Intuity™ CONVERSANT® System

Version 7.0

System Reference

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About This Book

Overview

This book contains information on basic troubleshooting procedures for the most common Intuity CONVERSANT system problems, diagnostics procedures, common system procedures, as well as a listing of system alarms and messages.

Intended Audiences

This book is intended primarily for the:

- On-site service technician
- System administrators.

Secondary audiences include field support personnel.

We assume that the primary users of this book have completed the Intuity CONVERSANT hardware installation and maintenance training course (see).

How This Book is Organized

This book contains the following sections:

- Chapter 1, Troubleshooting — Covers some basic troubleshooting procedures for the most common system problems.

- Chapter 2, Diagnostics — Describes diagnostic procedures for the Intuity CONVERSANT system.

- Chapter 3, Common System Procedures — Describes procedures for cartridge tape and diskette drive operation, backup and restore, voice system administration, and operating system administration.

- Chapter 4, Alarms and Log Messages — Lists the system alarms and log messages and repair procedures for system troubles.

- Glossary — Defines the terms, abbreviations, and acronyms used in system documentation.

- Index — Alphabetically lists the principal subjects covered in the book.

Conventions Used in This Book

Understanding the typography and other conventions used is this book is necessary to interpret the information.

Terminology
- The word "type" means to press the key or sequence of keys specified. For example, an instruction to type the letter "y" is shown as

  Type **y** to continue.

- The word "enter" means to type a value and then press the **ENTER** key on the keyboard. For example, an instruction to type the letter "y" and press **ENTER** is shown as

  Enter **y** to continue.

- The word "select" means to move the cursor to the desired menu item and then press **ENTER**. For example, an instruction to move the cursor to the start test option on the Network Loop-Around Test screen and then press **ENTER** is shown as

  Select **Start Test**.

- The system displays menus, screens, and windows. Menus () present options from which you can choose to view another menu, or a screen or window. Screens and windows both show and request system information (through).

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

Figure 1.   Example of Intuity CONVERSANT Menu

```
            Voice System Administration

Application Package Administration
Backup/Restore
Configuration Management
Feature Packages
Reports
Script Builder Applications
Switch Interfaces
System Monitor
Exit
```
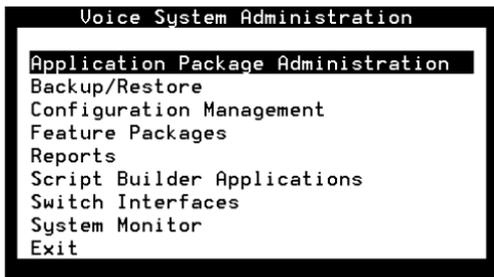
Figure 2.   Example of Intuity CONVERSANT Window Showing Information

```
  3                  Shut Down the Machine

Users currently logged on:

root         console      Jul  8 06:39
root         pts000       Jul  8 08:48
```
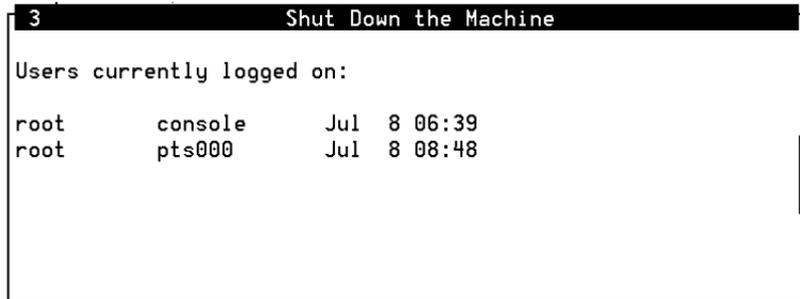
Figure 3.   Example of Intuity CONVERSANT Window Requesting Information

```
    Wait Time
 ┌──────────────┐
 │ Seconds:  ▓  │
 └──────────────┘
```
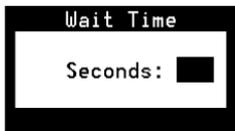
Figure 4.   Example of Intuity CONVERSANT Screen Showing Information

```
UnixWare Installation            Primary Hard Disk Partitioning

In order to install LINCS, you should reserve a UNIX system
partition (a portion of your hard disk's space) containing
100% of the space on your primary hard disk. After you press
'ENTER' you will be shown a screen that will allow you to
create new partitions, delete existing partitions or change
the active partition of your primary hard disk (the partition
that your computer will boot from).

WARNING: All files in any partition(s) you delete will be
destroyed. If you wish to attempt to preserve any files from
an existing UNIX system, do not delete its partitions(s).

The UNIX system partition that you intend to use on the
primary hard disk must be at lease 4200 MBs and labeled
"ACTIVE."

Press 'ENTER' to continue
```

Figure 5.   Screen Requesting Information

```
UNIX System Installation                         Set Slice Sizes

Please select whether you would like the recommended slice sizes
or would like to customize the slice sizes.

Your choices are:
1. Recommended Slice Sizes
2. Customize Slice Sizes
```

Keyboard and
Telephone Keypad
Representations

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

  Press **ENTER**.

- Two or three keys that you press at the same time on your terminal or PC (that is, you hold down the first key while pressing the second and/or third key) are represented in small capitalized **BOLD** text. For example, an instruction to press and hold the Alt key while typing the letter "d" is shown as

  Press **ALT + D**.

- Function keys on your terminal, PC, or system screens, also known as soft keys, are represented as small capitalized **BOLD** text followed by the function or value of that key enclosed in parentheses. For example, an instruction to press function key 3 is shown as

  Press **F3** (Choices).

- Keys that you press on your telephone keypad appear in small capitalized **BOLD** text. For example, an instruction to press the first key on your telephone keypad is shown as

  Press **1** to record a message.

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

Screen Displays   • Values, system messages, field names, prompts that appear on the screen, and simulated screen displays are shown typewriter-style `constant width text`, as in the following examples:

  ~ Enter the number of ports to be dedicated to outbound traffic in the `Maximum Simultaneous Ports` field.

  ~ Enter **y** in the `Message Transfer?` field.

  ~ The system displays the following message:

    `Installation in progress.`

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

    Start at the Voice System Administration menu and select:

    ```
    > Reports

        > Message Log Report
    ```
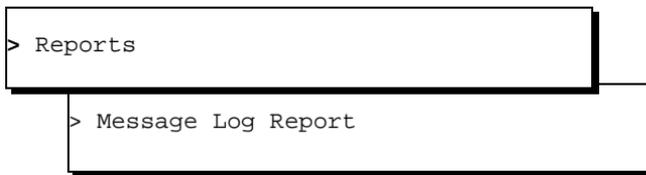
    In this example, you would access the Voice System Administration menu and select the Reports menu. From the Reports menu, you would then select the Message Log Report option.

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

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

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

• Command variables are shown in ***bold italic*** type when they are part of what you must type in, and in *blue italic type* when they are referred to, for example:

Enter **ch ma *machine_name***, where *machine_name* is the name of the call delivery machine you just created.

• Command options are shown inside square brackets, for example:

Enter **connect *switchname* [-d] [-b | -w]**

Cross References   [Blue, underlined] type indicates a cross reference or hypertext link that will
and Hypertext   take you to another location in the document when you click on it.

Safety and Security Alert Labels

This book uses the following symbols to call your attention to potential problems that could cause personal injury, damage to equipment, loss of data, service interruptions, or breaches of toll fraud security:

⚠ CAUTION:

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

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

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

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

Getting Help

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

To use the online help:

- Press **F1** (Help) when you are in a menu or window.

  The first time you press **F1**, the system displays information about the currently active window or menu.

  - ~ When you are in a window, the help explains the purpose of the window window and describes its fields.
  - ~ When you are in a menu, the help explains how to use menus.

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

- Press **F2** (Choices) when you are in a field.

  The system displays valid field choices either in a pop-up window or on the status line directly above the function keys.

- Press **F6** (Cancel) to exit the online help.

Technical Assistance

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

         http://support.lucent.com

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

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

- In Canada, call one of the following numbers, depending on your location:

  - 1-800-363-1882 for assistance in Quebec and eastern Canada

  - 1-800-387-4268 for assistance in Ontario and western Canada

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

Related Resources

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

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

- Organizations within Lucent Technologies (904) 636-3261

- Lucent Technologies customers and all others (800) 255-8988

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

- Organizations within Lucent Technologies

  http://training.gls.lucent.com

- Lucent Technologies customers and all others

  http://www.lucenttraining.com

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

- For technicians doing repairs on Intuity CONVERSANT V7.0 systems

  ~ BTT509H, CONVERSANT Installation and Maintenance Voice Information System

- For technicians and administrators

  ~ BTC344M, Intuity CONVERSANT V7 Administration Overview (CD-ROM)

- For application developers

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

Documentation   Appendix A, "Documentation Guide," in *Intuity CONVERSANT System Version 7.0 System Description*, 585-313-204, describes in detail all books included in the Intuity CONVERSANT library and referenced in this book.

Note: Always refer to the appropriate book for specific information on planning, installing, administering, or maintaining an Intuity CONVERSANT system.

Additional Suggested Documentation

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

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

Obtaining Printed Versions of the Documentation

See of Copyright and Legal Notices for information on how to purchase Intuity CONVERSANT documentation in printed form. You can also print documentation locally from the CD-ROM (see).

Using the CD-ROM Documentation

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

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

Setting the Default Magnification

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

Adjusting the Window Size

On HP and Sun workstations, you can control the size of the reader window by using the **-geometry** argument. For example, the command string **acroread -geometry 900x900 mainmenu.pdf** opens the main menu with a window size of 900 pixels square.

Hiding and Displaying Bookmarks

By default, the document appears with bookmarks displayed on the left side of the screen. The bookmarks serve as a hypertext table of contents for the chapter you are viewing. You can control the appearance of bookmarks by selecting **View | Page Only** or **View | Bookmarks and Page.**

Using the Button Bar

The button bar can take you to the book's Index, table of contents, main menu, and glossary. It also lets you update your documents. Click the corresponding button to jump to the section you want to read.

Using Hypertext Links

Hypertext links appear in blue underlined text. These links are shortcuts to other sections or books.

Navigating with Double Arrow Keys

The double right and double left arrows (◀◀ and ▶▶) at the top of the Acrobat Reader window are the go-back and go-forward functions. The go-back button takes you to the last page you visited prior to the current page. Typically, you use ◀◀ to jump back to the main text from a cross reference or illustration.

Searching for Topics

Acrobat has a sophisticated search capability. From the main menu, select **Tools | Search.** Then choose the **Master Index.**

Displaying Figures   If lines in figures appear broken or absent, increase the magnification. You might also want to print a paper copy of the figure for better resolution.

Printing the Documentation

Note: For information on ordering printed copies of the documents, see .

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

Printing an Entire Document

To print an entire document, do the following:

1 From the documentation main menu screen, select one of the print-optimized documents. Print-optimized documents print two-screens to a side, both sides of the sheet on 8.5x11-in or A4 paper.

2 Select **File | Print**.

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

4 The document prints.

5 Close the file. Do not leave this file open while viewing the electronic documents.

Printing Part of a Document

To print a single page or a short section, you can print directly from the online version of the document:

1 Select **File | Print**.

2 Enter the page range you want to print, or select **Current**.

The document prints, one screen per side, two sides per sheet.

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2 Follow the instructions provided on the CD-ROM to do one of the following:

~ Print the paper version of the form, complete it, and either fax or mail it to us.

~ Access a Lucent Technologies website where you can enter your comments electronically.

Contact Us Directly   If you prefer not to use the comment form, you can contact us directly at the following address or fax number.

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

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1 Troubleshooting

Overview

This chapter describes some basic troubleshooting procedures for the on-site technician or system administrator with repair procedures for the most common system procedures. These procedures are contained in troubleshooting tables, each of which includes a column describing the trouble indication and a column describing the corrective action.

Note: This information is in addition to the repair procedures provided for system alarms in Chapter 4, Alarms and Log Messages.

Topics covered include:

The following assumptions are made in this chapter:

- You have checked the Message Log for any relevant messages. See "Message Log Report," in Chapter 7, "Common Administration" of *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501, for the procedure to run the report.

- The corrective action procedures are intended to provide a starting point to isolate a problem and may not be exhaustive.

- The corrective action procedures assume general editing knowledge and script familiarity, as most of the commands and procedures are performed from the command line.

- You have already performed a visual inspection of the system.

Repairing Power-Up Troubles

Power-up troubles are those that occur when first turn the system on. lists the indications related to power-up troubles.

Table 1. Repairing Power-Up Troubles

Indication	Corrective Action
The system does not power up.	**1** Verify that the platform is receiving power.
	2 Verify all external system connections (power cords and monitor cables) are correct (for example, the blue cable connects to the 3270 card and not to the system parallel port).
	3 Verify all external system connections are secure.
	1 of 3

Table 1. Repairing Power-Up Troubles

Indication	Corrective Action

During start-up, the system displays the following message:
 	
`Shared memory is marked as invalid. cvis_menu exiting.`
	1 Stop the voice system. See <u>Stopping the Voice System on page 217</u> in <u>Chapter 3, Common System Procedures</u>.
	
	2 Start the voice system. See <u>Starting the Voice System on page 214</u> in <u>Chapter 3, Common System Procedures</u>.
	
	3 Enter **cvis_menu**
	
	4 If the problem persists, do the following:
	
	   a Stop the voice system.
	   b Enter **cp /vs/shmem/devtbl vs/shmem/devtbl.old**
	   c Enter **rm /vs/shmem/devtbl**
	   d Start the voice system.

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Table 1. Repairing Power-Up Troubles

Indication	Corrective Action
The **start_vs** command takes a long time to initialize on a system with many analog lines.	**1** Starting at the Switch Administration screen, set Dial-Tone Training to "No." See Chapter 4, "Switch Interface Administration," of *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.
	Note: If dial-tone training is "no," you should specify the dial-tone frequency to be used with a particular switch (350 and 440 is the default for the DEFINITY switch).
	2 Verify that the transfers being performed in the application are still functioning properly.
When the system boots, it displays messages in the message log report or on the console similar to the following: `Unable to attach shared memory, Bad DEVTBL, and/or VROP respawning too rapidly.`	**1** Stop the voice system. See Stopping the Voice System on page 217 in Chapter 3, Common System Procedures.
	2 Enter **cp /vs/shmem/devtbl /vs/shmem/devtbl.old**
	3 Enter **rm /vs/shmem/devtbl**
	4 Start the voice system. See Starting the Voice System on page 214 in Chapter 3, Common System Procedures.

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Repairing Boot-Up Troubles

Boot-up troubles are those that occur when the system crashes and reboots itself or when you reboot the system. Table 2 on page 6 lists the indications and possible repair procedures related to boot-up troubles.

