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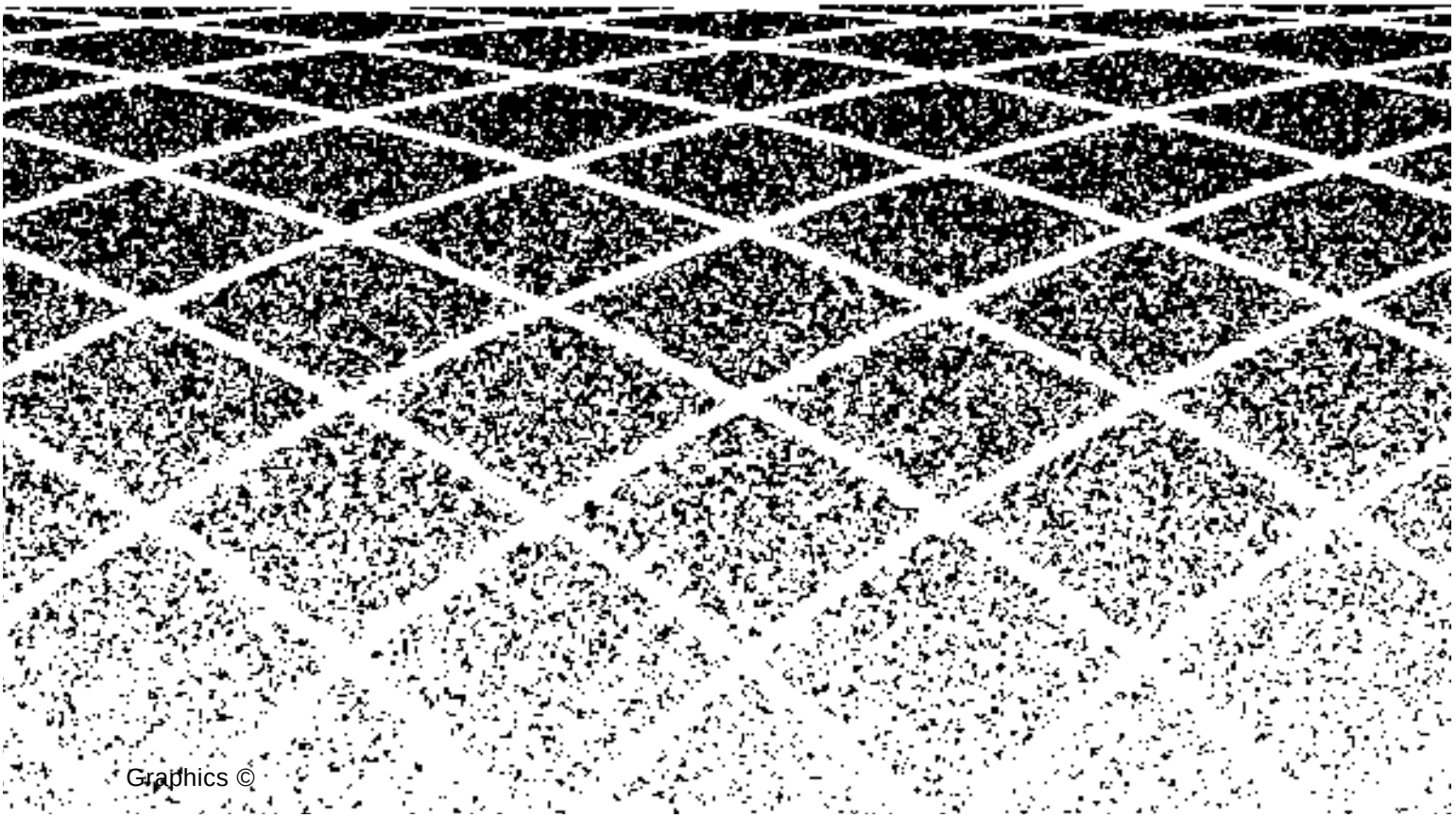
CONVERSANT®
Voice Information System
Version 4.0 Planning



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About This Book

Purpose

This document, titled *CONVERSANT VIS Version 4.0 Planning*, 585-350-602, is used to help determine the combination of hardware, software, custom applications and speech that is needed to automate specific transactions through the use of a CONVERSANT® Voice Information System (VIS). This document also describes how to order and implement the CONVERSANT system that is planned to perform the automated transaction(s).

NOTE:
This document is to be used in conjunction with the *CONVERSANT VIS System Description*, 585-350-207, and the *CONVERSANT VIS Marketing Guide*, 585-350-003. The system description document contains informative and explanatory text concerning both standard and optional hardware and software, base features, and feature packages, as well as performance and capacity limits. The marketing guide document describes marketing strategies, feature requirements and sales channel architectures.

Intended Audience

The primary audience for this document is the AT&T Design Center, Account Executives, Voice Processing Co-Marketers (VPCs), CONVERSANT Sales Specialists, the International Technical Assistance Center (ITAC) or anyone else who gathers preliminary information and makes decisions about the system configuration of a new or upgraded VIS. The sales and design managers who plan and execute project implementation, as well as the customer themselves, will find helpful information on system inventory, feature limitations, and technical support contacts within this book. This book is also referenced by technical support personnel when assisting in the implementation of a new or upgraded VIS.

How This Book Is Organized

This document is divided into the following sections:

- Chapter 1, "Planning Roadmaps"

  Provides an overall checklist to assist in planning the VIS hardware and software for new and upgrade systems.

- Chapter 2, "Determining Customer Needs"

  Contains questions that are to be asked of the customer before the order is placed, to determine their hardware, software, and application needs.

- Chapter 3, "Configuring the CONVERSANT VIS"

  Discusses the basic functions required to plan and implement a VIS including traffic engineering, equipment specification, and hardware and software configuration rules and limitations. This chapter also includes detailed explanation and instructions on the partitioning of hard disk drives.

- Chapter 4, "Preparing for Installation"

  Discusses the roles and responsibilities of various individuals and teams who are involved in the provisioning and implementation of the system, including the planned CONVERSANT VIS Administrator, and the Script Builder application developer. This chapter is meant to be used in conjunction with the *CONVERSANT VIS System Description*, 585-350-207, for information on training, documentation, system support and component sparing, as well as planning the physical site with considerations to equipment specifications, environmental considerations, and peripheral connectivity.

- Appendix A, "Planning Worksheets"

  Contains checklists and worksheets to help make planning decisions about application and speech development. They also provide site-specific information to design center personnel who are suggesting system upgrade possibilities, and the installation technician who needs to track and manage the existing and new system resources while installation occurs.

- Appendix B, "Support and Design Resources"

  Lists the organizations to contact for design, sales, and service support, as well as those AT&T organizations and VPCs that develop custom applications and speech.

- Appendix C, "Price Element Codes"

  Provides all the price element codes (PECs) used when ordering the CONVERSANT VIS product.

- Appendix D, "Standard Speech Phrases"

  Lists all the phrases provided in the standard speech package. This information is useful when planning additional speech development.

This book also includes a list of Abbreviations, a Glossary, and a cross-referenced Index.

Related Resources

This book is designed to supplement other volumes in the CONVERSANT VIS library. Always refer to the appropriate book for specific information on installing, operating, and maintaining the VIS. Books related to CONVERSANT VIS are listed in Table 1 and Table 2. A full description of each document is available in the *CONVERSANT VIS Version 4.0 Documentation Guide*, 585-350-002.

Documentation Ordering Procedure

Although a base set of documents is supplied with the VIS, you can order additional documents, or single documents by:

1. Calling the AT&T Customer Information Center (800-432-6600)
2. Supplying the:
   - — Document number
   - — Name of the account executive
   - — Customer name and address
   - — Method of payment

Table 1. CONVERSANT VIS V4.0 Documentation

Description	Order Number
[2]Documentation Guide	585-350-002
Multi-Application Platform 100 Voice Processing Hardware Installation	585-350-107
Multi-Application Platform 100C Voice Processing Hardware Installation	585-350-108
Multi-Application Platform 40 Voice Processing Hardware Installation	585-350-109
[2]Upgrades	585-350-110
[2]Software Installation	585-350-111
[2]Maintenance	585-350-112
[2]Installation Checklists	585-350-113
[1]Description	585-350-207
[2]Application Development	585-350-208

1. These books begin with “CONVERSANT VIS”
2. These books begin with “CONVERSANT VIS Version 4.0”

Table 2. CONVERSANT VIS V4.0 Documentation

Description	Order Number
[2]Command Reference	585-350-209
[1].FAX Attendant Co-residency	585-350-210
[2]486 CPU Upgrade Kit for MAP/100 and MAP/100C	585-350-211
[2]SCSI Disk Drive Upgrade Kit for MAP/100 and MAP.100C	585-350-212
[2]Upgrade Kit for MAP/40	585-350-213
[2]Change Description	585-350-402
[2]Planning	585-350-602
[2]Operations	585-350-703
[1].Script Builder	585-350-704
[1].Graphical Speech Editor	585-350-705
[1]External Alarms	585-350-801
[1].SCSI Mirroring	585-350-804
[1].Primary Rate Interface	585-350-805
[1].Form Filler Plus	585-350-806
[1].Text-To-Speech	585-350-807
[1].CompuLert/SCCS	585-350-808
[1].Local Area Network	585-350-809
[1].NetView Alarms	585-350-810
[1].Call Classification Analysis	585-350-811
[1].Adjunct/Switch Application Interface	585-350-812
[1].WholeWord Speech Recognition	585-350-813
[1].FlexWord Speech Recognition	585-350-814
[1].Host Interface	585-350-815
ORACLE SQL*NET	585-350-901
ORACLE SQL*RDBMS	585-350-902
ORACLE SQL*Forms	585-350-903
ORACLE SQL*ReportWriter	585-350-904
ORACLE SQL*Menu	585-350-905
ORACLE PRO*C	585-350-906

1. These books begin with “CONVERSANT VIS”
2. These books begin with “CONVERSANT VIS Version 4.0”

The following documents are provided with the base CONVERSANT VIS platform. The appropriate hardware installation document will be shipped depending upon which platform was requested for the system.

Each feature package such as ASAI or PRI, ordered to supplement the base CONVERSANT VIS platform, is shipped with the corresponding feature package document. The feature package documents are listed in Table 2.

Table 3. .CONVERSANT VIS V4.0 Base Documentation

Description	Order Number
[2]Documentation Guide	585-350-002
Multi-Application Platform 100 Voice Processing Hardware Installation	585-350-107
Multi-Application Platform 100C Voice Processing Hardware Installation	585-350-108
Multi-Application Platform 40 Voice Processing Hardware Installation	585-350-109
[2]Upgrades	585-350-110
[2]Software Installation	585-350-111
[2]Maintenance	585-350-112
[2]Installation Checklists	585-350-113
[1]Description	585-350-207
[2]Application Development	585-350-208
[2]Command Reference	585-350-209
[2]Change Description	585-350-402
[2]Planning	585-350-602
[2]Operations	585-350-703

1. This book begins with “CONVERSANT VIS”
2. These books begin with “CONVERSANT VIS Version 4.0”

Trademarks and Service Marks

The following trademarked products are mentioned in this book:

- CONVERSANT is a registered trademark of AT&T.
- AUDIX is a registered trademark of AT&T.
- 5ESS is a registered trademark of AT&T.
- 4ESS is a registered trademark of AT&T.
- ORACLE is a registered trademark of the ORACLE corporation.
- IBM is a registered trademark of International Business Machines, Inc.
- UNIX is a registered trademark of UNIX Sytems Labortories, Inc.
- Hayes is a registered trademark of Hayes Microcomputer Products, Inc.
- Smartmodem is a trademark of Hayes Microcomputer Products, Inc.
- Voice Power is a trademark of AT&T.
- FlexWord is a trademark of AT&T.

How to Make Comments About This Book

You can help to improve the next release of the *CONVERSANT VIS Version 4.0 Planning,* 585-350-602*,* by filling out the feedback form located at the front of this document.

If the feedback form has been removed, please send your comments to:

AT&T
Product Documentation Development
Room 22-2C11
11900 North Pecos Street
Denver, Colorado 80234

Please include the name and order number, 585-350-602, of this book.

Planning Roadmaps

1

Overview

This chapter provides a checklist to assist in planning CONVERSANT Voice Information System (VIS) hardware and software for new or upgraded installations. The checklist is designed so that as a task is finished, it is checked off in the "Completed" column, thereby finishing the planning process by finishing the checklist tasks. Use this checklist in conjunction with the VIS Implementation Checklist provided in Appendix A, "Planning Worksheets". This checklist covers both planning for a new system and planning for an upgrade.

- Planning new systems

  The list covers the basic procedures needed to implement a voice information system and application for a new customer. It includes assessing the application, hardware, and software needs of the customer, obtaining a configuration, and preparing for installation.

- Planning an upgrade system

  The list also includes the basic procedures necessary to upgrade to a new VIS hardware platform, or add to a current one. Included are steps needed when upgrading both hardware and software. In some cases, certain hardware and/or software features currently used by the customer may have changed or are no longer supported.

Planning a New/Upgrade System

Task	Task Description	Procedure/Chapter	Completed
1.	Order CONVERSANT documentation, at the Sales Channel's discretion, to serve as a reference for questions and information on overall CONVERSANT VIS functionality and feature packages, specifically the *CONVERSANT VIS System Description*, 585-350-207.	"About This Book".	
2.	Define the transaction and necessary application. Identify hardware and software required by the planned application, and the group responsible for creating the application software.	Chapter 2, "Determining Customer Needs". Appendix B, "Support and Design Resources".	
3.	If upgrading a currently installed system, contact the Technical Services Center (TSC) and evaluate the current system inventory, which includes hardware, software, database and application resources	Appendix A, "Planning Worksheets". Appendix B, "Support and Design Resources".	
4.	Design the VIS.	Chapter 3, "Configuring the CONVERSANT VIS", and the *CONVERSANT VIS System Description*, 585-350-207.	
5.	Contact the Design Center Design Support Group or International Technical Assistance Center (ITAC) for design assurance.	Chapter 3, "Configuring the CONVERSANT VIS". Appendix B, "Support and Design Resources".	

Task	Task Description	Procedure/Chapter	Completed
6.	Obtain a final configuration.	Chapter 3, "Configuring the CONVERSANT VIS".	
7.	Schedule application/ speech/speech recognition software development.	Chapter 4, "Preparing for Installation". Appendix B, "Support and Design Resources".	
8.	Assign customer contacts.	Chapter 4, "Preparing for Installation".	
9.	Prepare detailed equipment room layout including space, environmental, power and peripheral connectivity considerations.	Chapter 4, "Preparing for Installation". Chapter 6 of the *CONVERSANT VIS System Description*, 585-350-207.	
10.	Schedule training.	Chapter 4, "Preparing for Installation".	
11.	Schedule Installation dates with Technical Services Center (TSC).	Chapter 3, "Configuring the CONVERSANT VIS".	
12.	Order advanced documentation, at the Sales Channel's discretion as warranted by the customer.	"About This Book".	
13.	Create maintenance contract.	Chapter 4, "Preparing for Installation". Appendix B, "Support and Design Resources".	
14.	Place the order.	Chapter 3, "Configuring the CONVERSANT VIS".	

Determining Customer Needs

2

This chapter contains suggestions and questions that help to evaluate the amount of system resources and particular feature packages needed by a customer. This information can help to accurately configure the CONVERSANT Voice Information System (VIS) and one or more applications, with the proper amount of hardware and software resources. A CONVERSANT VIS pre-installation evaluation consists of following basic tasks:

- Assessing general project needs. This involves answering a list of general questions regarding the intended use of the CONVERSANT VIS, which focuses on the transaction and application requirements, traffic patterns, and the caller interface.
- Customer premises interface questions. This is a list of questions that identify the telephony and private network facilities that the CONVERSANT VIS will physically connect to.
- Feature package needs assessment. This is a list of feature-specific questions that are used to determine whether a particular feature is applicable to a customer's needs.
- Application requirements analysis. Because nearly all CONVERSANT VIS applications and their associated hardware interfaces are unique, this task provides the basis for a detailed discussion between the account executive or sales specialist and the customer to determine the components to be used in the application and to evaluate the application site.

Assessing General Project Needs

NOTE:
Some of the following questions may require investigation beyond the immediate knowledge of a typical customer or sales representative. That is, the customer may not be the only source of answers to the questions asked in this assessment. Other individuals such as database or switch administrators may have to be consulted to receive all pertinent information.

Customer's General Needs

- What is the customer's business?
- How did the customer find out about AT&T voice response technology?
- Why does the customer want to implement a voice response system?
- Are any advanced features (speech recognition, call classification analysis, text-to-speech, etc.) perceived as an immediate need, or possibly needed in the future?
- Would other services such as voice mail or automated fax response be useful on the same hardware system?

Transaction, Application, and Traffic Pattern Needs

- What general type of transaction needs to be automated? (Automated attendant, bulletin board, call center (high-volume mail-order, telemarketing, etc.) form filler, transaction-oriented, voice/fax mail,)

  These types are explained in the document *CONVERSANT VIS System Description*, 585-350-207, Appendix B, "CONVERSANT VIS Application Examples."
- What is the transaction?
- How is the transaction performed today?
- Where is this transaction performed? If there are multiple sites involved, list all of them.
- In detail, what is the step-by-step flow of this transaction?
- Are there operational procedures for the transaction? If so, ask for a copy.
- What are the in-service hours for this transaction?
- How many people currently perform this transaction?
- Is all their time spent on this one transaction?

- If not, what other transactions do they perform and how much time is allocated to each additional transaction?
- How much employee time does the customer want to "free up" with the use of an automated transaction (application) on a voice response system?
- What are the present costs of the manually staffed and completed transaction (loaded salaries, facilities, network, etc.)?
- Who will create the custom application required to automate the transaction? (For example, the customer themselves through Script Builder, the VPC, Custom Services Group, IMS/SDO, the Enhanced Services Group at the Technical Support Center, etc.)
- What are the in-service hours of the existing transaction?
- How many total callers are there in given times of the in-service period? (30-minute, 1-hour, half-day, and daily totals)
- What percentage of callers are anticipated to use the voice response system?
- What are the peak busy hours? (The standard busy hour formula is 15 - 17 percent of the daily call volume in an 8-hour day.)
- How many calls occur during that peak period?
- How many calls occur during the average period?
- Are there variations in the amount of traffic that the transaction currently services (daily, weekly, monthly, seasonal)?
- Is more than one time zone of calling population covered?
- What amount of total call volume will be directed to voice response?
- What percentage of the calls are transferred to an attendant during average hours? During peak hours?
- What percentage of callers use touch-tone telephones? Rotary telephones?
- What is the average length (holding rate) of each call?
- What is the desired blocking (busy) level?

Caller Interface

- Are passwords, identification numbers, or other input required for access to the application?
- Will/Does the caller request information that is stored in a host computer, such as account balances, interest rates, or phone extensions?
- What information must specifically be looked up in the database?

- Does/should certain information be verified by the caller? If so, what is it?
- What information must be spoken to a caller?
- What information must be input to the host computer to complete the application?
- Does the customer want to limit the number of transactions a caller can make during one call? If so, how?
- How many applications does the customer want to run on one voice response system?
- Will the majority of callers be able to provide touch-tone input to answer the application prompts, or would speech recognition be valuable in some instances?
- If speech recognition is used, will the calling population be diverse enough to warrant one or more foreign language recognition packages?

Caller Demographics

- What is the geographic dispersion of the customer's callers? How big is this group?
- Will this application be available to the general public?
- Will the application provide service to callers in a foreign country, or to callers with heavy accents or regional dialects?
- If one or more foreign languages are used by the calling population, requiring voice prompts and possibly speech recognition to be performed in more than one language, what are they?
- Are the callers business or residential? Describe the characteristics of the caller group.

Customer Premises Interface Questions

Public Switched Network Questions

- What type of telephone arrangement does the customer have?
- If a customer-premises switch is used, what brand and model is it?
- Where is the customer premises switch located?
- What kind of signaling does the switch expect?
- What type of access is in place [local WATS, foreign exchange (FX)]?
- How many incoming trunks or lines are available?
- What kind of access (type of trunks from Central Office or station lines from PBX) will be used for the voice response system?
- Is there a need to reroute calls from the voice response system to an agent or attendant?
- Will calls be directed to the voice response system on a primary or overflow basis?

Private Data Network Questions

- What type of host computer does the customer have or is interested in using?
- Where is the customer host computer located?
- What communications protocols are used with the host computer? List the transaction formats and screen formats, if possible.
- If the customer uses more than one host computer, are the disks linked so the voice system communicates with only one host machine?
- What is the front-end processor, if any?
- What is the line protocol [systems network architecture (SNA)/synchronous data link control (SDLC), asynchronous/tty, etc]?

  If synchronous protocol is used, Script Builder is the primary vehicle for constructing dialogue. If asynchronous is used, the Asynchronous Host Interface Toolkit should be used to help construct a custom DIP.
- What data transmission speeds can the customer's equipment support? For example, 4.8-Kbps through 56-Kbps.
- What type of character set is used?
- How many files, on average, are accessed in an hour?

- What information is contained in a file record? Be as specific as possible.
- Is the transaction interactive or batch mode?
- Is user input required? If so, how much?
- Will any database files reside in the voice response system processor? If so, list them.
- How frequently will the database files be updated?
- How often will information be downloaded from the host computer? What is the average record length?
- Does the customer have the ability to perform the custom programming sometimes needed to implement host connectivity? This entails both software programming, and hardware development resources.

Feature Package Needs Assessments

The following is a series of questions that should be asked whenever a CONVERSANT VIS is being investigated or planned. Based on the results of the preliminary system-related questions previously listed, certain features and feature packages have been identified for potential use. Each heading asks specific questions for each feature which can help identify the need for that particular capability or enhancement based on the overall intended use of the CONVERSANT VIS.

It should be noted that not all of the features and feature packages listed here and described in the *CONVERSANT VIS System Description*, 585-350-207, are available for use and deployment in foreign countries. For questions concerning the international use of the VIS and its capabilities, please contact the AT&T International Technical Assistance Center.

Asynchronous Host Interface Toolkit

Use the following questions to determine the appropriateness of the Asynchronous Host Interface Toolkit feature for the application.

For a description of the Asynchronous Host Interface Toolkit feature, refer to the *CONVERSANT VIS System Description*, 585-350-207.

1. Does the application need, or could it benefit from data inquiries to hosts via an asychronous TTY interface?
2. Does the application need, or could it benefit from real-time updates of data values over this asynchronous interface?
3. Are resources available on the host computer system to develop the asynchronous interface which will transmit and receive the CONVERSANT VIS asynchronous host interface messages?

This feature will help reduce the cost and amount of time it takes to implement an asynchronous host interface between a CONVERSANT VIS and a host computer. The package is not a general purpose interface, nor is it a terminal emulator. It is not, therefore, a screen-based interface. It is designed for rudimentary message-based communications, and is intended as a toolkit to enable development-capable customers to get a solution working quickly because they can modify their known working software. With this in mind, the customer will be responsible for assigning a programmer or programming group the task of creating the host software to match the interface.

Adjunct/Switch Application Interface (ASAI)

Use the following questions to determine the appropriateness of the Adjunct/Switch Application Interface (ASAI) feature for the application. When reviewing the ASAI feature package, keep in mind that a CONVERSANT VIS V4.0 base feature called "Converse Vector Step" may be more practical for the particular capability needed. The feature associated with Converse Vector Step functionality includes capabilities of both the VIS and the PBX, and together are known as Voice Response Integration (VRI). VRI is a software capability that allows a PBX to maintain control of a call even when it hands off or transfers a call to a VIS.

For more detailed information on planning for the ASAI feature, refer to *CONVERSANT VIS Adjunct/Switch Application Interface*, 585-350-812, and the *CallVisor Adjunct/Switch Application Interface*, 555-230-222, manuals. For a description of the ASAI feature, refer to the *CONVERSANT VIS System Description*, 585-350-207. For a description of the Converse Vector Step feature and its applications, refer to *CONVERSANT VIS Script Builder*, 585-350-704.

NOTE:
This feature is available only when the CONVERSANT VIS is used with a DEFINITY G3 PBX. For information on the latest specific G3 systems that have been compatibility certified, (for example, G3i, G3r, etc.) contact the Design Center.

1. Does the application need or could it benefit from the ability to receive ANI, DNIS, or switch call prompting digits for incoming calls on an out-of-band basis?

   ASAI provides this capability.

2. Does the application need or could it benefit from the ability to receive ANI, DNIS, or switch call prompting digits for incoming calls on an in-band basis?

   ASAI cannot provide this information on an in-band basis. VRI must be used to obtain the information in this way.

3. If ANI routing of calls is anticipated with the ASAI feature, what is the anticipated amount of traffic to the application?

   If the application is expected to service a relatively low amount of traffic, VRI may be able to automate the transaction without the need to purchase the ASAI feature. It should be noted that ASAI handles moderate to large amounts of ANI-routing traffic much more quickly and efficiently than VRI does. Consequently, VRI is not recommended for an application that anticipates high volumes of traffic.

4. Could the call center benefit from automatic data screen delivery to agents, with the added benefit of the VIS prompting for standard information such as account numbers, transferring the call to an agent ACD split, and then informing the host computer to display the screen to the agent receiving the call?
5. Does the application need or could it benefit from the ability of the VIS to route calls on the PBX?

   With ASAI, calls can be routed on a PBX, however, they lose any original position or control that was previously held by the PBX before being transferred to a VIS script.
6. If so, does the application require that the PBX maintain control of the call after VIS processing is finished?

   VRI allows the PBX to maintain control of a call by keeping the call in a live agent queue while interacting with the VIS.

AUDIX Voice Power Co-Residency

Use the following questions to determine whether the customer could benefit by purchasing the AUDIX Voice Power product and operating it co-resident with the CONVERSANT VIS. CONVERSANT VIS applications written in Script Builder can invoke AUDIX Voice Power functionality through the use of "external actions" within an application script, and the combination of both products on a single hardware platform may be able to automate a transaction in a more efficient manner than just the CONVERSANT VIS or AUDIX Voice Power alone. AUDIX Voice Power Co-residency does not require dedicated T/R cards, and can "share" a T/R circuit card with other applications on the system. For example, through administrative screens on the VIS, three channels of a 6-channel T/R card can be assigned to AUDIX Voice Power use, while the other three channels may be assigned to another application.

For a description of AUDIX Voice Power Co-Residency with CONVERSANT, refer to the *CONVERSANT VIS System Description*, 585-350-207.

1. Does the customer already have a voice mail service? If not, do they have plans for purchasing one?

   AUDIX Voice Power Co-residency on a CONVERSANT VIS platform is an economical method of obtaining a basic voice mail system.

2. Does the customer currently have, or is interested in purchasing a fax services system?

   AUDIX Voice Power can be fully integrated with the FAX Attendant product to provide a complete set of resources for automating a transaction. Refer to planning questions concerning FAX Attendant Co-residency later in this chapter.

3. Will (or is) the CONVERSANT VIS platform be integrated with a PBX? If so, what is the make and model of the switch?

   If AUDIX Voice Power or FAX Attendant are used to provide service on a CONVERSANT VIS platform that is integrated with an AT&T System 75/ DEFINITY G1 PBX, additional hardware is needed, specifically, the Digital Communications Protocol (DCP) circuit card, and associated cabling.

4. What other application(s) will reside on the platform?

   The AUDIX Voice Power system is, like all other applications, subjective in terms of performance issues. Its performance and/or use on the system is dependent on what else is on the system. For example, the Form Filler Plus application uses the same area on the disk for storing voice response messages as AUDIX Voice Power does for its voice mail storage. Therefore, in a co-resident environment, the Form Filler records would need to be transcribed more quickly to prevent loss of data.

5. Will other application(s) interact with the AUDIX Voice Power Application, or pull information from it using Script Builder interactions?

   The Script Builder application can interact with AUDIX VP through four Voice Mail External Actions:

   — Get name and greeting of an AUDIX Voice Power subscriber.

- Put voice mail into an AUDIX Voice Power mailbox
- Get voice mail from an AUDIX Voice Power mailbox
- Execute the AUDIX Voice Power voice mail service

Call Classification Analysis

Use the following questions to determine the appropriateness of the Call Classification Analysis (CCA) feature for the application.

For more detailed information on planning for this feature, refer to document *CONVERSANT VIS Call Classification Analysis*, 585-350-811, For a description of the CCA feature, refer to the *CONVERSANT VIS System Description*, 585-350-207.

1. Will CCA calls be made to the public switched network or within a PBX?

   PBX dispositions are not certified (for example, fast busy may not be detected).

2. Will CCA calls be made Internationally?

   The CCA feature is designed to be used in North America and is not guaranteed to work when the destination is outside of this geographic area.

3. Does the application need to detect Call Progress Tones (CPTs) after dialing on calls delivered over Line Side T1 lines?

   Basic identification of CPTs cannot be performed on Line Side T1 lines the way it is over Tip/Ring lines. Call Classification Analysis must be performed if this information is required over a digital interface like LST1.

4. Will CCA be used in conjunction with T1 or PRI?

   Analog T/R lines may be more noisy than digital lines, which may reduce the disposition accuracy.

5. What dispositions are required to be detected?

   CCA detects busy and ring tones generated by older or faulty equipment, modem tones, and Special Information Tones (SITs). Intelligent CCA (included in the base product) only detects busy and ring/no-answer within a PBX.

CompuLert/SCCS/ARU Interface

Use the following questions to determine the appropriateness of the CompuLert/SCCS/ARU Interface feature for the application.

