td>display errdata</td>
<td>A command that displays system errors sent to the logger.</td>
</tr>
<tr>
<td><strong>DMA</strong></td>
<td>direct memory address</td>
</tr>
<tr>
<td><strong>DNIS</strong></td>
<td>dialed number identification service</td>
</tr>
<tr>
<td><strong>DPR</strong></td>
<td>dial pulse recognition</td>
</tr>
<tr>
<td><strong>DSP</strong></td>
<td>digital signal processor</td>
</tr>
</tbody>
</table>
**Glossary**

**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.”
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.

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.

PRISM Logger and Alerter General Message Class
<table>
<thead>
<tr>
<th>Glossary</th>
<th>grammar</th>
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</thead>
<tbody>
<tr>
<td>grammar</td>
<td>The inputs that a recognizer can match (identify) from a caller.</td>
</tr>
<tr>
<td><strong>Graphical Speech Editor</strong></td>
<td>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.</td>
</tr>
</tbody>
</table>

**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

**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

INDFSFILE
The standard SNA file transfer utility that runs as an application under CICS, TSO, and CMS. INDFSFILE 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.
<table>
<thead>
<tr>
<th>IPC</th>
<th>interprocess communication</th>
</tr>
</thead>
<tbody>
<tr>
<td>IPC</td>
<td>intelligent ports card (IPC-900)</td>
</tr>
<tr>
<td>IPCI</td>
<td>integrated personal computer interface</td>
</tr>
<tr>
<td>IRAPI</td>
<td>Intuity Response Application Programming Interface</td>
</tr>
<tr>
<td>IRQ</td>
<td>interrupt request</td>
</tr>
<tr>
<td>ISA</td>
<td>industry standard architecture</td>
</tr>
<tr>
<td>ISDN</td>
<td>Integrated Services Digital Network</td>
</tr>
</tbody>
</table>
**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.

**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.

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

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
**Glossary**

**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.

**Mpbs**
- 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.
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.
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<th>NFAS</th>
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<tr>
<td><strong>NFAS</strong></td>
<td>non-facility associated signalling</td>
</tr>
<tr>
<td><strong>NFS</strong></td>
<td>network file sharing</td>
</tr>
<tr>
<td><strong>NGTR</strong></td>
<td>next generation Tip/Ring (AYC30) circuit card</td>
</tr>
<tr>
<td><strong>NM-API</strong></td>
<td>Network Management - Application Programming Interface</td>
</tr>
<tr>
<td><strong>NMVT</strong></td>
<td>network management vector transport</td>
</tr>
<tr>
<td><strong>nonex</strong></td>
<td>nonexistent state</td>
</tr>
<tr>
<td><strong>nonindexed table</strong></td>
<td>A table that can be searched only in a sequential manner and not via a field name.</td>
</tr>
</tbody>
</table>
**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.

**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.
### Glossary

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<th>Description</th>
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<tr>
<td>polling</td>
<td>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.</td>
</tr>
<tr>
<td>port</td>
<td>A connection or link between two devices that allows information to travel to a desired location. See “telephone network connection.”</td>
</tr>
<tr>
<td>PRI</td>
<td><strong>Primary Rate Interface</strong></td>
</tr>
<tr>
<td></td>
<td>An ISDN term for connections over E1 or T1 facilities that are usually treated as trunks.</td>
</tr>
<tr>
<td>private branch exchange</td>
<td>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.</td>
</tr>
</tbody>
</table>
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
Glossary

**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.”

**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

**RDBMS**
ORACLE relational database management system
<table>
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<th>Glossary Term</th>
<th>Definition</th>
</tr>
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<tbody>
<tr>
<td>RECOG</td>
<td>speech recognition feature message class</td>
</tr>
<tr>
<td>recognition type</td>
<td>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.</td>
</tr>
<tr>
<td>recognizer</td>
<td>The part of the system that compares caller input to a grammar in order to correctly match (identify) the caller input.</td>
</tr>
<tr>
<td>record</td>
<td>See “database record.”</td>
</tr>
<tr>
<td>recovery</td>
<td>The process of using copies of the Intuity CONVERSANT system software to reconstruct files that have been lost or damaged. See also “restore.”</td>
</tr>
<tr>
<td>remote database</td>
<td>Information stored on a system other than the Intuity CONVERSANT system that can be accessed by the Intuity CONVERSANT system.</td>
</tr>
</tbody>
</table>
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

rollback

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

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.
<table>
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<tr>
<th><strong>Script Builder</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>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”).</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>SCSI</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><em>small computer system interface</em></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>SDLC</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>synchronous data link control</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>SDN</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>software defined network</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>shared database table</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A database table that is used in more than one application.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>shared speech</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Speech that is a part of more than one application.</td>
<td></td>
</tr>
</tbody>
</table>
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.

T1
A digital transmission link with a capacity of 1.544 Mbps.

table
See “database table.”

tag image file format
A format for storing and exchanging digital image data associated with fax modem data transfers and other applications.
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.
Glossary

**ThickNet**
A 10-mm (10BASE5) coaxial cable used to provide interLAN communications.

**ThinNet**
A 5-mm (10BASE2) coaxial cable used to provide interLAN communications.

**TIFF**
tag image file format

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

time share operation

TSM
transaction state machine process

TTS
text-to-speech
TWIP

T1 interface process

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_szr 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.)
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<tr>
<th>Glossary</th>
<th>voice response unit</th>
</tr>
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<tr>
<td><strong>voice response unit</strong></td>
<td>A computer connected to a telephone network that can play messages to callers, recognize caller inputs, access and update databases, and transfer and monitor calls.</td>
</tr>
<tr>
<td><strong>voice system administration</strong></td>
<td>The means by which you are able to administer both voice- and nonvoice-related aspects of the system.</td>
</tr>
<tr>
<td><strong>VPC</strong></td>
<td>voice processing co-marketer</td>
</tr>
<tr>
<td><strong>VROP</strong></td>
<td>voice response output process</td>
</tr>
<tr>
<td><strong>VRU</strong></td>
<td>voice response unit</td>
</tr>
</tbody>
</table>
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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