Table 2. Repairing Boot-Up Troubles

Indication	Corrective Action
Cards are not recognized during boot up.	1 Enter **pkginfo | pg**
	2 Make sure the driver software is installed (SSP, Tip/Ring, or T1).
	3 Check the circuit cards. See Checking the Circuit Cards on page 66 in Chapter 2, Diagnostics.
	4 Make sure that cards have the proper switch settings.
	1 of 5

Table 2.   Repairing Boot-Up Troubles

Indication	Corrective Action
When the system boots, it displays messages in the message log report or on the console similar to the following: `Unable to attach shared memory, Bad DEVTBL, and/or VROP respawning too rapidly.`	**1** Stop the voice system. See Stopping the Voice System on page 217 in Chapter 3, Common System Procedures. **2** Enter **cp /vs/shmem/devtbl /vs/shmem/devtbl.old** **3** Enter **rm /vs/shmem/devtbl** **4** Start the voice system. See Starting the Voice System on page 214 in Chapter 3, Common System Procedures.

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Table 2. Repairing Boot-Up Troubles

Indication	Corrective Action
The system displays the following message: `Non-system disk or disk error. Replace and hit any key to continue.`	**1** Check the diskette drive and confirm that it is empty. **2** Check the cartridge tape drive and confirm that it is empty. **3** Check the power connections. **4** Reboot the system. See <u>Rebooting the UNIX System on page 225</u> in <u>Chapter 3, Common System Procedures</u>.
The system passes run level four then reboots continuously (rolling reboot).	**1** Power off the platform immediately after the system reboots. **2** Remove one optional circuit card (for example, SSP, T1, or Tip/Ring). **3** Reboot the system. See <u>Rebooting the UNIX System on page 225</u> in <u>Chapter 3, Common System Procedures</u>. **4** Repeat <u>step 1</u> through <u>step 3</u> until the system reboots properly. **5** Replace the circuit cards.

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Table 2. Repairing Boot-Up Troubles

Indication	Corrective Action
A file system check shows a file system with 0 files, 0 blocks, or 0 free.	**1** Verify the disk partition was adequate. See "Recommended Disk Partitions" in Chapter 5, "Installing Base System Software," the maintenance book for your platform.
	2 Remove unnecessary data files.
	3 If the problem persists, restore the system software from the backup tape. See in .
	If no backup is available, reload the system software. See the following chapters the maintenance book for your platform:
	~ Chapter 5, "Installing Base System Software"
	~ Chapter 6, "Installing Intuity CONVERSANT System Software"
	~ Chapter 7, "Installing the Optional Feature Software"

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Table 2. Repairing Boot-Up Troubles

Indication	Corrective Action
The system hangs after a reboot and the screen is blank.	**1** Check the diskette drive and confirm that it is empty.
	2 Check the power connections.
	3 Check the hard disk drive indicator light for activity.
	4 Reboot the system. See Rebooting the UNIX System on page 225 in Chapter 3, Common System Procedures.

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Repairing System Installation, Upgrade, or Setup Troubles

Repair procedures are available for some troubles that occur during initial installation of the voice system, while upgrading either hardware or software, or when adding additional hardware or software.

Table 3 on page 11 lists the indications and possible repair procedures related to these troubles.

Table 3. Repairing System Installation/Upgrade/Set-Up Troubles

Indication	Corrective Action

The system cannot initialize the IPCI card.	**1** Check for possible conflict with memory and I/O addresses or interrupt conflicts.
	
	2 Log in as root.
	
	3 Enter **crash**
	
	4 Enter **strstat**
	
	The system displays a screen listing the tunable parameters similar to the screen shown in Figure 6 on page 12.
	
	  a Increase the values to slightly higher than what is listed in the **CONFIG** column.
	
	  b If anything other than 0 is listed in the **FAIL** column, use the **/etc/conf/bin/idtune** command to increase the tunable parameter. The parameters to tune are NSTREAM, NQUEUE (should be 4 X NSTREAM), NBLK4, NBLK16, NBLK64, NBLK128, NBLK256, NBLK512, NBLK1024, NBLK2048, and NBLK4096.
	
	  c After you have changed the tunable parameters, use the **/etc/conf/bin/idbuild** command to rebuild the UNIX kernel.
	
	5 Reboot the system. See Rebooting the UNIX System on page 225 in Chapter 3, Common System Procedures.

Figure 6. strstat Sample Output

```
> strstat
ITEM                CONFIG    ALLOC    FREE        TOTAL     MAX    FAIL
streams              106      106       0           592     109     0
queues               522      522       0          1926     530     0
message blocks        75       57      18         24269      77     0
data blocks           68       57      11         18271      68     0
link blocks           16       16       0            16      16     0
stream events          6        4       2             6       6     0

Count of scheduled queues:    0
.
```

Repairing Application-Related Troubles

Sometimes the voice system will not take calls or an application does not work as expected. Or there there may be trouble with the Script Builder application development tool or the Script Builder FAX Actions Package. Table 4 on page 13 lists the indications and possible repair procedures for these application-related troubles.

Table 4. Repairing Application-Related Troubles

Indication	Corrective Action
The voice system rings but does not answer the telephone or the voice system is busy.	1 Enter **display card all**
	2 Check the status of all the circuit cards.
	3 Make sure PLAY/CODE, and/or TTS, is assigned to an INSERV SSP card (in service).
	4 Check if the application is properly assigned to the channel(s).
	5 Make sure the application contains an action to answer the phone.
	6 Check the Message Log Report for messages indicating that TSM is respawning due to too many channels in the system.
	If so, do the following:
	a Use **/etc/conf/bin/idtune** to increase NCHANNELS tunable parameter.
	b Use **/etc/conf/bin/idbuild -B** to rebuild the kernel.
	c Reboot the system.

1 of 3

Table 4.   Repairing Application-Related Troubles

Indication	Corrective Action
The voice system answers the call, but does not play any speech.	**1** Scan the Message Log Report for messages related to the trouble.
	2 Enter **display card all**
	3 Verify that the spadm script is not assigned to any channels.
	4 Check the status of all the circuit cards.
	5 If spadm is assigned, reassign the channel to the correct script name. See Chapter 3, "Voice System Administration," of *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.
	6 Place test calls to determine if this is occurring on every channel.
	7 If this occurs only on certain channels, it could be a hardware problem. Place the problem channels in a MANOOS state until the card can be replaced.
	8 Enter **trace tsm chan all	tee /tmp/trace.out** This sends the trace output to the console and to the file **/tmp/trace.out**
	9 Review the trace output for failure indications or error messages.

2 of 3

Table 4.   Repairing Application-Related Troubles

Indication	Corrective Action
All calls are dropped.	**1** Scan the Message Log Report for messages related to the trouble.
	2 Enter **hstatus all**
	This will allow you to check the status of the host if this feature is being used.
	If all sessions are recovering or logging in, this could explain the trouble.
	3 Enter **who -rpb**
	4 Search for different time stamps on the processes.
	A recent date different from most of the others may indicate the process respawned.
	5 Record the scenario that caused the problem.
	6 If the process is specific to a feature package, see the trouble table for that feature package in this chapter.
	3 of 3

Repairing Script Builder Troubles

Table 5 on page 16 provides information on troubles related to the Script Builder package.

Table 5. Repairing Script Builder Troubles

Indication	Corrective Action
Messages are cut off.	Add a few seconds of initial silence (0.2 to 0.5 seconds) to the beginning of the message to be played.
	Another way to avoid missing any segment of a message is to construct a phrase consisting of a few seconds of silence and play that phrase first.
The terminal is locked up.	Use the following key sequence to release your keyboard:
	CONTROL J stty sane CONTROL J
Host sessions recover repeatedly.	**1** Scan the Message Log Report for messages related to the trouble.
	2 Make sure a Transaction Base screen has been specified.
	3 Make sure the Login and Recovery sequences both leave the host session at a Transaction Base screen.

1 of 3

Table 5.   Repairing Script Builder Troubles

Indication	Corrective Action
The system displays the following message: `No Space On Root File System.`	1 Press **EXIT** from Script Builder. 2 Clean up the root file system. Try to free a minimum of several hundred blocks. 3 Re-enter Script Builder with your application. You may find that everything is functioning properly with your application. You may be able to continue right where you left off and just retype any previous changes that were not saved. However, depending on where you were in the application when root ran out of space, some files may be corrupted. 4 If Script Builder fails completely with this application, do the following: a Remove the transaction part of the application by pressing REMOVE in the Script Builder Applications screen. b Restore it from a backup. See *Intuity CONVERSANT System Version 7.0 Application Development with Script Builder*, 585-313-206.
	2 of 3

Table 5.   Repairing Script Builder Troubles

Indication	Corrective Action
There is no speech output.	**1** Make sure the phrase actually exists. If it does not, record it. See the Speech Administration screen in Chapter 7, "Producing Speech," of *Intuity CONVERSANT System Version 7.0 Application Development with Script Builder*, 585-313-206. **2** Make sure the OVOL and IVOL parameters are correctly set in the Switch Interface screen. See Chapter 5, "Switch Interface Administration," of *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501. **3** Enter **display card sp** **4** Check the status of the SSP cards.
A ring no answer occurs for an application that has a host interface.	**1** Scan the Message Log Report for messages related to the trouble. **2** Check the host timeout value and verify that the host response time is not exceeded.

3 of 3

Repairing Script Builder FAX Actions Troubles

Table 6 on page 19 provides information about trouble related to the Script Builder FAX Actions package. See this table for appropriate corrective action if a trouble with Script Builder FAX Actions arises.

Note: The most most frequent reasons for a failure to send a fax is that the remote fax machine is busy or out of paper or that there is no fax machine at the remote number.

Table 6. Repairing Script Builder FAX Actions Troubles

Indication	Corrective Action
The fax cover page process failed.	The script request to join two files into a single fax file (possibly for use as a cover page) failed. For this operation to be completed, file conversions are performed to get the information into a form suitable for transmission.
	Most likely, one or both of the files requested are not suitable for transmission. Make sure the files requested are either text files or fax files entered through the FAX Loading and Printing screen.

1 of 5

Table 6.   Repairing Script Builder FAX Actions Troubles

Indication	Corrective Action
The execute UNIX command failed.	The script request to execute a UNIX command or shell script failed. Most likely, the problem is with the command or shell script. Check that the command or shell script that was attempted works when executed manually. If it does, make sure that its full path name is provided to the script.
	2 of 5

Table 6.   Repairing Script Builder FAX Actions Troubles

Indication	Corrective Action
A negative return value indicates that an error has occurred.	Use the following list of return values to determine the cause of the error: • -1: Another faxit command going on. • -2: Fax failed. • -3: Channel denied. • -4: Fax does not exist. • -5: No previous queued faxes. • -6: No background file exists. • -7: No foreground file exists. • -8: No foreground file exists. • -10: Opening file failed. • -12: Can't set timer. • -13: File not specified. • -14: System error. • -15: Destination not supplied. • -17: Command not supplied. • -18: Return string not supplied.

3 of 5

Table 6. Repairing Script Builder FAX Actions Troubles

Indication	Corrective Action
Fax file or text file not found.	The script request to transmit a fax file to the caller failed because the fax file or text file requested could not be found. Verify that the fax file exists either in the Fax Loading and Printing screen or at the full path specified in the script.
	The caller did not receive the fax requested. Consider manually transmitting the fax message requested by the caller using the delivery number contained in the error message.
The Out of Call Fax Report or output from the **faxlog** or **faxrpt** command indicates that fax transmission failed (con't.).	Corrective actions for the causes of failure are described below:
	• NoProtocol (no protocol) — The destination number may not be a fax device or a connection cannot be made to the number. Check the number.
	• Remote-DCN (remote disconnect) — The remote fax device was most likely disconnected before transmission was complete. Manually resend the fax.
	• DI Error (internal error) — An Intuity CONVERSANT fax internal error occurred. A VXMDI message may have been logged. Follow the repair procedure provided for the message in Chapter 4, Alarms and Log Messages.

4 of 5

Table 6. Repairing Script Builder FAX Actions Troubles

Indication	Corrective Action
The Out of Call Fax Report or output from the **faxlog** or **faxrpt** command indicates that fax transmission failed (con't.).	• `Loopback` — The destination number is likely the same as the Intuity CONVERSANT system. Check the number. Due to loop prevention, a fax may not be able to be transmitted to another line on the same system but must be forwarded instead.
	• `FTT` (failure to train) — The transmission training tone was not recognized. Check the line conditions.
	• `ProtoTmout` (protocol timeout) — The destination number may not be a fax device, the transmission training tone may not have been recognized, the remote fax device may have a protocol incompatibility or nonconformance, there may have been problems with the retraining tone, service disruption may have affected the line, or there is noise on the line. Manually resend the fax, if necessary.
	• `Halted` — The fax was most likely cancelled by the Intuity CONVERSANT system before the remote fax device hung up. Manually resend the fax, if necessary.
	• `ProtoError` (protocol error) — The remote fax device may have a protocol incompatibly or nonconformance. If possible, investigate the remote fax device or try another number.
	• `RTN` (retrain negative) — Problems with the retraining tone indicate an excess of transmission errors. Partial transmission of the fax may have been successful. Check the line conditions.

Repairing Administrative Troubles

Administrative troubles sometimes occur when the system performs a task you have initiated (for example, a trouble arises while performing a backup of the system software). Table 7 on page 24 contains troubles related to administrative tasks.

Table 7. Repairing Administrative Troubles

Indication	Corrective Action
UNIX commands are failing or the disk reported failures.	Scan the Message Log Report.
Using the vi editor causes a core dump.	To split the file into multiple segments, enter **split -*n filename name*** where *n* is the number of lines in each piece (1000 is the default), *filename* is the name of the files you want to split, and *name* is the new segment you are creating.
	1 of 2

Table 7.   Repairing Administrative Troubles

Indication	Corrective Action
ccasum never finishes its cron job.	**1** Determine if you are transferring to more than 100 numbers. If you are, kill the cron job by doing the following: **a** Enter **ps -ef | grep ccasum** **b** Search for the parent process id (PID) for ccasum (located in the second column from the left). **c** Enter **kill -9 *pid#*** where *pid#* is the PID number. **2** Create an index for ccasum by doing the following: **a** Log in to SQL*Plus as sti/sti **b** Enter **create index cca_idx on cca(phone_num);** **c** Enter **:quit** to exit the SQL*Plus Utility. **3** When the call traffic is light, enter **/vs/bin/util/ccasum** **4** Enter **/vs/bin/util/ccadel** when ccasum is finished.
	2 of 2

Repairing Operational Troubles

Operational troubles are experienced with the physical components of the voice system, such as a blank monitor or an inoperable modem. These troubles can occur at any time. Table 8 on page 26 contains troubles related to operational tasks.