For more detailed information on planning for this feature, refer to document *CONVERSANT VIS CompuLert/SCCS*, 585-350-808, For a description of the CompuLert/SCCS feature, refer to the *CONVERSANT VIS System Description*, 585-350-207.

1. Does the VIS environment require remote monitoring capabilities or on-site alarm notification.
2. How many VIS units require monitoring?

   1 SCCS link per system is required.
3. How many serial ports are available on each system that is to support an SCCS/ARU interface. What other peripheral equipment connected to the VIS uses asynchronous communications?

   Two serial expansion ports (COM1 and COM2) are provided standard on the VIS. If the planned system uses more than two asynchronous ports, the Multi-Port Asynchronous Communications Interface will be needed.
4. Who will monitor the systems to provide support if problems occur?

   An alarm relay unit (ARU) is most effective to a central office area that is always staffed and monitored. SCCS is primarily used for the reporting of system trouble conditions to a remote monitoring group. Different maintenance strategies will need to be enforced if the monitoring personnel are on-site or remote technicians.

Country Specific Analog Switch Packages

Use the following questions to determine the appropriateness of the Country Specific Analog Switch Integration packages.

For more detailed information on this feature, refer to the *CONVERSANT VIS System Description*, 585-350-207.

1. Is the CONVERSANT VIS to be installed and operational in Mexico, Hong Kong, or the U.K.?
2. Will the VIS interface with the local PSTN or a DEFINITY PBX in one of the three countries listed above?

If both questions were answered "yes," a switch integration package must be used for the particular country indicated. Minimal tuning will be needed for the VIS to interface with the PSTN or DEFINITY PBX.

Country Specific Non-AT&T PBX Integration

If the VIS is to interface with a non-AT&T PBX, the same country-specific switch package is used, but much more in-depth parameter tuning is necessary. The following questions concerning the far-end switch parameters should be answered to help resolve interface conflicts between the VIS and a non-DEFINITY PBX:

1. What country is the CONVERSANT VIS being installed?
2. What is the brand or model of PBX or switch that the VIS is interfacing to?
3. Far end disconnect signal? (Signal provided from switch to indicate far end hang up)
   - Wink _____ ms (Break in loop current to indicate disconnect)
   - Call progress tone (e.g., Dial tone, Busy, Reorder, Ring)
4. Frequencies, cadences used in call progress tones (e.g., Busy 440 + 480 500 msec on / 500 msec off). Record in Table 2-1 on the following page.

Table 2-1. Frequencies and Cadence of Non-AT&T PBX

Tone	Frequencies	Cadence
Dial Tone		
Busy		
Reorder (congestion)		
Ringback		
Stutter Dial Tone		

5. Method used for register recall (Loop timed? a.k.a flash).
   - What is the flash/recall duration. (e.g., 600 ms)
6. Call Transfer Sequences
   - Initiate call transfer _____(e.g., Flash, Wait for Dial tone)
   - Complete call transfer _____ (e.g., Hang up)
   - Initiate In call transfer _____ (e.g., Flash, Wait for Dial tone)
   - Reconnect caller _____ (e.g., Flash, Pause, Flash)
7. DTMF Signaling
   - Minimum tone duration On _____ msec
   - Minimum tone duration Off _____ msec
   - Interdigit pause _____ msec
   - Power level high group _____ dBm
   - Power level low group _____ dBm
8. Dial Pulse Signaling
   - Make/Break ratio _____
   - Pulse rate _____ pulses/sec
   - Interdigit pause _____ msec

Enhanced File Transfer

Use the following questions to determine the appropriateness of the Enhanced File Transfer feature for the application.

For more detailed information on planning for this feature, refer to *CONVERSANT VIS Host Interface*, 585-350-815. For a description of the Enhanced File Transfer feature, refer to the *CONVERSANT VIS System Description*, 585-350-207.

1. Does the customer have more than one CONVERSANT VIS or computer system that contains application related data?
2. If so, is the CONVERSANT VIS and host computer connected using synchronous 3270 communication scheme?

   This feature requires that a synchronous connections to a host computer using 3270-based hardware and protocol be used. If not, refer to the heading "3270 Synchronous Host Communications Interface" later in this chapter.
3. If so, are they connected to the same host mainframe?

   This could be a development system in one city and a production system in one or more cities. Ideally, this feature is intended for a customer that has multiple system that are not co-located, and connected to the same synchronous network.
4. If a synchronous network exists, how many logical units (LUs) are established, and what is the traffic volume on those LUs?

   The Enhance File Transfer feature requires one dedicated LU for all transfers to/from remote machines. If a small number of established LUs on a system handle a large amount of traffic, additional LUs may need to be added. A second PC/XL 3270 circuit card may be warranted.

External Alarms

Use the following questions to determine the appropriateness of the External Alarms feature for the application.

For more detailed information on planning for this feature, refer to *CONVERSANT VIS External Alarms*, 585-350-801. For a description of the External Alarms feature, refer to the *CONVERSANT VIS System Description*, 585-350-207.

1. Is the CONVERSANT VIS located in a central office environment?

   This is a requirement for the feature.

2. Is the system isolated in the central office with little day-to-day administration?

   Systems that are not administered and manipulated on a regular basis offer greater opportunities of problems/outages going unnoticed for extended periods of time.

3. Are there multiple CONVERSANT platforms resident in a single office?

   An external alarm interface can help isolate a single VIS that is experiencing problems very quickly.

4. Is there a critical need for urgent notification of problems within the VIS without relying on actually logging into each system?

   External alarms can provide near real time alerting of critical and major exceptions through the user-defined thresholds without physically accessing the system and paging through a reports log.

5. Have there been instances in which problems within the CONVERSANT VIS have been brought to attention because of customer complaints or service outages?

FAX Attendant Co-residency

Use the following questions to determine the appropriateness of the FAX Attendant Co-residency feature for the application.

For more detailed information on planning for this feature, refer to *CONVERSANT VIS FAX Attendant Co-residency* 585-350-210. For a description of the FAX Attendant Co-residency feature, refer to the *CONVERSANT VIS System Description*, 585-350-207.

1. Does the customer have an interest in purchasing an automated fax services product?

   If so, discuss how the customer wishes to use a product like FAX Attendant, and potential uses for the three main services of the product, which includes FAX Mail, FAX Call Answer, and FAX Response. These services are described briefly in the *System Description*, and in detail in the *FAX Attendant Co-residency* document.

2. Is the customer interested in integrating FAX Attendant with a System 75 R1v1-v3, DEFINITY G1 & G3, System 85, or System 25 R3.0 PBX?

   FAX Attendant may be used with switch integration packages for any of the PBXs listed above.

3. Does the customer currently have, or is interested in purchasing a voice mail system?

   FAX Attendant can be fully integrated with AUDIX Voice Power to provide a complete set of resources for automating a transaction. Refer to planning questions concerning AUDIX Voice Power earlier in this chapter.

4. How can the services of FAX Attendant and possibly AUDIX Voice Power complement each other and help increase the efficiency of the transaction?

5. Will an application script interact with the FAX Attendant application, or pull information from it using Script Builder interactions?

   The Script Builder application can interact and invoke FAX Attendant services through the use of an External Action. The same holds true for AUDIX Voice Power.

   — Allow a caller to send a FAX

   — Allows a caller to receive a fax

   — Allows a system to store and retrieve fax transmissions from a mailbox.

   If Script Builder FAX Actions are used, it allows any fax information to be stored within any section of disk (such as root, usr, usr1, swap, etc.).

If using FAX Attendant as strictly a co-resident application, all storage of fax images and information is directed to the usr partition. In either case planning must be performed so that the disks are properly partitioned. For partitioning information, FAX services consume approximately 1-Mbyte of disk space per each 25 pages of stored fax images

6. How many channels of FAX Attendant service are required to service the projected traffic volume?

   FAX Attendant is limited to 12 channels of service (three circuit cards) with a maximum throughput of approximately 26,000 pages/day. (40 seconds per page, 24 hours-a-day, 12 channels.)

Form Filler Plus

Use the following questions to determine the appropriateness of the Form Filler Plus feature for the application.

For more detailed information on planning for this feature, refer to *CONVERSANT VIS Form Filler Plus*, 585-350-806. For a description of the Form Filler Plus feature, refer to the *CONVERSANT VIS System Description*, 585-350-207.

1. What is the basic format of the Form Filler Plus application?

   Indicate here the type of "form" that is requested by the customer. For example, does the customer want a credit application or an order form application?

2. What is the data to be gathered?

   It is suggested that a chart be made to map the flow of the application. This diagram should detail what information the customer wishes to gather from the Form Filler Plus application and how the actions in the script are connected. Form Filler Plus allows a maximum of 10 prompts per call session or application.

3. How many channels will this application occupy?

   A customer can use either analog T/R or digital T1/LST1 channels in a Form Filler Plus application. The number of channels the Form Filler Plus application occupies is dependent only on the total channel capacity of the system.

4. What is the expected call volume per day? What is the peak call volume per hour?

   Use this information to determine if the customer will have enough channels as requested to handle the expected and peak call volume periods.

5. How many different Form Filler Plus applications will be needed?

   This question will help determine the total number of T/R or T1/LST1 ports needed to properly service the customer.

6. How quickly would Form Filler Plus records be transcribed and deleted?

   A Form Filler Plus application is, like all other applications, subjective in terms of performance issues. Its performance and/or use on the system is dependent on what else is on the system. For example, AUDIX Voice Power uses the same area on the disk for storing voice mail messages as Form Filler Plus does for its storage. Therefore, in a co-resident environment, the Form Filler records would need to be transcribed more quickly to prevent loss of data.

7. How often could the voice system be brought down to run audits, etc.?

8. Would the Form Filler Plus application stand alone, or would it be part of a larger service that would require touch-tone input to operate?
9. Will callers be allowed to be able to listen to and re-record their responses to the form filler flus prompts (which requires touch-tone input)?
10. Is a call record to be saved if the caller hangs up before answering all the questions?

Graphical Speech Editor

Use the following questions to determine the appropriateness of the Graphical Speech Editor (GSE) feature for the application.

For more detailed information on planning for the GSE feature, refer to *CONVERSANT VIS Graphical Speech Editor User Guide,* 585-350-704. For a description of the GSE feature, refer to the *CONVERSANT VIS System Description*, 585-350-207.

1. Is the platform that will support the GSE feature equipped with a 486DX, 50-MHz CPU?

   The platform must meet these requirements in order to support GSE. If not, a hardware upgrade kit is needed.

2. Does the customer wish to record their own announcements?

   The GSE provides an easy method to record, and then clean up or edit an announcement. Unwanted words can be deleted, silence can be inserted or deleted, words can be rearranged, and the volume of any portion of the announcement can be changed.

3. Does the customer need to make changes to pre-recorded announcements?

   The GSE can store (and edit) announcements that come in from an audio input line such as a telephone, microphone, or audio tape player.

4. Does the customer need to make changes to announcements that are in the CVIS database?

   Announcements in PCM64, ADPCM32, or ADPCM16 form can be easily converted and edited by the GSE.

5. Are there times within the day that the CONVERSANT VIS application may be shut down for a period of time, or calls handled by another CONVERSANT VIS?

   The GSE requires that the application and voice system be stopped and inoperational on the VIS in order to use the GSE. If the system cannot be taken down, the GSE must be loaded and run on another system that contains at least a 50-MHz CPU.

Hardware Upgrade Kits

Use the following questions to determine the appropriateness of a hardware upgrade kit for a particular CONVERSANT VIS platform.

For more detailed information on tasks to perform a hardware upgrade, refer to the appropriate hardware upgrade kit documentation listed below.

- *CONVERSANT VIS V4.0 486 CPU Upgrade Kit for MAP/100 and MAP/100C*, 585-350-211
- *CONVERSANT VIS V4.0 SCSI Disk Drive Upgrade Kit for MAP/100 and MAP/100C*, 585-350-212
- *CONVERSANT VIS V4.0 Upgrade Kit for MAP/40*, 585-350-213

For a description of the Hardware Upgrade Kits feature, refer to the *CONVERSANT VIS System Description*, 585-350-207.

For more information on the task of upgrading an entire system to a new platform or software generic, refer to *CONVERSANT VIS V4.0 Upgrades*, 585-350-110.

MAP/100 CPU Upgrade Kit

1. Are additional features being requested by the customer that could tax the CPU resources of the system as it is currently configured?
2. Does the customer wish to decrease host transaction processing time?
3. Does the customer wish to decrease the amount of time it takes to access data in a local or remote ORACLE database?
4. Does the customer wish to add the Graphical Speech Editor feature?

MAP/100 SCSI Peripheral Upgrade Kit

1. Does the customer wish to add applications that require large speech files or additional ORACLE database partitions on the existing ESDI hard disk drives?
2. Is the customer interested in adding AUDIX Voice Power Co-residency or FAX Attendant Co-residency features which require large amounts of additional disk space?
3. Is the customer interested in obtaining a method of hard disk back-up that could limit their data losses in the event of a hard disk drive crash or failure?

MAP/40 Upgrade Kits (486 CPU and SCSI Kits)

1. Are additional features being requested by the customer that could tax the CPU resources of the system as it is currently configured?
2. Does the customer wish to decrease host transaction processing time?
3. Does the customer wish to decrease the amount of time it takes to access data in a local or remote ORACLE database?
4. Does the customer wish to add the Graphical Speech Editor feature?
5. Does the customer wish to add applications that require large speech files or additional ORACLE database partitions on the existing IDE hard disk drives?
6. Is the customer interested in adding AUDIX Voice Power Co-residency or FAX Attendant Co-residency features which require large amounts of additional disk space?
7. Is the customer interested in obtaining a method of hard disk back-up that could limit their data losses in the event of a hard disk drive crash or failure?

Line Side T1

Use the following questions to determine the appropriateness of the Line SIde T1 feature for the CONVERSANT VIS-to-PBX interface.

For more detailed information on the Line Side T1 feature, please refer to the *CONVERSANT VIS System Description*, 585-350-207.

1. What is the customer's current telephony interface arrangement?
2. Does the customer currently utilize analog links with Tip/Ring cables as the VIS-to-PBX interface?

   A single T1 circuit card and cable can replace up to four T/R circuit cards and their associated T/R cabling, allowing other feature packages to be utilized. The PBX also shares the same advantages.
3. If not, can the customer benefit from the reduced cost of purchasing new Line Side T1 cabling to implement a link versus the more numerous (and inherently more expensive) Tip/Ring cables and connectors? This same advantage occurs on the PBX as well.
4. Does the customer currently utilize T1 circuit cards in the VIS and wishes to implement a digital VIS-to-PBX link to keep the entire telephony portion of the system digital?
5. Can the customer's application accommodate the lack of reliable dial tone and Call Progress Tone (CPT) detection?

   LST1 does not provide dial tone detection by itself, and may have trouble accurately identifying CPTs. Call Classification Analysis must be used to provide accurate CPT identification.
6. Does the application need or could it benefit from the ability to do flash transfers

   LST1 provides this capability on T1 channels.

Local Area Network Connectivity

Use the following questions to determine the appropriateness of the Local Area Network (LAN) Connectivity feature for the application.

For more detailed information on planning for this feature, refer to *CONVERSANT VIS Local Area Network*, 585-350-809. For a description of the Local Area Network feature, refer to the *CONVERSANT VIS System Description*, 585-350-207.

1. What is the design of the current network? What are the plans for future expansion?
2. What types of systems currently (or are planned to) reside on the LAN?
3. How many CONVERSANT VIS platforms will be linked?
4. Does the network use TCP/IP over InterLan (Ethernet) or StarLAN?
5. If the network is InterLan (Ethernet), does the network use TBASE2 (Thinnet), or TBASE5 (Thicknet) cabling? If StarLAN, assume twisted pair.
6. Will Remote Database Access, which allows a script developed with Script Builder to read and modify tables in multiple remote ORACLE databases be used?

   This type of access requires that the remote machines be connected to the VIS over a LAN using SQL*Net software.
7. Will multiple host application programs be accessed from a single voice application?
8. Will multiple applications access the same host?
9. Will a dedicated logical unit (LU) be preferred for each caller transaction?

   Multiplexing of transactions onto a single LU can increase throughput in some cases.

Multi-Port Asynchronous Communications Interface

Use the following question to determine the appropriateness of the Multi-Port Asynchronous Communications Interface feature for the application.

For a description of the Multi-Port Asynchronous Communications Interface feature, refer to the *CONVERSANT VIS System Description*, 585-350-207.

1. Does or will the CONVERSANT VIS configuration utilize more than two devices that require asynchronous communication ports?

   Each CONVERSANT VIS platform offers two standard serial communication ports, COM1 and COM2. If more serial devices or links are to be added/used, the Multi-Port Asynchronous Communications Interface must be used, which provides eight additional serial ports.

   As an example, the Remote Maintenance Circuit Card will be assigned to COM1 when it is retrofitted/shipped with new systems. A customer using the Graphical Speech Editor feature is required to use COM2 for the mouse connection. This configuration automatically requires the Multi-Port Asynchronous Communications Interface circuit card, if any additional serial devices are needed.

   It should be recognized that in certain situations, there may not be enough system resources to allow the use of this circuit card and still retain the desired number of telephony channels and features.

NetView Alarm Interface

Use the following questions to determine the appropriateness of the NetView Alarm Interface feature for the application.

For more detailed information on planning for this feature, refer to *CONVERSANT VIS NetView Alarms*, 585-350-810. For a description of the NetView Alarms feature, refer to the *CONVERSANT VIS System Description*, 585-350-207.

1. Is the CONVERSANT VIS supporting a synchronous host interface?

   This feature inherently requires a synchronous connection to a host computer.

2. Can the host computer administrator benefit in receiving critical and major CONVERSANT VIS trouble reports or messages in a standard 3270 host format?

   This feature transmits high-priority messages from the VIS to the host as operator generated alerts (OGAs).

Primary Rate Interface (PRI)

Use the following questions to determine the appropriateness of the Primary Rate Interface (PRI) feature for the application.

For more detailed information on planning for this feature, refer to *CONVERSANT VIS Primary Rate Interface*, 585-350-805. For a description of the Primary Rate Interface feature, refer to the *CONVERSANT VIS System Description*, 585-350-207.

Commercial PRI

1. Does the application require ISDN services such as:
   - Calling party number (providing ANI or SID)?
   - Call-by-call outbound selection for multiple service types on the same trunk?
   - Call-by-call inbound service query?
   - Redirecting multiple number query?
   - DNIS for multiple applications on a shared trunk?
2. What are the benefits of placing the CONVERSANT VIS behind the PBX switch?

   Frequent transfers to PBX agents or stations, combined trunking, backup facilities available for voice response if PBX components go out of service, etc.

   PRI-related call information (ANI/DNIS/SID) can be delivered to the CONVERSANT VIS, over PRI facilities using either ASAI or Converse Vector Step.
3. Does the planned application require fast call set-up time?

   ISDN passes the dialed number for outgoing calls as data in the D-channel, This is faster than playing touch-tones on Tip/Ring lines.

Network PRI

1. Is the customer an AT&T affiliate with an approved exception to use tones other than audible ringing before answering the call?
2. Does the application require flexible alerting to provide busy tone, special information tone, or other information before answering the call?

General PRI

1. Is the customer an AT&T affiliate with an approved exception to use the advanced functionality available with this feature?

2. Does the application require more signaling information than is supported by Commercial or Network PRI?
3. Are specialized Information Elements (IEs) required by the application?
4. Are multiple service types needed on the same trunk?
5. Does the planned application require fast call set-up time?

Remote Database Access

Use the following questions to determine the appropriateness of the Remote Database Access feature for the application.

For more detailed information on planning for this feature, refer to *CONVERSANT VIS Host Interface*, 585-350-815. For a description of the Remote Database Access feature, refer to the *CONVERSANT VIS System Description*, 585-350-207.

1. Does the CONVERSANT VIS currently utilize (or is planned to utilize) a local area network connection to a remote computer system?

   Remote Database Access relies on Local Area Network connectivity to gain access to databases on remote systems. Refer to the heading "Local Area Network Connectivity" in this chapter for more information on LAN arrangements.

2. Does/can this remote computer system support an ORACLE database?

3. Does the CONVERSANT VIS have ample hard disk drive space, or is system memory a concern because of multiple features or excessive speech file size?

   Large amounts of hard disk space is freed up for other uses when a data base is moved to a remote system.

4. Are multiple computer systems required to access the same database located on a particular system?

   If the database is located on a CONVERSANT VIS and other systems require access to it, this repeated access from outside systems can affect the efficiency of the CONVERSANT VIS.

Script Builder

Script Builder is a basic and integral part of the CONVERSANT VIS and is rarely excluded by the customer when purchasing a VIS. It allows a customer to create custom applications in a very short amount of time, and is considered crucial for efficient VIS operations.

For more detailed information on operations and utilization of Script Builder, refer to the books *CONVERSANT VIS Script Builder*, 585-350-704, and *CONVERSANT VIS Application Development,* 585-350-208. For a brief description of Script Builder, refer to the *CONVERSANT VIS System Description*, 585-350-207.

1. Is the CONVERSANT VIS only intended to support pre-packaged applications that are already written?

   If so, Script Builder is not needed.

SCSI Disk Mirroring

Use the following questions to determine the appropriateness of the SCSI Disk Mirroring feature for the CONVERSANT platform.

For more detailed information on planning for this feature, refer to *CONVERSANT VIS SCSI Mirroring*, 585-350-204. For a description of the SCSI Disk Mirroring feature, refer to the *CONVERSANT VIS System Description*, 585-350-207.

1. Do you have large amounts of data, data tables, or speech files resident on the CONVERSANT VIS hard disk drive? For example, more than 600-Mbytes of information?
2. How long would it take the current or planned CONVERSANT VIS system to recover from a hard disk drive crash?
3. Could call processing be handed off to another CONVERSANT VIS machine if a hard disk drive crashes, or is this the only machine that supports this particular application?
4. If the hard disk drive crashed on the VIS, is there a dated backup copy of the information stored on that disk anywhere else? (another system, a remote database, etc.)
5. If data is lost because of a hard disk drive crash, and it was proprietary or customer-supplied information, how would you go about obtaining it again?

Speech Production Kit

Use the following questions to determine the appropriateness of the Speech Production Kit for use in recording speech for an application.

For more information on the Speech Production Kit, refer to the *CONVERSANT VIS System Description,* 585-350-207, and any of the three MAP/100, MAP/100C, or MAP/40 *Hardware Installation Guides.*

1. Does the customer utilize older IVP4/IVP6 Tip/Ring circuit cards such as the AYC6 and AYC5?

   New versions of the IVP circuit cards have built-in audio input jacks that allow the direct connection of a miniature audio jack to the T/R circuit card. Older T/R circuit card require a modular-to-audio jack interface to accommodate optional recording equipment or to circumvent the use of an inefficient telephone handset as a microphone.

2. Does the customer plan to record new custom speech, or change custom speech on a regular basis?

3. Is the clarity and quality of speech recording of a high importance?

   Speech recording that is produced through a high-quality microphone or transferred through a direct signaling link to the VIS will sound much better than speech recorded through a telephone handset.

4. Is special recording equipment to be used, such as a microphone, reel-to-reel or cassette recorder, to capture the speech before being input to the system?

   As stated above, older Tip/Ring circuit cards such as the AYC6 and AYC5, require an audio-to-modular interface so that these types of recording equipment can be directly interfaced to the T/R circuit card.

Speech Recognition

Use the following text and questions to evaluate customer needs pertaining to the WholeWord and FlexWord Speech Recognition (SR) feature packages. For additional information, refer to *CONVERSANT VIS WholeWord Speech Recognition*, 585-350-813, and *CONVERSANT VIS FlexWord Speech Recognition*, 585-350-814, documents.

Speech Recognition Assessment Checksheet

In order to successfully evaluate a potential SR application, certain aspects of the project must be defined. The success of the SR feature depends greatly on the data to be recognized, the application itself, and how it interacts with the callers. The Speech Recognition Pre-assessment Checksheet addresses four areas of concern regarding potential SR applications:

- Application
- Recognition data
- Intended calling population
- Customer expectations about speech recognition

Please note that these topics need not be answered in a formal document. However, the topics should be thought out, and the customer should be prepared to discuss the information. All client confidentiality is maintained. Refer to Appendix A, "Planning Worksheets", for the SR and application pre-assessment checksheet and application evaluation form.

Intended Calling Population

The calling population can influence whether Speech Recognition (SR) is a good method of caller input. If it is, the population can also influence the particular form of SR used, and affect the accuracy of the chosen method in several ways. WholeWord SR supports international languages such as Canadian French, Mexican Spanish, and U.K. English, while FlexWord SR provides only U.S. English recognition. In either case, callers with heavy speech accents or regional dialects may have problems being recognized. For WholeWord Custom Vocabularies, it may make sense to incorporate samples from the calling region into the speech models used for recognition. An application may also be written differently based on the age or experience of the callers.

Use the following information to determine aspects about the calling population:

- Location. Will callers ring from a quiet office or home, or are most of the callers located in very noisy environments like airports, near machinery, in a car, or outside?
- Demographics. In what country, and region of the country, do most of the expected calling population live?

- Typical caller. What is the typical caller like, including their experience with the service the application will provide and with automated phone systems?
- Frequency of use. How often will the same caller use the application. Will a number of callers become very familiar with the application? Familiar enough to want to skip prompts that they already know the answers to?
- Application target. To what portion of the calling population is the application targeted? Business oriented, or residential services?

Customer Expectations for Speech Recognition

AT&T would like the customer to define what they hope to accomplish by using speech recognition technology. Then, with AT&T, they can determine if their expectations can be met. Meeting certain performance expectations may require the development of new word models, custom grammars, custom data interface processes (DIPs), or special external functions. Please note when addressing the following issues, that exact figures are not required; general percentages will give an indication of the expectations.

The following information should be used to determine customer expectations:

- What is expected call volume per day?
- What is the number of simultaneous speech recognition channels required? This will help determine hardware needs. For more information on the hardware limitations of the Speech Recognition feature, refer to Chapter 3, "Configuring the CONVERSANT VIS".
- What percentage of customers will be handled entirely through speech recognition?
- What percentage of customers will be handled entirely through touch tone?
- What percentage of customers require live agent assistance?
- How does the customer define success in terms of using SR technology?

General Application Factors

Speech Recognition technology works better with some types of application than others. Many factors help determine the feasibility. Initially, the evaluators need to understand the type of service the application provides and how the application interacts with the caller.

- What type of service is the application to provide?
- Will the new application create a new type of service transaction for the company?
- Is the transaction already automated with a voice response technology?

- What peripherals are to be used with the new application (host, switch, local area network, ASAI, ISDN-PRI, etc).
- What is the expected flow of the application? For example:
    1. Greet caller
    2. Prompt for account number
    3. Verify account number via database lookup
    4. Prompt caller for “savings” or “checking” account balance
    5. Speak balance information via host lookup
- How many calls that require speech recognition are anticipated?
- Will all of the callers be willing to use the application that requires them to use speech recognition technology?
- How many callers will have no choice of relying on either speech recognition technology or an operator attendant, because they are using rotary phones without DTMF touch-tones for inputting information?
- Is there to a process for handling callers without speech recognition? This can include live attendants as a "bail-out" option to callers who are having trouble within the call, or for callers who do not wish to use the technology?.
- Are custom vocabularies (words outside of the “zero” through “nine,” “yes,” “no,” and “oh”) required for the application?
- If a custom vocabulary is needed, how often will it need to be updated or changed?
- Are the navigation options of the application simple for the caller?
- Is the application designed for human-machine dialogue?

Based on these previous questions, a good indication of whether Speech Recognition can be a useful and productive feature can be gained.

Speech Recognition Format

The following questions will help determine whether WholeWord SR or FlexWord SR should be used to provide SR capabilities for the application in question.

- Can the application be written in such a way to limit speech response from a caller to digits 0 - 9 and “yes/”no”?

  If so, a WholeWord Standard Vocabulary Speech Recognition package would accommodate the application’s needs with the highest accuracy rate.

- If not, can a limited few “unique” words suffice in creating a user-friendly application, or are many unique words required, such as names, part names or department names?

  If a few unique words are needed, a WholeWord Custom Vocabulary Speech Recognition package would accommodate the application’s needs. If many are needed, FlexWord would offer the most economical method of creating and maintaining a vocabulary.

- Does the application require a very large vocabulary, such as all the names of a particular department or a large selection of part names?

  FlexWord can sustain a vocabulary of up to 2000 words per application.

- Does the application require that callers respond in languages other than American English?

  If so, a WholeWord Standard Vocabulary package in a specific foreign language needs to be used to accommodate the application’s needs. FlexWord is only available in U.S. English.

  If a WholeWord foreign language package is used, all prompts and playbacks must be recorded by the customer or by purchasing custom recorded phrases from AT&T.

- Are large groups of the calling population likely to use more than one language?

  For example, a large Latin-American calling population that is fluent in both U.S. English and Mexican Spanish could benefit from the Bilingual WholeWord Speech Recognition feature that allows both language packages to operate simultaneously.

- Will the application change periodically and require new words to be developed and implemented on a daily/weekly/monthly basis?

  If so, a FlexWord Speech Recognition package would probably accommodate the application’s needs.

- Are there any reservations about creating an application with more involved, informative prompts to guide a caller through the process?

  A FlexWord prompt is generally more involved than a WholeWord prompt to ensure greater recognition accuracy. This should be taken into consideration when planning the application design. FlexWord wordlists and vocabularies also require custom work with AT&T.

- Will background noise often be present from the caller? For example, calling from manufacturing areas, lumber yards, machine shops, etc.

  If background noise is anticipated, speech recognition technology should be avoided within an application. Neither WholeWord or FlexWord speech recognition technology works well with large amounts of background noise.

- How complex are the phrases or words to be spoken by the caller?

  WholeWord produces the best results when recognizing words less than 3 syllables in length, where FlexWord is best when recognizing short phrases or words between 3 and 5 syllables in length.

- Is a digit string required to be recognized?

  WholeWord SR offers a more user friendly environment in which to convey digit strings to the system. A user can speak a steady string of digits up to 24 digits in length without interruption, unlike FlexWord which requires an individual prompt for each digit. It should be noted that digit strings 1 to 10 digits long offer the greatest recognition accuracy, with a 3% accuracy degradation for each digit. (1-digit = 97% accuracy, 2-digits = 93% accuracy, 3-digits = 90% accuracy, etc..)

- Will the calling population use the system often enough to become familiar with the speech recognition prompts?

  WholeWord offers the ability to “Barge In” and input a word before the prompt is finished playing, while FlexWord cannot. Advanced users who know how to navigate through the prompts frequently exercise the ability to barge in on prompts.

  If barge in is used with WholeWord SR, additional SP/CMP hardware resources may be needed.

Connected Digit Recognition Data

Recognition feasibility and accuracy depends greatly on the type of data to be recognized; therefore, it is extremely important to understand the data involved. All data to be recognized within the application should be identified and defined. Any data item other than single words, single digits, or connected words (such as the name John Smith) should be identified by a name, description, string length, verification rules, and any other distinguishable features about the data. Verification rules indicate how the data might be verified as accurate, such as through a database lookup or checksum routine. An example of the data breakdown expected is shown in the following table:

Table 2-2. Example of String Application Data Items

Data Item	Length	Verify By	Comment
Checking account number	7	DB lookup	Always starts with "98"
Savings account number	7	DB lookup	Always starts with "99"
Extension number	4	DB lookup	Extension number to transfer to
Credit card number	15	Checksum	Only accept MasterCard and Visa

- Are the digit strings to be recognized a fixed length or a variable length?

  A fixed length gives the highest recognition accuracy.)
- Is there a need to perform data integrity checking of caller input (for example, verifying the validity of a credit card by checking a mathematical combination of numbers on the credit card)?
- Are digit strings separated in smaller logical units (for example, credit cards, phone number, etc.)?
- Are any of the digit strings in the format always in a predefined format (for example, area codes always have a middle digit of zero or one)?
- Is the data to be recognized normally spoken in a digit format (for example, having to speak “one hundred” as “1-0-0”)?

Text-to-Speech

The following issues should be addressed by a customer considering using TTS in an application. These questions allow the customer to gain understanding of the capabilities and limits of this feature and whether it will work in the proposed application.

Listed below are questions to start the discussion. Each question is followed by information that will help to evaluate the customer's response as well as the appropriateness of the proposed application.

For an overview of the TTS feature, refer to the *CONVERSANT VIS System Description*, 585-350-207, or *CONVERSANT VIS Text-to-Speech*, 585-350-807.

1. Why is the use of TTS being considered? What is hoped to be gained by using the technology?

   This feature is ideal for speaking dynamic text, such as names and addresses in a database. It can be used to support applications that cannot store and maintain large speech data files. In addition, TTS can be useful for designing prototype applications that require speech prompts and playback. It may save time and money spent on prerecording phrases for the prototype applications.

2. Does a male or female voice need to be used in the application?

   The output from the TTS feature is in a male voice. This may affect the consistency in the customer's application if the voice output is the female standard.

3. How many channels of TTS will be used on the system?

   A single speech processor (SP) circuit card (AYC9) can support up to six channels of simultaneous TTS.

4. If the text intended for TTS is not stored on the VIS, what kind of private data network will be used to supply this data to the VIS?

   A customized interface may be needed to retrieve and store the text on the VIS.

5. Is the text to be used with TTS in the ASCII format?

   All text must be in the ASCII format in order for it to be used by the TTS feature. If the text is not already in the ASCII format, the text will have to be converted.

6. What is the sentence structure of the text to be used by TTS?

   The output of TTS sounds the best when the text is well-edited. The use of commas and action verbs is recommended. Avoid lengthy and run-on sentences.

7. Are there any customized abbreviations or acronyms that will be included in the text intended for TTS (for example, "wht brd" for "wheat bread")?

A skeleton “tts_dip” is provided so that application developers can modify text (abbreviations or acronyms) that are not recognized by TTS. Also, technical consultation is available from AT&T for custom abbreviations or acronyms.

8. Will the application for TTS be designed in native script language or with the Script Builder interface?

   Consult *CONVERSANT VIS Text-to-Speech*, 585-350-807, for information about designing the TTS application in native script language. Also, *CONVERSANT VIS Version 4.0 Application Development*, 585-350-208, contains general information about programming in the native script language. The Script Builder interface for designing the TTS application is highly recommended. Refer to *CONVERSANT VIS Script Builder*, 585-350-704.

9. Will TTS phrases be mixed with pre-recorded speech in the same Announce statement?

   The talkoff and speak with interrupt functionality is handled the same way that prerecorded phrases are handled when the TTS phrases stand alone in an Announce statement. However, when TTS phrases are mixed with pre-recorded phrases in the same Announce statement, the talkoff and speak with interrupt functionality is handled differently. Consult the *CONVERSANT VIS Text-to-Speech*, 585-350-708, document for details.

10. Will the text be in all uppercase, all lowercase, or a mixture of the two?

    TTS is case sensitive. If the text is in all uppercase letters, the text will have to be filtered so that the uppercase text is converted to lowercase. A skeleton dip is provided that can be customized to filter uppercase text to lowercase. Custom work and consultation is available from AT&T.

3270 Synchronous Host Communications Interface

Use the following questions to determine the appropriateness of the 3270 Synchronous Host Interface feature for the application.

For more detailed information on planning for this feature, refer to *CONVERSANT VIS Host Interface*, 585-350-815. For a description of the Synchronous Host Interface feature, refer to the *CONVERSANT VIS System Description*, 585-350-207.

1. Does the customer have an IBM mainframe computer with 3270 features?
2. Does information reside on this host computer that customers need access to?
3. Would a transaction become shorter if information about a known customer could automatically be presented to an operator on a computer screen at the same time the call is answered?

   This type of system interaction is known as a “Screen Pop”, and can be performed when a 3270 synchronous host interface is put in place. Other feature packages are required as well for this particular capability.
4. Could the efficiency of an automated transaction be increased if information pertaining to each caller was automatically forwarded to an operator based on information provided by the VIS about each call?
5. Can the system support a 3270 synchronous host interface communication network, and the hardware/software package needed to provide it?

   The 3270 Synchronous Host Communications Interface package consists of multiple software programs, one or two circuit cards, and the associated cabling.

Analyzing Application Requirements

The following analysis is presented in two parts: application analysis and site analysis. It is meant to be used by application development groups as a point of reference while planning and creating a custom application.

NOTE:
Some of the information here may have already been covered in the Project and Feature Needs Assessment.

Application Analysis

1. Define the goal or function of the application.

   For each application, state its functions briefly but in enough detail to specify the functions.

2. Provide the name and telephone numbers of the following people:

   - A single point of contact who is familiar with the application and parties involved. This person must be able to pull together resources, and provide information at the implementation team's request as well as obtain answers to questions or issues that may arise during development.
   - A customer host network programmer
   - A customer host application expert (application programmer or application user who is very familiar with the application and how to progress through the required screens)
   - The system administrator or equivalent
   - The persons who will be the VIS administrator and the administrator backup once the system is installed

3. Define the application requirements

   Develop a detailed description of what the application must do, including the following:

   - Produce a simple script, diagram, or flow chart of the application flow. This should include menus, action taken for valid and invalid caller responses, and phrases spoken. It should indicate where information must be retrieved from the host (if used) and/or local database (if used).
   - Make a list of all speech/phrases to be used in the application excluding the standard speech package (numbers, letters, months, days of the week, etc.). Be assured that this list may undergo modification before the final speech is recorded by a professional after development and initial testing is complete. This list should include:

a. Greetings and special messages

b. Prompts to the caller for information including reprompts (for example, “please re-enter your account number”)

c. Responses to erroneous input

d. Phrases to speak information back to the caller

- Provide information and discussion for a complete and thorough understanding of the host application, specifically:

  a. Confirm that the affected host screen formats are standard and the fields for those screens appear in a fixed location

  b. Produce printouts of all affected host screens, including all possible error screens. Highlight the fields from which information will be extracted.

- List the specific details of the call that are to be tracked with the standard call data statistics package. Indicate where these events occur in the application script or flow chart.
- Define the following caller input parameters if something different than defaults are required:

  a. Time to enter first touch tone

  b. Maximum time allowed between touch tones

  c. Use of touch tone terminators such as “#”

  d. Maximum number of tries the caller gets to enter input

- Define the hours of operation for the VIS and the hours of operation of the host application.
- Define the application’s voice. Professional recording of speech may or may not be done after initial customer acceptance of the application.

4. List important dates from the customer perspective, including the desired (and realistic) cutover date.

Site Analysis

NOTE:
Successful completion of these tasks will most likely require an interface between the customer, the application developer, and the host computer vendor. If a site visit is required, attempt to finalize the requirements and establish host connectivity with the VIS while all parties are actively involved in assessing the situation.

1. Determine who should attend the requirements analysis meeting.

2. Define and resolve all remaining host issues:
    - Discuss with the host network programmer the normal configuration/SYSGEN information:
        - Asynchronous/TTY protocol
        - SNA
        - 3274 with 3278 Mod II terminals
        - Modems/modem eliminator/direct connect
        - Number of LUs
        - Dial-up lines for development in Columbus
        - Baud rates
        - Full duplex/half duplex
        - Example of SYSGEN (if needed)
    - Obtain configuration information from the network programmer:
        - XID (for dial-ups)
        - Number of LUs to be used
        - Cluster controller address
        - Full duplex/half duplex line
        - Baud rate
        - NRX or NRXI
        - Worst-case host response time estimates
        - Login ids and passwords
    - Any other host-related issues
3. With a person familiar with the host application, acquire a thorough understanding of the flow of the host screens from login through transaction to logout. The following information must be ascertained:
    - Define the login and transaction base screen.
    - Will the login base screen vary (that is, is it possible another screen could be waiting in the morning after the host goes down at night)?
    - Can the host lines ever become locked up? What could cause this? How is it prevented or handled?
    - What are the normal hours of operation for the host application?
    - What is the login and logoff sequence? Note that during the development phase, logoff may be attempted from many different screens when debugging the application. Therefore, the logout process should be viewed from that perspective.

- Review all screens in the host application from start to finish. Visit *all* screens and identify for capture any error screens that may be encountered.
- Identify the host screen fields from which information will be input and extracted.

4. Specify the local database characteristics if one is to be used
5. Meet with the system administrator and discuss the following issues:
   - Jacks and cabling
   - CS interface options (tip/ring distribution panel)
   - Loop start lines
   - Administer lines as 2500 sets [standard Plain Old Telephone Service (POTS)]
   - Type of hunt group on VIS lines
   - Queuing
6. Determine the freeze date for the VIS application.

   This should be a mutually agreed-upon freeze date after which no changes to the application will be made without negotiation and perhaps additional cost.
7. Finalize the selected voice for the application and discuss time frames for speech production either by the development organization or the customer relative to the overall schedule.
8. Define and resolve any remaining application issues such as:
   - Service hours
   - Number of incoming lines
   - What applications are assigned to what lines
   - Caller input timing parameters and reprompts

Configuring the CONVERSANT VIS

3

This chapter provides the necessary information and references needed to plan, configure, and implement a CONVERSANT Voice Information System (VIS). It includes:

- Designing a CONVERSANT VIS with considerations for:
  - — Traffic engineering
  - — Equipment specifications
  - — Environmental considerations
  - — Cable connections
  - — Hardware and software configuration rules and limitations
  - — Memory Allocation and Hard Disk Drive Partitioning
- Obtaining a final configuration
- Placing an order

Designing a VIS

Many factors must be considered when designing, or configuring a VIS. The major factors in addition to the application itself are traffic engineering, equipment specifications, environmental considerations, and cable connections.

Traffic Engineering

Traffic engineering, as it is referred to in this book, involves configuring a VIS with a specific number of channels based on the customer's application, analysis of the customer's traffic patterns, and other telephone network connectivity and trunk data.

There are various tools to help in analyzing traffic and formulating a channel size estimate. Many software packages on the market can assist with traffic engineering. In addition, formulas such as the Erlang B, provided in the ATTOMS/DOSS configurators, can assist in determining channel size. AT&T personnel are available to assist in traffic engineering.

Equipment Specifications

Refer to Chapter 6, "CONVERSANT VIS Requirements and Specifications," of the *CONVERSANT VIS System Description*, 585-350-207, for equipment area conditions, specifications, detailed data communications requirements, and telephone network characteristics.

From these equipment specifications, it can be determined if any changes to the switch are necessary to support the addition of the VIS environment. A general list of switch integration parameters is listed in Chapter 4 of the *CONVERSANT VIS System Description*, 585-350-207, under the heading "Country Specific Analog Switch Integration Packages." All switch integration parameter modification must be made on a switch-by-switch basis, and technical support from AT&T is available to assist in these tasks.

Environmental Considerations

Refer to Chapter 6, "CONVERSANT VIS Requirements and Specifications" of the *CONVERSANT VIS System Description*, 585-350-207, for information about power, space, temperature, and humidity-level requirements for the VIS. Use this information to determine if the proposed site has appropriate environmental requirements available and, if not, what must be provided to meet those requirements.

Cable Connections

Refer to Chapter 5, "CONVERSANT VIS Connectivity," of *CONVERSANT VIS System Description*, 585-350-207, for diagrams and information about typical cable connections to the public switched network (analog and digital telephone), as well as private data network (synchronous and asynchronous peripheral and host communications). Actual cabling between the VIS and peripheral equipment or host computers and switches is uniquely performed by the installation

team on all VIS platforms, and can vary based on the basic variables presented by each system. Chapter 5 of the *System Description* is only intended to act as a reference guide, not an instructional manual.

Hardware and Software Configuration Rules and Limitations

General CONVERSANT VIS V4.0 Feature Rules and Restrictions

The following rules determine what hardware is required for the set of features requested by the customer. These rules apply to all current platforms including the MAP/100C, MAP/100, and MAP/40. Many of these rules are hardware-related, and are brought to the planner's attention automatically by the Manual, ATTOMS, or DOSS configurators.

- The following circuit cards are not supported in any new or upgraded CONVERSANT VIS V4.0 platform:
  - AYC1
  - AYC2
  - AYC3, AYC3B
  - VRS6
  - IPC-802
  - 3270 Cleo Emulex circuit card
- Four channels of analog Tip/Ring (T/R) service can be provided per integrated voice processing four channel circuit card (IVP4).
- Older IVP-4 cards (AYC6s) require a time-division multiplexor (TDM) bus upgrade kit.
- Six channels of analog T/R service can be provided per IVP6 or IVP6-IU circuit card.
- CONVERSANT Co-Residency with the AUDIX Voice Power system requires analog IVP circuit cards to act as telephony interfaces. The cards used for AUDIX Voice Power service subtract from the total number of analog channels in the system that can provide analog VIS service. A maximum of 12 channels of AUDIX Voice Power service is allowed.
- Each 24 channels of digital T1 or Line Side T1 service require one T1 card (AYC3B or AYC11).
- Up to 23 channels of digital primary rate interface (PRI) service requires one T1 card (AYC3B or AYC11) and one SP card; 24 through 47 channels (MAP/100C and MAP/100 only) require an additional T1 card (AYC3B or AYC11).

- The T1 cards (AYC3B, AYC11) require the SP card (AYC2C) for coding and playback. When an SP card is used for speech playback and coding, refer to Chapter 7, "Capacity and Performance Considerations,"' of *CONVERSANT VIS System Description*, 585-350-207, for additional information.
- Call Classification Analysis (CCA) requires one SP per six concurrent classifications. The ratio of channels to concurrent classifications depends on such things as holding times, classification times, and the percent of channels for which classification is used. Assume one SP for up to 24 channels of CCA if no better information is available.
- When using LST1 with the DEFINITY G3i PBX, a TN767C (DS1 circuit card) is required.
- Each four channels of concurrent WholeWord or FlexWord speech recognition requires 0.5 SP and one CMP card. The ratio of channels to concurrent or continuous recognition depends on such things as the application, the caller population, the length of prompts, and the speech recognition mode selected. Assume that 2 incoming ports is equal to one Speech Recognition channel if no data is available.
- Speech playback and coding can share an SP card with the WholeWord Speech Recognition feature. The total SP requirement for these functions is the sum of the separate requirements.

NOTE:
Unless "Prompt During Interrupt" is used, a channel can not perform playback and recognition at the same time since "Prompt During Interrupt" requires both simultaneously.

- FlexWord Speech Recognition, Call Classification Analysis (CCA) and Primary Rate Interface (PRI) each require separate dedicated SP cards.
- At lease one SP circuit card must be installed to support the Background Music Feature on any platform.
- FAX Attendant and AUDIX Voice Power service may not be assigned to any digital T1 or Line Side T1 channel by an application script.
- A maximum of 12 channels of AUDIX Voice Power service may be installed on any CONVERSANT VIS platform.
- A maximum of 12 channels of FAX Attendant service may be installed on any CONVERSANT VIS platform.
- Adjunct/Switch Application Interface (ASAI) requires an Integrated Personal Computer Interface (IPCI) card on the CONVERSANT VIS, and a BRI interface on the PBX.
- An AUDIX Voice Power Co-Residency or FAX Attendant Co-residency with System 75/DEFINITY G3 switch integration requires the use of the modified digital communication protocol (DCP) circuit card.

- Use of the DCP circuit card requires disabling the COM2 serial port.
- Use of the Graphical Speech Editor requires that the mouse be connected to the COM2 serial port.
- One remote access port (and associated modem) must be dedicated for remote maintenance for customers utilizing AT&T Technical Service Center (TSC) support. This is enforced by the ATTOMS/DOSS configurators, and for other purposes, ports for remote access are treated as optional. This access port is provided by the Remote Maintenance Circuit Card.
- The Remote Maintenance Circuit Card is always assigned to the COM1 serial port.
- The ASAI feature and System 75/DEFINITY G1 switch integration for the AUDIX Voice Power system are mutually exclusive.
- Remote access requires one or more asynchronous ports or a local area network (LAN) with connections to another machine that has asynchronous ports.
- A local printer requires a parallel or asynchronous port or use of a LAN to a machine with a port.
- Assuming adequate hard disk drive capacity, a maximum of 74,000 phrases are allowed.
- Each 6 channels of concurrent Text-to-Speech (TTS) synthesis require 1 AYC9 SP card. The ratio of total channels running on an application to channels of concurrent TTS is application dependent. An AYC9 used for TTS can not be used for other processing.
- Each 32 IBM 3270 Logical Units (LUs) or each 3270 Front End Processor (FEP) connection requires 1 CLEO PC/XL 3270 card.
- Remote Database Access capability requires either LAN card (StarLAN or InterLan), and the corresponding Network Interface package, CONVERSANT SQL*NET, Transmission Control Protocol/Internet Program (TCP/IP), and the Network Utilities package.

Specific MAP/100 and MAP/100C Feature Rules and Restrictions

The following feature and hardware restrictions are specific to the MAP/100 and MAP/100C platforms only, and are to in addition to all other rules and restrictions stated above in the heading "General CONVERSANT VIS Feature Rules and Restrictions."

- At most 48 independent channels (incoming calls) with at most 48 additional channels used for bridging are allowed. A bridged channel refers to an application-initiated outgoing connection based upon the needs of, or requested by, a particular incoming call.

- The MAP/100C and MAP/100 provide a total of 25 circuit card slots, with a maximum of 15 TDM bus-dependent cards allowed simultaneously. Circuit card slot assignment is in accordance to the Configuration Program, and depends upon the amount and type of magnetic peripherals and features used.
- 23 channels of digital PRI service requires one T1 and one SP card, as well as one SP card dedicated to PRI service if playback and coding are simultaneous; 24 through 47 channels requires an additional T1 circuit card.
- A maximum of eight T/R cards are supported.
- A maximum of four T1 cards are supported.
- A maximum of eight SP cards are supported.
- A maximum of eight CMP cards are supported.
- A maximum of three Brooktrout TR114 cards are supported.
- A maximum of ONE of each of the following cards is supported:
  - IPCI (ASAI card)
  - DCP (AUDIX Voice Power card)
  - 8-port Asynchronous (GEMINI-1000, IPC-900)
  - LAN (StarLAN or InterLan)
  - SCSI Magnetic Peripherals controller (SCSI only)
  - Cartridge Tape Drive Controller (ESDI only)
- A maximum of two CLEO PC/XL 3270 CLEO cards are supported.
- The second serial port, CLEO PC/XL 3270, ESDI cartridge tape, and parallel printer are not allowed together. (IRQ restriction)
- The combination of IPCI, IVP, InterLan, SP, CLEO PC/XL 3270, ESDI cartridge tape, and parallel printer is not supported. (IRQ restriction)
- The combination of DCP, IVP, InterLan, SP, CLEO PC/XL 3270, ESDI cartridge tape, and parallel printer is not supported. (IRQ restriction)
- The combination of IPCI, StarLAN, IVP, CLEO PC/XL 3270, ESDI cartridge tape, and parallel printer is not supported.
- The combination of DCP, StarLAN, IVP, CLEO PC/XL 3270, ESDI cartridge tape, and parallel printer, is not supported.
- Slots 24 and 25 are reserved for the hard disk controller card and cartridge tape card, respectively, on existing ESDI systems only.

- In SCSI-based systems the SCSI controller shall be installed in slot 25 so that the SCSI cable does not have to run across other cards. Slot 24, vacated by the non-SCSI cartridge tape controller card, is available for general use subject to other existing constraints such as non-availability of the TDM bus.
- Any cards in slots 17 through 25 may not be connected to the TDM bus or CMP card bus.
- The CPU must be located in slot 16.
- Slot 17 is reserved for the video card. The card in this slot (next to the component side of the CPU) must be a half- or three-quarter length card because of physical interference from CPU card memory.
- All cards connected to the TDM or CMP card bus (T/R, T1, SP, or CMP cards) must be located in slots 1-15.
- The Remote Maintenance Circuit Card will be installed in slot 18.

Specific MAP/40 Feature Rules and Restrictions

The following feature and hardware restrictions are specific to the MAP/40 platform only, and are to in addition to all other rules and restrictions stated previously in the heading "General CONVERSANT VIS Feature Rules and Restrictions."

- At most 24 independent channels (incoming calls) with at most 24 additional channels used only for bridging are allowed. A bridged channel refers to an application-initiated outgoing connection based upon the needs of, or requested by a particular incoming call.
- The MAP/40 provides a total of 12 circuit card slots, with a maximum of eight TDM bus-dependent circuit cards allowed simultaneously. Circuit card slot assignment is in accordance to the Manual Configurator, and depends upon the amount and type of magnetic peripherals and features used.
- WholeWord Speech Recognition is limited to a maximum of 12 detectors (24 channels) on the MAP/40. This maximum can be provided by a dedicated SP circuit card and two CMP cards.
- FlexWord Speech Recognition is limited to a maximum of 8 detectors (16 channels) on the MAP/40. This maximum can be provided by a dedicated SP circuit card and two CMP cards.
- Text-to-Speech is limited to a maximum of 12 channels on the MAP/40. This maximum can be provided by two dedicated AYC9 SP circuit cards.
- When used as a platform for AUDIX Voice Power Co-Residency, no more than 12 MAP/40 channels may be assigned to AUDIX Voice Power services.

- When used as a platform for FAX Attendant Co-residency, no more than 12 analog MAP/40 channels may be assigned to FAX Attendant service.
- A maximum of 8 tip/ring (T/R) circuit cards are allowed (four must be used for bridging).
- A maximum of two T1 circuit cards are allowed (one must be used for bridging).
- A maximum of four SP circuit cards are allowed.
- A maximum of two CMP circuit cards are allowed.
- A maximum of three Brooktrout TR114 cards are allowed.
- A maximum of ONE of each of following circuit cards is allowed:
  - IPCI (ASAI card)
  - DCP (AUDIX Voice Power card)
  - LAN (StarLAN or InterLan)
  - Multi-Port Asynchronous communications (GEMINI-1000, IPC-900)
  - SCSI Magnetic Peripherals controller (SCSI only)
  - Cartridge Tape Drive Controller (ESDI only)
- A maximum of two CLEO PC/XL 3270 cards are supported.
- The second serial port, CLEO PC/XL 3270, cartridge tape, and parallel printer are not allowed. (IRQ restriction)
- The combination of IPCI, IVP-6, InterLan, SP, CLEO PC/XL 3270, cartridge tape, and parallel printer is not allowed on IDE 386 systems. (IRQ restriction)
- The combination of DCP, IVP-6, InterLan, SP, CLEO PC/XL 3270, cartridge tape, and parallel printer is not allowed on IDE 386 systems. (IRQ restriction)
- The combination of IPCI, IVP, StarLAN, CLEO PC/XL 3270, cartridge tape, and parallel printer is not allowed on IDE 386 systems. (IRQ restriction)
- The combination of DCP, IVP, StarLAN, CLEO PC/XL 3270, cartridge tape, and parallel printer is not allowed on IDE 386 systems. (IRQ restriction)

Board Resource Assignments

Table 3-1 is list of resource assignments for each card supported by all three platforms in Version 4.0. Values are listed for each resource in the order preferred — first choice, second choice, and so on. Note that only the values needed by the generic Version 4.0 for the supported cards are listed — not all values allowed by the card are given. The V4.0 Configuration Program provides a complete set of values.

NOTE:

IRQs 0, 1, 6, 8, and 9 always are used by the PC itself, and are not available for assignment (IRQ 2 maps to IRQ9). IRQs 3, 4 and 7 are allocated for the asynchronous TTY and parallel printer ports on the motherboard, respectively, but can be used for other resources. IRQ 13 is reserved for a Math co-processor.

Brackets ([ ]) indicate that any of the enclosed values are allowed.

Where multiple cards of the same type are used, IRQs are common for all. However, I/O ports and RAM addresses are unique. This is true for all CONVERSANT cards.

CONVERSANT cards provide a switch for setting the card number; This switch sets both the I/O ports and RAM address to the appropriate values, as defined in the following table.

Table 3-1. CONVERSANT VIS Hardware Resource Assignments for Version 4.0

Board	Slot (bit)	IRQ	I/O Ports address(size)	RAM	Notes
Video Controller (VGA)	8			A0000(128K) &C0000(32K& E0000-Effff(64K)	required
WD1007V SE2-F001 disk controller	16	14,6	1F0(16) & 3F0(8) & 330(4)	C8000 (16K)	ESDI DMA 2
Adaptec 1542 B disk controller	16	14,6	1F0(16) & 3F0(8) & 330(4)	C8000 (16K)	SCSI DMA 2
CPU card parallel printer port		7	378(8)		
CPU card serial port		4	2E8(8)		
CPU card serial port #2		3	2F8(8)		
IVP-4/6/IU	8/16	2,15,5	[1-3,5-7,9-A]00(32/bd)		cards 0-7
SP	16	11	120-13C(4/bd)	C00000-F80000 (512K/bd)	cards 8-15
T1	16	12	22[0246](2/bd) &23[0246](2/bd)		cards 0-3
CMP	16				
Remote Maintenance Circuit Care	16	4	2E8(8)		Replaces the COM1 serial port.
Cartridge Tape (ESDI/IDE only)	8	5,7	288(2)		DMA 1
GEMINI-100 async.	16	10,15,4	380,[23][9-E]0(16)	C[8ACE]000,D0000(8K)	
IPCI	8	3,2		[D0,D8,CC]000(16K)	
DCP-disabled DMA	8	3,2	380(8)		
Brooktrout TR114	16	10,15,3,5, 7,2	240, 260,2C0(32)	0	DMA3
CLEO PC/XL 3270	8	3,5,7	3[ABE]00,2[ABE0]0(16)	[CD][048C]000(16K)	
StarLAN PC NAU	8	2,3,5,7	360,368(8)	[C8,CC,D[048C]]000(16K)	
Interlan NP600	16PC	15,11,3,5	2F0(8)		DMA 7

Memory Allocation and Hard Disk Drive Partitioning

This section will describe the procedures necessary to partition the hard disks according to the system configuration. These descriptions and procedures are meant to be used with information contained in Table 3-7 and Table 3-8 concerning software package sizes.

Partitioning the Disk

The CONVERSANT hardware systems can be configured with a variety of sizes for each of the five file systems or disk slices that are used. These file systems include: root, usr, usr2 (for speech), swap, and dump. These components must be sized properly during the initial installation to avoid running out of space in any area, thereby forcing the disk to be repartitioned and the software reloaded. Two of the components (swap and dump) are fixed in size and will not run out of space. The other three components; root, usr and usr2 (speech), may have enough space during initial system setup, but may run out later depending on file creation and other system activity. The following is a description of each of the components:

- Swap — This area of the disk is fixed in size depending on the amount of Random Access Memory (RAM) that is on the system. It is always 1.5 times RAM. For a 12-Mbyte system, swap should be set to 18-Mbytes. For a 16-Mbyte system, swap should be 24-Mbytes.