Table 8. Repairing Operational Troubles

Indication	Corrective Action
The alarm buzzer on the TAM is sounding.	Enter **alarm_cutoff** at the UNIX system prompt.
The **shutdown** and **init** commands do not bring the system down.	Perform a hard reboot of the system. See Rebooting the UNIX System on page 225 in Chapter 3, Common System Procedures, for the procedure.

1 of 2

Table 8. Repairing Operational Troubles

Indication	Corrective Action
The monitor screen is blank, but the voice system is still taking calls.	**1** Check the power on the voice system. If the power is on, place a test call to the system. **2** Check the LED on the monitor. If the LED is on, check the contrast and brightness controls on the monitor. **3** Check the monitor connection to the voice system. **4** Unplug/plug in the monitor cable to the voice system. **5** Check the on/off switch on the monitor. **6** Log in remotely to check out the system and see if the voice system is taking calls. **7** If the problem persists, replace the monitor and/or the video controller module on the IOB.
	2 of 2

Repairing Feature Licensing Troubles

Feature Licensing troubles are those that occur when the user is unable to access certain features of the system. contains troubles related to operational tasks.

Table 9. Repairing Feature Licensing Troubles

Indication	Corrective Action
Feature licensing is no longer active.	If the name of your system has been changed, notify field support personnel.

Repairing Other Voice System Troubles

The following tables contain some general trouble areas that do not fall into the other classes listed above. Specifically, these troubles include:

Repairing Call-Transfer Troubles

Table 10 on page 30 lists the repair procedures for repairing call-transfer troubles.

Table 10. Repairing Call Transfer Troubles

Indication	Corrective Action
Voice System not transferring calls properly (cont.).	**1** Scan the Message Log Report.
	2 Verify the values on the Switch Administration screen as described in Chapter 4, "Switch Interface Administration," of *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.
	If this screen has changed, do the following:
	a Save the values.
	b Stop the voice system. See Stopping the Voice System on page 217 in Chapter 3, Common System Procedures.
	c Start the voice system. See Starting the Voice System on page 214 in Chapter 3, Common System Procedures.
	d Reinstall the application.
	1 of 2

Table 10.   Repairing Call Transfer Troubles

Indication	Corrective Action
Voice System not transferring calls properly.	**3** Try to transfer a call manually, by completing the following steps:
	Note: You need an analog telephone for this test.
	a Plug the line going into the voice system into the telephone.
	b Place the call to this telephone.
	c Answer the call.
	d Try to transfer to another extension.
	4 Assign the feature test script to the channel and place test calls.
	5 Enter **trace tsm chan all trip	tee /tmp/trace.out**
	6 Check the logic of the application that is doing the transfer.
	2 of 2

Repairing Performance Troubles

Table 11 on page 32 lists the repair procedure for performance troubles.

Table 11. Repairing Performance Troubles

Indication	Corrective Action
The system is slow or delayed in speaking.	Reduce the load. See Reducing Load on page 36.
The system performance is degraded. For example: • Speech breaks are occurring. • There is bad response time to commands.	

Repairing Diagnostics Troubles

Table 12 on page 32 lists the repair procedures for repairing diagnostics troubles.

Table 12. Repairing Diagnostics Troubles

Indication	Corrective Action
Card diagnostics failed.	Check the circuit cards. See Checking the Circuit Cards on page 66 in Chapter 2, Diagnostics.

Repairing Touch-Tone Input Troubles

Table 13 on page 33 lists the repair procedures for repairing touch-tone input troubles.

Table 13. Repairing Touch-Tone Input Troubles

Indication	Corrective Action
User touch-tone input is not being correctly interpreted by the system.	**1** Verify the action to collect data from the caller matches the intended use in the script.
	2 If this is channel related (that is, the trouble only appears on a particular channel) and you have another card, see if the trouble occurs on the other card.
	If not, replace the original card. See Chapter 2, "Installing or Replacing Circuit Cards," in the maintenance book for your platform.

Repairing Report Troubles

Table 14 on page 34 lists the repair procedures for repairing report troubles.

Table 14.   Repairing Report Troubles

Indication	Corrective Action
Call data reports are not accurate or they are not complete.	**1** Determine if there is any additional free space in the database by entering **dbfrag** **2** Scan the Message Log Report.

Repairing Channel/Card State Troubles

Table 15 on page 34 lists the repair procedures for repairing channel/card state troubles.

Table 15.   Repairing Channel/Card State Troubles

Indication	Corrective Action
Channel/card is in Manoos state.	Restore the channel or card by entering **restore *channel/card channel#/card#*** See Appendix A, "Summary of Commands," in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501 for more information on the **restore** command.
	1 of 2

Table 15. Repairing Channel/Card State Troubles

Indication	Corrective Action
Channel/card is in FOOS state.	Enter **display channel *channel_number***
	If T1.5, PRIB, or PRID is displayed, check the error log for a message in the range TWIP013–TWIP018. Follow the recommended repair procedure for that message.
	If VRS6, IVP4, or IVP6 is displayed:
	1 Enter **diagnose card *card_number***.
	2 If the channel remains Foos, check the telephone connection to the card.
Channel/card is in BROKEN state.	Follow the repair procedure for message MTC003 on page 428 in Chapter 4, Alarms and Log Messages.

2 of 2

Reducing Load

This repair procedure is provided to enable application developers and system administrators to troubleshoot the root cause of system problems. Problems related to performance depend on a wide range of variables. Understanding the nature of the problem requires a good understanding of the attributes of the system that affect performance.

Note: Every system must have a minimum of 128 Mbyte of memory.

The information provided in this section is platform related. Rule out application-related performance problems first before proceeding with this procedure.

Identifying Performance Problems

Most performance-related problems become noticeable through either reports of slow response time from end users or performance- or load-related error messages in the alarm log.

Reports of Poor Response Time   If poor response time is reported but no load-related messages are reported to the alarm log, it is likely that the response time delays are a result of:

• Host transactions

• Database transactions

- Delays in custom database interface processes (DIPs) or customer IRAPI processes

- Large, complex applications

An application rarely experiences unacceptable delays because of voice processing (playing and coding phrases and recognizing touch tones) without alarms in the alarm log. Voice processing shows little change in response time as system load increases. Typically, if load increases to a point where the system cannot serve voice processing requests in real time, alarms are logged.

Reports of System Inaccessibility
Typically, if load increases to a point where the system cannot serve voice processing requests in real time, alarms are logged. However, if the system is inaccessible, the alarms logged are also inaccessible. UNIX interprocess communication (IPC) message queues may indicate that the system may be nearing its load threshold.

Load-Related Messages in the Alarm Log
Load-related messages in the alarm log indicate that voice processing cannot be carried out in real time because of excessive system load. Components of the system which affect voice processing include:

- CPU complex

- Memory

- Hard disk drives

Identifying Load Culprits

Before attempting to analyze the application for load liabilities, it is important to remember that processing external to the application may be the cause of load related problems. Check that none of the following occur at times when load-related alarms are reported:

- Use of the Intuity CONVERSANT Script Builder application generator on a production machine during peak load hours

- Excessive use of call data event tracking

- Excessive requests to the 3270 host interface

- Reading of large (more than 500 records) database tables that are not indexed

- Reading of and writing to database tables exclusively

- Use of the system monitor program with a fast refresh rate

  A fast refresh rate is anything less than the default rate of 5 seconds.

- Requests for call data reports during peak load periods

- Performance of other operation, administration, and maintenance (OA&M) functions (includes backups, speech administration, etc)

- ASCII-to-fax conversions when using Script Builder FAX Actions

- System cron jobs

Note: Every day at 12:15 a.m. all call data is summarized. If this coincides with even low voice processing activity, alarms may be reported. A possible solution is to modify the crontab entry for a time with less load.

If sources of external load have been ruled out, continue with the procedures in , , and .

Checking CPU Resources   To check the CPU resources, enter **sar**

Note: To display current CPU usage every 5 seconds for 50 seconds, enter **sar 5 50**

The system displays the CPU Resources screen ().

Figure 7.   CPU Resources Screen

```
00:00:00%usr %sys   %wio   %idle
01:00:00  0    0      0      100
02:00:00  0    0      0      100
03:00:00  0    0      0      100
04:00:00  0    0      0      100
05:00:00  0    0      0      100
06:00:00  0    0      0      100
07:00:00  0    0      0      100
08:00:00  0    0      0      100
08:20:00  0    0      0      100
08:40:00  0    0      0      100
09:00:00  0    0      0       99
09:20:00  0    0      0       99
09:40:00  0    4      1       95
10:00:00  9   43      3       45
10:20:00 10   36      2       52
10:40:00 10   23      2       65
11:00:00  9   23      2       65
11:20:00  2    4      1       93
11:40:00  0    0      0       99
```

If the CPU Resources screen shows CPU usage (the sum of columns 2
and 3, usr + sys) over 60 percent during the busy hour or when alarms
are logged, it is likely that alarms are a result of over utilization of CPU
resources.

The output of the second command should only be considered during the busy hour and CPU usage should again be below 60 percent. If either of these tests show CPU utilization consistently over 60 percent it is likely that the CPU is the problem.

See Reducing Load on the CPU on page 52.

Checking Disk Resources

To check the disk resources, enter **sar -c** or **sar -c 5 50**

The system displays the Disk Resources screen (Figure 8 on page 41).

Figure 8. Disk Resources Screen

14:23:46	scall/s	sread/s	swrit/s	fork/s	lwpcr/s	exec/s	rchar/s	wchar/s
14:23:51	389	92	12	2.00	0.00	3.40	45977	1011
14:23:56	646	130	99	1.40	0.00	2.20	49849	9142
14:24:01	404	98	16	1.40	0.00	2.20	47136	4298
14:24:06	401	89	13	2.20	0.00	3.60	45524	594
14:24:11	127	27	5	0.00	0.00	0.00	341	1181
14:24:16	92	23	1	0.00	0.00	0.00	320	286
14:24:21	108	21	1	0.00	0.00	0.00	291	1259
14:24:26	245	83	4	0.00	0.00	0.00	789	1281
14:24:31	468	133	34	1.40	0.00	2.20	49135	2470
14:24:36	95	26	4	0.00	0.00	0.00	812	3436
14:24:41	74	21	1	0.00	0.00	0.00	291	1916
14:24:46	226	41	33	0.00	0.00	0.00	1406	2134
14:24:51	100	22	2	0.00	0.00	0.00	297	1926
14:24:56	125	23	1	0.00	0.00	0.00	354	1916

Note: If the sum of the rchar/s and wchar/s columns is consistently greater than 320000 during the busy hour, then it is likely that the disk is the problem. See Reducing Load on the CPU on page 52 for repair procedures.

Checking Memory Resources

To check the CPU resources, do the following:

1 Enter **sar -p** or **sar -p 5 50**

The system displays the Memory Resources screen (Figure 9 on page 42).

Figure 9. Memory Resources Screen

```
14:27:30   atch/s atfree/s atmiss/s  pgin/s  ppgin/s  pflt/s  vflt/s slock/s
14:27:35    43.20   21.40    1.40     0.20     0.20   20.40   31.20    0.00
14:27:40     0.00    0.00    0.00     0.00     0.00    0.00    0.40    0.00
14:27:45     0.60    0.40    1.00     0.40     1.00    0.00    0.40    0.00
14:27:50     0.00    0.00    0.00     0.00     0.00    0.00    0.00    0.00
14:27:55     0.00    0.00    0.00     0.00     0.00    0.00    0.00    0.00
14:28:00     0.00    0.00    0.00     0.00     0.00    0.00    0.00    0.00
14:28:05     0.00    0.00    0.00     0.00     0.00    0.00    0.00    0.00
14:28:10     0.40    0.20    0.00     0.00     0.00    0.00    0.20    0.00
14:28:15    25.20    1.20    1.40     0.00     0.00   23.80   18.20    0.00
14:28:20     3.60    0.40    3.60     3.40     3.60    3.20    4.40    0.00
14:28:25    21.00    0.60    1.20     0.00     0.00   20.20   13.00    0.00
14:28:30    68.20   10.00   22.40    14.40    20.00   49.40   67.20    0.00
14:28:35    16.40   12.20    3.20     4.80    11.20    0.00   24.60    0.00
14:28:40     2.60    0.00    0.80     0.80     0.80    0.00   20.80    0.00
14:28:45     0.00    0.00    0.00     0.00     0.00    0.00    0.00    0.00
14:28:50     0.00    0.00    0.00     0.00     0.00    0.00    0.00    0.00
14:28:55     0.00    0.00    0.00     0.00     0.00    0.00    0.00    0.00
14:29:00     0.20    0.00    1.20     1.20     1.20    0.20    1.20    0.00
14:29:05     0.20    0.00    0.60     0.20     0.40    0.20    0.40    0.00
14:29:10     0.80    0.80    0.00     0.00     0.00    0.00    0.80    0.00
14:29:15     0.00    0.00    0.20     0.00     0.00    0.00    0.20    0.00
```

2 Check the column labeled vflt/s. Note if this value is consistently close to or greater than 50.00 and continue with step 3.

Note: Processes being created and terminated regularly will also cause vflt/s to increase. If this is the case, memory may be sufficient, but the creation of processes is forcing the operating system to *page* processes to disk and back into memory. When processes are paged, they respond more slowly and speech processing may be interrupted.

3 Enter **sar -g** or **sar -g 5 50**

The system displays the Memory Resources screen (Figure 10 on page 43).

Figure 10. Memory Resources Screen

```
14:32:49   pgout/s  ppgout/s   vfree/s   pfree/s   vscan/s
14:32:54    0.00     0.00       0.00      0.00      0.00
14:32:59    0.00     0.00       0.00      0.00      0.00
14:33:04    0.00     0.00       0.00      0.00      0.00
14:33:09    0.00     0.00       0.00      0.00      0.00
14:33:14    0.00     0.00       0.00      0.00      0.00
14:33:19    0.00     0.00       0.00      0.00      0.00
14:33:24    0.00     0.00       0.00      0.00      0.00
14:33:29    0.00     0.00       0.00      0.00      0.00
14:33:34    0.00     0.00       0.00      0.00      0.00
14:33:39    0.00     0.00       0.00      0.00      0.00
14:33:44    0.00     0.00       0.00      0.00      0.00
14:33:49    0.00     0.00       0.00      0.00      0.00
14:33:54    0.00     0.00       0.00      0.00      0.00
14:33:59    0.00     0.00       0.00      0.00      0.00
14:34:04    0.00     0.00       0.00      0.00      0.00
14:34:09    0.00     0.00       0.00      0.00      0.00
14:34:14    0.00     0.00       0.00      0.00      0.00
```

4 Check the column labeled pgscan/s. Note if this value is consistently close to or greater than 100 and continue with .

5 Enter **sar -r**

The system displays the Memory Resources screen ().