  This area is used to temporarily store programs (swap in and out) that are competing for CPU time and cannot remain in core memory due to size restraints.

- Dump — This area of the disk is fixed in size and should equal the amount of RAM on the system. The operating system "dumps" an image of core memory upon system crashes. The dump can be fetched after rebooting for analysis of what may have caused the crash. When allocated, this partition must be at least as big as the partition allocated to RAM.

- Root — This area of the disk houses the UNIX operating system, all VIS executable and data files, Script Builder application files, and the database. Root is designated a file system. Once the size of the file system is established, the only way to add space is to repartition. It is important to allocate enough space initially to allow "growth" in the root area since this area is normally the center of system activity.

  There is a limit of 1024 total cylinders for root.

  Call data handler is kept in the ORACLE local database in the root slice. It is recommended that a minimum of 4-Mbytes be provided, even if only one channel is used and there are no large local databases. The default (8-Mbytes, 16,000 blocks) is commonly sufficient for 36 channels of typical traffic. For more channels, heavy call-event collection, or heavier call volume, use 10-Mbytes (20,000 blocks), or 12-Mbytes, (24,000 blocks).

  Local database tables also reside in the root slice of the ORACLE database. A table consisting of three 12-byte fields per record and 10,000 records may require up to 1-Mbyte of space depending on its organization.

- Usr — This area of the disk houses user home directories and files, and is used at installation time to temporarily load some feature packages. This is also a file system which is fixed in size once the system is partitioned at installation. Unless there are user-generated programs generating output that is not controlled (such as periodic file purging/removal),

this area should remain fairly stable in size. One exception to this is the FAX Co-residency feature. This feature stores all FAX images received to a mailbox and stored for selected transmissions. Thus, when using FAX Attendant, special considerations should be given to this disk area. Because of the varying amount of storage potential needed for FAX Attendant, no solid figures are recommended. Usr space is consumed by FAX Attendant at the rate of 1-Mbyte per 25 pages of stored fax transmission, and should be partitioned accordingly.

- Usr2 (Speech) — This area contains all digitized speech used for playback in the applications loaded on the system. If the application(s) use voice coding or Form Filler, the speech recorded during those applications is stored in this area. AUDIX Voice Power also uses this area for voice mail storage. Depending on call volumes and the length of voice-coded phrases, this area may have to be configured to allow plenty of growth. This area is also fixed in size at installation. If the application(s) do not perform voice coding, then only speech space associated with adding additional applications needs to be considered.

  Each phrase requires a minimum of 16-Kbytes, and the complete standard speech set with all inflections occupies about 6-Mbytes of memory.

  Depending on the coding rate, speech phrases are stored in different amounts of blocks.

The correct sizes of these areas depend on the way the system is configured. Four basic configurations are possible:

- General use configuration — Provides enough space in root and usr to develop several large applications, keep large ORACLE tables, and maintain space for personal files.
- Maximum ORACLE configuration — Provides space for large database demands for either local database tables or a large number of call data events.
- Maximum speech configuration — Use only if the system requires a large amount of speech. It provides approximately 80 hours of ADPCM/32 speech storage using a 1.2-Gbyte SCSI hard disk drive.
- Dual speech configuration — Provides additional speech storage on the second hard disk, for dual 600-Mbyte ESDI and dual 200-Mbyte IDE systems.

There are six steps used to properly calculate the hard disk partitions for a CONVERSANT VIS:

1. Calculate feature space requirements
2. Calculate local database space requirements
3. Calculate VIS database space requirements

4. Calculate speech storage requirements
5. Calculate available disk space
6. Calculate recommended disk partitions

NOTE:
Once the disks are formatted, the sizes of the partitions can only be changed by reinstalling the UNIX operating system and VIS software. The size of the partitions is directly related to the hard disk drive format a particular platform is operating with.

Refer to the *CONVERSANT VIS System Description*, 585-350-207, for information on the magnetic peripheral formats available with each CONVERSANT VIS platform.

SCSI, ESDI, and IDE Disk Drive Partition Examples

The following tables show examples of how hard disk drives of each size and format may be partitioned. These disk partitions may be requested when the CONVERSANT VIS is planned, and the system hard disks will be shipped with the proper partitions created. The partitions can also be modified at any time after system installation, by reloading the UNIX operating system. The sample file system assignments used in this section provide minimal space for UNIX file systems and maximum space for speech.

The following is the *estimated* maximum amount of speech for Version 4.0 for each disk configuration:

The numbers shown are theoretical maximums not likely to be achieved because there is wasted space whenever a phrase does not fill a block. For example, standard speech is stored at 32-Kbps ADPCM. One block holds 4 seconds of speech. If a phrase is less that 4 seconds, the remaining space within that speech block is left empty, and is not available for other use.

Each speech block holds 2 seconds at 64-Kbps coding rate, 4 seconds at 32-Kbps, 5.33 seconds at 24-Kbps, and 8 seconds at 16-Kbps. These are theoretical maximums, not likely to be achieved because there is wasted space whenever a phrase does not fill a block. Furthermore, these assume only 10-Mbyte for ORACLE and minimum space in the UNIX file system. Refer to the heading "Memory Allocation and Hard Disk Drive Partitioning" later in this section, or *CONVERSANT VIS Version 4.0 Operations*, 585-350-703, about filesystem space required by the various software packages. This information can be used to determine reductions in maximum capacity as a function of additional software packages and database needs.

Table 3-2. Hours of Storage Speech Available According to Disk Setup

Disk Setup	Speech Capacity (Blocks/Mbytes)	16-Kbyte ADPCM	24-Kbyte SBC	32-Kbyte ADPCM	64-Kbyte PCM
200-Mbyte IDE	6464/103	14.3	9.6	7.1	3.6
Dual 200-Mbyte	19,264/308	42.8	28.5	21.4	10.7
600-Mbyte ESDI	32,064/513	71.2	44.5	35.6	17.8
Dual 600-Mbyte	70,464/1127	156.6	104.3	78.3	39.1
1.2-Gbyte SCSI	72,307/1156	160.6	107.5	80.3	40.1
Dual 1.2-Gbyte	72,307/1156	160.6	107.5	80.3	40.1

Table 3-3. SCSI/386 CPU Disk Drive Partitions

1.2 Gbyte Drive Partitioning (Mbyte/cylinders)

System Use	Total	Root ORACLE Blocks	Usr (FAX)	Usr2 (Speech)	Swap	Dump
General use	545/545	60 Mbyte = 120,000	125/125	500/500	18/18	12/12
Big ORACLE	676/676	320 Mbyte = 640,000	50/50	138/138	18/18	12/12
Max ORACLE	1020/1020	960 Mbyte = 920,000	50/50	138/138	18/18	12/12
Max speech	120/120	60 Mbyte = 120,000	50/50	1000/1000	18/18	12/12

Table 3-4. SCSI/486 CPU Disk Drive Partitions

1.2 Gbyte Drive Partitioning (Mbyte/cylinders)

System Use	Total	Root ORACLE Blocks	Usr (FAX)	Usr2 (Speech)	Swap	Dump
General use	535/535	60 Mbyte = 120,000	125/125	500/500	24/24	16/16
Big ORACLE	676/676	320 Mbyte = 640,000	50/50	128/128	24/24	16/16
Max ORACLE	1020/1020	960 Mbyte = 920,000	50/50	128/128	24/24	16/16
Max speech	110/110	60 Mbyte = 120,000	50/50	1000/1000	24/24	16/16

Table 3-5. ESDI Disk Drive Partitions

600-Mbyte Drive Partitioning (Mbyte/cylinders)

System Use	Total	Root ORACLE Blocks	Usr (FAX)	Usr2 (Speech)	Swap	Dump
General use	245/613	60 Mbyte = 120,000	125/313	194/485	18/45	12/30
Max ORACLE	378/946	320 Mbyte = 640,000	50/125	138/345	18/45	12/30
Max speech	100/250	60 Mbyte = 120,000	30/75	434/1089	18/45	12/30
Dual speech*	100/250	60 Mbyte = 120,000	30/75	434/1089	18/45	12/30

* These numbers relate to the first disk. The second ESDI disk should be partitioned entirely as Usr2, and reserved for speech storage only.

Table 3-6. IDE Disk Drive Partitions

200-Mbyte Drive Partitioning (Mbyte/cylinders)

System Use	Total	Root ORACLE Blocks	Usr (FAX)	Usr2 (Speech)	Swap	Dump
General use	102/346	40 Mbyte = 80,000	40/136	40/136	18/61	12/41
Max ORACLE	137/465	92 Mbyte = 184,000	25/85	20/68	18/61	12/41
Max speech	65/221	20 Mbyte = 40,000	25/85	92/312	18/61	12/41
Dual speech*	65/221	20 Mbyte = 40,000	25/85	92/312	18/61	12/41

* These numbers relate to the first disk. The second IDE disk should be partitioned entirely as Usr2, and reserved for speech storage only.

Calculating Your Own Partitions

If none of the configurations shown fit your needs, use the following guidelines along with Table 3-7, Table 3-8, and Table 3-9 on the next pages to estimate space requirements.

Feature Package Space

Space requirements for root can vary depending on the number of packages loaded. Use the following tables to sum the sizes of all the packages to be loaded. Use the package sizes in the Meg column to determine minimum space requirements for both ROOT and USR file systems.

NOTE:
The Base ORACLE package does not include the size of the database itself. This is calculated at a later time.

Table 3-7. Space Requirements for UNIX and CONVERSANT VIS Base Software

Package	root		usr	
	Blocks	Mbyte	Blocks	Mbyte
UNIX Base System — UNIX V3.2.2	10,648	5.20	10,072	4.92
UNIX System V/386 Release 3.2 Upgrade	2,200	1.07	5,000	2.44
SCSI Support — Version 2.3*	1,000	.49	300	.15
Cartridge Tape Utilities†	1300	.63	50	.02
C Software Development Set Version 4.1.5	3,152	1.54	4,200	2.05
Editing Version 2.0	12	.01	1,226	.60
Forms & Menu Language Interpreter	0	0	574	.28
Framed Access Command Environment V1.2.1	14	.01	5,920	2.89
Framed Access Command Environment Help V1.2.1‡	0	0	754	.36
Remote Terminal Version 2.0	0	0	1,790	.87
Extend Terminal Interface V2.0	0	0	1,850	.90
UNIX Extension — Remote File Sharing — V2.0‡	2,000	.98	1,000	.49
Network Support Utility V2.0‡	206	.10	540	.26
Base ORACLE DBMS 6.0.30**	8,527	4.16	8,537	4.17
Extended ORACLE DBMS 6.0.30‡	19,106	9.33	500	.24
CONVERSANT VIS Application Software	35,365	17.27	407	.20
T1 Board Driver	1,896	.93	1,996	.97
SP Board Driver	1,139	.55	1239	.60
Configuration Program	387	.19	487	.24
Feature Test Script	3,224	1.57	3,224	1.57
Voice Mail External Actions			10	0
Script Builder FAX Actions	2344	1.17	2344	1.17

* SCSI systems only
† ESDI systems only
‡ Optional
** Includes a 20,000 block database

Table 3-8. Space Requirements for CONVERSANT VIS Optional Packages Software

Package	root		usr	
	Blocks	Mbyte	Blocks	Mbyte
Script Builder	5,351	2.61	5,531	2.61
Form Filler Plus	2,250	1.10	2,350	1.48
Intelligent Ports Card Driver	329	.16	21	.01
3270 Host Communication Driver	329	.16	21	.01
3270 Host Communication Protocol	-	-	-	-
3270 Host Communication File Transfer Software	0	0	750	.39
3270 NetView Alarm	238	.12	338	.17
SQL*Menu V5.0.10 for ORACLE RDBMS 6.0.30	44	.02	8	.01
SCSI Mirroring Support**	1,000	.49	300	.15
Adjunct/Switch Application Interface	7,005	3.42	7,105	3.47
Adjunct/Switch Application Interface Library V01.01.18	3,000	1.46	3,990	1.51
PBX/PSTN Switch Interface Package - UK	140	.07	240	.12
PBX/PSTN Switch Interface Package - Mexico	132	.06	232	.11
PBX/PSTN Switch Interface Package - Hong-Kong	136	.07	236	.12
Line Side T1 Interface Package - DEFINITY	323	.16	423	.21
Line Side T1 Interface Package - Galaxy	322	.16	422	.21
ISDN Primary Rate Interface (PRI)	5,055	2.47	5,155	2.52
ISDN Network Primary Rate Interface (PRI)	576	.28	676	.33
Call Classification Analysis	948	.46	1,048	.51
WholeWord Speech Recognition - US English	2,582	1.26	2,682	1.31
WholeWord Speech Recognition - Mexican Spanish	2,334	1.14	2,434	1.89
WholeWord Speech Recognition - Canadian French	2,440	1.91	2,540	1.24
WholeWord Speech Recognition - UK English	2,390	1.67	2,490	1.26
FlexWord Speech Recognition Package	4,042	1.97	4,142	2.02
Speech Collection Toolkit	1246	.61	1346	.66
Text-to-Speech	10,151	4.98	10,251	5

Table 3-9. Space Requirements for Optional Packages Software

Package	root		usr	
	Blocks	Mbyte	Blocks	Mbyte
Graphical Speech Editor	403	.20	503	.25
Enhanced TCP/IP WIN/386 Release 3.0	2,244	1.10	1,332	.65
Network Interface Driver R2.0*	192	.09	510	.25
NP600A Network Processor**	88	.04	808	.39
SQL*NET TCP/IP V1.2 for ORACLE RDBMS 6.0.30	8,739	4.27	8,749	4.27
CompuLert/SCCS	329	.16	429	.21
External Alarms Package	611	.30	714	.35
CSG Asynchronous Host Toolkit Version 1.0	1,200	.59	100	.05
AUDIX Voice Power Appl. Software R2.1.1:Speech	40	.02	0	0
AUDIX Voice Power Appl. Software R2.1.1:Software	5,400	2.64	19,456	9.50
AUDIX Voice Power Appl. Software R2.1.1:Update 2	28	.01	842	.41
AUDIX Voice Power Switch Integration Software R2.1.1	3,030	1.48	0	0
AUDIX Voice Power S/I Software R2.1.1:Update 2	0	0	1,522	.74
FAX Attendant Co-resident Application Software R2.1.1 V2	12721	6.21	17653	8.61
FAX Attendant Non-co-resident Application Software R2.1.1 V2	11900	5.95	22996	11.22
FAX Attendant Co-resident S25 S/I Software R2.1.1	4034	2.02	4034	2.02
FAX Attendant Co-resident S75/DEF. S/I Software R2.1.1 V2	7675	3.83	7675	3.93
FAX Attendant Non-co-resident S75/DEF. S/I Software R2.1.1 V2	3679	1.83	3679	1.83
FAX Attendant Non-co-resident S85/DEF. S/I Software R2.1.1 V2	3666	1.83	3666	1.83

To calculate the total amount of space required in the ROOT and USR file systems for feature packages only, sum the MEG columns for both ROOT and USR respectively for each feature planned for the system.

Example of ROOT/USR Feature Package Space Required

Assume a MAP/100 with SCSI peripherals, a LAN, Script Builder, Call Classification Analysis (CCA) and a 3270 host interface is needed to automate a transaction. The system has 2 T1s, 2 SPs, a StarLAN card, a CLEO PC/XL 3270 card and

a Gemini-1000 serial ports card. In the calculations below, the variable name used for the root space requirement is called ROOT, and the variable name used for the usr space requirement is called USR. The packages required based on the above information are:

- UNIX (Base + Upgrade) — ROOT space = 6.27 MB, USR space = 7.36 MB
- SCSI Support — ROOT space = .49 MB, USR space = .15 MB
- VIS Software — ROOT space = 9.11 MB, USR space = .12 MB
- Base ORACLE — ROOT space = 4.16 MB, USR space = 4.16 MB
- Configurator — ROOT space = .19 MB, USR space = .24 MB
- Feature Test — ROOT space = 1.57 MB, USR space = 1.57 MB
- Network Support Utility — ROOT space = .10 MB, USR space = .26 MB
- Network Interface Driver (StarLAN) — ROOT space = .09, USR space = .25
- TCP/IP LAN — ROOT space = 1.10 MB, USR space = .65 MB
- Script Builder — ROOT space = 2.61 MB, USR space =2.61 MB
- Extended ORACLE — ROOT space = 9.33 MB, USR space = .24 MB
- Full CCA — ROOT space = .46 MB, USR space = .51 MB
- 3270 Host — ROOT space = .16 MB, USR space = .4MB
- Intelligent Ports Card Driver — ROOT space = .16 MB, USR space = .01 MB
- T1 driver — ROOT space = ..93 MB, USR space = .97 MB
- SP driver — ROOT space = .55 MB, USR space = .60 MB

The feature space requirements for the ROOT and USR partitions are:

ROOT=6.27+9.11+4.16+.23... = 37.28, or 37 MB
USR=7.36+.12+4.16+.28+... = 20.1, or 20 MB

Database Sizing

Local Database Sizing

Database space is allocated in 512 byte blocks. The database requires approximately 2500 blocks of overhead space.

Each table requires approximately 5 blocks of initial overhead space for the table definition and the list of data extents. A 512 byte block requires an average of 22 bytes of overhead. Each row requires an average of 5 bytes of overhead. Every

column (field) present in a row requires 1 byte of overhead. Columns that contain no data (NULL column) still requires this 1 byte of overhead.

Use the following formula to calculate the number of bytes required for a row in a table:

5+ (# of columns X 1) + (the sum of average column sizes)

This formula provides an estimate of the number of bytes required for a row in a table. Multiply this by the number of estimated rows to obtain the space requirement for a table:

((A X W)/(512-22)) + 5 = size of the table in 512 byte blocks

where:

A = number of rows
W = number of bytes in a row

Example of Calculating Local Database Table size

An application uses two Local Database Tables. The first table has the following makeup.

NOTE:
Characters (chars) are bytes in the descriptions below:

Table #1 has the following fields:

Name (24 chars)
SSN (9 chars)
DOBirth (Date field, 10 chars)
Sex (1 char)

Table #2 has the following fields:
Policy (10 chars)
Description (30 chars)

Assuming there are 5000 records (or rows) in Table #1, and 500 in Table #2, the calculations would be:

Table #1

((A * W)/(512 - 22)) + 5 = size of table in 512 byte blocks

where:

A = number of rows = 5000
W = number of bytes in a row = 24 + 9 + 10 + 1 = 44

((5000 * 44)/(490)) + 5 = 454 blocks

Factor in indexing,

454 * 1.3 = 590 blocks required for Table #1

Table #2

((A * W)/(512 - 22)) + 5 = size of table in 512 byte blocks

where:

A = number of rows = 500
W = number of bytes in a row = 10 + 30 = 40

((500 * 40)/(490)) + 5 = 46 blocks

Total Local Database space = Table #1 + Table #2 = 590 + 46 = 636 blocks

VIS Database Sizing

There are 7 tables used by all applications loaded on your system. The tables store information about each call. The data stored in these tables are used to generate the reports on the system. With the exception of the tables EVENTS and EVSUM, only the number of days of storage (X) and the expected daily call vol-

ume for all applications (Y) are needed. The variables W and Z are explained below. Use the following formulas to determine the amount of space (512 bytes blocks) required by each of the seven call data tables:

$$\text{CDH} = \left(\left(\frac{X \cdot Y \cdot 51}{512 - 22}\right) + 5\right) 1.3$$

$$\text{CDHSUM} = \left(\left(\frac{24 \cdot X \cdot 55}{512 - 22}\right) + 5\right) 1.3$$

$$\text{EVENTS} = \left(\left(\frac{W \cdot X \cdot Y \cdot Z}{512 - 22}\right) + 5\right) 1.3$$

$$\text{EVSUM} = \left(\left(\frac{24 \cdot X \cdot Z \cdot 19}{512 - 22}\right) + 5\right) 1.3$$

$$\text{CCA} = \left(\left(\frac{X \cdot Y \cdot 34}{512 - 22}\right) + 5\right) 1.3$$

$$\text{CCASUM} = \left(\left(\frac{24 \cdot 365 \cdot 47}{512 - 22}\right) + 5\right) 1.3$$

$$\text{TRASUM} = \left(\left(\frac{24 \cdot X \cdot 35}{512 - 22}\right) + 5\right) 1.3$$

where: W = 5 + (number of column x1) + (sum of average column sizes)
X = 1 + number of days of data to keep as specified in /vs/bin/util/croncdh (default is 7)
Y = calls per day
Z = number of call data events in script

When call data events are captured by the application, the events table uses the most space of the seven call data tables. Therefore, you must calculate the value of W very carefully for the EVENTS table.

For example, if an application captures two 10-character event strings, three 15-character event strings, a total of five application events, the formula for W is:

W = 5 + (number of columns × 1) + (sum of average column sizes)

$$W = 5 + (5 \cdot 1) + \left(5 + 2 + 2 + 0 + \left(\frac{(10 + 10 + 15 + 15 + 15)}{5}\right)\right)$$

W = 5 + 5 + (5 + 2 + 2 + 0 + 13)

W = 32

The events table has 5 columns or fields:

- ID_EVENT is the internal call data ID and is always 5 characters
- EVENT_NUM is the event number assigned by Script Builder of the event and is fixed at 2 characters
- EVENT_CT is the running total of the number of events tracked and is fixed at 2 characters
- EVENT_TM is a date field that is not currently used but must be accounted for
- EVENT_STR is a string variable that stores any event strings the developer has established

In this example, the events table consists of four columns: ID_EVENT (average size is 5 characters), EVENT_NUM (avg size is 2 characters), EVENT_CT (average size is 2 characters), and EVENT_STR (the average of 2 10-char strings and 2 15-char strings). The field EVENT_TM is set to 0 since it is not used. The average column sizes was used in the above example in calculating the value for W.

The database also contains a rollback segment which records actions which should be undone in specific cases. The size of the rollback segment grows dynamically. It is recommended that the space to hold call data for one day or 20% of the database, whichever is larger, be allocated to the rollback segment. To find the space to hold call data for 1 day, set X=1 in the calculations you just performed and recalculate the total database size by summing up all the tables. Then, compare that number to 20% of the total database size calculated previously. Use the larger of the two numbers as the “rollback segment” in the two-line formula that follows.

The total space allocated to the ORACLE database must take into account any database tables, call data tables, rollback segment, and the 30% growth factor mentioned earlier.

(local database tables + total database + 2500 overhead + rollback segment) X 1.3 X .000512 = Total MB allocated to the ORACLE database

Now add this number to the amount of Root MB required from the Feature Package sum calculated earlier. This number represents the minimum amount of space required in the Root partition. The recommended root partition is calculated once the space requirements are determined for the speech slice.

Example of Calculating Database Size Required

Using the formula above, the total space required for the ORACLE database can be calculated. The calculations shown earlier for the local database tables will be used and thus will not be duplicated here.

Assume that the customer wants to store the default 7 days of call data on the system, expects 12500 calls per day on the system, and is collecting 20 events per call. Assume all of the 20 events are numbers (not event strings). The calculations would use the following variables:

- X= 1 + number of days of storage = 8
- Y= calls per day = 12500
- Z= number of call events in script = 20
- W= 5 + (number of columns) + (sum of average column sizes) = 5 + 5 + (5 + 2 +2 + 0 + 0). Notice the average column sizes for both EVENT_TM and EVENT_STR are 0 because neither event dates or event strings are being used. W = 19.

The database table sizes would be:

- CDH = (((8 * 12500 * 51)/492) +5) * 1.3 = 13482
- CDHSUM = (((24 * 8 * 55)/492) +5) * 1.3 = 34
- EVENTS = (((19 * 8 * 12500 * 20)/492) +5) * 1.3 = 100413
- EVSUM = (((24 * 8 * 20 * 19)/492) +5) * 1.3 = 199
- CCA = (((8 * 12500 * 34)/492) +5) * 1.3 = 8990
- CCASUM = (((24 * 365 * 47)/492) +5 * 1.3 = 791 (this table is fixed in size)
- TRASUM = (((24 * 8 * 35)/492) +5) * 1.3 = 24

The database size then is CDH + CDHSUM + ... = 123933 (in blocks).

The rollback segment is calculated as either 20% of 123933 (24786) or the space to hold call data for 1 day, whichever is larger. The space to hold call data for 1 day (substitute 1 for X in above calculations) is:

- CDH = (((1 * 12500 * 51)/492) +5) * 1.3 = 1690
- CDHSUM = (((24 * 1 * 55)/492) +5) * 1.3 = 10
- EVENTS = (((19 * 1 * 12500 * 20)/492) +5) * 1.3 = 12557
- EVSUM = (((24 * 1 * 20 * 19)/492) +5) * 1.3 = 31
- CCA = (((1 * 12500 * 34)/492) +5) * 1.3 = 1129
- CCASUM = (((24 * 365 * 47)/492) +5 * 1.3 = 791 (this table is fixed in size)
- TRASUM = (((24 * 1 * 35)/492) +5) * 1.3 = 9

The space to hold call data for one day is CDH + CDHSUM + ... = 16217. Since 24786 is larger than 16217, then the number used for the rollback segment is 24786.

The total space required for the ORACLE database is:

(local database tables + total database + 2500 overhead + rollback) * 1.3 * .000512 = .000512 =

(636 + 123933 + 2500 + 24786) * 1.3 * .000512 = 101 MB

Now add this number to the amount of Root MB required from the Feature Package sum calculated earlier. This number represents the minimum amount of space required in the Root partition. The recommended root partition is calculated once the space requirements are determined for the speech slice.

ROOT SPACE required = Feature space + ORACLE database = 37 + 101
= 138 MB
USR SPACE = 20 MB as calculated earlier

The ROOT requirement alone requires this system to have at least one 600 MB drive.

Speech Space Sizing

Thus far, the minimum space requirements for the ROOT and USR file systems has been calculated. This section calculates the minimum space requirements for the Speech partition. Direct consultation with the customer must occur in order to answer the questions below. If an answer is not known, use either a best guess or the default value provided.

All calculations assume the customer uses ADPCM32 as the speech encoding rate. The speech calculation requires the following inputs:

1. How many different applications are planned for the VIS? This input is be called NUM_APP in the formula below. The default value is 10.
2. How many phrases (including voice coded phrases stored during a call) will each application have? This input is called NUM_PHR in the formula below. The default value is 100.
3. What will be the average phrase length in seconds? This inputs is called PHR_LEN in the formula below. A default answer would be 5 seconds.
4. Will Standard speech be loaded onto the system? If this answer is yes, then the input STD_SPC should be set to 6, otherwise this input is 0.

The inputs collected above should be inserted into the formula below to get the minimum speech space requirements:

NUM_APP * NUM_PHR * PHR_LEN * .0039 + STD_SPC = Speech space in MB

If the default values were used, the calculation would be:

Speech Space Required = 10 * 100 * 5 * .0039 + 6 = 25.5 MB

If the number of phrases and phrase lengths vary significantly between applications, one can calculate each application's speech requirement separately. The formulas would be:

Total Speech Space = Speech for Application 1 = NUM_PHR(1) * PHR_LEN(1) * .0039
+ Speech for Application 2 = NUM_PHR(2) * PHR_LEN(2) * .0039
+ Speech for Application 3 = NUM_PHR(3) * PHR_LEN(3) * .0039
+ .
+ .
+ .
+ Speech for Application N = NUM_PHR(N) * PHR_LEN(N) * .0039

The total speech space required would be the sum of each application's speech requirement + STD_SPC.

Example of Calculating Speech Space

Assume the customer has 15 different applications planned to store on the system. Assume that each application has about 80 phrases and an average phrase length of 5 seconds. Assume that the standard speech package is stored on the system.

The calculations for determining speech space are:

NUM_APP * NUM_PHR * PHR_LEN * .0039 + STD_SPC = Speech space in MB
or
15 * 80 * 5 * .0039 + 6 = 29 MB

Recommended Disk Partition Calculations

The minimum space requirements for ROOT, USR and Speech have been calculated thus far. This section combines minimum space requirements with additional questions to come up with the recommended disk partition sizes for a VIS. The following prompts determine what additional information is required:

1. How much growth do you expect on the system? This input, expressed as a decimal, adds a proportionate amount of space to the ROOT, USR and Speech file systems calculated above. This input is called GRTH. The default is .20 (20%).
2. How much memory (RAM) will be on the system? This input, expressed in MB, should be either 12 or 16. This input is be called RAM, and is used to calculate both the SWAP space and DUMP space mentioned above.

3. What is the size of the first disk on the system? This input, expressed in MB, should be either 200 (for MAP/40), 600 or 1200. This input is be called DSK in the formula below.
4. What is the preference for allocating disk space?

    a. Maximize Speech Space, Minimize ROOT space

    b. Maximize ROOT Space, Minimize Speech space

    c. Allocate space equally to ROOT and Speech

    This prompt allows one to allocate the free space left on the disk (after meeting the minimum requirements for each area) as the customer desires. If the customer feels that they may place additional applications with large speech requirements on the system, then they should maximize the Speech space and minimize ROOT space.

    The second option would be used if the customer feels that additional applications may not be added which have large speech space requirements. Additional database space or space to load additional features may be needed in the future. In this case, they should maximize ROOT space and minimize Speech space.

    If they want to allocate space to both partitions equally, use Option 3. In any case, the following inputs should be used in the calculation below based on the customer choice:

    1. For Option 1 set SPCH_ALC=.7, ROOT_ALC=.2, USR_ALC=.1
    2. For Option 2 set SPCH_ALC=.2, ROOT_ALC=.7, USR_ALC=.1
    3. For Option 3 set SPCH_ALC=.45, ROOT_ALC=.45, USR_ALC=.1

The following formulas calculate the estimated space requirements for each area:

- ROOT_REQ = ROOT Space Requirement calculated before * (1 + GRTH)
- USR_REQ = User Space Requirement calculated before * (1 + GRTH)
- Speech_REQ = Speech Space Requirement calculated before * (1 + GRTH)
- SWAP_REQ = RAM * 1.5
- DUMP_REQ = RAM

The available disk space left (MB) is calculated using the formula:

AVL_DSK = DSK - ROOT_REQ - USR_REQ - SWAP_REQ - DUMP_REQ - Speech_REQ

If this number is negative, then the current disk size is too small to hold the required partition sizes. Either the estimates for speech space, database space, or feature packages are too big, or a larger disk size (if possible) is required.

The recommended disk partition calculations (in MB) are:

1. ROOT = ROOT_REQ + (AVL_DSK * ROOT_ALC)
2. USR = USR_REQ + (AVL_DSK * USR_ALC)
3. Speech = Speech_REQ + (AVL_DSK * SPCH_ALC)
4. SWAP = SWAP_REQ as calculated above
5. DUMP = DUMP_REQ as calculated above

NOTE:
For 1.2 Mbyte hard disk drives --> 1-Mbyte = 1 cylinders
For 600 Mbyte hard disk drives --> 1-Mbtye = 2.5 cylinders
For 200 Mbyte hard disk drives --> 1-Mbyte = 3.4 cylinders

Example of Calculating Available Disk Space

Assume the customer is expecting 10 per cent growth on the system. Assume that the system has 16-Mbytes of main memory with a 1.2-Gbyte disk drive. Assume the customer may perform development work on the system and require ROOT space to be maximized. The calculations to determine the estimated space requirements would be:

- ROOT_REQ = ROOT Space Requirement calculated before * (1 + GRTH)

  = 138 MB * (1.10) = 152 MB
- USR_REQ = User Space Requirement calculated before * (1 + GRTH)

  = 20 MB * (1.10) = 22 MB
- Speech_REQ = Speech Space Requirement calculated before * (1 + GRTH)

  = 29 MB * (1.10) = 32 MB
- DUMP_REQ = RAM = 16 MB
- SWAP_REQ = RAM * 1.5 = 24 MB

The available disk space left (MB) is calculated using the formula:

AVL_DSK = DSK - ROOT_REQ - USR_REQ - SWAP_REQ - DUMP_REQ - Speech_REQ

= 1200 - 152 - 22 - 32 - 16 - 24 = 954 MB

Example of Calculating Recommended Disk Partitions

The recommended disk partition calculations (in MB) are:

- ROOT = ROOT_REQ + (AVL_DSK * ROOT_ALC)

  = 152 + (954 * .7) = 819 MB
- USR = USR_REQ + (AVL_DSK * USR_ALC)

  = 22 + (954 * .1) = 117 MB
- Speech = Speech_REQ + (AVL_DSK * SPCH_ALC)

  = 32 + (375 * .2) = 107 MB
- DUMP = DUMP_REQ as calculated above = 16 MB
- SWAP = SWAP_REQ as calculated above = 24 MB

Obtaining a Final Configuration

In order to obtain a final configuration to place the CONVERSANT VIS order, the following activities must be completed. These activities should be performed between the customer and project sales manager.

- The account executive or sales representative will assist in creating a final configuration, forming a list of price element codes (PECs) needed, and placing the order using the AT&T Order Management System (ATTOMS) configurator and/or AT&T Delivery Operation Support System (DOSS).
- Contact the Design Center, International Customer Service Group, or International Technical Assistance Center (ITAC) to technically assure the configuration proposal (Appendix B, "Support and Design Resources").
- Provide a schematic layout of the installation site including the location of the VIS in relation to the switch and the host (Chapter 4, "Preparing for Installation" of this book and Chapter 6, "CONVERSANT VIS Requirements and Specifications," of the *CONVERSANT VIS System Description*, 585-350-207.
- Determine responsibilities for administering the necessary switch translations to support VIS operation.
- Determine the role of the Technical Services Center during VIS implementation (Appendix B).
- Determine the role of the application developer for system design and interface operability (Appendix B).
- Make changes to the proposal as appropriate.
- Finalize the configuration.

- Schedule training
- Provide milestones for installation.

Placing an Order

Use DOSS or ATTOMS to place a CONVERSANT VIS order. This includes the hardware as well as any custom software and speech requests.

When negotiating the purchase of new or upgrade system software, the TSC should be contacted, at the time the CONVERSANT VIS order is placed, to negotiate the software installation date. The installation should occur at least 2 weeks prior to desired cut to service date. All new CONVERSANT VIS platforms are shipped from the factory with system software pre-loaded.

Preparing for Installation

4

This chapter discusses important external factors that are involved in the planning and installation of a CONVERSANT Voice Information System (VIS).

In order to prepare for installation of the CONVERSANT VIS the following needs must be considered:

- Custom application design and custom speech resources
- Personnel
- Training, documentation, and system support
- Physical site environment

Developing a Custom Application and Custom Speech

Organizations are available to design a custom application and create the speech specific to the application, if the customer is unable to perform these functions with the existing feature packages such as Script Builder, Graphical Speech Editor, Asynchronous Host Toolkit, optional ORACLE packages, etc.. For more information about available design resources, refer to Appendix B, "Support and Design Resources".

Selecting Personnel

The customer is responsible for assigning the following personnel:

- A system administrator responsible for the day-to-day operations of the CONVERSANT VIS (for example, bringing up the Voice System, taking it down, running administrative reports, checking the message log, etc.).
- A Script Builder application developer responsible for creating customer application programs for the VIS. In cases where custom applications have already been developed, this person needs to be familiar with these applications.

The same person can be identified to perform both of the above functions. It is critical that the person/persons to fulfill these roles be identified as early in the provisioning process as possible. These persons will be central points of contact during the installation/set-up/initial service time period. Refer to "Customer Training" later in this chapter to determining what training is available for these individuals and how to schedule the training.

Customer Training

Customer training is available for CONVERSANT VIS in the following major areas:

- Installation and Maintenance
- Script Builder

Training is available through the GBCS Training Center. Contact CONVERSANT VIS account executive/sales representative, or call 1-800-255-8988 for details and information on the courses listed on the following page.

Installation and Maintenance Training

- BO3620A — CONVERSANT VIS Installation and Maintenance (PEC 1420-CM1)

  This is a 5-day class designed for persons having the responsibility for installing and maintaining the VIS. Students should have a familiarity with the UNIX operating system (especially editing) some familiarity with systems controllers and with telecommunications equipment.

  This course is designed for AT&T technicians or customers who need to become more familiar with maintaining the VIS.

Script Builder Training

- BC3612A — Introduction to Script Builder (PEC 1420-SBL)

  This is a 4-day course designed for persons having responsibility for creating customer application programs for the CONVERSANT VIS. Students should have some programming background in a high-level program language or with personal computer application packages such as BASIC, COBOL, dBase III or IV, LOTUS 1-2-3, etc. They should understand programming concepts (such as goto, evaluate, if then, or else commands), terminology and logic, and understand the flow of voice response applications. A working knowledge of the UNIX operating system or MS-DOS is required.

  Attendance for one person in one class is included in the price of the Script Builder software. Any additional classes or attendees are charged to the customer.

- BC3613A — Script Builder Host Interface Administration (PEC 1420-SBH)

  This is a 1-day course designed to provide a Script Builder application designer the ability to utilize the Script Builder host interface for IBM 3270 SNA or bisynchronous environments. This course is offered as the fifth day for the introductory Script Builder course and CU3612 is a prerequisite for this fifth day.

- BC3625A — CONVERSANT Script Builder — Advanced (PEC 1420-SBA)

  This is a 5-day course designed for those customers who will be using the advanced speech processing functions (speech recognition, PRI, ASAI, etc.) or native script language of the CONVERSANT VIS. Students are expected to have attended the introductory Script Builder and host interface classes (BC3612A and BC3613A) prior to attending this course. They are also required to have a working knowledge of the UNIX operating system and C programming language. All attendees are required to pay course fees.

Customer Documentation

A complete library of documentation is available to support CONVERSANT VIS V4.0. All titles are prefaced with *CONVERSANT Voice Information System* except for the hardware installation books. The hardware installation and hardware upgrade documents that are received depend on the particular platform that is ordered (MAP/100C, MAP/100, MAP/40).

To prevent redundancy, Table 1 and Table 2 in the first section of this book titled "About This Book" give a concise list of documentation for CONVERSANT VIS V4.0. For additional information on the entire VIS library, refer to the *CONVERSANT VIS Documentation Guide*, 585-350-002.

Documentation Ordering Procedure

Although a base set of documents is supplied with the VIS, you can order additional documents, or single documents by:

1. Calling the AT&T Customer Information Center (800-432-6600)
2. Supplying the:
   - Document number
   - Name of the account executive
   - Customer name and address
   - Method of payment

Support Resources

Support resources are available for installation and maintenance, system administration, and the optional Script Builder feature. AT&T warrants that the CONVERSANT VIS, including all hardware and operating system software, will operate according to system specifications for 1 year from the installation date. If any portion of the system is not operational during that period, AT&T will repair or replace those components without charge to the customers. Note that replaced components become the property of AT&T.

For more information about maintenance agreements, contact an AT&T sales or marketing representative. For more information about available support resources, refer to Appendix B, "Support and Design Resources".

Component Sparing Information

The information contained under this heading is to be used as a guideline for ordering critical spare parts for a particular system or installation. A part is considered to be a critical spare if its failure puts the system out of service until the part can be replaced. For example, if a system is configured so that it relies solely on a single SP circuit card for playback and coding capabilities in either an analog or digital environment, that circuit card is considered a critical spare.

Please contact the National Parts Service Center (NPSC) at 1-800-222-PART, from 7:00 AM to 6:00 PM if additional information is needed. For additional help with determining the comcode of a component, call the comcode hotline at 1-800-654-5832, 7:30 AM to 7:00 PM.

Planning Worksheets

A

This appendix contains the following worksheets or forms:

- Implementation checklist
- Implementation team information sheet
- System inventory worksheets (for upgrade systems)
- Configuration worksheet
- Speech recognition assessment checklists
- Application evaluation form

VIS Implementation Checklist

1. Order CONVERSANT documentation, at the Sales Channel's discretion, to serve as reference for customer questions and design. Refer to Chapter 4, "Preparing for Installation", for information about ordering the *CONVERSANT VIS System Description*, 585-350-207.
2. Qualify the account using the questions in Chapter 2, "Determining Customer Needs".
3. Design preliminary CONVERSANT VIS using the AT&T Delivery Operations Support System (DOSS) or AT&T Order Management Service (ATTOMS) configurators. Refer to Chapter 3, "Configuring the CONVERSANT VIS", and Appendix C, "Price Element Codes", for specific information.
4. Make appropriate arrangements for sourcing software application and speech production. Refer to Appendix B, "Support and Design Resources".
5. Finalize the system configuration using the DOSS or ATTOMS configurator. Contact the appropriate AT&T technical support group when necessary for design assurance. Refer to Appendix B, "Support and Design Resources".
6. Determine what changes (if any) are required to the domestic or international PBX/ACD switch translations to support the CONVERSANT VIS environment. Refer to Chapter 4, Chapter 6 and Chapter 7, of *CONVERSANT VIS System Description*, 585-350-207.
7. Where appropriate, work with AT&T Network Services Division to obtain proper network design.
8. Obtain AT&T Network Services Division assurance for the proposal, including coverage of milestone dates and facility availability.
9. Present configuration and cost estimates to the customer to validate the concept proposal. Modify initial configuration parameters as needed. Refer to Appendix C, "Price Element Codes".
10. If necessary, go to Special Bids for contract terms and conditions (that is, special maintenance, network software pricing, etc.).
11. If customer requires ISDN-PRI, complete ISDN Early Request Screening Form and Pre-sale Capacity Inquiry Form, for desired install date. Forward to ISDN Network Specialist.
12. Present the final proposal, including the following:
    a. The customer responsibilities for obtaining, creating, or modifying the existing operation to work with the VIS.

b. A summary of the traffic impact on the associated PBX, and additional hardware/software requirements. A description of necessary PBX upgrade, if appropriate.

c. A schematic layout of the installation including the location of the VIS in relation to the PBX and the Host, and DCE requirements as appropriate.

d. The customer responsibilities for administering (or contracting) the necessary ACD switch translations to support VIS operation.

e. The role of the Technical Support Center (TSC) or International Technical Assistance Center (ITAC) during the VIS implementation. The TSC or ITAC are involved when turning up the physical links to an ASAI application, and heavily involved during the hardware or software upgrade of an existing platform.

f. The application developer's (or groups's) role for system design and interface operability.

g. The auxiliary costs including INFO-2 service if ANI delivery, switch translations, etc.

13. Develop or deliver rough project timelines for AT&T's portion of the project.
14. Discuss final equipment room, power, and customer maintenance options.
15. Develop a final customer quote based upon the agreed configuration, software development and speech production costs, milestones for equipment, and facility provisioning dates.
16. Prepare a detailed equipment room layout including environmental considerations.
17. Conduct a joint project meeting with the customer and services (including the TSC or ITAC when appropriate), defining the scope and limits of customer acceptance criteria. The application developer will have a role in end-to-end test plans; AT&T acceptance test plans can only include basic CONVERSANT VIS functionality.
18. Obtain the customer agreement and contract signature.
19. Issue a DOSS CONVERSANT order, and custom software/speech requests where appropriate. If planning a software/feature package upgrade to an existing platform, contact the TSC at 1-800-344-9670 to negotiate the software installation date (at least 2 weeks prior to the desired cut date).
20. Develop a preliminary draft of the implementation plan including major milestones, tentative dates, acceptance criteria, and responsibilities.
21. Make sure that AT&T Network Services Division if involved if ISDN is needed, as ISDN implementations require a test plan developed by Network Services.

22. Finalize the implementation task timeline including internal milestone requirements.
23. Review DOSS order numbers and content. Verify any Service Price Elements issued where appropriate for desired PBX translations, as well as PBX hardware additions.
24. Ensure that a Network WORD order is issued for facility provisioning.
25. Conduct a business assurance meeting and review items noted in Steps 12 and 17. Involve customer telecom, MIS, and operation representatives.
26. Assign a customer contact (preferably an application developer or telecom administrator) as customer project leader and main contact during implementation. Assure operations management representation on the project team.
27. Plans for coordinator and interface with the customer's host computer vendor. This may be needed to finalize proper host communication software and hardware arrangement. The customer should act as a liaison between the vendor and AT&T planning groups when needed.

Implementation Team Information Sheet

TITLE AND NAME	MAILING ADDRESS	TELEPHONE NUMBER
ACCOUNT EXECUTIVE		
DESIGN SPECIALIST		
CONVERSANT OVERLAY SPECIALIST		
GBCS PROJECT MANAGER		
CUSTOMER PROJECT MANAGER		

TITLE AND NAME	MAILING ADDRESS	TELEPHONE NUMBER
VIS SYSTEM ADMINISTRATOR		
DEPARTMENTAL COORDINATOR		
TECHNICAL SERVICE CENTER		
APPLICATION OR SCRIPT PRODUCTION		
HOST COMPUTER TECHNICAL SUPPORT		

System Inventory

The following procedures can be used to determine software load, memory and disk configurations, and inventory the CONVERSANT circuit cards on existing VIS platforms. This section describes how to inventory the AT&T Multi-Application Platform 100 (MAP/100), MAP/100C, and MAP/40 platforms.

NOTE:
All instructions that require command execution, should use the “root” login, as some are not available to system administration login id’s.

Refer to the *CONVERSANT VIS System Description*, 585-350-207, for details as to which attributes of the current platforms are supported. Also, refer to the heading "Hardware and Software Configuration Rules and Limitations" in Chapter 3, "Configuring the CONVERSANT VIS", of this document.

Any questions about these procedures should be referred to the Design Center — Configuration Support Group, or Technical Service Center (TSC).

1. HARDWARE PLATFORM:

   Identify the Multi-Application Platform (MAP) that is being inventoried.

   MAP100C, MAP/100, MAP/40

2. SOFTWARE ISSUE:

   Identify the software issue currently operating on the platform. Login with a regular login ID and follow the menu sequence below:

   1st Menu = AT&T FACE
   2nd Menu = System Administration
   3rd Menu = Software Setup
   4th Menu = Display Installed Software

   A listing of all installed software is displayed; record the version of CONVERSANT VIS Software that is listed (for example, 3.1).

   SOFTWARE ISSUE: _____

3. TIP/RING CARDS, T1, & SPEECH PROCESSING CARDS:

   Look at the back of the main cabinet for the following labels to identify Tip/Ring, T1, and speech processing cards and enter the quantity of each on the lines provided. Identification of these cards may require some physical disassembly of the platform.

Card Name	Label	Quantity
VRS6 T/R*	AYC1	
IVP6 T/R*	AYC5	
IVP6 T/R	AYC5B	
IVP4 T/R*	AYC6	
IVP4 T/R	AYC6B	
T-1*	AYC3	
T-1	AYC3B	
T-1	AYC11	
SP*	AYC2	
SP*	AYC2B	
SP	AYC2C	
SP	AYC9	
CMP	AYC7	

* These circuit cards are no longer orderable and are not supported if upgrading or migrating the system.

4. MEMORY SIZE:

   Some early MAP/100 models may be equipped with only 8-Mbytes of memory. In these cases, upgrading to VIS 4.0 with a 386 CPU will require a 4-Mbyte upgrade.

   The “memsize” command will give the system’s total amount of random access memory installed on the CPU circuit card.

   command: **/etc/memsize**

   The output value, expressed in bytes, (that is, something like 8388608, or 12306245) would indicate approximately 8-Mbytes or 12-Mbytes of RAM, respectively.

   SYSTEM RAM=_____Mbytes

5. HARD DISK DRIVE:

   In the MAP/100C and MAP/100 platforms, there can be one or two hard disk drives in the 600-Mbyte ESDI format, or in the 1.2-Gbyte SCSI format. In the MAP/40 platform, there can be one or two 200-Mbyte IDE hard disk drives. Identification of these units may require some physical disassembly of the platform if accurate records of peripheral installation have not been kept.

   — The 1.2-Gbyte SCSI hard disk drive is a half-height peripheral identified by a MAXTOR model number of MXT-1240S. Its physical dimensions are approximately 5.75x4x1.75 inches, and is mounted in the peripheral bay using a combination of anodized (gold colored) adaptor brackets. This disk drive accepts a 2-row, 50-pin bus connector.

   — The 600-Mbyte ESDI hard disk drive is a full-height peripheral identified by its large, unmistakable size. It is black in color, and requires no additional adapter brackets for mounting, with the entire unit measuring approximately 7x6x2 inches.

   — The 200-Mbyte IDE hard disk drive is a half-height peripheral identified by a MAXTOR model number of 7213AT or 7245A. Its physical dimensions are approximately 5.75x4x1 inches, and is mounted into the peripheral bay using a combination of anodized (gold colored) adaptor brackets. This disk drive accepts a 2-row, 40-pin bus connector.

   DISK DRIVE FORMAT = SCSI/ESDI/IDE

   NUMBER OF DRIVES = 1 / 2

6. CARTRIDGE TAPE DRIVE:

   In the MAP/100C and MAP/100 platforms, there can be either a 525-Mbyte SCSI cartridge tape drive, or a 150-Mbyte ESDI cartridge tape drive with a corresponding controller card. In the MAP/40 platform, there is a 150-Mbyte ESDI tape drive.

   CARTRIDGE TAPE DRIVE FORMAT = SCSI/ESDI

7. MULTI-PORT ASYNCHRONOUS COMMUNICATIONS CARD:

   There are different asynchronous communication cards that may be installed in the CONVERSANT VIS, namely the CTC GEMINI 1000, IPC-900, or IPC-802. Record which card is currently in use.

   ASYNCHRONOUS 8-PORT CARD = _____

   NOTE:
   The IPC-802 card is no longer available and is not supported. It has been replaced by the IPC-900 and CTC Gemini 1000 circuit card.

8. LOCAL AREA NETWORK CARD:

   The InterLan NP600A Local Area Network (LAN) card has a 15-pin connector, in addition to a coaxial input connector.

   The StarLAN Interface has a D8W-87 cord attached which terminates at a StarLAN hub.

   LOCAL AREA NETWORK CARD = _____

9. 3270 INTERFACE CARD:

   Determine whether the card is an older CLEO Emulex or a CLEO PC/XL 3270. The Series 1 CLEO Emulex 3270 IBM Host Interface card has a 25-pin MALE connector with a black casing around the pin field.

   The Series 2 CLEO PC/XL 3270 Interface card has a 25-pin MALE connector.

   3270 INTERFACE CARD = _____

   NOTE:
   Emulex circuit cards are no longer available and are not supported. They have been replaced by the CLEO PC/XL 3270 card.

10. MONITOR TYPE:

    Is an AT&T or customer provided monitor being used with this CONVERSANT VIS? What make and model is it?

    MONITOR = COLOR / MONOCHROME

    MAKE & MODEL = _____

11. PARALLEL PRINTER:

    Is an AT&T or customer provided parallel printer being used with this CONVERSANT VIS? What make and model is it?

    MAKE & MODEL = _____

12. MODEM:

    Is an AT&T or customer-provided Hayes-compatible modem attached for system access by AT&T Denver and Columbus technical support personnel? If provided, the modem is connected to a serial port at the rear of the CPU. What make and model is it?

    MAKE & MODEL = _____

13. IPCI CIRCUIT CARD:

    The IPCI card used for the ASAI feature is connected with D8W-87 cords, a terminating resistor, and 103A wall jack to a BRI interface at the DEFINITY G3 PBX.

    IPCI CARD: Y / N

14. AUDIX VOICE POWER DCP INTERFACE CIRCUIT CARD:

    The DCP card is connected with a D8W-87 cord and 103A Wall Jack to a digital port at the DEFINITY PBX.

15. DCP INTERFACE CARD: Y / N

    Any questions on this procedure should be referred to the GBCS Design Center.

16. OTHER EXTERNAL VENDOR EQUIPMENT:

    If any additional circuit boards or peripheral equipment exist within the system and did not fit into any of the previous inventory questions, list each component's model, manufacturer and function.

    1. _____
    2. _____
    3. _____
    4. _____

Configuration Worksheet

The following worksheet should be used when generating a configuration for a new or upgraded system. Use this sheet in conjunction with Appendix C, "Price Element Codes". Current pricing of all components can be obtained through DOSS or ATTOMS configurator ordering techniques.

PEC	Quantity	Description	Price

Speech Recognition Assessment Checklists

1. CUSTOMER CONTACT:_____

   CUSTOMER NAME:

   TEL:_____

   COMPANY NAME:

2. Describe the service that this application provides. Is this a new service? Is the application already automated with a voice response technology?
3. Describe the general flow of the application. (Greet caller, prompt for account number, verify account number via database lookup, etc.)
4. What is the anticipated life span of a custom vocabulary or wordlist? Will the application require the recognition of speech samples or patterns that change on a weekly/monthly/yearly basis?
5. Describe the calling populations demographics. Is the application targeted for domestic or international use? If domestic, does the calling population live in one particular city or state, or is it nationwide? Is this a heavily-accented region, or prone to use of local dialects?
6. Will the calling population be ethnically diverse, or have multiple common languages that may warrant two language packages to be installed and operational on the VIS?
7. Will the average caller use the service or application enough times to become familiar with the prompts and want to barge-in before each prompt is finished, to save time? Also, is the average caller willing to listen attentively a set of lengthy prompts and repeats of spoken words required to ensure SR accuracy?
8. What is the caller's environment (for example, a noisy shipping yard, or a quiet office setting)?
9. What is the expected call volume per day? What is the peak call volume per hour?
10. How many channels of speech recognition does the application require?
11. What percentage of the calls are expected to be handled entirely through touch tone?
12. What is the data to be gathered? What is the length of the digit string?

Example:

DATA ITEM	LENGTH (Fixed or Variable)	COMMENTS	VERIFICATION METHOD (Y or N)
catalog item number	7-9 (Variable)	always starts with "01"	Yes - host
extension number	4 (Fixed)	number to transfer to	No
menu choice	1 (Fixed)	choices are 1,2,3,4	Yes - Script Builder

The first data item, catalog item number, is a variable length number 7-9 digits long. The number always starts with an '01', for example, '0198655'. This number can be verified using the 3270 host to check if this catalog item number exists.

The second data item, extension number, is a fixed length number 4 digits in length. This can be any 4 digit number, so there is no way for this data to be verified.

The third data item, menu choice, is a fixed length number 1 digit in length. Since it is a menu choice from Script Builder, it can be verified using the Confirm option of the Prompt and Collect, and verifying with the caller what was spoken.

.

DATA ITEM	**LENGTH (Fixed or Variable)**	**COMMENTS**	**VERIFICATION METHOD (Y or N)**

13. Please provide a description of the peripherals. Local area network, type of telephone lines) and other features used with this application (i.e. ASAI, PRI, CCA).

HOST: _____

SWITCH: _____

TYPE OF TEL: _____

LINES: _____

OTHER FEATURES: _____

OTHER: _____

Application Evaluation Form

ACCOUNT TEAM CONTACTS: _____

NAME: _____ TEL: _____

NAME: _____ TEL: _____

CUSTOMER CONTACT: _____

CUSTOMER NAME: _____

TEL: _____

COMPANY NAME: _____

ACCEPTED: Yes _____ No _____

REJECTED: Yes _____ No _____

If rejected, please state the reasons below.

- APPLICATION

  Describe the service that the application provides.

- DATA

  Describe the data to be recognized.

- CUSTOM WORK

  Is a custom vocabulary required? Why or why not?

  Is a custom wordlist needed? Why or why not?

  Is a custom DIP needed? Why or why not?

- PRODUCT CO-RESIDENCY

  Are other software products such as AUDIX Voice Power or FAX Attendant to be loaded co-resident with the VIS? Will the application be required to interact or invoke service from these products through the use of Script Builder External Actions?

- PUBLIC SWITCHED NETWORK INTERFACE

  What is the telecommunications interface arrangements to which the VIS will be connected? Will the interface be analog Tip/Ring lines, Digital T1 or PRI?

  Will the VIS be integrated with a PBX? What is the make and model of the PBX? Will it be ASAI compatible? If so, will analog or LST1 lines be used?

Is the VIS to be located in a foreign country? What will it be interfacing with?

- HARDWARE

  Considering how many channels of speech recognition are required by this application, what are the hardware needs? Use the configurator to make sure that this is a legal configuration.

  How many channels of speech recognition are needed?

  How many companion circuit cards are required?

  How many signal processor circuit cards are required?

  How many Tip Ring or T1 circuit cards?

- HUMAN FACTORS

  Describe any concerns in the area of Human Factors. Does this application fit well as an automated service?

- ERROR HANDLING

  Is there an alternate process for handling callers without speech recognition? This would cover the cases of callers not being recognized, or if there are no more channels of speech recognition available. What is the caller is having problems with the script?

- CONCERNS

  Are there any other areas of concern regarding this application. Please state concerns here.

Support and Design Resources

B

This appendix outlines the support and coverage of the organizations that are available to assist in planning, implementation, or troubleshooting a new or upgraded CONVERSANT VIS.

Support Resources

The following pages describe the support resources available to CONVERSANT customers. This support includes the following AT&T Affiliated Organizations:

- National Sales Support Team
- Small Business Division
- VPC Channel Management
- Voice Application Specialists
- Design Center
- Technical Service Center
- International Technical Assistance Center
- Custom Services Group
- End User Software Development Group
- Custom Applications Development Group
- Speech Support Services Group
- Voice Processing Co-Marketers

National Sales Support Team

The following pages list the individuals within AT&T responsible for sales support of the CONVERSANT VIS within the National Sales Support Team. Addresses, telephone and FAX numbers are also provided.