Figure 11. Memory Resources Screen

```
00:00:00   freemem freeswap
01:00:00     4783    69125
02:00:00     4889    69155
03:00:00     4889    69155
04:00:01     4888    69155
05:00:01     4887    69136
06:00:00     4885    69135
07:00:00     4886    69136
08:00:00     4887    69155
08:20:00     4884    69136
08:40:00     4890    69193
09:00:00     4887    69136
09:20:00     4884    69135
09:40:00     4671    69121
10:00:00     4518    68978
10:20:00     4502    68958
10:40:00     4501    69027
11:00:00     4177    68797
11:20:00     3988    68660
11:40:01     3648    68580
```

6 Check the column labeled freemem. Note if this value is consistently close to or less than 100.

7 If two or more values consistently follow the pattern listed below, see Reducing Memory Usage on page 54 for more information.

vflt/s > 50.00

pgscan/s > 100

freemem < 100

Also, make sure that the appropriate number of SSP circuit cards in your system are assigned the VOICE function. See "SSP Functions" in Chapter 3, "Voice System Administration," of *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.

Reducing Load for Host

Tune the 3270 host interaction.

The following procedures should be considered for reducing the load for the host.

- Limit the number of screens that must be sent to or retrieved from the host, making the voice system less dependent on host performance.

- The parameters associated with the host can impact system performance. Make sure that time-out periods are long enough for the host to respond but not too long so that the caller must wait unnecessarily. Be aware of how the parameters are used and what is typical for the host

system. Keep track of how many LUs the system has and how many channels are to be used. For example, if a system with one host communication board (32 LUs available) has 48 calls active each of which needs to access the host, 16 callers are locked out of the host if LUs are not shared (that is, if the LUs are reserved).

- For host systems that are known to be slow at times, one way of hiding the pause from the host is to use an announce statement between the send host screen and the get host screen statements. For example:

- Prompt and Collect (get card number)

    a Get Host Screen A
    b Send Host Screen A (send the card number to the host application)
    c Announce (repeat the card number to the caller)
    d Get Host Screen (retrieve caller data)

    This would cover part of the time that the host is slow in processing the user-input card number with an announce statement that repeats the number back to the user. By the time the announce is completed, the host may have responded. Thus the user does not realize the gap caused by the slow host response.

- Consider checking the speed of the host link. Increasing the speech of the link to 19.2 or 56 Kbps may decrease any delays in host processing.

Reducing Load for Database

The following should be considered to reduce load because of use of the local database.

- For large tables (over 500 records) that are being read by the application, indexing the tables reduces the access time and impact on system performance. However, note that making changes to indexed tables can also impact system performance.

- The insert (add) record operation is a much faster operation than the update (change) operation. One way to replace a change record with an add record is to add records to a table during the normal call hours and write a shell routine using SQL*PLUS to summarize and delete records during nonpeak hours.

- Attempt using SQL*Views to encapsulate common database queries which require multiple accesses on a single table or accesses from multiple tables.

- Keep in mind that each call data event is a unique record in more than one table. Therefore, every time a call data event is accessed, the database table is updated at the end of the call.

Reducing Load for Custom DIPs/IRAPI Processes

Since DIPs can be vary widely in size and complexity there is little specific information that can be given about DIP performance. In general, DIPs should:

- Avoid using excessive memory (more than 200 pages)

- Avoid creating new processes (by using **fork(2)** and **exec(2)** or **system(3)**)

- Rely on minimal communication with the script to reduce message sending

Reducing Load for Voice Processing

The information below simply attempts to give a step-by-step approach to reducing speech-processing load.

Voice Play   Voice play performance is affected by the:

- Coding algorithm

- Phrase length

- Speech pool

Coding Algorithm   Coding algorithm primarily determines how much data must be transferred to do voice processing. Coding algorithms such as SBC16, ADPCM16, and CELP16 pack 4 seconds of speech in a single 8-Kbyte block and show the best performance. PCM64 is at the other extreme of the spectrum; it packs 1 seconds of speech in a single block, and therefore requires the system to do four times the work in the same time. ADPCM32 is the standard coding rate. ADPCM32 is a middle ground between performance and sound quality. It packs 3 seconds per block. SBC24 packs 3 seconds per block. Sound quality must be considered before moving to the SBC16 or ADPCM16 coding algorithms.

Phrase Length   Short phrases (less than 2 seconds for ADPCM32), particularly when played back-to-back (such as through a single action), place more load on the system then a single longer phrase. The load manifests itself as increased CPU usage, memory occupancy and, if the speech pool size (see the following paragraph) is larger than the speech buffer cache, disk accesses.

For optimal performance, phrase length should be as close to the total capacity of its block count as possible. Block count is the number of speech blocks required to contain the phrase. If speech does not use blocks efficiently space is wasted in memory, and since data is copied over from disk in block sized chunks, disk accesses and CPU usage increase. For example, a phrase that uses an odd number of seconds (1, 3, 5, etc.) uses only 50 percent of a block, whereas a 2-second phrase uses the entire block. However, the system utilizes CPU and disk resources more efficiently when speaking a 5-second phrase rather than 5 individual 1-second phrases.

Placing longer phrases into one step is preferable to using separate short phrases.

Speech Pool   The speech pool is the quantity of speech data required by an application. It can be thought of as the working set (for those familiar with virtual memory operating system terminology). The voice system caches speech in main memory. This is called the speech buffer cache, and it allows speech data to be reused without having to constantly retrieve it from disk. If all the active speech data can fit into memory simultaneously, the voice system will not have to continually access the disk for speech data. This results in a substantial savings in both CPU usage and disk accesses. If, however, the speech pool size is larger than the speech buffer cache, then the voice system will have to access the disk more frequently for speech. The larger the speech pool, the more likely speech will have to be read from disk.

Calculating speech pool size requires knowing which phrases are usually played during normal script processing and how many blocks of speech these phrases require. See the paragraph above regarding block capacity for various coding algorithms. Calculating the size of the buffer cache requires a meticulous analysis of the application and an understanding on how users progress through a typical call scenario.

The size of the buffer cache is tunable by adding the *nbufs* parameter in the **/vs/data/spchconfig** file. VROP sets this value dynamically based on the number of telephone network connections in the system. The entry in the **/vs/data/spchconfig** file overrides the VROP setting. Note that you may not

set this value to more than 250. A system showing signs of heavy disk activity, a large speech pool, and no appreciable paging activity may be a candidate for specifying the *nbufs* parameter. Modifying this dynamically assigned value should be done with extreme caution. Making this number too large may result in system paging, which is the worst condition the voice system can get into with respect to performance.

Reducing Load for Voice Play

Reducing load because of voice play requires maximizing speech buffer efficiency, matching the speech pool size to the speech buffer cache, or considering the use of different coding rates which pack more speech into a single block or disk load balancing.

Maximal speech buffer efficiency may be achieved through the concatenation of several small phrases into a single larger phrase. The common practice of trimming silence from the ends of phrases and replacing the silence with short silent phrases is particularly inefficient. Playing silence to introduce delays is also inefficient. Try using the **sleep** instruction as described in Appendix A, "Summary of Script Instructions," of *Intuity CONVERSANT System Version 7.0 Application Development with Advanced Methods*, 585-313-203.

Matching the speech pool size with the speech buffer cache may be achieved through increasing speech buffer efficiency as described above, and ensuring that phrases are shared both with and between applications.

Voice Code   Performance because of voice code is affected similar to voice play with
                     respect to phrase length and coding algorithm. Voice coding differs in speech
                     pool size. All coded phrases are *new*; that is, there is no benefit from the
                     speech buffer cache. It is likely that coded phrases will force other phrases to
                     be flushed from the cache. Coding also requires a write to disk for each
                     phrase coded. These two factors combine to increase load on the disk.
                     Increased disk load because of coding may be addressed by switching
                     coding algorithms, reducing channel counts or code times, or balancing the
                     disk load.

Reducing Load on the CPU

                     Application types making heavy use of CPU resources typically include those
                     with heavy voice processing or local database loads. See Reducing Load for
                     Voice Processing on page 48 and Reducing Load for Database on page 47. If
                     these software components do not appear to be responsible, the following
                     sections suggest other possibilities.

Inefficient DIPs See Reducing Load for Custom DIPs/IRAPI Processes on page 48.

Run Away   If the **sar(1m)** command consistently shows 0 percent idle time, it is likely that
Processes   a process is in an infinite loop. The process can be identified with **ps(1m)** by
                      examining the change in its CPU time and run status. If it is a system
                      process, contact a service representative. If it is a user process, repair as
                      required.

Inefficient Scripts   Script developers can write applications that inherently use system resources inefficiently or are extremely large and complex. Since scripts are interpreted, using the script language for anything other than basic call flow control may result in unacceptable inefficiencies. Code segments performing complex lexical or arithmetic calculations should be considered as candidates for DIPs. Also, increase efficiency by creating modular applications that execute sub-applications from a main application. For example, a main application could allow a user to select a language application (that is, a version of an application in a particular language). The user input would then execute the language application from the main application.

Reducing Disk Usage

Applications making heavy use of voice processing or a local database typically place heavy loads on the disk. See and . If problems persist, consider rechecking paging activity and memory usage. Also, consider adding more disks to your platform.

Reducing Memory Usage

If you have concluded that your system does not have sufficient memory, the first thing to consider is the processes you have running. Be sure to check to rule out the effects of external processing. lists the processes that can be terminated if they are not providing a service to the application.

Table 16. Processes That May Be Terminated

Process	Description
xferdip	This process is used only in bridging applications. Enter **xferdip_off** to terminate the process.
lpsched	This process is only required if a line printer is being used with the system. The command **/usr/lib/lpshut** can be used to turn off the lp scheduler. You may also rename the **S80lp** file from the **/etc/rc2.d** directory to **s80lp**. This action prevents the process from being execute during startup, but maintains the file on the system should the scheduler be needed in the future.
Network	Some networking processes such as **rwhod** and **routed** may be unnecessary.
sysmon	Do not run **sysmon** in systems with insufficient memory.

If no processes can be eliminated, be sure that all the packages on your system are being used and are not occupying memory unnecessarily.

Also be aware that script size, both code and data, affects memory usage. Application scripts should be shared across channels whenever possible, and redundant code and data should be eliminated.

Finally, if the *nbufs* parameter has been specified in the **/vs/data/sphchconfig** file and a large number is specified (see Speech Pool on page 50), consider reducing *nbufs*. The effect of reducing *nbufs* may be an increase in disk accesses for speech. However, the voice system is more tolerant of disk accesses for speech than for paging.

2 Diagnostics

Overview

This chapter describes diagnostic procedures for Intuity CONVERSANT system troubles.

Topics covered include:

Circuit Card Diagnostics

The following diagnostics can be performed on:

- Tip/Ring circuit cards

- SSP circuit cards

Checking Cable Connections for Cables Other Than the TDM Bus Cable

To check cable connections, do the following:

1 Route calls away from the system during this procedure.

2 Make sure that you know the type of card to be checked.

3 Write down the message text to make note of the card number.

4 Shut down the operating system. See Shutting Down the Operating System on page 222, in Chapter 3, Common System Procedures .

5 Access the circuit card cage.

See the "Getting Inside the Computer" chapter of the maintenance book for your platform.

6 Check the cable connections to be sure they are properly connected to the appropriate cards.

See the "Replacing or Installing Circuit Cards" chapter in the maintenance book for your platform.

7 If a cable is not seated properly, reseat the cable and continue with step 8.

If the cables appear to be inserted properly, do the following before continuing with step 8.

   a Remove the cables other than the TDM bus cable.

Note: Do not remove the TDM Bus cable at this time.

   b Remove the circuit card from the system. See Chapter 2, "Installing or Removing Circuit Cards," in the maintenance book for your platform.

   c Replace the circuit card. See Chapter 2, "Installing or Replacing Circuit Cards" in the maintenance book for your platform.

Note: Do not reseat the cables on the circuit card.

8 Reboot the operating system. See Rebooting the UNIX System on page 225 in Chapter 3, Common System Procedures .

9 Enter **diagnose card *card_number***

where *card_number* is the number of the identified circuit card.

- ~ If the circuit card passes diagnostics, and is on the TDM bus, continue with step 10.

- ~ If the circuit card passes diagnostics and is not on the TDM bus, replace the cables you removed earlier and restore the system to service.

- ~ If the circuit card fails diagnostics, replace the circuit card and restore the system to service. See Chapter 2, "Installing or Replacing Circuit Cards" in the maintenance book for your platform.

10 Enter **diagnose bus *x***

where *x* is the number of bus.

Note: *x* must be either **1** or **all**.

If the circuit card:

- ~ Passes this diagnostic, replace the cables removed in Checking Cable Connections for Cables Other Than the TDM Bus Cable on page 57.

- ~ Fails this diagnostics, continue with the procedure in Checking the Terminating Resistors on page 60.

Checking the Terminating Resistors

To check the terminating resistors, do the following:

1 Shut down the operating system. See Shutting Down the Operating System on page 222 in Chapter 3, Common System Procedures .

2 Verify that the terminating resistors are inserted correctly. See the "Replacing Other Components" chapter in the maintenance book for your platform.

Note: The AYC5B and AYC11 circuit cards do not require orientation of the terminating resistors.

3 If the terminating resistors are inserted correctly, continue with step 4.

If the terminating resistors have not been inserted correctly, do the following:

a Insert the terminating resistors correctly.

b Reboot the system. See Rebooting the UNIX System in Chapter 3, Common System Procedures .

c Enter **diagnose card** *card_number*

where *card_number* is the number of the identified circuit card.

d If the circuit card :

- Passes diagnostics, restore the system to service.
- Does not pass diagnostics, continue with step 4.

4 Verify that terminating resistors for the TDM bus exist only on the circuit cards connected at either end of the TDM bus.

If the other circuit cards do not have terminating resistors, continue with the procedure in .

If the other circuit cards have terminating resistors, do the following:

a Remove the terminating resistors.

b Reboot the system. See in .

c Enter **diagnose card** *card_number*

where *card_number* is the number of the identified circuit card.

d If the circuit card:

- Passes diagnostics, restore the system to service.

- Does not pass the diagnostic, continue with the procedure, .

Checking the Backplane Slot

To check the backplane slot, do the following:

1 Shut down the system. See Shutting Down the Operating System on page 222 in Chapter 3, Common System Procedures .

2 Change the slot in which the circuit card resides.

3 Log in as **root**.

4 Start the voice system. See Starting the Voice System on page 214, in Chapter 3, Common System Procedures .

5 Enter **display card *card number***

where *card number* is number of the affected circuit card.