K.L. Varnas (Karen)	**Voice Processing Markets VP**
55 Corporate Drive	(908)-658-8800
Room 15D35	(908)-658-2777 (FAX)
Bridgewater, NJ 08807	attmail!klvarnas

C.M. Ring (Carolyn)	**Voice Processing Channels Director**
55 Corporate Drive	(908)-658-2380
Room 13A33	(908)-685-7104 (FAX)
Bridgewater, NJ 08807	attmail!cring

M.J. Plevel (Marty)	**National Sales Director**
55 Corporate Drive	(908)-658-7972
Room 13A71	(908)-658-2963 (FAX)
Bridgewater, NJ 08807	attmail!mplevel

T.A. Mason (Todd)	**Sales Support Manager**
6200 East Broad Street	(614)-860-4706
Room 2B340	(614)-860-6712 (FAX)
Columbus, OH 43213	cbvox1!tam

R.E. Arden (Rick)	**Sales Support Manager**
6200 East Broad Street	(614)-860-2496
Room 3B320	(614)-860-6712 (FAX)
Columbus, OH 43213	cbvox1!rarden

K.S. Searles (Ken)	**Sales Support Manager**
6200 East Broad Street	(614)-860-7329
Room 2B352	(614)-860-6712 (FAX)
Columbus, OH 43213	cbvox1!kss

Voice Application Specialists

Northeast Region

R.A. Cohen (Rick)
51 Sawyer Road
2nd Floor
Waltham, MA 02154

(617)-736-9211
(617)-736-9246 (FAX)
attmail!racohen

J. Koehler (Jeff)
440 Hamilton Avenue
Room 1200C
White Plains, NY 10601

(914)-397-8151
(914)-397-8139 (FAX)
attmail!jroehler

D.R. Harford (David)
8 Two Mile Road
1st Floor
Farmington, CT 06032

(203)-678-3686
(203)-678-3678 (FAX)
attmail!drhfd

F. Gambino (Frank)
1301 Avenue of the Americas
12th Floor
New York, NY 10019

(212)-841-4863
(212)-841-4839 (FAX)
attmail!fgambino

M.B. Monroe (Mary)
250 Clinton Street
Syracuse, NY 13202

(315)-442-3816
(312)-442-3859 (FAX)
attmail!mmonroe

E.R. Wagner (Ethel)
1301 Avenue of the Americas
Room 1216
New York, NY 10019

(212)-841-4954
(212)-841-4909 (FAX)
attmail!ewagner

Mid-Atlantic Region

H.E. Nothacker, Jr. (Harry)
530 E. Swedesford Road
2nd Floor
Wayne, PA 19087
(215)-971-8004
(215)-971-8080 (FAX)
attmail!hnothacker

J. Patetta (Joe)
800 Lanidex Plaza
2nd Floor
Parsippany, NJ 07054
(201)-884-7165
(201)-515-3573 (FAX)
attmail!jpatetta

W.J. Haney (Bill)
530 E. Swedesford Road
4th Floor
Wayne, PA 19087
(215)-971-7965
(215)-971-6995 (FAX)
attmail!whaney

C. Cordom (Chris)
1593 Spring Hill Road
Suite 700E
Vienna, VA 22182
(703)-760-7329
(703)-760-7148 (FAX)
attmail!ccordom

M.E. White
1593 Spring Hill Road
Suite 700E
Vienna, VA 22182
(703)-760-7194
(703)-760-7148 (FAX)
attmail!mwhite

Federal Region

M.J. Abadessa (Mary)
8403 Colesville Road
Room 14NC18
Silver Spring, MD 20910
(301)-608-4793
(301)-608-5767 (FAX)
attmail!mabadessa

Midwest Region

R.C. Beaubien (Rod)
26955 Northwestern Highway
Suite 200
Southfield, MI 48034

(313)-262-3777
(313)-262-6915 (FAX)
attmail!rbeaubien

J.A. Scheider (Jim)
3201 W.White Oaks Drive
Suite 100E
Springfield, IL 62704

(217)-793-4535
(217)-793-4504 (FAX)
attmail!jscheider

A.W. Stasch (Al)
227 West Monroe Street
Floor 22
Chicago, IL 60606

(312)-230-5209
(312)-230-8741 (FAX)
attmail!astasch

D.E. Mahle (Dennis)
300 W Wilson Bridge Road
Suite 150
Worthington, OH 43085

(614)-431-7718
(614)-431-7705 (FAX)
attmail!bcm5a11!dmahle

D.T. Schmitt, Jr. (Tom)
201 East 4th Street
Rm 102-1120
Cincinnati, OH 45202

Cincinnati Bell/AT&T
(513)-397-7765
(513)-381-3956 (FAX)
attmail!tschmitt

Southeast Region

M.A. Kelly Sonnier (Margaret)
1057 Lennox Park Boulevard
Suite 400
Atlanta, GA 30319

(404)-814-6861
(404)-814-6970 (FAX)
attmail!makelly

R.M. Waters (Bob)
424 South Woods Mill Road
Chesterfield, MO 63017

(314)-275-3373
(314)-275-3183 (FAX)
attmail!rwaters

P. Martine (Paul)
100 West Cypress Creek Road
6th Floor
Fort Lauderdale, FL 33309

(305)-938-4728
(305)-938-4630 (FAX)
attmail!pmartine

G.V. Evans (Gary)
One Brentwood Commons
750 Old Hickory Boulevard
Brentwood, TN 37027

(615)-377-8388
(615)-377-8340 (FAX)
attmail!bsga!gevans

Southwest Region

G.S. Chancer (Glenn)
750 B Street
Suite 1700
San Diego, CA 92101
(619)-699-2284
(619)-699-2007 (FAX)
attmail!gchancer

M. Cline (Melissa)
5 Greenway Plaza East
Room 3073D
Houston, TX 77046
(713)-968-5263
(713)-968-5360 (FAX)
attmail!mdcline

C.C. Chesser (Chuck)
2800 North Central Avenue
Suite 1000
Phoenix, AZ 85004
(602)-285-5926
(602)-285-5910 (FAX)
attmail!cchesser

S. Rookard (Steve)
5525 LBJ Freeway
4th Floor
Dallas, TX 75265
(308)-851-3670
(308)-851-3683 (FAX)
attmail!srookard

R. Buchwald (Randy)
3546 Barry Avenue
Los Angeles, CA 90066
(310)-391-1131
(310)-391-9490 (FAX)
attmail!rbuchwald

Southwest Region

A.Fleischer (Andrea) 74 North Pasadena Avenue Suite 100 Pasadena, CA 91103	(818)-304-5323 (818)-304-5394 (FAX) attmail!afleischer
B. Young (Berry) 5525 LBJ Freeway Fourth Floor Dallas, TX 75265	 (214)-308-2726 (214)-851-3683 (FAX) attmail!byoung
D.D. Dakouzlian (Debbie) 31332 Flying Cloud Drive Laguna Niguel, CA 92677	(818)-304-5369 (818)-304-5394 (FAX) attmail!ddakouzl

Northwest Region

Leila Hanlon 2130 Buena Vista Avenue Alemeda, CA 94501	(510)-769-2044 (510)-814-9229 (FAX) attmail!lhanlon
R.R. Wick (Bob) 901 Marquette Avenue 5th Floor Minneapolis, MN 55402	 (612)-376-5343 (612)-376-5265 (FAX) attmail!rwick
J. McGreevey (Jim) 121 S.W. Morrison Street Suite 300 Portland, OR 97204	 (503)-295-5024 (503)-295-5058 (FAX) attmail!jmcgreevey
M. H. Irwin (Marsha) 4 Triad Center Suite 1000 Salt Lake City, UT 84180	 (801)-237-1064 (801)-237-1031 (FAX) attmail!mirwin
K. Nalder (Kenly) 4 Triad Center Suite 1000 Salt Lake City, UT 84180	 (801)-237-1129 (801)-237-1031 (FAX) attmail!knalder
J.R. Thornton (Jimmy) 5445 DTC Parkway Suite 400 Englewood, CO 80111	 (303)-793-8495 (303)-793-8329 (FAX) attmail!jrthornton
B.D. Norman (Brian) 121 SW Morrison Street, Suite 300 Portland, OR 97204	 (503)-295-5051 (503)-295-5021 (FAX) attmail!bdnorman

Small Business Division

The Small Business Division (SBD) primarily targets small businesses in which to market CONVERSANT VIS platforms. The majority of their sales consist of MAP/40 machines, with a few MAP/100s through the year as well. The following lists their current Application Sales Group (ASG) managers, who are responsible for approximately 50 Application Sales Consultants (ASCs) throughout the country.

Sedelia Boudreaux
6135 Park South Drive
Floor 5
Charlotte, N.C. 28210

(704)-551-1880
(704)-556-4420 (FAX)

Deryll Moore
227 W. Monroe
25th Floor
Chicago, IL. 60606

(312)-230-3007
(312)-230-8831 (FAX)

Voice Processing Co-Marketing Support

A Voice Processing Co-Marketer (VPC) may plan, sell, and implement the CONVERSANT VIS product and provide additional experienced personnel familiar with the VIS system design and application support. For a complete list of authorized VPCs for the VIS product, refer to the latest sales brief through the Electronic Library (ELIB). This list contains address and territory information on the current VIS VPCs. The following tables list the AT&T Account Management Support persons responsible for VPC coordination.

Carolyn Ring 55 Corporate Drive Rm 13A33 Bridgewater, NJ 08807	Director of Voice Processing Distribution Channels 908-658-2380 attmail!carolynmring
David Furtado 55 Corporate Drive Rm 13A33 Bridgewater, NJ 08807	National VPC Channel Mgr. (908)-658-6678 attmail!dfurtado
G.M. Rod Sheffield 55 Corporate Drive Rm 13A33 Bridgewater, NJ 08807	Mgr of VPC Certification (908)-658-7629 attmail!sheffield
Maryellen Borkowski 55 Corporate Drive Rm 13A17 Bridgewater, NJ 08807	Assistant (908)-658-7561 attmail!mborkowski

Dianne Benson 10810 Farnam Drive Suite 200 Omaha, NE 68154	VPC Account Manager, Western US (402)-392-7659 attmail!dbenson
Gary Secrest 6200 E. Broad Street Rm 2B-348 Columbus, OH 43213	VPC Account Manager, Eastern US (614)-860-5473 cbvox!!gas
Rob Brown 520 Broadhollow Road Melville, NY 11747	Account Manager, Arrow Electronics (516)-420-3180 attmail!robertbrown
Paul Anger 2800 North Central Avenue Suite 900 Phoenix, AZ 85004	Operations and Technical Support Manager (602)-759-5028 attmail!panger
Rodger Miller 2800 North Central Avenue Suite 900 Phoenix, AZ 85004	Lead Generation Manager (602)-759-6438 attmail!rdmiller

International Technical Assistance Center

The International Technical Assistance Center acts as a focal point for all CONVERSANT VIS international sales and maintenance. International sales, as well as Tier1 and Tier 2 technical support, is provided by approximately 75 non-AT&T Direct and Distributing organizations worldwide. They perform sales, configuration, and installation responsibilities in the target countries that CONVERSANT VIS is marketed in.

The ITAC supports the international sales channels by performing two main tasks listed below:

- Maintenance support

  The ITAC performs Tier 3 maintenance support for existing international CONVERSANT VIS installations.

- Presale support

  The ITAC also performs pre-sale support for the Direct and Distributing organizations by performing design assurance for proposed system sales, type approval testing of new hardware in target countries, tech trials and controlled introductions of new systems in target countries.

  The ITAC also uses the DOSS configurator to place the final order of each international system, after appropriate design assurance criteria are met.

The ITAC is available on a 24-hour, 7 day-per-week basis to support the functions above. A maintenance engineer can be reached by direct dialing the number 1-303-538-4666.

Design Center Support

The Design Center provides three types of support for domestic AT&T sales channels:

- Configuration-related questions

  If anyone associated with the sales process requires assistance while using one of the configuration programs such as the AT&T Order Management Service (ATTOMS) ordering system or the AT&T Delivery Operations Support System (DOSS), they should contact the Design Center at 800-521-7872.

- Feature-related support

  If anyone associated with the sales process requires additional information on determining considerations for using a particular VIS feature such as Speech Recognition, they should contact the Design Center at

800-521-7872. The Sales and Technical Response Center (STRC) within the Design Center is available to assist with these feature-related questions.

- Technical Assurance on Design for Configuration

  If anyone associated with the sales process requires assistance in determining whether they have properly configured a new or upgraded system, submit the E1154 form and FAX it to 303-850-8932. The Design Center reviews the configuration for the following:

  — Are the Price Element Codes (PEC)s valid for the application?

  — Are the PEC attributes correct?

  — Is the order segmentation correct?

This type of review is typically done prior to the contract phase with the customer.

Technical Service Center Support

The Technical Service Center (TSC) provides four types of support for domestic customers as well as sales and marketing personnel:

- Help Line Support

  If a customer requires answers to basic administrative questions, such as backing up the system or turning on a printer port, they should contact the TSC at 800-344-9670. This support is available Monday through Friday, 8 a.m. to 5 p.m. (customer time zone).

- Maintenance Support

  If a customer requires assistance with hardware and/or software diagnostics, they should contact the TSC at 800-344-9670. Customers are served based on the severity of the problem experienced and whether a maintenance contract exists. Refer to an AT&T representative for information on the specific support provided in the various maintenance contracts

- Script Builder Support

  If a customer or sales consultant needs assistance in troubleshooting a current application, they should contact the TSC at 800-344-9670. This support is for help in debugging the current script, rather than writing a new script.

- Upgrades Support

  The TSC assists all sales channels in planning and implementing a CONVERSANT VIS upgrade, for both hardware and software issues.

Application Design Resources

The following lists organizations within, and outside of AT&T that design custom CONVERSANT VIS applications and speech for an additional fee.

Custom Services Group — AT&T

The Custom Services Group specializes in the development of custom applications for CONVERSANT voice systems. As an integral part of the CONVERSANT VIS team, this group is able offer expertise on the latest features and enhancements.

For information, contact one of the following people:

- Kitty Monk — 614-860-3875
- Jeff Otte — 614-860-2015
- Ken Stafford — 614-860-3730
- Walt Wallace — 614-860-2633
- John Weinhardt — 614-860-4682

IMS-Software Development Group— AT&T

The SDO group is a custom development group that specializes in UNIX-based business applications for external and internal customers, with primary focus on CONVERSANT VIS custom software solutions. This organization is also responsible for creating FlexWord speech vocabularies and wordlists.

For information, contact one of the following people:

- Diane Parks, Florida — 407-662-6964
- Richard Cook, Georgia — 404-242-1551
- John Longchamps, Maryland — 410-992-0907

Custom Applications Development Group — AT&T

The Custom Application Development Group specializes in advanced CONVERSANT applications and custom applications that require development of special features. This group specializes in large CONVERSANT VIS arrangements that would typically include multiple VIS platforms, dual Local Area Networks (LANs), 3270 Synchronous Host Communication Interfaces, as well as centralized management and monitoring for the entire architectural arrangement.

For information, contact one of the following people:

- Sally Werner — 303-538-4977
- Bill Longenbaker — 614-860-2023

VPC Application Development

A VPC can be used with the VIS product to ensure the availability of personnel experienced with the system design and application support. For a complete list of authorized VPCs for the VIS product, refer to the latest sales brief in the Electronic Library (ELIB). This list contains address and territory information on the currently authorized VPCs for CONVERSANT VIS.

For additional information, contact one of the following people:

- Eastern region: Kit Bowes — 908-658-7624
- Central region: Diane Benson — 402-392-7659
- Western region: Roger Miller — 602-285-6438

Speech Development Support Services Group

The Speech Development Support Services Group generates standard and custom speech for CONVERSANT VIS applications according to customer specifications. These speech files are available in American English, U.K. English, Canadian French, and Mexican Spanish. This group should be contacted if custom speech phrases are required for the CONVERSANT application, or if the system is being located in a foreign country. For information, contact either of the following people:

- Dick Nichols — 614-860-2260
- Bruce Collins — 614-860-5339

For FlexWord Speech development, refer to the IMS-SDO on the previous page.

Price Element Codes

C

This appendix contains the price element codes (PECs) for each of the CONVERSANT Voice Information System (VIS) Version 4.0 platforms. These tables include the platform PECs for the MAP/100, the MAP/100C, and the MAP/40 as well as the software attributes and upgrade packages.

NOTE:
Some PECs are packages of smaller items shipped together. Nearly every item that requires a PEC will have at least two other PECs included in it:

- PKG01 — NSSO Packing (No value)
- PKG99 — Dist. Packing (No value)

These two PECs indicate that packing materials are used. They are shown as standard in nearly every PEC that is used in the ATTOMS or DOSS configurator when ordering equipment.

MAP/100 Price Element Code Descriptions

The following tables list the current inventory of hardware components available for a CONVERSANT VIS with Version 4.0 software on the MAP/100 platform.

Table D-1. MAP/100 Hardware Package PECs

PEC	Attribute	Comcode	Description
7024-BA4			MAP/100 AC, 486/40, SCSI, RMB
		J1P260B-1 L-21,	MAP/100 Stand, 486/50, 16-Mbyte
		J1P260B-1 L-A,	MAP/100 Hardware Installation book
		J1P260BA-1 L-4,	Video Controller
		J1P260CA-1 L-18,	1.2 GB SCSI Disk Drive
		J1P260CA-1 L-19,	SCSI Disk Controller
		J1P260CA-1 L-17,	SCSI Tape Drive
	CTR15 “D”		U.S. Default (No Mat’l)
	CTR01	J1P260 B-1 L-B	U.K. Kit
	CTR24	J1P260B-1 L-C	Hong Kong Kit
	CTR03	J1P260 B-1 L-D	Mexico Kit
	CTR07	J1P260 B-1 L-E	Canada Kit
	RMB01 “D”	J1P260 AA-1 L10	Remote Maintenance Circuit Card
	RMB02	J1P260 AA-1 L11	Remote Maintenance Circuit Card
	MDL04 “D”	J1P260B-1 L-3	Desk Side Dress Kit
	MDL05	J1P260B-1 L-4	Rack Mounting Kit
	PAR02		Max ORACLE
	PAR03		Max Speech
	PAR05		Big ORACLE
7024-BD4			MAP/100 DC, 486, SCSI, RMB
		J1P260B-1 L-22,	MAP/100 Stand, 486/50, 16-Mbyte
		J1P260B-1 L-A,	MAP/100 Hardware Installation book
		J1P260BA-1 L-4,	Video Controller
		J1P260CA-1 L-18,	1.2 GB SCSI Disk Drive
		J1P260CA-1 L-19,	SCSI Disk Controller
		J1P260CA-1 L-17,	SCSI Tape Drive
	CTR15 “D”		U.S. and V3.1 Default (No Mat’l)
	CTR01	J1P260 B-1 L-B	U.K. Kit
	CTR24	J1P260B-1 L-C	Hong Kong Kit
	CTR03	J1P260 B-1 L-D	Mexico Kit
	CTR07	J1P260 B-1 L-E	Canada Kit
	RMB01 “D”	J1P260 AA-1 L10	Remote Maintenance Circuit Card
	RMB02	J1P260 AA-1 L11	Remote Maintenance Circuit Card
	MDL04 “D”	J1P260B-1 L-3	Desk Side Dress Kit
	MDL05	J1P260B-1 L-4	Rack Mounting Kit
	PAR01 “D”		General Partition
	PAR02		Max ORACLE
	PAR03		Max Speech
	PAR05		Big ORACLE

Table D-1. MAP/100 Hardware Package PECs (Continued)

PEC	Attribute	Comcode	Description
7024-BDS			MAP/100 DC, 386, SCSI, RMB
		J1P260B-1 L-14,	MAP/100(DC) Stand, 386, 8-Mbyte
		J1P260B-1 L-A,	MAP/100 Hardware Installation book
		J1P260BA-1 L-4,	Video Controller
		J1P260CA-1 L-18,	1.2 GB SCSI Disk Drive
		J1P260CA-1 L-19,	SCSI Disk Controller
		J1P260CA-1 L-17,	SCSI Tape Drive
		J1P260CA-1 L-11,	8-12 Mbyte Memory Upgrade
	CTR15 “D”		U.S. Default (No Mat’l)
	CTR01	J1P260 B-1 L-B	U.K. Kit
	CTR24	J1P260B-1 L-C	Hong Kong Kit
	CTR03	J1P260 B-1 L-D	Mexico Kit
	CTR07	J1P260 B-1 L-E	Canada Kit
	RMB01 “D”	J1P260 AA-1 L10	Remote Maintenance Circuit Card
	RMB02	J1P260 AA-1 L11	Remote Maintenance Circuit Card
	RMB99		V3.1 Default (No Mat’l)
	MDL04 “D”	J1P260B-1 L-3	Desk Side Dress Kit
	MDL05	J1P260B-1 L-4	Rack Mounting Kit
	PAR01 “D”		General Partition
	PAR02		Max ORACLE
	PAR03		Max Speech
	PAR05		Big ORACLE
7024-BAS			MAP/100 AC, 386, SCSI, RMB
		J1P260B-1 L-13,	MAP/100 Stand, 386, 8-Mbyte
		J1P260B-1 L-A,	MAP/100 Hardware Installation book
		J1P260BA-1 L-4,	Video Controller
		J1P260CA-1 L-18,	1.2 GB SCSI Disk Drive
		J1P260CA-1 L-19,	SCSI Disk Controller
		J1P260CA-1 L-17,	SCSI Tape Drive
		J1P260CA-1 L-11,	8-12 Mbyte Memory Upgrade
	CTR15 “D”		U.S. and V3.1 Default (No Mat’l)
	CTR01	J1P260 B-1 L-B	U.K. Kit
	CTR24	J1P260B-1 L-C	Hong Kong Kit
	CTR03	J1P260 B-1 L-D	Mexico Kit
	CTR07	J1P260 B-1 L-E	Canada Kit
	RMB01 “D”	J1P260 AA-1 L10	Remote Maintenance Circuit Card
	RMB02	J1P260 AA-1 L11	Remote Maintenance Circuit Card
	RMB99		V3.1 Default (No. Mat’l)
	MDL04 “D”	J1P260B-1 L-3	Desk Side Dress Kit
	MDL05	J1P260B-1 L-4	Rack Mounting Kit
	PAR01 “D”		General Partition
	PAR02		Max ORACLE
	PAR03		Max Speech
	PAR05		Big ORACLE

Table D-2. MAP/100 Hardware Package Upgrade PECs

PEC	Attribute	Comcode	Description
7024-104U			MAP/100 & 100C SCSI Upgrade Kit
		ED5P910 60 G-5	SCSI Tech Upgrade Kit
7024-105U			MAP/100 & 100C 486/50 Upgrade Kit
	RMB01 "D"	ED5P91060 G-1	Kit W/Remote Maintenance Circuit Card w/Modem
	RMB02	ED5P91060 G-2	Kit W/Remote Maintenance Circuit Card w/o Modem
7024-106U			MAP/100 486 SCSI V4.0 Upgrade
	RMB01 "D"	ED5P91060 G-1	Kit W/Remote Maintenance Circuit Card w/Modem
	RMB02	ED5P91060 G-2	Kit W/Remote Maintenance Circuit Card w/o Modem
		ED5P910 60 G-5	SCSI Tech Upgrade Kit
		J1P260TF1 L-1	Base System Boot Software
		J1P260TF1 L-3	Remote Terminal RFS Software
		J1P260TF1 L-4	Low Level Format
		J1P260TF1 L-5	Recovery Boot Floppy
		J1P260TF1 L-7	Cartridge Tape Utilities
		J1P260TF1 L-17	V4.0 Feature Test Script Package
		J1P260TF1 L-18	Voice Mail External Actions
		J1P260TF1 L-56	ORACLE Migration Package
		J1P260TF1 L-59	Blank Configuration Data Floppy
		J1P260TF1 L-13	UNIX Base Software, Cartridge Tape
		J1P260TF1 L-14	Generic Software, Cartridge Tape
		J1P260TF1 L-22	8-Port Asynchronous Communications Software
		J1P260TF1 L-23	Synchronous Host Communicatons Interface Software
		J1P260TF1 L-28	UNIX Upgrade V2.2 to V2.3 Software
		ED5P90860 G-1	Doc Set
		ED5P90860 G-2	Installation, Maintenance, and Operations Docs.
		ED5P90860 G-20	SQL*RDBMS Documentation
		ED5P20830 G7B	TDM Bus Cable
		403789167	Tip/Ring Terminating Resistors
		106901093	MAP/100 Hardware Install and Upgrade Doc
		106901127	MAP/100C Hardware Install and Upgrade Doc

MAP/100C Price Element Code Descriptions

The following tables list the current inventory of hardware components available for a VIS with Version 4.0 software on the MAP/100C.

Table D-3. MAP/100C Hardware Package PECs

PEC	Attribute	Comcode	Description
7024-CD4			MAP/100C DC, 486/50, SCSI, RMB
		J1P260C-1 L-21,	MAP/100C(DC) Stand, 486/50, 16-Mbyte
		J1P260C-1 L-A,	MAP/100C Hardware Installation book
		J1P260BA-1 L-4,	Video Controller
		J1P260CA-1 L-18,	1.2 GB SCSI Disk Drive
		J1P260CA-1 L-19,	SCSI Disk Controller
		J1P260CA-1 L-17,	SCSI Tape Drive
	CTR15 “D”		U.S. Default (No Mat’l)
	CTR01	J1P260 C-1 L-B	U.K. Kit
	CTR24	J1P260 C-1 L-C	Hong Kong Kit
	CTR03	J1P260 C-1 L-D	Mexico Kit
	CTR07	J1P260 C-1 L-E	Canada Kit
	RMB01 “D”	J1P260 AA-1 L10	Remote Maintenance Circuit Card
	RMB02	J1P260 AA-1 L11	Remote Maintenance Circuit Card
	MTG56 “D”	J1P260C-1 L-3	4ESS Mount
	MTG57	J1P260C-1 L-4	5ESS Mount
	MTG58	J1P260C-1 L-5	Commercial Mount
	PAR01 “D”		General Partition
	PAR02		Max ORACLE
	PAR03		Max Speech
	PAR05		Big ORACLE
7024-CA4			MAP/100C AC, 486/50, SCSI, RMB
		J1P260C-1 L-22,	MAP/100C(AC) Stand, 486/50, 16-Mbyte
		J1P260C-1 L-A,	MAP/100C Hardware Installation book
		J1P260BA-1 L-4,	Video Controller
		J1P260CA-1 L-18,	1.2 GB SCSI Disk Drive
		J1P260CA-1 L-19,	SCSI Disk Controller
		J1P260CA-1 L-17,	SCSI Tape Drive
	CTR15 “D”		U.S. Default (No Mat’l)
	CTR01	J1P260 C-1 L-B	U.K. Kit
	CTR24	J1P260 C-1 L-C	Hong Kong Kit
	CTR03	J1P260 C-1 L-D	Mexico Kit
	CTR07	J1P260 C-1 L-E	Canada Kit
	RMB01 “D”	J1P260 AA-1 L10	Remote Maintenance Circuit Card
	RMB02	J1P260 AA-1 L11	Remote Maintenance Circuit Card
	RMB99		V3.1 Default (No Mat’l)
	MTG56 “D”	J1P260C-1 L-3	4ESS Mount
	MTG57	J1P260C-1 L-4	5ESS Mount
	MTG58	J1P260C-1 L-5	Commercial Mount
	PAR01 “D”		General Partition
	PAR02		Max ORACLE
	PAR03		Max Speech
	PAR05		Big ORACLE

Table D-3. MAP/100C Hardware Package PECs (Continued)

PEC	Attribute	Comcode	Description
7024-CDS			MAP/100C DC, 386, SCSI, RMB
		J1P260C-1 L-13,	MAP/100C(DC) Stand, 386, 8-Mbyte
		J1P260C-1 L-A,	MAP/100C Hardware Installation book
		J1P260BA-1 L-4,	Video Controller
		J1P260CA-1 L-18,	1.2 GB SCSI Disk Drive
		J1P260CA-1 L-19,	SCSI Disk Controller
		J1P260CA-1 L-17,	SCSI Tape Drive
		J1P260CA-1 L-11,	8-12 Mbyte Memory Upgrade
	CTR15 “D”		U.S. Default (No Mat’l)
	CTR01	J1P260 C-1 L-B	U.K. Kit
	CTR24	J1P260C-1 L-C	Hong Kong Kit
	CTR03	J1P260 C-1 L-D	Mexico Kit
	CTR07	J1P260 C-1 L-E	Canada Kit
	RMB01 “D”	J1P260 AA-1 L10	Remote Maintenance Circuit Card
	RMB02	J1P260 AA-1 L11	Remote Maintenance Circuit Card
	RMB99		V3.1 Default (No Mat’l)
	MTG56 “D”	J1P260C-1 L-3	4ESS Mount
	MTG57	J1P260C-1 L-4	5ESS Mount
	MTG58	J1P260C-1 L-5	Commercial Mount
	PAR01 “D”		General Partition
	PAR02		Max ORACLE
	PAR03		Max Speech
	PAR05		Big ORACLE
7024-CAS			MAP/100C AC, 386, SCSI, RMB
		J1P260C-1 L-14,	MAP/100C(AC) Stand, 386, 8-Mbyte
		J1P260C-1 L-A,	MAP/100C Hardware Installation book
		J1P260BA-1 L-4,	Video Controller
		J1P260CA-1 L-18,	1.2 GB SCSI Disk Drive
		J1P260CA-1 L-19,	SCSI Disk Controller
		J1P260CA-1 L-17,	SCSI Tape Drive
		J1P260CA-1 L-11,	8-12 Mbyte Memory Upgrade
	CTR15 “D”		U.S. Default (No Mat’l)
	CTR01	J1P260 C-1 L-B	U.K. Kit
	CTR24	J1P260 C-1 L-C	Hong Kong Kit
	CTR03	J1P260 C-1 L-D	Mexico Kit
	CTR07	J1P260 C-1 L-E	Canada Kit
	RMB01 “D”	J1P260 AA-1 L10	Remote Maintenance Circuit Card
	RMB02	J1P260 AA-1 L11	Remote Maintenance Circuit Card
	RMB99		V3.1 Default (No Mat’l)
	MTG56 “D”	J1P260C-1 L-3	4ESS Mount
	MTG57	J1P260C-1 L-4	5ESS Mount
	MTG58	J1P260C-1 L-5	Commercial Mount
	PAR01 “D”		General Partition
	PAR02		Max ORACLE
	PAR03		Max Speech
	PAR05		Big ORACLE

MAP/40 Price Element Code Description

Table D-4. MAP/40 Hardware Package PECs.