6 If the circuit card state:

    ~ Has changed to MANOOS, enter **restore card *card number***

    where *card number* is the number of the affected circuit card.

    ~ Has not changed to MANOOS, continue with the procedure in Checking the Switch Settings on page 63.

Checking the Switch Settings

To check the switch settings, do the following:

1 Check the circuit card for proper switch settings. See Chapter 2, "Installing or Replacing Circuit Cards" in the maintenance book for your platform.

2 Check the switches to ensure a clean closure.

3 Check the chips on the card, and f any are not properly seated, reseat them.

4 Reboot the system. See Rebooting the UNIX System on page 225 in Chapter 3, Common System Procedures .

5 Log in as **root**.

6 Start the voice system. See Starting the Voice System on page 214 in Chapter 3, Common System Procedures .

7 Enter **display card** *card number* where *card number* is number of the affected circuit card.

8 If the circuit card state:

~ Has changed to MANOOS, enter **restore card *card number***

where *card number* is the number of the affected circuit card.

You have repaired the circuit card.

~ Has not changed to MANOOS, continue with .

9 Shut down the system. See in Chapter 3, Common System Procedures .

10 Reverse the switch settings of the suspect circuit card with a similar circuit card in the system.

11 Reboot the system. See in Chapter 3, Common System Procedures .

12 Log in as **root**.

13 Start the voice system. See in Chapter 3, Common System Procedures .

14 Enter **display card *card number***

where *card number* is number of the affected circuit card.

~ If the circuit card state has changed to MANOOS, enter
  restore card *card number*

  where *card number* is the number of the affected circuit card.

~ If the problem migrates with the switch setting, it is attributable to a
  software problem and not a hardware problem.

~ If the problem remains with the suspect circuit card, replace the
  suspect circuit card. See Chapter 2, "Installing or Replacing Circuit
  Cards" in *Intuity CONVERSANT System Version 7.0 Maintenance*,
  585-313-501.

Checking the Circuit Cards

If the procedures in [Checking the Backplane Slot on page 62](#) and [Checking the Switch Settings on page 63](#) have been attempted and the problem still exists, the problem may be attributed to another circuit card in the system. To determine which card, do the following:

1 Run diagnostics on all remaining cards in the system by entering:
diagnose card all

2 Observe the diagnostics for any failures.

If any circuit card fails diagnostics, perform the [Checking the Backplane Slot on page 62](#) and [Checking the Switch Settings on page 63](#) procedures on that circuit card to determine if it is the source of the problem.

If all cards pass diagnostics, contact your service representative.

Checking a Circuit Card Using the Intuity CONVERSANT Windows

The Intuity CONVERSANT windows can be used to check the status of:

• Tip/Ring circuit cards

• IPCI circuit cards

• Fax circuit cards

Checking a Tip/Ring Circuit Card

It is possible to check:

- The entire Tip/Ring circuit card (see Checking the Tip/Ring Circuit Card on page 67)

- A single channel on the Tip/Ring circuit card (see Checking a Tip/Ring Circuit Card Channel on page 70)

Checking the Tip/Ring Circuit Card

To check a circuit card using the Intuity CONVERSANT windows, do the following:

1 Start at the Voice System Administration menu (Figure 12 on page 67).

Figure 12. Voice System Administration Menu

```
      Voice System Administration

Application Package Administration
Backup/Restore
Configuration Management
Feature Packages
Reports
Script Builder Applications
Switch Interfaces
System Monitor
Exit
```

> **2** Select

```
> Configuration Management

    > System Control

        > Diagnose

            >Diagnose Equipment
```
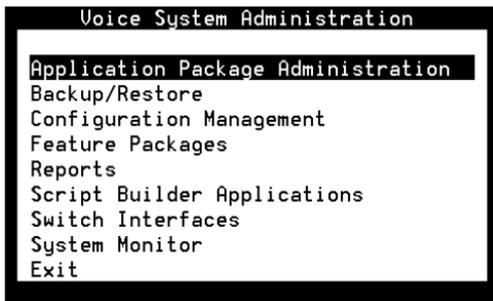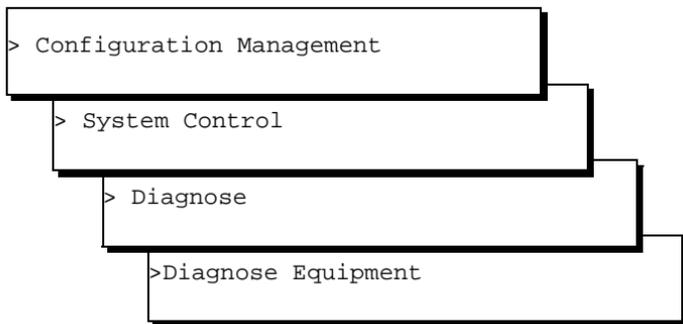
The system displays the Diagnose Equipment Window (Figure 13 on page 68).

Figure 13.   Diagnose Equipment Window

```
                    Diagnose Equipment

        Equipment to diagnose:
            Equipment Number:
        Immediate diagnosis?
```

> **3** Enter **card** in the Equipment to diagnose: field.

4 Enter a card number, valid range, or **all** in the Equipment Number: field.

Note: Enter circuit card ranges using one of the following formats:

    0,1,2
    0 1 2
    0-2

5 Choose from the following options:

~ If you want to conduct an immediate diagnosis, enter **y** in the
Immediate diagnosis? field.

Note: Immediate diagnosis takes the specified channels out of service
immediately even if a call is in progress.

~ If you do not want to conduct an immediate diagnosis, enter **n** in the
Immediate diagnosis? field.

Note: The system waits until all specified channels are idle before
beginning the diagnosis.

6 Press **F3** (Save).

The system removes the circuit card from service and runs the
diagnostics. If the circuit card:

~ Passes the diagnostics, the system displays the following message
before placing the circuit card back in service:

Diag *card*, Passed

~ Does not pass the diagnostics, the system displays the following message:

```
Diag card, Failed
```

Replace the circuit card.

Checking a Tip/Ring Circuit Card Channel

To check a Tip/Ring circuit card channel using the Intuity CONVERSANT windows, do the following:

1 Start at the Voice System Administration menu () and select:

```
> Configuration Management

    > System Control

        > Diagnose

            >Diagnose Equipment
```
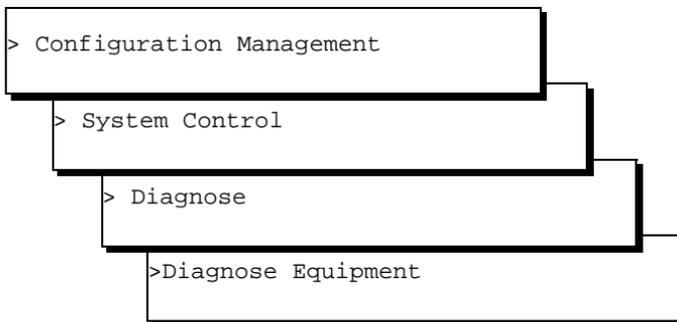
The system displays the Diagnose Equipment Window (Figure 13 on page 68).

2 Enter **channel** in the Equipment to diagnose: field.

3 Enter a channel number, valid range, or **all** in the Equipment Number: field.

Note: Enter circuit card ranges using one of the following formats:

    0,1,2
    0 1 2
    0-2

4 Choose from the following options:

   ~ If you want to conduct an immediate diagnosis, enter **y** in the Immediate diagnosis? field.

Note: Immediate diagnosis takes the specified channels out of service immediately even if a call is in progress.

   ~ If you do not want to conduct an immediate diagnosis, enter **n** in the Immediate diagnosis? field.

Note: The system waits until all specified channels are idle before beginning the diagnosis.

5 Press **F3** (Save).

The system removes the channel from service and runs the diagnostics.

~ If the channel passes the diagnostics, the system displays the following message:

```
Found loop current on Channel X
Channel X state changed to INSERV.
Request to diagnose Tip/Ring chan X completed
```

~ If the circuit card did not pass the diagnostics, replace the circuit card.

Checking an IPCI Circuit Card

To check an IPCI circuit card, do the following:

1 Start at the Voice System Administration menu (Figure 12 on page 67) and select:

```
> Feature Packages

    > ASAI Administration

        > Diagnose IPCI Board
```
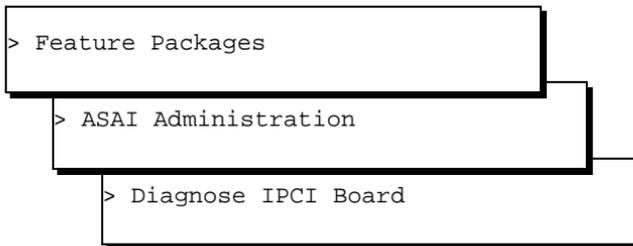
The system displays the Diagnose IPCI Board window (Figure 14).

Figure 14. Diagnose IPCI Board Window

```
                        Diagnose IPCI Board

IPCI Board passed all tests

Press ENTER to continue


```
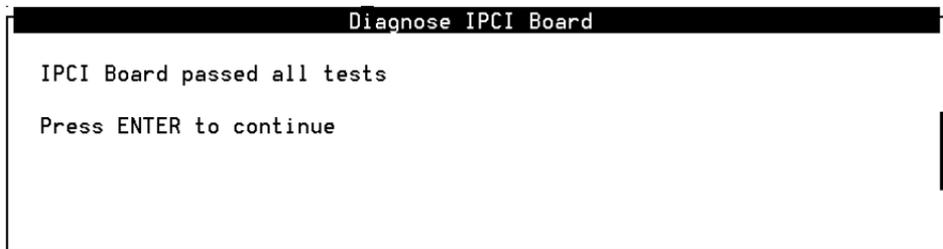
2 Press **ENTER**.

The system displays the ASAI Administration menu (Figure 15).

Figure 15. ASAI Administration Menu

```
        ASAI Administration
    Channel Administration
   >Diagnose IPCI Board
    Domain Administration
    Initialize IPCI Board
    Parameter Administration
    Show ASAI Software Version
    Show Status of ASAI Link
    Take IPCI Board Off-Line
```
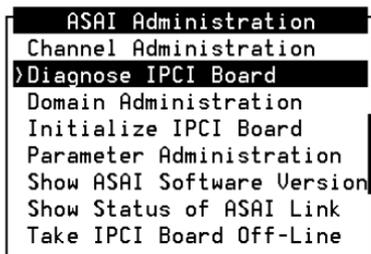
If the IPCI circuit card:

~ Passes the diagnostics, you have completed the procedure.

~ Fails the diagnostics, replace the circuit card.

Checking a FAX Circuit Card

It is possible to check the entire FAX circuit card or to check a single channel on the FAX circuit card.

To check a FAX circuit card, do the following:

1 Start at the Voice System Administration menu (Figure 12 on page 67) and select:

```
> Application Package Administration

    > Script Builder FAX Actions

        > FAX Equipment Operations

            >FAX Equipment Diagnostics
```
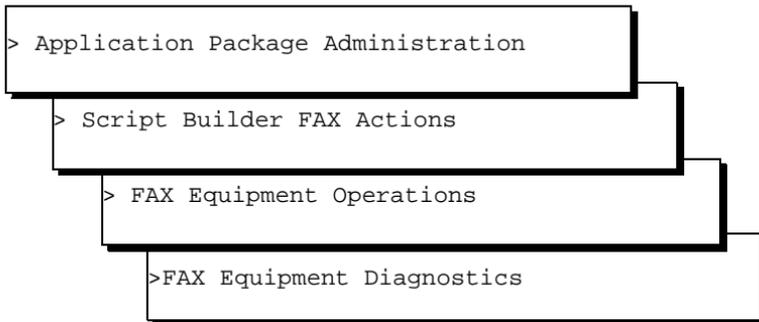
The system displays the FAX Equipment Diagnostics window (Figure 16).

Figure 16.   FAX Equipment Diagnostics Window

```
         Diagnose FAX Equipment
Equipment to Diagnose: _____
      Equipment Number: _____
 Immediate Diagnosis?: ___
```

2 Enter **card** in the Equipment to diagnose: field.

3 Enter a card number, valid range, or **all** in the Equipment Number: field.

Note: Enter circuit card ranges using one of the following formats:

0,1,2
0 1 2
0-2

4 Choose from the following options:

~ If you want to conduct an immediate diagnosis, enter **y** in the Immediate diagnosis? field.

Note: Immediate diagnosis takes the specified channels out of service immediately even if a call is in progress.

~ If you do not want to conduct an immediate diagnosis, enter **n** in the Immediate diagnosis? field.

Note: The system waits until all specified channels are idle before beginning the diagnosis.

5 Press **F3** (Save).

The system displays the FAX Equipment Diagnostics Results window (Figure 17 on page 76).

Figure 17.   FAX Equipment Diagnostics Results Window

```
┌──────────────────────────────────────────────────────┐
│         FAX Equipment Diagnostic Results               │
│                                                        │
│  Non-Immediate Diagnosis Requested                     │
│                                                        │
│                                                        │
│  Diagnosing FAX Card 1...                              │
│                                                        │
│  FAX Channel 4 (Port 0) Passed Test                    │
│  FAX Channel 5 (Port 1) Passed Test                    │
│  FAX Channel 6 (Port 2) Passed Test                    │
│  FAX Channel 7 (Port 3) Passed Test                    │
│                                                        │
│                                                        │
└──────────────────────────────────────────────────────┘
```
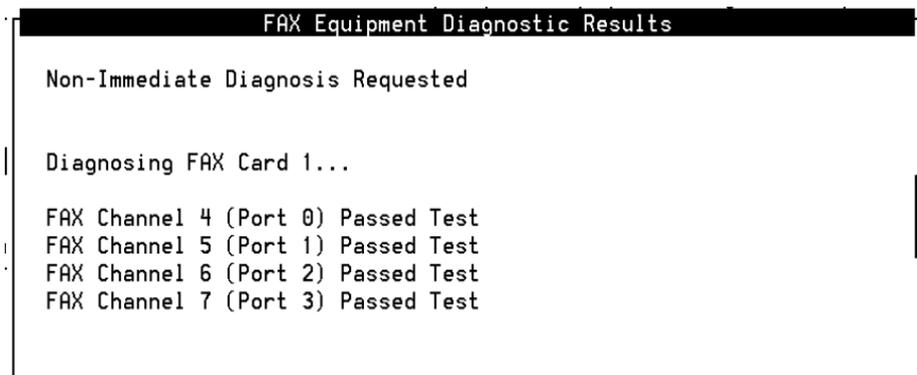
   6 If the FAX circuit card

      ~ Passes the diagnostics, you have completed the procedure.

      ~ Fails the diagnostics, replace the circuit card.

Checking a FAX Circuit Card Channel

To check a FAX circuit card channel, do the following:

1 Start at the Voice System Administration menu (Figure 12 on page 67) and select:

```
> Application Package Administration

    > Script Builder FAX Actions

        > FAX Equipment Operations

            >FAX Equipment Diagnostics
```

The system displays the FAX Equipment Diagnostics window (Figure 16 on page 74).

2 Enter **channel** in the `Equipment to diagnose:` field.

3 Enter a channel number, valid range, or all in the `Equipment Number:` field.

Note: Enter circuit card ranges using one of the following formats:

0,1,2
0 1 2
0-2

  4 Choose from the following options:

  ~ If you want to conduct an immediate diagnosis, enter **y** in the
    Immediate diagnosis? field.

Note: Immediate diagnosis takes the specified channels out of service
  immediately even if a call is in progress.

  ~ If you do not want to conduct an immediate diagnosis, enter **n** in the
    Immediate diagnosis? field.

Note: The system waits until all specified channels are idle before
  beginning the diagnosis.

  5 Press **F3** (Save).

  The system displays the FAX Equipment Diagnostics Results window
  ().

  6 If the FAX circuit card channel:

  ~ Passes the diagnostics, you have completed the procedure.

  ~ Fails the diagnostics, replace the circuit card.

Checking an EQUINOX Multi-Port Serial Circuit Card

To check a multi-port serial circuit card, do the following:

  1 At the UNIX prompt, enter **/usr/bin/megadiag**

The system displays the Megaport and Megaplex Configuration and Diagnostics screen ().

Figure 18.   Megaport and Megaplex Configuration and Diagnostics Screen

```
      MEGAPORT/MEGAPLEX CONFIGURATION AND DIAGNOSTICS V. 1.04
 Driver Stats   Port Stats    Diagnostics

   Driver Status
   Board Status
  Counters




                        MEGAPORT/MEGAPLEX CONFIGURATION
                        AND DIAGNOSTICS UTILITY V. 1.04






                                          Use Arrow Keys: F1 for help
```
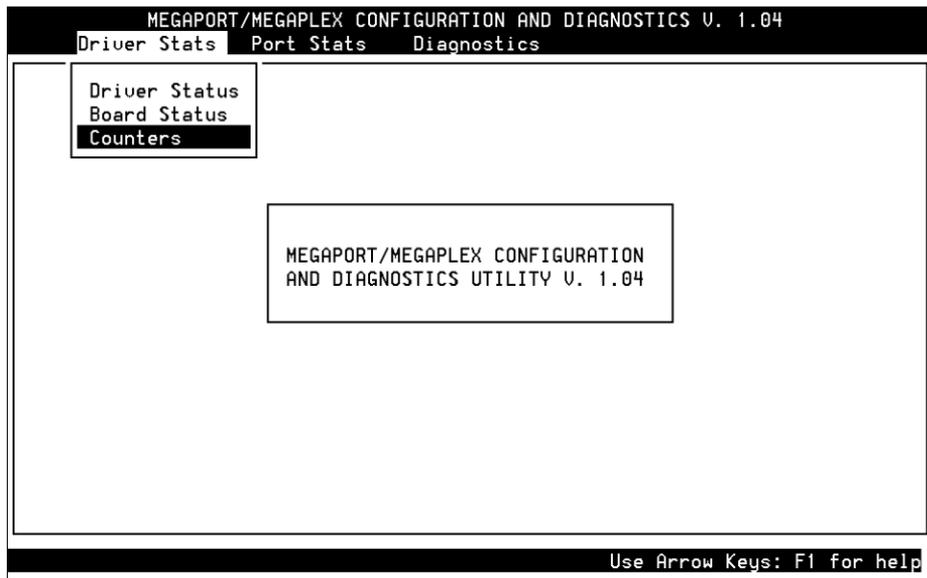
The Megaport and Megaplex Configuration and Diagnostics screen contains a menu bar with the options Driver Stats, Port Stats, and Diagnostics.

Use the right and left arrow keys on the keyboard to move between the menu bar options.

Use the up and down arrow keys to move between menu options.

• Press **ENTER** to select a menu option.

Press **F1** for help.

Press **ESC** to exit.

Displaying Serial Port Driver Stats

The serial port driver stats include:

• Drive Status

• Board Status

The Driver Status option displays the device driver's current configuration including the driver version, number of boards configured, number of boards found, and memory mapping.

To display the drive status, do the following:

1 Start at the Megaport and Megaplex Configuration and Diagnostics screen (Figure 18 on page 79).

2 Place the cursor on **Driver Stats**.

3 Place the cursor on **Driver Status**.

4 Press **ENTER**.

The system displays the Driver Status window (Figure 19 on page 81).

Figure 19.   Driver Status Window

```
┌─────────────── Driver Status ───────────────┐
│ Equinox Megaport STREAMS Device Driver, Version 2.24a │
│ Currently configured for 1 board(s) (logical).        │
│ Number of boards found: 1                             │
│ Board address        BUFFER              REGISTER     │
│ Board # 1            0x000D0000          0x000D2000    │
└───────────────────────────────────────────────────────┘
```

To display the board status, do the following.

1 Start at the Megaport and Megaplex Configuration and Diagnostics screen (Figure 18 on page 79).

2 Place the cursor on **Driver Stats**.

3 Place the cursor on **Board Status**.

4 Press **ENTER**.

The system displays the Board Status menu (Figure 20 on page 82).

Figure 20.   Board Status Menu

```
┌─── Board ───┐
│/dev/ttysa[a-x]│
│/dev/ttysb[a-x]│
│/dev/ttysc[a-x]│
│/dev/ttysd[a-x]│
│/dev/ttyse[a-x]│
│/dev/ttysf[a-x]│
│/dev/ttysg[a-x]│
│/dev/ttysh[a-x]│
│/dev/ttysi[a-x]│
│/dev/ttysj[a-x]│
└───────────────┘
```

Displaying Port Stats

Three options are available on the Port Stats menu:

• Port Status

• Termio

• Register Dump

These options allow the system to show certain port characteristics.

Port Status

The Port Status selection is a real-time representation of the RS-232 leads. It includes:

- Transmit rate
- Receive rate
- Total characters received
- Total characters transmitted
- Buffered data counts

The Port Status display is useful in troubleshooting wiring problems, chattering lines or devices (modems) and in monitoring load activity over a single line. Activity measurements can be taken by noting the Transmitted and Received counts and comparing them with other serial ports.

To display the port status, do the following:

1 Start at the Megaport and Megaplex Configuration and Diagnostics screen (Figure 18 on page 79).

2 Place the cursor on **Port Stats**.

3 Place the cursor on **Port Status**.

4 Press **ENTER**.

The system displays the Prompt window (Figure 21 on page 84).

Figure 21.   Prompt Window

```
    device: /dev/ttysaa
```

5 Enter the name of the device to be verified.

The system displays the Port Status window ().

Figure 22.   Port Status Window

```
┌──────────────/dev/ttysaa──────────────┐
│    OUTPUT                   INPUT      │
│  TD          OFF         RD        OFF │
│  DTR         OFF         DCD       OFF │
│                                        │
│  XON/XOFF    XON'ed                    │
│  Status      CLOSED                    │
│  CPS         0           CPS       0   │
│  Transmitted      0      Received     0│
│  Buffered    0           Buffered  0   │
└────────────────────────────────────────┘
```

Termio

The Termio option displays the general terminal interface data associated with the serial card. It is similar to the "stty" command in that it prints all enabled termio flags.

To display the termio, do the following:

1 Start at the Megaport and Megaplex Configuration and Diagnostics screen (Figure 18 on page 79).

2 Place the cursor on **Port Stats**.

3 Place the cursor on **Termio**.

4 Press **ENTER**.

The system displays the Prompt window (Figure 21 on page 84).

5 Enter the name of the device to be verified.

The system displays the Termio window.

Register Dump

The Register Dump option displays a real-time window of the on-board registers. The data is in raw form and useful to only Equinox technical personnel. It is used to obtain information about the hardware status and various software flags.

To display the Register Dump, do the following:

1 Start at the Megaport and Megaplex Configuration and Diagnostics screen (Figure 18 on page 79).

2 Place the cursor on **Port Stats**.

3 Place the cursor on **Register Dump**.

4 Press **ENTER**.

The system displays the Prompt window (Figure 21 on page 84).

5 Enter the name of the device to be verified.

The system displays the Register Dump window (Figure 23 on page 86).

Figure 23. Register Dump Window

```
┌──────────── Reg. dump for /dev/ttysaa ────────────┐
│ State:    0   mp_flags:   0                        │
│ cflag:    0   iflag:    522    oflag:   0  lflag:  0 │
│                                                    │
│ txbase:   0   txidx:    0    txend:   0            │
│ rxbase:   1   rxidx:    0    rxend:   0            │
│ txcs:    88   txbaud:   FE    out_ct   3           │
│ rxcs:    88   rxbaud:   FE    in_ctl  FF           │
│ txcsr:  2081  rxcsr:  2081    sample  21           │
│ mie:      0   cie:      0    cis:   C200           │
│ rxtdm:   CF   txtdm:    C3                          │
│ equlz:    0   eqmin:    0    eqmax:   0  linkst:  0 │
│ Transmit:          0    Receive:         0         │
└────────────────────────────────────────────────────┘
```

Diagnostics

There are two options on the Diagnostics menu:

- Loopback
- Send

They are intended for the experienced user. The Loopback test is designed to diagnose the card's primary components and their functionalities. There are two types of loopback tests: internal and external. The Send test simply writes a continuous stream of data to the specified port which is helpful in resolving wiring issues.

Serial Port External Loopback Test

Although the option for the serial port external loopback test appears on the screen, this option is not available. You should use the internal loopback test option.

Serial Port Internal Loopback Test

The internal loopback test is the same as the external loopback test except that it does not require that the transmit and receive pins be wired together. Because it does not test the full cabling of the port, the internal loopback test is not as thorough as the external loopback test.

To perform the serial port internal loopback test, do the following:

1 Start at the Megaport and Megaplex Configuration and Diagnostics screen (Figure 18 on page 79).

2 Place the cursor on **Diagnostics**.

3 Place the cursor on **Loopback**.

4 Press **ENTER**.

The system displays the Loopback menu (Figure 24 on page 88).

Figure 24. Loopback Menu

```
┌─ Loopback ─┐
│ Configure  │
│ Run        │
└────────────┘
```
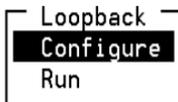
5 Place the cursor on **Configure**.

6 Press **ENTER**.

The system displays the Configure menu (Figure 25 on page 89).

Figure 25. Configure Menu

```
┌ Configure ┐
│ Speed     │
│ Board     │
│ Verify    │
│ Update    │
└───────────┘
```

7 Place the cursor on **Board.**

8 Press **ENTER**.

   The system displays the Board menu (Figure 20 on page 82).

9 Press **ENTER** to select the first group of ports.

10 Press **ESC**.

   The system displays the Loopback menu (Figure 24 on page 88).

11 Place the cursor on **Run**.

12 Press **ENTER**.

   The system displays the Run menu (Figure 26 on page 90).

Figure 26.   Run Menu

```
┌─── Run ───┐
│ 24 Ports  │
│ 12 Ports  │
│ 8 Ports   │
│ Single    │
└───────────┘
```

13 Place the cursor on **8 Ports.**

14 Press **ENTER**.

The system displays the Loop Type menu (Figure 27 on page 90).

Figure 27.   Loop Type Menu

```
┌── Loop type ──┐
│ External Loopback │
│ Internal Loopback │
└───────────────┘
```
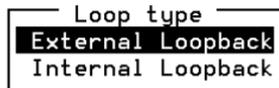
15 Place the cursor on **Internal Loopback**.

16 Press **ENTER**.

The system displays the Internal Loopback window (Figure 28 on page 91).

Figure 28.   Internal Loopback Window

```
┌Port───Xmit──────Rcv──────Errors──Rate┐        ┌────── Note ──────┐
│saa    156825    151264       0    3874│        │                  │
│sab    156825    151237       0    3874│        │ ESC to exit      │
│sac    156825    151258       0    3875│        │                  │
│sad    156825    151230       0    3876│        │ F2  Reset Errors │
│sae    156825    151219       0    3875│        │                  │
│saf    156825    151195       0    3870│        │ F3  Reset Test   │
│sag    156825    151170       0    3861│        │                  │
│sah    156825    151160       0    3857│        │ F4  Refresh Screen│
└────────────────────────────────────────┘      │                  │
                                                 │                  │
                                                 └──────────────────┘
```

Checking a Speech and Signal Processor Circuit Card

Check the SSP circuit card using the **spar** command by doing the following:

1 To create a report showing peak percent usage for the entire circuit card and each of the different algorithms, enter **spar -ap**

The system displays a message similar to the following:

```
Signal Processing Activity Report(Peak Percent Usage By Algorithm)
10/20/1997

CARD  5   STATE: Inserv       CLASS: Signal_Processor(SP)   O.S.INDEX: 0
          NAME:  AYC2          OPTIONS: slave,tdm1
          FUNCTION: play+code

       brd wwr fwr echo  cca tts dpr play code celp fax
00:20  NA  NA  NA   NA   NA  NA  NA   NA   NA   NA   NA
00:40  NA  NA  NA   NA   NA  NA  NA   NA   NA   NA   NA
01:00   0   0   0    0    0   0   0    0    0    0    0
   .    .   .   .    .    .   .   .    .    .    .    .
   .    .   .   .    .    .   .   .    .    .    .    .
   .    .   .   .    .    .   .   .    .    .    .    .
10:40  69  42   0   10    9   8   0    0    0    0    0
11:00  71  44   0   11   10   9   0    0    0    0    0
11:20  66  42   0    4   10  11   0    0    0    0    0
11:40  91  58   0   15    8  10   0    0    0    0    0
12:00  80  47   0   12   16   5   0    0    0    0    0
12:20  77  39   0   10   15  13   0    0    0    0    0
```

Column headings reflect percent usage for the following:

~ brd — All algorithms allocated to the board; note that in a given row, the peak percentage for the board may be slightly different than the sum of the algorithm percentages because the peaks may not have occurred during the same interval. For example, if the **spadc** command collects data at 5-minute intervals, and the **spar** report displays the peak percentages for 20-minute periods, the peak percentage for the board and for each of the algorithms may have occurred during any of the four different 5-minute **spadc** periods that provide data for the 20-minute **spar** interval.