PEC	Attribute	Comcode	Description
7024-A25			MAP/40 V4.0 Bundle W/IVP6
		J1P260TF-1 L-1,	Base System Boot Software
		J1P260TF-1 L-3,	Remote Term RFS Software
		J1P260TF-1 L-5,	Recovery Boot Floppy
		J1P260TF-1 L-7,	Cartridge Tape Utilities
		J1P260TF-1 L-11	Configuration Data Package
		J1P260TF-1 L-13	UNIX Base Software Tape
		J1P260TF-1 L-14,	Generic Software Tape
		J1P260TF-1 L-17,	Feature Test Script Package
		J1P260TF-1 L-18,	Voice Mail External Actions
		J1P260TF-1 L-28,	UNIX Software Upgrade V2.2 to V2.3
		ED5P90860 G-1	Advanced Documentation Set
		ED5P90860 G-2	Software Installation and Maintenance Docs.
		105149140	D25F-87 Modem Cable 5-ft.
		406793471	2400 Baud Optima Modem
		847106945	9-25 Pin Adapter
	CTR15 “D”		US interf (No Mat’l)
	CTR01	J1P260 TF1 L-43	PBX/PSTN Switch Interface (UK)
	CTR01	J1P260 D-1 L-B	UK Kit
	CTR24	J1P260 TF1 L-45	PBX/PSTN Switch Interface (Hong Kong)
	CTR24	J1P260C-1 L-C	Hong Kong Kit
	CTR03	J1P260 TF1 L-44	PBX/PSTN Switch Interface (Mexico)
	CTR03	J1P260 C-1 L-D	Mexico Kit
	CTR07	J1P260 C-1 L-E	Canada Kit
	RMB01 “D”	J1P260 AA-1 L10	Remote Maintenance Circuit Card
		J1P260D-1 L-21,	MAP/40, Vert Stand, 486/25 CPU, 16 MB
		J1P260BA-1 L-4,	Video Controller
		J1P260CA-1 L-19,	SCSI Disk Controller
		J1P260CA-1 L-15	1.44 MB Floppy Drive
		J1P260CA-1 L-18,	1.2 GB SCSI Disk Drive
		J1P260D-1 L-A,	MAP/40 Hardware Installation book
		J1P260CA-1 L-17,	SCSI Tape Drive
		106430861	IVP6BD
		ED5P20830 G-16	3 ft Telephone Mtg. Cord (2)
		103623195	25 ft Telephone Cord (2)
		406594952	Color Monitor
		406743336	Keyboard
	RMB01 “D”	J1P260AA-1 L10	Remote Maintenance Circuit Card w/Modem
	RMB02	J1P260AA-1 L11	Remote Maintenance Circuit Card w/o Modem
	PAR01 “D”		General Partition
	PAR02		Max ORACLE
	PAR03		Max Speech
	PAR05		Big ORACLE

Table D-4. MAP/40 Hardware Package PECs (Continued)

PEC	Attribute	Comcode	Description
7024-AA4			MAP/40 486/25, SCSI, RMB
		J1P260D-1 L-21,	MAP/40 Stand, 486/25, RMB
		J1P260D-1 L-A,	MAP/40 Hardware Installation book
		J1P260BA-1 L-4,	Video Controller
		J1P260CA-1 L-15	1.44 MB Floppy Disk Drive
		J1P260CA-1 L-18,	1.2 GB SCSI Disk Drive
		J1P260CA-1 L-19,	SCSI Disk Controller
		J1P260CA-1 L-17,	SCSI Tape Drive
	CTR15 “D”		U.S. Default (No Mat’l)
	CTR01	J1P260 D-1 L-B	U.K. Kit
	CTR24	J1P260D-1 L-C	Hong Kong Kit
	CTR03	J1P260 D-1 L-D	Mexico Kit
	CTR07	J1P260 D-1 L-E	Canada Kit
	RMB01 “D”	J1P260 AA-1 L10	Remote Maintenance Circuit Card
	RMB02	J1P260 AA-1 L11	Remote Maintenance Circuit Card
	PAR01 “D”		General Partition
	PAR02		Max ORACLE
	PAR03		Max Speech
	PAR05		Big ORACLE
7024-AC4			MAP/40 386 IDE, RMB
		J1P260D-1 L-21,	MAP/40 Stand, 386, IDE, RMB, 8-Mbyte
		J1P260D-1 L-A,	MAP/40 Hardware Installation book
		J1P260BA-1 L-4,	Video Controller
		J1P260CA-1 L-15	1.44 MB Floppy Disk Drive
		J1P260CA-1 L-16	200 MB IDE Hard Drive
		J1P260CA-1 L-19,	Hard Disk Drive Controller
		J1P260CA-1 L-10,	ESDI Cartridge Tape Drive
		J1P260CA-1 L-11	8-MB to 12-MB Memory
	CTR15 “D”		U.S. Default (No Mat’l)
	CTR01	J1P260 D-1 L-B	U.K. Kit
	CTR24	J1P260D-1 L-C	Hong Kong Kit
	CTR03	J1P260 D-1 L-D	Mexico Kit
	CTR07	J1P260 D-1 L-E	Canada Kit
	RMB01 “D”	J1P260 AA-1 L10	Remote Maintenance Circuit Card
	RMB02	J1P260 AA-1 L11	Remote Maintenance Circuit Card
	PAR01 “D”		General Partition
	PAR02		Max ORACLE
	PAR03		Max Speech
	PAR05		Big ORACLE
7024-A50			MAP/40 486/50 Platform
7024-A51			MAP/40 386 TO 486/25 Upgrade
7024-A52			MAP/40 486/25 TO 486/50 Upgrade

Table D-5. MAP/40 Upgrade Kits

PEC	Attribute	Comcode	Description
7024-046U			MAP/40 486/25 SCSI- V4.0 Upgrade
	RMB01 “D”	ED5P91060 G-3	Kit w/Remote Maintenance Circuit Card w/Modem
	RMB02	ED5P91060 G-4	Kit w/Remote Maintenance Circuit Card w/o Modem
		J1P260TF1 L-1	Base System Boot Software
		J1P260TF1 L-3	Remote Terminal RFS Software
		J1P260TF1 L-4	Low Level Format
		J1P260TF1 L-5	Recovery Boot Floppy
		J1P260TF1 L-7	Cartridge Tape Utilities
		J1P260TF1 L-17	V4.0 Feature Test Script Package
		J1P260TF1 L-18	Voice Mail External Actions
		J1P260TF1 L-56	ORACLE Migration Package
		J1P260TF1 L-59	Blank Configuration Data Floppy
		J1P260TF1 L-13	UNIX Base Software, Cartridge Tape
		J1P260TF1 L-14	Generic Software, Cartridge Tape
		J1P260TF1 L-22	8-Port Asynchronous Communications Software
		J1P260TF1 L-23	Synchronous Host Communications Interface Sfwe
		J1P260TF1 L-28	UNIX Upgrade V2.2 to V2.3 Software
		ED5P90860 G-1	Doc Set
		ED5P90860 G-2	Installation, Maintenance, and Operations Docs.
		ED5P90860 G-20	SQL*RDBMS Documentation
		ED5P20830 G7B	TDM Bus Cable
		403789167	Tip/Ring Terminating Resistors (4)
		106924111	MAP/40 Hardware Installation and Upgrade Docs.
7024-044U			MAP/40 486/25 SCSI Upgrade Kit
	RMB01 “D”	ED5P91060 G-3	Kit w/Remote Maintenance Circuit Card w/Modem
	RMB02	ED5P91060 G-4	Kit w/Remote Maintenance Circuit Card w/o Modem

Hardware and Software Package Upgrades Price Element Codes

Table D-6. V4.0 Hardware and Software Package Upgrade PECs

PEC	Attribute	Comcode	Description
1321-040			V4.0 Generic Software W/UNIX Base Software
		J1P260TF1 L-1	Base System Boot Software
		J1P260TF1 L-3	Remote Terminal RFS Software
		J1P260TF1 L-5	Recovery Boot Floppy
		J1P260TF1 L-7	Cartridge Tape Utilities
		J1P260TF1 L-11	Configuration Data Package
		J1P260TF1 L-13	UNIX Base Software, Cartridge Tape
		J1P260TF1 L-14	Generic Software, Cartridge Tape
		J1P260TF1 L-17	V4.0 Feature Test Script Package
		J1P260TF1 L-18	Voice Mail External Actions
		J1P260TF1 L-28	UNIX Upgrade V2.2 to V2.3 Software
		ED5P90860 G-1	Doc Set
		ED5P90860 G-2	Installation, Maintenance, and Operations Docs.
	CTR15 "D"		US Interface (No Mat'l)
	CTR01	J1P260TF1 L-43	PBX/PSTN Switch IF (UK)
	CTR03	J1P260TF1 L-44	PBX/PSTN Switch IF (Mexico)
	CTR24	J1P260TF1 L-45	PBX/PSTN Switch IF (Hong Kong)
		105149140	D25F-87 Modem Cable 5 ft
		406793471	2400 Baud OPTIMA Modem
		847106945	9-25 PIN Adapter
1321-079			Script Builder V3.1 & V4.0 Upgrade
	REL31 "D"	ED5P90560 G-5	Script Builder Doc
	REL31	J1P260TE1 L-19	Script Builder Software
	REL40	ED5P90860 G-3	Script Builder Software 4.0
	REL40	J1P260TF1 L-20	Script Builder Doc 4.0

Table D-6. V4.0 Hardware and Software Package Upgrade PECs (Continued)

PEC	Attribute	Comcode	Description
1321-080			V4.0 Upgrade W/UNIX-2.1 & Up
		J1P260TF1 L-1	Base System Boot Software
		J1P260TF1 L-3	Remote Terminal RFS Software
		J1P260TF1 L-4	Low Level Format
		J1P260TF1 L-5	Recovery Boot Floppy
		J1P260TF1 L-7	Cartridge Tape Utilities
		J1P260TF1 L-17	V4.0 Feature Test Script Package
		J1P260TF1 L-18	Voice Mail External Actions
		J1P260TF1 L-56	ORACLE Migration Package
		J1P260TF1 L-59	Blank Configuration Data Floppy
		J1P260TF1 L-13	UNIX Base Software, Cartridge Tape
		J1P260TF1 L-14	Generic Software, Cartridge Tape
		J1P260TF1 L-22	8-Port Asynchronous Communications Software
		J1P260TF1 L-23	Synchronous Host Communications Interface Sfwe
		J1P260TF1 L-28	UNIX Upgrade V2.2 to V2.3 Software
		ED5P90860 G-1	Doc Set
		ED5P90860 G-2	Installation, Maintenance, and Operations Docs.
		ED5P90860 G-20	SQL*RDBMS Documentation
		ED5P20830 G7B	TDM Bus Cable
		403789167	Tip/Ring Terminating Resistors (4)
	DOC01 “D”	106901093	MAP/100 Hardware Installation and Upgrade Docs
	DOC02	106901127	MAP/100C Hardware Installation and Upgrade Docs
	DOC03	106901111	MAP/40 Hardware Installation and Upgrade Docs
1321-081			Speech Recognition Upgrade to V4 Package
		J1P260TF1 L-31	Speech Recognition Software
		ED5P908 60 G-5	Speech Recognition Doc.
1321-082			CCA Upgrade - V2.1 & Up (Software Only)
		J1P260TF1 L-30	Call Classification Analysis Software
		ED5P90860 G-9	Call Classification Analysis Doc
1321-083			V4 PRI Upgrade - V2.1 & Up (Software Only)
		J1P260TF1 L-21	Primary Rate Interface Software
		ED5P90860 G-13	Primary Rate Interface Documentation

Table D-6. V4.0 Hardware and Software Package Upgrade PECs (Continued)

PEC	Attribute	Comcode	Description
1321-084			Form Filler Upgrade to V4.0
		J1P260TF1 L-21	Form Filler Plus Software
		ED5P90860 G-14	Form Filler Plus Document
1321-085			NetView Upgrade - V3.0 & Up (Software Only)
		J1P260TF1 L-24	NetView Alarm Interface Software V4.0
		ED5P90860 G-18	NetView Alarm Interface Document
1321-086			Text-To-Speech Upgrade - V3.0 & Up (Software Only)
		J1P260TF1 L-37	Text-To-Speech Software
		ED5P90860 G-15	Text-To-Speech Documentation
1321-087			Security-US-V3.0 & Up (Software Only)
		J1P260TF1 L-19	Security Administration Software
1321-088			StarLAN Upgrade - V3.0 & Up (Software Only)
		J1P260TF1 L-39	Network Interface Driver Software
1321-089			InterLan Upgrade - V3.0 & Up (Software Only)
		J1P260TF1 L-40	NP600A Network Processor Software
1321-090			CompuLert/SCCS Upgrade - V3.0 & Up (Software)
		J1P260TF1 L-41	CompuLert/SCCS Interface Software
		ED5P90860 G-16	CompuLert/SCCS Documentation
1321-091			SQL*NET TCP/IP Upgrade - V2.1 & Up (Software)
		J1P260TF1 L-41	SQL*NET TCP/IP Software
		ED5P90860 G-16	SQL*NET TCP/IP Documentation
1321-092			Remote DBMS LAN Upgrade - V3.0 & Up (Software)
		J1P260TF1 L-41	Enhanced TCP/IP Software
		ED5P90860 G-16	Enhanced TCP/IP Documentation

Table D-6. V4.0 Hardware and Software Package Upgrade PECs (Continued)

PEC	Attribute	Comcode	Description
1321-093			SQL*Menu Upgrade - V3.0 & Up (Software Only)
		J1P260TF1 L-51	SQL*Menu Software
		J1P260TF1 L-57	ORACLE*TERMINAL Software
		J1P260TF1 L-58	ORACLE OBJECT*SQL Software
		ED5P90860 G-23	SQL*Menu Documentation
1321-094			SQL*FORMS Upgrade - V3.0 & Up (Software)
		J1P260TF1 L-52	SQL*FORMS Software
		J1P260TF1 L-57	ORACLE*TERMINAL Software
		J1P260TF1 L-58	ORACLE OBJECT*SQL Software
		ED5P90860 G-21	SQL*FORMS Documentation
1321-095			PRO*C RDBMS (V6) - V3.0 & Up
		J1P260TF1 L-53	PRO*C Software
		ED5P90860 G-24	PRO*C Documentation
1321-096			SWL*ReportWriter Upgrade - V3.0 & Up
		J1P260TF1 L-54	SQL*ReportWriter Software
		ED5P90860 G-22	SQL*ReportWriter Documentation
1321-097			RDBMS(V6) & SQL*Plus Upgrade - V3.0 & Up
		J1P260TF1 L-8	Base ORACLE Software
		J1P260TF1 L-9	Extended ORACLE Software
1321-098			ASAI Upgrade - V2.1 & Up (Software Only)
		J1P260TF1 L-26	ASAI Feature Software
		J1P260TF1 L-27	ASAI Library Software
		ED5P90860 G-10	ASAI Feature Documentation
1321-099			Network PRI Upgrade - V2.1 & Up (Software)
		J1P260TF1 L-42	Network PRI Software (Restricted)
1321-100			SCSI Mirroring Upgrade - V3.1 (Software Only)
		J1P260TF1 L-25	SCSI Disk Mirroring Software
		ED5P90860 G-12	SCSI Disk Mirroring Document

Table D-6. V4.0 Hardware and Software Package Upgrade PECs (Continued)

PEC	Attribute	Comcode	Description
1321-101			CO External Alarm Upgrade - V3.1 (Software)
		J1P260TF1 L-50	CO External Alarm Software
		ED5P90860 G-11	CO External Alarm Document
1321-102			ISDN General Purpose PRI V4.0
		107087413	ISDN GP PRI Software V4.0
		107087439	ISDN PRI Release Notes V4.0
		107087454	ISDN PRI User Guide V4.0
		106439839	AYC2C Circuit Card
1321-103			ISDN General PRI V4.0
		107087413	ISDN GP PRI Software V4.0
		107087439	ISDN PRI Release Notes V4.0
		107087454	ISDN PRI User Guide V4.0
1321-110			Speech Recognition/US for V4.0
		J1P260TF1 L-31	Speech Recognition Software US
		ED5P90860 G-5	Speech Recognition Documentation
1321-111			Graphical Speech Editor Kit
		407022227	Metro-X Runtime AT&T Software
		407022243	Motif Runtime AT&T Software
		106375975	UNIX Serial Mouse Driver V2.2
		406999235	Serial Mouse
		J1P260TF1 L-35	CVIS GSE Utilities Software
		ED5P90860 G-4	CVIS GSE Documentation Support Package
	ADP17 “D”	J1P260DA1 L-4	Voice Workstation Kit (Audio Jack Convertor)
	ADP99		No Audio Jack Convertor
	BRD01 “D”	J1P260BA1 L-4	Video Controller Card
	BRD99		No Video Controller Card
1321-112			Speech Recognition/UK for V4.0
		J1P260TF1 L-32	Speech Recognition Software UK
		ED5P90860 G-5	Speech Recognition Documentation

Table D-6. V4.0 Hardware and Software Package Upgrade PECs (Continued)

PEC	Attribute	Comcode	Description
1321-114			Speech Recognition/Mexican Spanish for V4.0
		J1P260TF1 L-33	Speech Recognition Software Mexican Spanish
		ED5P90860 G-5	Speech Recognition Documentation
1321-113			Speech Recognition/Canadian French for V4.0
		J1P260TF1 L-34	Speech Recognition Software Canadian French
		ED5P90860 G-5	Speech Recognition Documentation
1321-115			Line Side T1 Interface Package
		J1P260TF1 L-46	Line Side T1 Interface Software - Definity
		J1P260TF1 L-47	Line Side T1 Interface Software - Galaxy
1321-116			FlexWord Recognition
		ED5P90860 G-6	FlexWord Recognition Documentation
1321-117			Asynchronous Host Toolkit V1.0
		J1P260TF1 L-61	Asynchronous Host Toolkit Software
		ED5P90860 G-25	Asynchronous Host Toolkit Documentation
1321-118			Speech Collection Toolkit (Restricted)
		J1P260TF1 L-36	Speech Collection Toolkit Software

Hardware and Software Package Price Element Codes

Table D-7. V4.0 Hardware and Software Package PECs

PEC	Attribute	Comcode	Description
70601			Script Builder Kit V3.1 & V4.0
	REL31 “D”	J1P260TE1 L-19	Script Builder Software 3.1
	REL31	ED5P90560 G-5	Script Builder Documentation 3.1
		J1P260DA1 L-4	Audio Jack Kit
	REL40	J1P260TF1 L-20	Script Builder Software 4.0
	REL40	ED5P90860 G-3	Script Builder Documentation 4.0
70602			Call Classification Analysis V3.1 & V4.0
	REL31 “D”	J1P260TE1 L-34	CCA Software 3.1
	REL31	ED5P90560 G-8	CCA Documentation 3.1
		106439839	AYC2C SP Circuit Card
	REL40	J1P260TF1 L-30	CCA Software 4.0
	REL40	ED5P90860 G-9	CCA Documentation 4.0
70603			Primary Rate Interface (PRI) V3.1 & V4.0
	REL31 “D”	J1P260TE1 L-33	PRI Software 3.1
	REL31	ED5P90560 G-9	PRI Documentation 3.1
		106439839	AYC2C SP Circuit Card
	REL40	J1P260TF1 L-29	PRI Software 4.0
	REL40	ED5P90860 G-13	PRI Documentation 4.0
70605			Adjunct/Switch Application Interface V3.1 & V4.0
	REL31 “D”	J1P260TE1 L-31	ASAI Generic Software 3.1
	REL31	J1P260TE1 L-32	ASA(Library Software 3.1
	REL31	ED5P90560 G-7	ASAI Documentation 3.1
	REL40	J1P260TF1 L-29	ASAI Feature Software 4.0
	REL40	J1P260TF1 L-27	ASAI Library Software 4.0
	REL40	ED5P90860 G-10	ASAII Documentation 4.0
70607			SCSI Disk Mirroring V3.1 & V4.0
	REL31 “D”	J1P260TE1 L-30	SCSI Mirroring Software V3.1
	REL31	ED5P90560 G-22	SCSI Mirroring Documentation 3.1
		J1P260CA1 L-18	1.2 GB SCSI Disk Drive
	REL40	J1P260TF1 L-25	SCSI Mirroring Software 4.0
	REL40	ED5P90860 G-12	SCSI Mirroring Documentation 4.0

Table D-7. V4.0 Hardware and Software Package PECs (Continued)

PEC	Attribute	Comcode	Description
70610			Central Office External Alarms V3.1 & V4.0
	REL31 “D”	J1P260TE1 L-5	External Alarm Package V3.1
	REL31	ED5P90560 G-3	External Alarms Documentation V3.1
		J1P260AA1 L-8	Alarm Circuit Pack
	REL40	J1P260TF1 L-50	External Alarms Software V4.0
	REL40	ED5P90860 G-11	External Alarms Doc8mentation V4.0
70611			Synchronous Host Interface Kit (Series 2) V3.1 & V4.0
	REL31 “D”	J1P260TE1 L-22	Synchronous Host Software V3.1
		J1P260AA1 L-7	Synchronous Host Interface Circuit Card
	REL40	J1P260TF1 L-23	Synchronous Host Software V4.0
70608			8-Port Asynchronous (Series 2) V3.1 & V4.0
		J1P260AA1 L-5	8-Port Asynchronous V3.1 & V4.0
		846362705	10’ Cord
	REL31 “D”	J1P260TE1 L-21	8-Port Software Driver V3.1
	REL40	J1P260TF1 L-22	Intelligent Ports Software V4.0
	CBL34	J1P260AA1 L-6	Asynchronous Jumper Cable (MAP/100C)
	CBL99 “D”		MAP/100 Default (No Mat’l)
70613			Form Filler Plus V3.1 & V4.0
	REL31 “D”	J1P260TE1 L-20	Form Filler Plus Software V3.1
	REL31	ED5P90560 G-10	Form Filler Plus Documentation
	REL40	J1P260TF1 L-21	Form Filler Plus Software V4.0
	REL40	ED5P90860 G-14	Form Filler Plus Documentation V4.0
70614			NetView Alarm Software V3.1 & V4.0
	REL31 “D”	J1P260TE1 L-23	NetView Alarm Software V3.1
	REL31	ED5P90560 G-14	NetView Alarm Documentation
	REL40	J1P260TF1 L-24	NetView Alarm Software V4.0
	REL40	ED5P90860 G-18	NetView Alarm Documentation V4.0

Table D-7. V4.0 Hardware and Software Package PECs (Continued)

PEC	Attribute	Comcode	Description
70615			Text-to-Speech V3.1 & V4.0
	REL31 “D”	J1P260TE1 L-36	Text-to-Speech Software V3.1
	REL31	ED5P90560 G-12	Text-to-Speech DocumentationV3.1
	REL40	J1P260TF1 L-37	Text-to-Speech Software V4.0
	REL40	ED5P90860 G-15	Text-to-Speech Documentation V4.0
70616			Security Administration Software V3.1 & V4.0
	REL31 “D”	J1P260TE1 L-18	Security Administration Software V3.1
	REL40	J1P260TF1 L-19	Security Administration Software V4.0
70617			StarLAN Interface Software V3.1 & V4.0
	REL31 “D”	J1P260TE1 L-38	StarLAN Interface Driver V3.1
	REL40	J1P260TF1 L-39	StarLAN Interface DriverV4.0
70618			InterLan Interface Software V3.1 & V4.0
	REL31 “D”	J1P260TE1 L-39	NP600A Network Processor Software V3.1
	REL40	J1P260TF1 L-40	NP600A Network Processor Software V4.0
70619			CompuLert/SCCS Software V3.1 & V4.0
	REL31 “D”	J1P260TE1 L-40	CompuLert/SCCS Software V3.1
	REL31	ED5P90560 G-19	CompuLert/SCCS Documentation V3.1
	REL40	J1P260TF1 L-41	CompuLert/SCCS Software V4.0
	REL40	ED5P90860 G-16	CompuLert/SCCS Documentation V4.0
70620			ORACLE SQL*NET TCP/IP V3.1 & V4.0
	REL31 “D”	J1P260TE1 L-29	SQL*NET TCP/IP Software V3.1
	REL31	ED5P90560 G-11	SQL*NET TCP?IP Documentation 3.1
	REL40	J1P260TF1 L-55	SQL*NET TCP/IP Software V4.0
	REL40	ED5P90860 G-19	SQL*NET TCP/IP Documentation V4.0
70621			Remote DBMS LAN Software V3.1 & V4.0
	REL31 “D”	J1P260TE1 L-37	Enhanced TCP/IP Software V3.1
	REL31	ED5P90560 G-13	LAN Documentation 3.1
	REL40	J1P260TF1 L-38	Enhanced TCP/IP Software V4.0
	REL40	ED5P90860 G-17	LAN Documentation V4.0

Table D-7. V4.0 Hardware and Software Package PECs (Continued)

PEC	Attribute	Comcode	Description
70622			ORACLE SQL*Menu Software V3.1 & V4.0
	REL31 “D”	J1P260TE1 L-29	SQL*Menu Software V3.1
	REL31	J1P260TE1 L-46	ORACLE*TERMINAL Software V3.1
	REL31	J1P260TE1 L-47	ORACLE OBJECT*SQL Software V3.1
	REL31	ED5P90560 G-11	SQL*Menu Documentation 3.1
	REL40	J1P260TF1 L-55	SQL*Menu Software V4.0
	REL40	J1P260TF1 L-57	ORACLE*TERMINAL Software V4.0
	REL40	J1P260TF1 L-58	ORACLE OBJECT*SQL Software V4.0
	REL40	ED5P90860 G-23	SQL*Menu Documentation V4.0
70623			ORACLE SQL*FORMS V3.1 & V4.0
	REL31 “D”	J1P260TE1 L-25	SQL*FORMS Software V3.1
	REL31	J1P260TE1 L-46	ORACLE*TERMINAL Software V3.1
	REL31	J1P260TE1 L-47	ORACLE OBJECT*SQL Software V3.1
	REL31	ED5P90560 G-16	SQL*FORMS Documentation 3.1
	REL40	J1P260TF1 L-52	SQL*FORMS Software V4.0
	REL40	J1P260TF1 L-57	ORACLE*TERMINAL Software V4.0
	REL40	J1P260TF1 L-58	ORACLE OBJECT*SQL Software V4.0
	REL40	ED5P90860 G-21	SQL*FORMS Documentation V4.0
70624			PRO*C/RDBMS (V6.0) V3.1 & V4.0
	REL31 “D”	J1P260TE1 L-26	ORACLE PRO*C Software V3.1
	REL31	ED5P90560 G-20	ORACLE PRO*C Documentation V3.1
	REL40	J1P260TF1 L-53	ORACLE PRO*C Software V4.0
	REL40	ED5P90860 G-24	ORACLE PRO*C Documentation V4.0
70625			SQL*ReportWriter (V6.0) V3.1 & V4.0
	REL31 “D”	J1P260TE1 L-27	SQL*ReportWriter Software V3.1
	REL31	ED5P90560 G-17	SQL*ReportWriter Documentation V3.1
	REL40	J1P260TF1 L-54	SQL*ReportWriter Software V4.0
	REL40	ED5P90860 G-22	SQL*ReportWriter Documentation V4.0
70626			SQL*Plus RDBMS (V6.0) V3.1 & V4.0
	REL31 “D”	J1P260TE1 L-10	Base ORACLE Software V3.1
	REL31	J1P260TE1 L-11	Extended ORACLE Software V3.1
	REL40	J1P260TF1 L-8	Base ORACLE Software V4.0
	REL40	J1P260TF1 L-9	Extended ORACLE Software V4.0

Table D-7. V4.0 Hardware and Software Package PECs (Continued)

PEC	Attribute	Comcode	Description
70627			Network PRI (Restricted)
	REL31 “D”	J1P260TE1 L-41	Network PRI Software V3.1
	REL40	J1P260TF1 L-42	Network PRI Software V4.0
70630			Optional SQL*RDBMS Documentation
		ED5P90860 G-20	SQL*RDBMS Documentation
70631			IVP6-IU Tip/Ring Circuit Card (UK)
		106560170	AYC16 Circuit Card
		103848800	DW8A-SE 25” Telephone Cord

Miscellaneous Price Element Codes

Table D-8. Version 4.0 Miscellaneous PECs

PEC	Attribute	Comcode	Description
70325			T1 Extension Cable
	MDL02	ED5P20830 G-1	T1 Extension Cable
70335			2nd Cable for Distribution Panel Assembly
		J1P260DA1 L-3	25 ft. Trunk/Line
70336			Tip/Ring Distribution Panel Assembly
		J1P260DA1 L-2	T/R Distribution Panel Assembly
		J1P260DA1 L-3	25 ft. Trunk/Line
70349			T1 Circuit Card
		106406598	AYC11 Circuit Card
70340			SP Circuit Card
		106439839	AYC2C Circuit Card
70390			Tip/Ring IVP6 Circuit Card
		105732267	AYC5B (IVP6) Circuit Card
		ED5P20830 G-16	3 ft. Telephone Mtg. Cord
		103623195	25 ft. Telephone Cord
70391			Speech Recognition (CMP) Circuit Card
		106024151	AYC7 Speech Recognition Circuit Card and Cables
		ED5P20830 G-5B	Speech Recognition Cable
		ED5P20830 G-6B	Speech Recognition Cable
70450			Color Monitor & Keyboard
		ED3P00170 G-5	Color Monitor
		J1P260BA1 L-2	Keyboard
		406666263	Power Cord

Table D-8. Version 4.0 Miscellaneous PECs (Continued)

PEC	Attribute	Comcode	Description
70451			Additional 600-Mbyte Hard Disk Drive
		J1P260CA1 L-3	600-Mbyte Hard Disk Drive
70452			4-Meg Memory Upgrade
70455			Additional 200-Mbyte Hard Disk Drive (MAP/40)
		J1P260CA1 L-16	200-Mbyte Hard Disk Drive
70461			Text-to-Speech Circuit Card
		106406572	AYC9 Text-to-Speech Circuit Card and Cables
70462			Alarm Relay Units
	PWR16	601381817	ARU with AC Transformer
	PWR17	601381809	ARU with DC Transformer
70464			InterLan Circuit Card
70612		J1P260AA1 L-7	Second CLEO 3270 Synchronous Host Interface Card
6951-110			StarLAN Circuit Card
6951-417			Parallel Printer Option
6950-EB1			Parallel Printer Cable
8302-104			IPCI Circuit Card (ASAI)
8307-MOD			AUDIX Voice Power Modified Circuit Card (DCP)

Table D-8. Version 4.0 Miscellaneous PECs (Continued)

PEC	Attribute	Comcode	Description
1200-001			Home Agent Software, 12 Agents
1200-002			Home Agent Software, 24 Agents
1200-003			Home Agent Software, 36 Agents
1200-004			Home Agent Software, 48 Agents
1200-005A			Home Agent 12 Channel Software upgrade
1228-025			AUDIX Voice Power
1228-026			AUDIX Voice Power S75 Switch Integration Software
1228-061			AUDIX Voice Power S25 Switch Integration Software
1258-2SA			FAX Attendant w/o AUDIX Voice Power
1258-2CR			FAX Attendant with AUDIX Voice Power Co-residency
1258-504			Brooktrout TR114 FAX Attendant Circuit Card
1321-002			First 150 Custom Phrases
1321-003			Additional Custom Phrases

Table D-8. Version 4.0 Miscellaneous PECs (Continued)

PEC	Attribute	Comcode	Description
1321-004			Supplemental Custom Phrases
1321-005			First 150 Custom Phrases, Rush
1321-006			Additional Custom Phrases, Rush
1321-007			Supplemental Custom Phrases, Rush
2725-07G			7' ASAI D8W-87 Cord
2725-07N			14' ASAI D8W-87 Cord
2725-07S			25' ASAI D8W-87 Cord
2725-16N			14' Modular RS-232 Cable
2750-D08			103A Connector Block for ASAI
2750-C11			Male Null Modem Connector
2750-C18			Female Terminal/Printer Adapter
6950-ET3			705 Multi-Tasking Terminal
6950-ET6			715 BCS Terminal Amber

Table D-8. Version 4.0 Miscellaneous PECs (Continued)

PEC	Attribute	Comcode	Descriptioni
6950-ET7			715 BCS Terminal White
6950-ET3			705 Multi-Tasking Terminal
21589			T1 CSU
21590			T1 CSU Wall Mount
63183			External Modem
69610			Male ACU/Modem Adapter
69608			Male Terminal/Printer Adapter
69607			50' Shielded Cable
69606			25" Shielded Cable
69609			Female Terminal/Printer Adapter
69611			Female/ACU/Modem Adapter
70551			TDM Upgrade Kit for IVP-4
70322			RS-232 Extension Cable for Synch or Asynch Opt.
70325			T1 Extension Cable
70336			TR Distribution Panel and One Cable

Table D-8. Version 4.0 Miscellaneous PECs (Continued)

PEC	Attribute	Comcode	Description
70335			Additional TR Distribution Cable
70462			Alarm Relay Unit

Standard Speech Phrases

D

Standard Speech Phrases

This appendix provides a complete listing of all standard speech phrases.