- wwr — WholeWord Recognition

- fwr— FlexWord Recognition

- echo — Echo Cancellation

- cca — Call Classification Analysis

- tts — Text to Speech

- dpr — Dial Pulse Recognition

- play — Play speech

- code — Record speech

- celp — Record speech with CELP algorithm

- fax — FAX

2 To create a report showing the average percent usage for licenses for each of the algorithms, enter **spar -l**

This command creates a report showing average percent usage of licenses for each algorithm. A partial sample output is shown below.

```
RTU Report (Average Percent License Utilization Across System)
10/23/1997

   tts     dpr    flex   whole   swtts    fax
  00:20     0       0       0       0       0       0
  00:40     0       0       0       0       0       0
  01:00     0       0       0       0       0       0
    .       .       .       .       .       .       .
    .       .       .       .       .       .       .
    .       .       .       .       .       .       .
  07:00    23       0       0       0       0       2
  07:20    23       0       0       0       0       2
  07:40    26       0       0       0       0       3
  08:00    12       0      21       0       0       0
  08:20    NA      NA      NA      NA      NA      NA
  08:40    NA      NA      NA      NA      NA      NA
  09:00    31       0      14       0       0       0
  09:20    32       0      14       0       0       1
  09:40    19       0      15       0       0       0
  10:00    18       0      12       0       0       3
  10:20    13       0      19       0       0       3
  10:40    13       0      22       0       0       3
```

Column headings reflect percent usage for the following:

~ tts — Text to Speech

~ dpr — Dial Pulse Recognition

~ flex — FlexWord recognition

~ whole — Whole Word recognition

~ swtts — Software Text to Speech

~ fax — FAX

Database Diagnostics

To check the ORACLE database free space, do the following:

1 Execute the **dbfrag** command.

The system displays the System Tablespace screen (Figure 29 on page 96).

Note: The data in your System Tablespace screen may be different from the data shown in Figure 29 on page 96.

Figure 29.   System Tablespace Screen

```
            SYSTEM Tablespace, Space is in Oracle Blocks (4096 Bytes/Block)

ALLOCATED    FREE   % FREE AVG/FRAG LARGEST   FRAGMENTS DB_FILES ROLLBACK
---------  ------- ------- -------- ------- ---------- -------- ---------
     2500      393   15.72      131     387          3        1       150


            USERS Tablespace, Space is in Oracle Blocks (4096 Bytes/Block)

ALLOCATED    FREE   % FREE AVG/FRAG LARGEST   FRAGMENTS DB_FILES ROLLBACK
---------  ------- ------- -------- ------- ---------- -------- ---------
    31250    26356   84.34    13178   26136          2        1       715
```

See Chapter 5, "Database Administration," and Appendix A, "Summary of Commands," in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501, for information on the **dbfrag** command.

2 If the number in the `%FREE` field is less than 10, add more space to the database.

See Chapter 5, "Database Administration," in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501, for information on increasing the database size.

Extents Diagnostics

An extent is an user defined unit of storage in the ORACLE "storage" clause when defining an ORACLE object. It is used as MINEXTENTS or MAXEXTENTS in the storage clause. An ORACLE object (that is, a table, an index, a rollback segment) grows one extent in size each time the object needs to be expanded.

When the maximum allowed number of extents is reached, the object will not be able to grow further. The object needs to be redefined so that either the size of each extent is increased or the initial object size is increased, to reduce the number of extents required for the storage of this object.

The maximum allowed number of extents in an system is 249.

To check the number of extents, do the following:

1 Enter **dbused**

The system displays the Space Allocated screen (Figure 30 on page 98).

Note: The data in your Space Allocated screen may be different from the data shown in Figure 30 on page 98.

Figure 30.   Space Allocated Screen

```
Usage for "sti/sti"

        Space allocated to objects. Oracle Blocks (4096 Bytes/Block)

NAME                TYPE        TBLSPACE    BLOCKS    MBYTES  EXTENTS MAX_EXTENTS
------------------  ----------  --------  ----------  --------  -------  -----------
SERVICE             TABLE       USERS          260     1.02        1          249
CDHSUM              TABLE       USERS            5      .02        1          249
CALL                TABLE       USERS          260     1.02        1          249
CCASUM              TABLE       USERS            5      .02        1          249
TRASUM              TABLE       USERS           20      .08        3          249
LDBCOLS             TABLE       USERS            5      .02        1          249
EVENTS              TABLE       USERS         1350     5.27        7          249
EVSUM               TABLE       USERS            5      .02        1          249
CCA                 TABLE       USERS          100      .39        1          249
Catalog             TABLE       USERS            5      .02        1          121
RCS                 TABLE       USERS            3      .01        1          121
S1                  INDEX       USERS          260     1.02        1          249
C1                  INDEX       USERS          260     1.02        1          249
E1                  INDEX       USERS         1350     5.27        7          249
```

2 Compare the value in the EXTENTS column to the value in the
MAX_EXTENTS column.

If the value in the EXTENTS column is greater than or equal to the value in
the MAX_EXTENTS column, the table has reached its maximum size.

3 If needed, redefine the database table storage. See Chapter 5, "Database Administration," in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501, for information on increasing the database size.

ORACLE Network Diagnostics

To check the ORACLE network, do the following:

1 Determine the machine name. See Chapter 5, "Database Administration," in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.

2 Enter **telnet *host_name***

where *host_name* is the name of the remote machine to which the database process is connected.

3 If the login prompt:

~ Appears on the screen, the network appears to be functioning properly. Continue with step 4.

~ Does not appear on the screen, the network is not functioning properly. Contact the network support personnel for help.

4 Press **CTRL** to return to the local machine.

5 Enter **netstat -a**

The system displays output similar to that in Figure 31 on page 100:

Figure 31.   Sample Output of netstat -a Command

```
Proto Recv-Q Send-Q  Local Address        Foreign Address         (state)
tcp        0      0  *.*                  *.*                     CLOSED
tcp        0      0  cpc5.login           cbgbcs.cb.lucent.1020   ESTABLISHED
tcp        0      0  cpc5.telnet          cbgbcs.cb.lucent.58407  ESTABLISHED
tcp        0      0  cpc5.telnet          cbgbcs.cb.lucent.57778  ESTABLISHED
tcp        0      0  cpc5.1063            sigma.1521              ESTABLISHED
tcp        0      0  cpc5.1062            sigma.1521              ESTABLISHED
tcp        0      0  *.1061               *.*                     LISTEN
tcp        0      0  *.1060               *.*                     LISTEN
tcp        0      0  *.671                *.*                     LISTEN
tcp        0      0  *.1058               *.*                     LISTEN
tcp        0      0  *.1059               *.*                     LISTEN
tcp        0      0  cpc5.login           *.*                     CLOSED
tcp        0      0  cpc5.telnet          cbgbcs.cb.lucent.60101  ESTABLISHED
tcp        0      0  *.printer            *.*                     LISTEN
tcp        0      0  *.listen             *.*                     LISTEN
tcp        0      0  *.chargen            *.*                     LISTEN
tcp        0      0  *.daytime            *.*                     LISTEN
tcp        0      0  *.discard            *.*                     LISTEN
tcp        0      0  *.echo               *.*                     LISTEN
tcp        0      0  *.time               *.*                     LISTEN
```

6 Verify that the remote machine name appears on the screen under the
`Foreign Address` column and the corresponding state field shows
`ESTABLISHED`.

7 If the remote machine name:

~ Does not appear, contact network support personnel for help.

~ Appears on the screen, verify that the ORACLE SQL*Net package is
installed on the remote machine.

8 Verify that the network tunable parameters are correct according to the recommendations in *Intuity CONVERSANT System Version 7.0 Communication Development*, 585-313-202.

9 Verify the database connection by doing the following:

   a Invoke the ORACLE utility SQL*PLUS by entering
      /oracle/bin/sqlplus sti/sti

     The system displays the following message:

     SQL>

   b Connect the SQL*PLUS session to the remote database by entering
      connect sti/sti \@*host_name*

     where *host_name* is name of the remote machine.

   c If the screen displays the following message the network and remote database are functioning:

     connected

     Continue with .

     If connected does not appear on the screen, contact the database administrator of the remote machine for help.

10 Exit from the SQL*PLUS utility by entering **quit**

TDM Bus Diagnostics

The TDM Bus can be diagnosed

• From the command line

• Through the windows

Using the Command Line

To diagnose the TDM Bus using the command line, do the following:

1 Confirm that the VIS associates the suspect card with "tdm1," by entering
display card *card number*

where *card number* is the suspect card.

2 If the card is not configured for tdm1, there is a configuration error. Do the
following :

a Record the current system configuration and service assignments.

b Stop the voice system. See Stopping the Voice System in Chapter 3,
Common System Procedures .

c Move the system configuration and service assignments by entering
mv /gendb/shmem/devtbl /gendb/shmem/devtbl.old

d Start the voice system. See Starting the Voice System, in Chapter 3,
Common System Procedures .

3 To confirm that the TDM master/slave configuration is appropriate, enter **display card all | pg**

Note: The | before pg is a pipe symbol, not a lower case L.

The system displays the Circuit Card Configuration screen (Figure 32 on page 104).

Note: The data in your Circuit Card Configuration screen may be different from the data shown in Figure 32 on page 104.

Figure 32. Circuit Card Configuration Screen

```
CARD 0 STATE: Inserv   CLASS: Digital (E1)       O.S.INDEX: 0
       NAME: AYC21     OPTIONS: master1,tdm1,PRI1,DCHAN
       FUNCTION: PRI

CD.PT   CHNSTATE STATE-CHNG-TIME   SERVICE-NAMEPHONE   GROUP OPTS
TYPE
 0.0   0  Manoos Oct 25 17:25:32  - -        4    tdm FRM
 0.1   1  Inserv Oct 25 17:32:48  - -        4    tdm PRIB
 0.2   2  Inserv Oct 25 17:32:47  - -        4    tdm PRIB
 0.3   3  Inserv Oct 25 17:29:46  - -        4    tdm PRIB
 0.4   4  Inserv Oct 25 17:32:46  - -        4    tdm PRIB
 0.5   5  Inserv Oct 25 17:29:46  - -        4    tdm PRIB
 0.6   6  Inserv Oct 25 17:29:46  - -        4    tdm PRIB
 0.7   7  Inserv Oct 25 17:29:45  - -        4    tdm PRIB
 0.8   8  Inserv Oct 25 17:29:45  - -        4    tdm PRIB
 0.9   9  Inserv Oct 25 17:29:44  - -        4    tdm PRIB
 0.10 10  Inserv Oct 25 17:29:45  - -        4    tdm PRIB
 0.11 11  Inserv Oct 25 17:29:44  - -        6    tdm PRIB
 0.12 12  Inserv Oct 25 17:29:44  - -        6    tdm PRIB
 0.13 13  Inserv Oct 25 17:29:44  - -        6    tdm PRIB
 0.14 14  Inserv Oct 25 17:29:43  - -        6    tdm PRIB
```

4 Confirm that there is only one card associated with the following
   configurations for tdm1.

   ~ master1

   ~ master2

~ master3

There can be multiple cards designated slave.

Use **ENTER** to page through the Circuit Card Configuration screen.

5 If more than one card is configured as **master1, master2**, or **master3**, there is a configuration error. Do the following:

   a Record the current system configuration and service assignments.

   b Stop the voice system. See Stopping the Voice System in Chapter 3, Common System Procedures .

   c Move the system configuration and service assignments by entering **mv /gendb/shmem/devtbl /gendb/shmem/devtbl.old**

   d Start the voice system. See Starting the Voice System, in Chapter 3, Common System Procedures .

6 Shut down the operating system. See Shutting Down the Operating System in Chapter 3, Common System Procedures .

7 If the problem persists, check the TDM resistors. See Checking the Terminating Resistors on page 60 .

8 If the problem persists, check the circuit card switch settings. See Checking the Switch Settings on page 63 .

Using the System Windows

To diagnose the TDM Bus using the windows, do the following:

1 Start at the Voice System Administration menu and select:

```
> Configuration Management

    > System Control

        > Diagnose

            >Diagnose Equipment
```
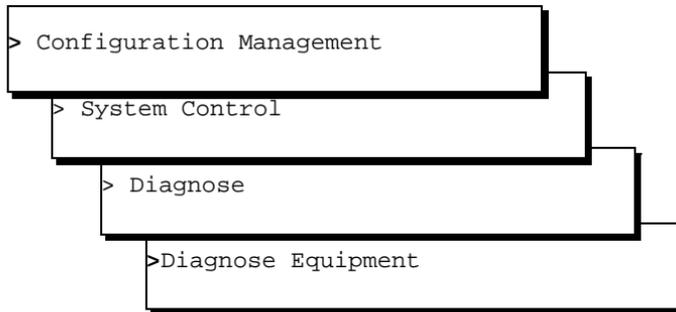
The system displays the Diagnose Equipment Window.

2 Enter **bus** in the **Equipment to diagnose** field.

The system automatically places a 1 in the **Equipment Number** field.

3 If you want to conduct an immediate diagnosis, enter **y** in the **Immediate diagnosis** field.

Note: Immediate diagnosis takes the cards, attached to the TDM bus, out of service immediately even if a call is in progress.

If you do not want to conduct an immediate diagnosis, enter **n** in the Immediate diagnosis field.

Note: The system waits until all specified channels are idle before beginning the diagnosis.

4 Press **F3** (Save).

The system removes the cards attached to the TDM bus from service and runs the diagnostics.

~ If the TDM bus passes the diagnostics, the system displays the following message:

Diag <bus>, Passed

~ If the TDM bus did not pass the diagnostics, replace the cable.

Voice Port Loop Around Test

To perform a voice port loop around test, do the following:

1 Start at the Voice System Administration menu and select:

```
> Configuration Management

    > System Control

        > Diagnose

            >Diagnose Equipment
```
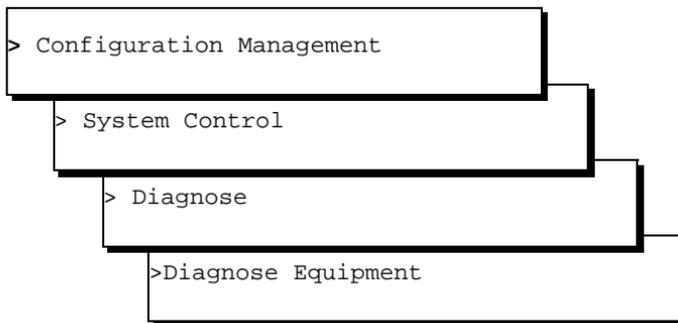
The system displays the Voice Port Loop Around Test window (Figure 33 on page 108).