There are three types of inflection:

- Rising inflection is usually used in questions and at the beginning of some words. It is denoted in this appendix by a question mark (?) following the tag.
- Medial inflection is usually used in a middle of a word or statement. For example, when you speak the number "101," the "0" is spoken with medial inflection. Nothing follows the tag to indicate medial inflection.
- Falling inflection is usually used at the end of a word or statement. For example, when you speak "2.0," the "0" is spoken with falling inflection. It is denoted in this appendix by a period (.) following the tag.

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c
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l
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o
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t
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w
x
y
z
0
1
2
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19

20
30
40
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60
70
80
90
100
1000
1000000
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b.
c.
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e.
f.
g.
h.
i.
j.
k.
l.
m.
n.
o.
p.
q.
r.
s.
t.
u.
v.
w.
x.
y.
z.
0.
1.
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9.
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70.
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100.
1000.
1000000.
a?
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j?
k?
l?
m?
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p?
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1000000?
am
April
April.
April?
August
August.
August?
cent
cents
December
December.
December?

dollar
dollar and
eighteenth
eighteenth.
eighteenth?
eighth
eighth.
eighth?
eleventh
eleventh.
eleventh?
February
February.
February?
fifteenth
fifteenth.
fifteenth?
fifth
fifth.
fifth?
first
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fourteenth
fourteenth.
fourteenth?
fourth
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fourth?
Friday
Friday.
Friday?
January
January.
January?
July
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July?
June
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June?
March
March.
March?
May
May.
May?
midnight
Monday
Monday.
Monday?
ninth
ninth.
ninth?
noon
November
November.
November?
o'clock
October
October.
October?
oh (as in 8:05)
pm
point
Saturday
Saturday.
Saturday?
second
second.
second?
September
September.
September?
seventeenth
seventeenth.
seventeenth?
seventh
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sixteenth
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sixth?
Sunday
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third
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thirtieth
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thirtyfirst
thirtyfirst.
twelfth
thirtyfirst?
thursday
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thursday?
tuesday
tuesday.
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twelfth.
twelfth?
twentieth
twentieth.
twentieth?
twentyeighth
twentyeighth.
twentyeighth?
twentyfifth
twentyfifth.
twentyfifth?
twentyfirst
twentyfirst.
twentyfirst?
twentyfourth
twentyfourth.
twentyfourth?
twentyninth
twentyninth.
twentyninth?
twentysecond
twentysecond.
twentysecond?
twentyseventh
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twentyseventh?
twentysixth
twentysixth.
twentysixth?
twentythird
twentythird.
twentythird?
Wednesday
Wednesday.
Wednesday?

Abbreviations

A

ACD
Automatic Call Distributor

ADPCM
Adaptive Differential Pulse Code Modulation

ANI
Automatic All Indentification

ARU
Alarm Relay Unit

ASAI
Adjunct/Switch Application Interface

ASCII
American Standard Code for Information Interchange

B

BB	Bulletin Board
bps	Bits per second
BSC	Binary Synchronous Communication

C

CCA	Call Classification Analysis
CDH	Call Data Handler
CIC	AT&T Customer Information Center
CICS	Customer Information Control System
CMP	Companion card
CMS	Call Management System

CO	Central office
CPE	Customer provided equipment or customer premise equipment
CPU	Central processing unit
CSU	Channel service unit

D

dB	Decibels
DBMS	Database Management System
DC	Direct current
DCE	Data Communications Equipment
DCP	Digital Communications Protocol
DIO	Disk Input and Output Process
DIP	Data interface process
DNIS	Dialed Number Identification Service
DSP	Digital Signal Processor
DTE	Data Terminal Equipment
DTMF	Dual Tone Multi-Frequency

E

EBCDIC	Extended binary Coded Decimal Interexchange Code
EIA	Electronic Industries Association
EISA	Extended Industry Standard Architecture
ESDI	Extended Serial Data Interface
ESS	Electronic Switching System

F

FACE	Framed Access Command Environment Interface
FDD	Floppy disk drive
FEP	Front end processor
foos	Facility out-of-service state

H

HDD	Hard disk drive
hwoos	Hardware out-of-service state
Hz	Hertz

I

IBM	International Business Machines
ID	Identification
IE	Information Element
inserv	In-service state
IPC	Inter-Process Communication
IPCI	Integrated personal computer interface
ISDN	Integrated Services Digital Network
ITAC	International Technical Assistance Center
IVP4	Integrated Voice Processing card with 4 analog channels
IVP6	Integrated Voice Processing card with 6 analog channels

K

Kbps	Kilobite per second
Kbyte	Kilobyte

L

LAN	Local Area Network
LED	Light-emitting diode
LU	Logical unit

M

manoos	Manually out-of-service state
MAP/100	Multi-Application Platform 100
MAP/100C	Multi-Application Platform 100C
MAP/40	Multi-Application Platform 40
Mbyte	Megabyte
ms	Millisecond
msec	Millisecond
MHz	Megahertz
MTC	Maintenance process

N

NCP	Network Control Program
netoos	Network out-of-service state
nonex	Non-existent state
NRZ	Non Return to Zero
NRZI	Non Return to Zero Inverted

P

PBX	Private Branch Exchange
PC	Personal computer
PCB	Printed circuit board
PCM	Pulse Code Modulation
PEC	Price element code
PRI	Primary Rate Interface

R

RAM	Random Access Memory

RDBMS	ORACLE relational database management system
RMB	Remote maintenance circuit card

S

SBC	Sub-band coding
SCCS	Switching Control Center System
SCSI	Small Computer System Interface
SDLC	Synchronous Data Link Control
SIMM	Single Inline Memory Module
SNA	Systems Network Architecture
SP	Signal Processor card
SPIP	Signal Processor Interface Process
SPPLIB	Speech Processing Library
SQL	Structured Query Language
sysgen	System generation

T

TCC	Technology Control Center
TCP/IP	Transmission Control Protocol/Internet Protocol
TDM	Time Division Multiplexing
TE	Terminal emulator
TLP	Transmission level plan
T/R	Tip/Ring card
TRIP	Tip/Ring Interface Process
TSC	AT&T Technical Services Center
TSO	Time Share Operation
TSM	Transaction State Machine
TTS	Text-to-Speech
TWIP	T1 Interface Process

U

UK	United Kingdom

V

VIS	CONVERSANT Voice Information System
VPC	Voice processing co-marketer
VRU	Voice response unit
VROP	Voice Response Output Process

Glossary

Numerics

3270 interface
A link between one or more VIS machines and a host mainframe. In CONVERSANT Voice Information System (VIS) documentation, the 3270 interface means the link between one or more VIS machines and an IBM host mainframe.

4ESS
A large, AT&T central office switch used to route calls through AT&T's telephone network.

A

ACD
See "Automatic Call Distributor."

ADPCM
See "Adaptive Differential Pulse Code Modulation."

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, Adjunct/Switch Application Interface) that the CONVERSANT Voice Information System (VIS) administers via cut-through access to the inherent management capabilities of the product itself; this is in opposition to CONVERSANT VIS's ability to administer the switch directly.

Adjunct/Switch Application Interface
An optional feature package that provides an Integrated Services Digital Network-based interface between AT&T PBX's and adjunct processors.

affiliate
A business organization that AT&T controls or which with AT&T is in partnership.

Alarm Relay Unit
A unit used in central office telecommunication arrangements that transmits warning indicators from telephone communications equipment (like the CONVERSANT VIS) to audio

alerter
A system process which responds to patterns of events logged by the "logdaemon" process.

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.

application
Made of several components which provides an automated version of the communication between a caller and an attendant.

application administration
The component of the VIS 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 VIS invokes the TSM script assembler for the specific application name and files are moved to the appropriate directories.

application verification
A process in which the VIS verifies that all the components needed by an application are complete.

ASCII
An acronym for American Standard Code for Information Interchange, a standard for data representation. ASCII code represents alphanumeric characters as binary numbers. The code includes 128 upper- and lower-case letters, numerals, and special characters. Each alphanumeric and special character has an ASCII code (binary) equivalent that is one byte long.

asynchronous communication
A method of data transmission in which bits or characters are sent at irregular intervals and bits or characters are spaced by start and stop bits and not by time. See also “synchronous communication.”

asynchronous data unit
An electronic communications device that allows computer systems to communicate over asynchronous lines more than 50 feet in length.

AUDIX Voice Power
A complete voice-mail messaging system accessed and operated by touch-tone telephones and integrated with a switch or “Private Branch Exchange.”

Automatic Call Distributor
A phone system that recognizes and answers incoming calls and completes these calls based on a set of instructions contained in a database. The Automatic Call Distributor 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.

B

back up
To preserve a copy of the information in a file in a different location, so that the data will not be lost in the event of hardware or system failure.

backing up an application
A utility that makes an archive copy of a completed application or makes an interim copy of an application in progress. The backup copy can be restored to the VIS if the online version is damaged, or if you make revisions and wish to go back to the previous version.

barge-in
A capability provided by WholeWord Speech Recognition that allows a caller to speak their response to the VIS prompt and have that response recognized before the prompt has finished playing.

batch file
A file containing one or more lines, each of which is a command executable by the UNIX shell.

Binary Synchronous Communications
A character-oriented synchronous link protocol.

blind transfer protocol
A protocol in which a call is completed as soon as the extension is dialed, without having to wait to see if the phone is busy, or if the caller answered.

BSC
See "Binary Synchronous Communications."

bundle
In the context of the Enhanced File Transfer package, this term is used to denote a single file, a group of files (package), or a combination of both.

byte
A unit of storage in the computer. On many systems, a byte is eight bits (binary digits), the equivalent of one character of text.

C

Call Classification Analysis
An optional feature package that allows application developers to classify the disposition of originated and transferred calls.

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 someone making a telephone call. It can be used by telephone switching equipment to selectively route an incoming call to a particular department or agent.

call progress tones
Standard telephony sounds that indicate the status of the call. These sounds include busy, fast busy, ringback, reorder, etc.

card cage
An area within a CONVERSANT VIS 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.

caution
An admonishment used when there is a possibility of a service interruption.

CCA
See "Call Classification Analysis."

CDH
See "Call Data Handler process."

central office
An office or location in which large telecommunication machines such as telephone switches and network access facilities are maintained. These locations follow strict installation and operation requirements.

Central Processing Unit
A component of the VIS that is based on either the Multi-Application Platform 100 (MAP/100), the Multi-Application Platform 40 (MAP/40), or the Multi-Application Platform 100C (MAP/100C).

CICS
See "Customer Information Control System."

cluster controller
A bisynchronous interface that provides a means of handling remote communication processing.

command
An instruction or request given by the user to the VIS software to perform a particular function. An entire command consists of the command name and options.

CompuLert/SCCS Interface
An optional feature that enables remote or console monitoring of error messages generated from the CONVERSANT VIS. Compulert is a centralized maintenance system for monitoring minicomputers, computer mainframes, etc. The Switching Control Center System (SCCS) is similar to the Compulert system but is used to support 4ESS local switching systems.

configuration
The arrangement of the software and hardware of a computer system or network. The CONVERSANT Voice Information System configuration includes either a standard or custom processor, peripheral equipment (for example, printers, 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 VIS 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 SP and T1 cards, and perform various maintenance functions.

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 the VIS environment. It supports the DEFINITY "converse" vector command to establish a two-way routing mechanism between the switch and the VIS 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 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.

co-residency
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 co-residency of AUDIX Voice Power on a CONVERSANT VIS platform.

CPU
See "Central Processing Unit."

crash
An interactive utility for examining the operating system core and for determining if system parameters are being exceeded.

custom speech
Unique words or phrases to be used in CONVERSANT VIS voice prompts that are recorded for a customer on a custom basis.

custom vocabulary
A specialized package of unique words or phrased crated on a pre-customer basis and used by WholeWord or FlexWord Speech Recognition purposes.

Customer Information Control System
Considered 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.

D

danger
An admonishment used when there is a possibility of personal injury.

data interface process
A software process that communicates with Script Builder applications.

database
A structured set of files, records, or tables.

database fields
Used to extract values from a local database and form the structure upon which a database is built.

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 change too often to "hard-code," or permanently store, in the transaction outline.

debug
The process of locating and correcting errors in computer programs. This process is also referred to as troubleshooting.

default
The way a computer will perform a task in the absence of other instructions.

diagnose
The procedure used to perform diagnostics on Tip/Ring, T1, or SP cards or a bus.

Dialed Number Identification Service
A service that allows incoming calls to contain information about the phone number for which it is destined.

directory
A type of file used to group and organize other files or directories.

DNIS
See “Dialed Number Identification Service.”

DIP
See “data interface process.”

display errdata
A command that displays system errors sent to the logger.

DSO
Digital Service Level 0 (64,000 bps).

DTMF
See “Dual Tone Multi-Frequency.”

Dual 3270 Links
A feature that provides an additional physical unit (PU) to allow a cost-effective means of connecting to two host computers. The customer can connect a VIS 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.

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 upon system crashes. The dump can be fetched after rebooting for analysis of what may have caused the crash.

E

Earth recall
A method of call transfer used by some PBXs outside of the U.S. Special considerations must be taken when identifying and tuning some communication protocol parameters before attempting to interface another machine to a system that uses this method of call transfer.

Enhanced Serial Data Interface
A software- and hardware-controlled method used to store data on magnetic peripherals.

error message
A message on the screen indicating that something is wrong and possibly suggesting how to correct it.

Error Tracker Process
See “etStub.”

Ethernet
Another name for a local area network that uses 10BASE5 or 10BASE2 coaxial cable and InterLan signaling techniques.

etStub
A system process which processes pre-Version 3.1 error message logging requests. These requests are transformed and passed on to the “logdaemon” process.

external actions
Specific tasks and interfaces controlled by CONVERSANT VIS software that allow a Script Builder application script to invoke processes and interact with other products or services. For example, a CONVERSANT VIS application script can invoke AUDIX Voice Power functionality through the used of an external action within an application script.

F

FACE
See “Framed Access Command Environment.”

feature
A function or capability of a product or an application within the CONVERSANT VIS.

feature package
An optionally purchased package that may contain both hardware and software resources, which provides additional functionality to a standard system.

featuretst
A standard CONVERSANT VIS software program that allows a VIS user to perform self-tests of critical hardware and software functionality.

field
A “slot” in a VIS window that holds one column of information in a row.

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. File transfer is performed either interactively or directly using the File Transfer System.

filename
Alphabetic characters used to identify a particular file.

Form Filler Plus
An optional feature package that provides the capability for application scripts to record caller’s responses to prompts for later transcription and review.

Framed Access Command Environment
An interface that enables you to execute a variety of administrative procedures including, disk operations, user login setup, and peripherals setup.

function key
A key, labeled F1 through F8, on your keyboard to which the CONVERSANT VIS software gives special properties for manipulating the user interface.

G

Graphical Speech Editor
A window-driven, X Windows/Motif based, graphical user interface (GUI) that can be accessed to perform different functions associated with the creation and editing of speech files to be used by VIS applications.

H

hard disk drive
A high-capacity data storage/retrieval device that is located inside a computer platform. A hard disk drive stores data on non-removable high-density magnetic media based on a predetermined format for retrieval by the system at a later date.

hardware
The physical components of a computer system. The central processing unit, disks, tape and floppy drives, etc., are all hardware.

host computer
A computer linked to a network providing 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.

I

iCk
The system integrity checking process.

IND$FILE
The standard SNA file transfer utility that runs as an application under CICS, TSO, and CMS. IND$FILE is independent of link-level protocols such as BISYNC and SDLC.

indexed table
A table that, unlike a non-indexed table, may be searched via a field name that has been indexed.

initialize
To start up the system for the first time.

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 card
The IVP4 or IVP6 card.

intelligent transfer protocol
A transfer protocol that monitors 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.

interface
The access point of a system. With respect to the VIS, the interface is designed to provide you with easy access to the software's capabilities.

ipcs
A command that reports interprocess communication facilities status.

ISDN
See "Integrated Services Digital Network."

K

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 VIS to recognize a single word in the middle of an entire phrase spoken by a caller in response to a prompt.

L

LAN
See "local area network."

Line Side T1
A digital method of interfacing a CONVERSANT VIS 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 local area network provides communications between computers and peripherals.

local database
A database residing on the VIS.

logical unit
A type of SNA Network Addressable Unit.

logdaemon
System information and error logging process.

logger
See “logdaemon”

logging on/off
Entering or exiting the CONVERSANT Voice Information System software.

LU
See “logical unit.”

M

magnetic peripherals
Data storage devices that use magnetic media to store information. Such devices include hard disk drives, floppy disk drives, and cartridge tape drives.

main screen
The CONVERSANT VIS VERSION 4.0 screen, from which you are able to enter FACE or Voice System Administration.

maintenance process
A software process that runs temporary diagnostics.

Manual Configurator Program
A software program that resolves or blocks the allocation of CPU and memory resources for controlling and optional circuit cards.

master
A board that provides clock information to the TDM bus.

megabyte
A unit of memory equal to 1,048,576 bytes (1024 x 1024). It is often rounded to one million.

Microsoft
A company that manufactures 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-DOS
A personal computer DOS operating system developed by the Microsoft Corporation.

MTC
See “maintenance process.”

N

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.

non-indexed table
A table that may be searched only in a sequential manner and that may not be searched via a field name.

note
An admonishment used to supply supplementary information for the topic being discussed.

null value
An entry containing no value. A field containing a null value is normally displayed as blank and is different from a field containing a value of zero.

O

on-line help
Messages or information that appear on the user's screen when a "function key" (F1 through F8) is pressed.

Operator Generated Alerts
System monitoring messages transmitted from the CONVERSANT VIS or other computer system to an IBM host computer that are 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 will execute 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

PBX
See "Private Branch Exchange."

PCM
See "Pulse Code Modulation."

peripheral (device)
Equipment such as printers or terminals that is in addition to the basic processor.

phoneme
A single basic sound of particular spoken language. The English language contains 40 phonemes that represent all basic sounds used with the language. As an example, the 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 tag
A string of up to 50 characters that identify the contents of a speech phrase used by an application script.

poll
A message sent from a central controller to an individual station on a multi-point network inviting that station to send if it has any traffic to send.

polling
A network arrangement whereby a central computer asks each remote location whether they wish to send information. This arrangement enables each user or remote data terminal an opportunity to transmit and receive information on shared facilities.

Primary Rate Interface
An optional feature package that provides a digital interface capable both of receiving and originating telephone calls directly from/to an AT&T 4ESS switch.

Private Branch Exchange
A private switching system, either manual or automatic, usually serving an organization, such as a business or government agency, and usually located on the customer’s premises.

processor
In CONVERSANT Voice Information System documentation, the computer on which the UNIX Operating System and CONVERSANT Voice Information System software runs. In general, the part of the computer system that processes the data. Also known as the “central processing Unit.”

ps
A command that shows active processes. This command displays the process table and can be used to determine which processes are consuming large amounts of system resources, such as CPU time.

Pulse Code Modulation
A digital modulation method of encoding voice signals into digital signals. See also “Adaptive Differential Pulse Code Modulation.”

R

raw mode
Conveys data from a terminal to a user without processing the data.

recovery
The process of using copies of the VIS software to reconstruct files that have been lost or damaged. See also “restore.”

remote database
The component of the VIS that provides access to information not currently on the VIS.

remote maintenance circuit card
A CONVERSANT VIS circuit card that is equipped standard with all new Version 4.0 purchases. This card, available with or without a built-in modem, allows remote personnel (for example, field support) to access all CONVERSANT VIS machines with a standard simplified process.

reports administration
The component of the VIS that provides access to system reports, including VIS call classification reports, call data detail reports, call data summary reports, message log reports, and traffic reports. In addition, if AUDIX Voice Power R2.1.1 is installed on your system, the reports administration component gives you access to AUDIX Voice Power reports.

restore
The process of recovering lost or damaged files by retrieving them from available backup 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.

roll back
To cancel changes to a database since the point at which changes were last committed.

rollback segment
A portion of the database which records actions which should be undone under certain circumstances. rollback segments are used to provide transaction rollback, read consistency, and recovery.

root space
An area of the disk that houses the UNIX Operating System, all VIS executables and data files, Script Builder application files, and the database.

S

sar
A command that is associated with the system activity report package.

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 Builder
An optional software package that provides a menu-oriented interface designed to assist in the development of custom voice response applications on the VIS.

SCSI
See "Small Computer System Interface."

shared database table
Using the same database table in more than one application.

shared speech
Speech that is a part of more than one application.

shared speech pools
A parameter that allows the user of a voice application to share speech components with other applications.

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.

slave
A board that depends on the TDM bus for clock information.

Small Computer System Interface
A disk drive control technology in which a single SCSI adapter card plugged into a PC slot is capable of controlling as many as seven different hard disks, optical disks, tape drives, etc.

software
The set or sets of programs that instruct the computer hardware to perform a task or series of tasks -- for example, the UNIX operating system software and the VIS Version 4.0 software.

speech energy
The amount of energy in a 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 file-system
A collection of several talkfiles. The file-system is organized into 16-Kbyte blocks for efficient management and retrieval of talkfiles. The CONVERSANT VIS speech file-system is not consistent with standard UNIX file-systems, and can not be referenced with standard UNIX commands such as “ls,” “cat,” etc.

speech modeling
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 phrase
A continuous speech segment encoded into a digital string.

Speech Recognition
An optional feature that provides speaker independence, connected digit recognition, key word spotting, prompt interrupt, and DTMF support functionality.

speech space
An area that contains all digitized speech used for playback in the applications loaded on the system.

standard speech
The speech package containing simple words and phrases produced by AT&T for use with a CONVERSANT VIS. 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 the voice prompts played by the VIS.

standard vocabulary
A standard package of simple word speech models provided by AT&T and used for WholeWord Speech Recognition purposes. These phrases include the digits “zero” through “nine,” “yes,” “no,” and “oh.”

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.

swap space
An area of the disk that is fixed in size depending on the amount of Random Access Memory (RAM) that is on the system. This area is used to temporarily store programs (swap in and out) that are competing for CPU time and cannot remain in core memory due to size constraints.

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 which is depressed when the handset is resting in the cradle (on hook). The device is raised when the handset is picked up (the phone is off hook).

switch hook flash
A signaling technique in which the signal is originated by momentarily depressing the “switch hook.”

switch interface administration
The component of the VIS that enables you to define the interaction between the VIS 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 switching systems.

synchronous communication
A method of data transmission in which bits or characters are sent at regular time intervals, rather than being spaced by start and stop bits. See also “asynchronous communication.”

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 3,000 lines that provides voice and data communications for its users.

system administrator
The person assigned the responsibility of monitoring all VIS software processing, performing daily system operations and preventive maintenance, and troubleshooting errors as required.

system architecture
The manner in which the CONVERSANT Voice Information System software is structured.

system message
An event or alarm generated by either a VIS or end user process.

system monitor
A component of the VIS in which tests are performed to verify that each incoming telephone line and its associated tip/ring or T1 card is functional. Through the "System Monitor" component, you are able to see displays of the Voice Channel and Host Session Monitors.

T

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

table
A collection of records that are logically grouped together.

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 may contain up to 65535 phrases and the speech file-system may contain multiple talkfiles.

TDM
See "Time-Division Multiplex."

Terminal Emulator
Software which allows the VIS 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 speech directly from ASCII text by converting that text to synthesized speech. The text may 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 Script Builder.

ThickNet
A 10-millimeter (10BASE5) coaxial cable used to provide InterLan communications.

ThinNet
A 5-millimeter (10BASE2) coaxial cable used to provide InterLan communications.

Time-Division Multiplex
A method of serving a number of simultaneous channels over a common transmission path by assigning the transmission path sequentially to the channels, each assignment being for a discrete time interval.

Tip/Ring
A term used to denote analog telecommunications using four-wire media.

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
Comprised of the exchanges between the caller and the voice system.

Transaction State Machine process
A software process that controls transactions via script execution and commands. The Transaction State Machine Process manages interaction with the network, manages interaction with other parts of the Voice System, allocates and frees devices and channels, and executes script language programs.

troubleshoot
The process of locating and correcting errors in computer programs. This process is also referred to as debugging.

TSM
See "Transaction State Machine process."

TTS
See "Text-to-Speech."

U

UNIX Operating System
A multi-user, multitasking computer operating system developed by Bell Telephone Laboratories division of AT&T.

UNIX shell
The command language that provides a user interface to the UNIX operating system.

usr space
An area of the disk that houses user home directories and files, and is used at installation time to temporarily load some feature packages. This is also a file system which is fixed in size once the system is partitioned at installation.

V

vi editor
A screen editor used by the VIS to create and change electronic files.

virtual channel
A channel that is not associated with an interface to the telephone network (Tip/Ring, T1, 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 may be initiated only by a "virtual seizure" request to TSM from a DIP.

VIS
See "Voice Information System."

vocabulary
A collection of words that a VIS is able to recognize using either WholeWord or FlexWord Speech Recognition.

voice channel
A channel that is associated with an interface to the telephone network (Tip/Ring, T1, or PRI). Any VIS application may run on a voice channel. Voice channel applications may be initiated by being assigned to particular voice channels or dialed numbers to handle incoming calls or they may be initiated by a "soft seizure" request to TSM from a Data Interface Process (DIP) or the **soft_szr** command.

Voice Information System
A computer connected to a telephone network that handles touch-tone input, voice response, and line transfer. The Voice Information System uses a screen-based, menu-driven user interface to interact with the system operator or administrator.

Voice Processing Co-Marketer
A company licensed to purchase voice processing equipment, such as the CONVERSANT VIS, 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 SP cards) and data storage devices (that is, hard disk, etc.)

Voice System Administration
The means by which you are able to administer both voice and non-voice related aspects of the system.

VROP
See "Voice Response Output Process."

W

warning
An admonishment used when there is a possibility of equipment damage.

wink signal
An interruption of current to a busy lamp indicating that there is a line on hold.

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