Figure 33.   Voice Port Loop Around Test Window

```
                    Voice Port Loop Around Test

            Dialing Channel:
            Target Channel:
                 Test Type:
        Immediate Diagnose?:
```
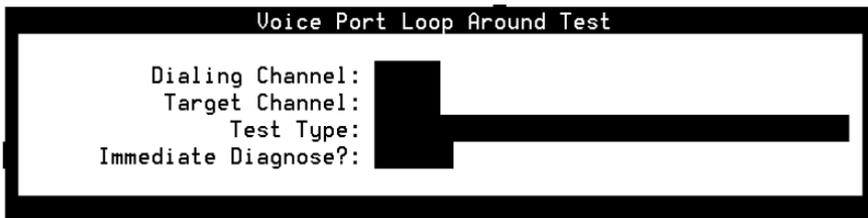
2 Enter a channel number in the `Dialing Channel:` field.

The dialing channel is the channel which sends the signal used to diagnose the target channel.

You can enter **AUTO** in this field to allow the system to choose the dialing channel.

3 Enter the number of the channel you want to diagnose in the `Target Channel:` field.

4 Enter a test type in the `Test Type:` field.

The following tests can be run on the voice port:

- ~ all
- ~ code
- ~ fax receive
- ~ fax transmit
- ~ gain control
- ~ loop current/dial tone detection
- ~ manipulation of hook state
- ~ play
- ~ ring detection

~ speed control

~ touch tone receive

~ touch tone transmit

Note: The gain control, loop current/dial tone detection, manipulation of hook state, ring detection, speed control, touch tone receive, and touch tone transmit test types will be run during a voice port loop around test regardless of the entry in the Test Type: field.

5 Enter **no** in the Immediate Diagnose? field.

If you enter **yes** in this field the diagnosis will be performed immediately regardless of the current state of the dialing channel.

Note: Immediate diagnosis cannot be done when **AUTO** is entered in the Dialing Channel: field.

6 Press **F3** (Save).

The system completes the diagnostics and displays the Voice Port Loop Around Test Results screen (Figure 34 on page 111).

Figure 34.   Voice Port Loop Around Test Results Screen

```
         Voice Port Loop Around Test Results

   manipulation of hook state         pass
   gain control                       pass
   speed control                      pass
   ring detection                     pass
   touch tone transmit                pass
   play                               pass
   touch tone receive                 pass
   record                             pass
   fax receive                        pass
   fax transmit                       pass
   loop current/dial tone detection   pass

Press Enter to continue.
```

7 Press **Enter**.

The system displays the Voice Port Loop Around Test window (Figure 33 on page 108).

ASAI Trace Utility

To invoke the ASAI trace feature, type trace dip7 at the system prompt. Additional VIS processes can be monitored by adding arguments to the command (for example, trace dip7 chan 1).

Note: All ASAI trace information displayed by trace is preceded by ASAI:. If trace is used to monitor other VIS processes, that information is preceded by other key words.

To cancel a trace command, press the **DELETE** key. The Trace Level parameter in the ASAI Parameters screen controls the amount of detail that is displayed when you use the trace dip 7 command to monitor messages and events being processed by the ASAI system. The trace feature facilitates the debugging of new applications and is an optional feature that is not required for normal system operations.

Three Trace Levels are available:

- The Low setting displays only ASAI error and warning conditions.

- The Normal setting displays information pertaining to the process of the A_Callinfo, A_Event, A_RouteSel, and A_Tran script actions, in addition to the information displayed by the Low setting. Such information is useful when attempting to debug new application scripts which use these actions.

- The High setting provides additional information on ASAI messages that are sent and received between the VIS and the DEFINITY Generic 3i PBX, in addition to the information displayed by the Low and Normal settings.

Low Detail

The Low setting displays only ASAI error and warning conditions. This is the default setting. Use this setting when there is live traffic to minimize processing overhead from the trace feature.

Error messages preceded by ASAI: ERROR: typically indicate a malfunction in the processing of the ASAI link between the VIS and the PBX, an improperly written script, or an incorrect configuration. Error messages are displayed by trace to give additional insight into problems that are reported as system messages and as error codes in the Return Fields of the external actions. If you receive an error messages in the Message Log Report. The ASAI-related system messages are numbered from ASAI001 through ASAI031 and are discussed in Chapter 3, "System Message Listings." Follow the instructions provided for the message to remedy the problem.

If you receive error messages in the trace output and no ASAI system messages are reported, you may be experiencing a problem with the A_Callinfo, A_Event, A_RouteSel, or A_Tran actions. In this case, one of these actions is probably returning an error code in its Return Field and also in the Cause Value field.

If you receive neither ASAI system message nor error return codes from an ASAI script action but are still receiving error messages in the trace output, you are probably experiencing a system problem and should escalate the problem.

Warning messages indicate a low-severity problem detected by the ASAI system. These message are preceded by ASAI: WARNING: and are usually the result of an incorrectly configured system or a manual out of service (manoos) ACD, VDN, or CTL domain that is receiving messages from the PBX. These messages may also correspond to a system message that appears in the Message Log Report. For example, the following message is displayed if you use A_Tran to transfer to an extension for which there is no domain administered in the Domain Administration screen.

ASAI: WARNING: Event 'C' Discarded, no CTL Domain for Ext '1234'

At the same time, system message number ASAI031 appears in the Message Log Report. Similarly, the following message is displayed if you use A_Tran to transfer to an extension or domain which is not in service.

ASAI: WARNING: Event 'C' Discarded, Domain 'name' not active

In this case no system message appears in the Message Log Report because it is not necessarily considered an error.

Normal Detail

In addition to the information displayed by the Low setting, the Normal setting displays information pertaining to the processing of the A_Callinfo, A_Event, A_RouteSel, and A_Tran script actions. Such information is useful when attempting to debug new application scripts which use these actions. The format is specific to each ASAI action being processed.

A_Callinfo trace information

When A_Callinfo is used in a voice script on a Tip/Ring or LST1 channel, trace displays the following information. The first line indicates which channel requested the information. The remaining indented lines contain the information that is returned to the A_Callinfo action in the voice script.

```
ASAI: A_Callinfo: Sending Info for chan 1
ASAI: Calling party Number:''
ASAI: Called Party Number: '5100'
ASAI: Switch Data: ''
ASAI: Trunk Group Id: '5', Call Id: '163'
ASAI: Cause Value: '0', Return Field: '0'
```

If an error occurs in the processing of A_Callinfo, a message preceded by ASAI: Error: A_Tran is displayed along with a description of the problem.

A_Event trace information

When A_Event is used in a monitoring or routing script that is assigned to a domain, the following trace messages are examples of what is displayed when each event is reported.

```
ASAI:  A_Event: Reporting Event 'C' to Domain 'name'
ASAI:  Connected Party Number: '5609'
ASAI:  Calling Party Number: ", Trunk Grp Id: '5'
ASAI:  Called Party Number: '5100'
ASAI:  Switch Data:"
ASAI:  Call id: '170', Other Call Id: '160'
ASAI:  LAI Display Info: "
ASAI:  VIS Data: "
ASAI:  Routing Id: '30'
ASAI:  Return Field: '67'
```

The first line indicates the type of event that is reported and the domain to which it is reported. The event type is one of the following:

- A (ABANDON) — The caller was abandoned before the call was answered.

- C (CONNECT) — The call was alerted or connected.

- E (END) — The call has ended after being answered.

- R (ROUTE REQUEST) — PBX is requesting the call be routed.

The indented lines that follow the first line contain information that is returned in the corresponding fields of the A_Event action form.

A_RouteSel trace information

When A_RouteSel is used in a routing script that is assigned to an RTE domain, the following trace messages are examples of what is displayed.

```
ASAI: A_RouteSel: Routing call in Domain 'name'
      (Route ID 1234)
ASAI: Destination Number: '5019'
ASAI: Split Extension: ''
ASAI: Priority Call? Yes
```

If the Route Select could not be sent to the PBX, a trace message preceded by ASAI: ERROR: A_RouteSel: is displayed along with a description of the problem. In come cases a cause value is also displayed. See Chapter 6 of *Intuity CONVERSANT System Version 7.0 Application Development with Script Builder*, 585-310-760, for a list of A_RouteSel Cause Values.

A_Tran trace information

When A_Tran is used in a voice script on a T/R or LST1 channel, trace displays messages such as the following indicating a successful transfer.

```
ASAI: A_Tran: requested on chan 1
ASAI: A_Tran: Taking Control of call on chan 1
      CLID 304)
ASAI: A_Tran: Placing caller on hold, chan 1
ASAI: A_Tran: Make Call on chan 1 (CLID 308)
ASAI: Destination Number: '5019'
ASAI: Split Ext: ''
ASAI: Priority Call? No
ASAI: A_Tran: Make Call completed on chan 1
ASAI: Call State: 'ALERTING'
ASAI: A_Tran: Merging calls on chan 1
```

The first line indicates which channel requested the transfer.

Note: Each line beginning ASAI: A_Tran: indicates the beginning of the next processing step required to perform the transfer operation and contains the channel number on which the operation is taking place. See Chapter 6 of *Intuity CONVERSANT System Version 7.0 Application Development with Script Builder*, 585-310-206, for an explanation of the steps required to perform a transfer. Processing steps may not be displayed contiguously depending on the amount of activity in the system (that is, other trace statements may appear in between each processing step for A_Tran).

The indented lines contain additional information about the current processing step. The Make Call step is followed by three lines of information which correspond to input fields in the A_Tran action form. The Make Call completed steps is followed by a line indicating the outcome of the call. A successful transfer is indicated by the Merging calls message.

In the following example the outbound call (Make Call completed) was to a busy destination. In this case, the transfer (merge) was not attempted and the caller was reconnected to the voice script.

The sequence ends with the following message:

```
ASAI: A_Tran: requested on chan 1
ASAI: A_Tran: Taking Control of call on chan 1
    (CLID 304)
ASAI: A_Tran: Placing caller on hold, chan1
ASAI: A_Tran: Make Call on chan 1 (CLID 308)
ASAI:Destination Number: '5019'
ASAI:  Split Ext: ''
ASAI: Priority Call? No
ASAI: A_Tran: Make Call completed on chan 1
ASAI: Call State: 'BUSY'
ASAI: A_Tran: Dropping call on chan 1
ASAI: A_Tran: Reconnecting caller on chan 1
ASAI: A_Tran: Relinquishing control of chan 1
```

Should an error occur in one of the processing steps, trace displays a
message preceded by ASAI: ERROR: A_Tran: with a description of the
problem.

Note: If you receive error return codes from the A_Tran action and do
not see errors while tracing dip7, the problem is detected by the
voice script before making the request to the ASAI subsystem.

High Detail

In addition to the information displayed by the Low and Normal settings, the High setting gives additional information on ASAI messages that are sent and received between the VIS and the DEFINITY Generic 3i PBX. High detail causes trace to display information concerning call event and routing event messages as well as requests for domain enable/disable, channel login/logout, and heartbeat.

Call events   ASAI messages (call events) received from the PBX contain information about a call on a domain. This information may be useful when attempting to debug an application script which is monitoring the progress of calls on the PBX. The format of the call event message is as follows:

```
ASAI: Received EVENT on Domain "name' (CLID num CID num)
```

The event can be one of the following

- ALERTING — The call is ringing at an extension.
- CALLEND — All parties have dropped from the call causing the call to end.
- CONFERENCED — The call has been conferenced.
- CONNECTED — The call has been answered.
- CUT THROUGH — The call is interworking with a non-ISDN trunk.
- DENIAL — The call has been routed to an invalid number (intercept).

- DROP — A party on the call has dropped from the call.
- OFFERED — The call has entered the specified domain.
- QUEUED — The call has been placed in a queue and is awaiting delivery to an extension.
- 3P CALLEND — A call that was originated by A_Tran has ended.
- TRANSFERRED — The call has been transferred.
- TRUNK SEIZED — The call has been routed to a trunk and the trunk has been seized.

The *name* is the name of domain which receives the event as specified in the Domain Administration screen. See Chapter 4, "Feature Package Administration" of *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-205, for additional information.

The name will be null for call events received that are not directly associated with a domain administered in the Domain Administration screen (for example, call events received for an outbound call placed by the A_Tran script action). The CLID *num* is the ASAI Cluster ID that identifies the specified domain. The CID *num* is the Call ID that identifies the call. The PID is the party ID that identifies which Party dropped from the call and is reported with a DROP message only.

Routing Events   There are two ASAI messages received from the PBX which contain routing information. This information may be useful when debugging a routing application script which is assigned to a RTE domain. The following trace message is printed for each route request received. The format of the trace message is as follows:

```
ASAI: Received ROUTE REQUEST on Domain 'name' (Route ID num)
```

Another trace message is printed when the PBX has acknowledged or canceled a previous route request. The format of this message is as follows:

```
ASAI: Received ROUTE END on Domain 'name' (Route ID num)
ASAI: Cause: X
```

Note: The second line indicates the reason why the route requested ended. After the receipt of this message a Route Selection can no longer be made (that is, A_RouteSel fails) for the specified Route ID. The Route ID is a number which identifies a particular route request.

Domain Enable/Disable Requests   When ACD or VDN domains are enabled or disabled, a message must be sent to the PBX requesting to activate or deactivate the sending of call events for the domain. Following are examples of the trace output that appears when these messages are sent.

```
ASAI: Sending ENABLE for domain 'name', ext '4321', type 1
(CLID 224)
ASAI: Sending DISABLE for domain 'name', ext '5678' type 2
(CLID 364)
```

The *name* and *ext* displayed correspond to the parameters administered for the domain in the Domain Administration screen. Note that Type 1 domains are ACD domains and Type 2 domains are VDN domains.

If an enable or disable request fails, a message is displayed which is preceded by ASAI: ERROR: ENABLE Domain: along with a description of the problem. If a Cause Value is provided in the message, the request was denied by the PBX.

Channel Login/Logout Requests

In order to log a channel in or out, an ASAI message must be sent to the PBX. Following are examples of the trace output that appears when these messages are sent.

```
ASAI: Sending LOGIN for chan 1, ext 1234 (CLID 778)
ASAI: Sending LOGOUT for chan1, ext 1234 (CLID 388)
```

The chan and ext displayed correspond to the parameters administered for the domain in the Channel Administration screen.

If a login or logout request fails, a message is displayed which is preceded by ASAI: ERROR: LOGIN CHANNEL: along with a description of the problem. If a Cause Value is provided in the message, the request was denied by the PBX.

Heartbeat Requests To insure that the PBX and the VIS are in constant communication event when there is no traffic, messages are sent back and forth between the two systems. These messages, called heartbeat messages, typically appear only after periods of idleness of longer than 1 minute.

Generally, these trace messages can be ignored unless you suspect a loss of communication between the PBX and the VIS. The messages should alternate every minute during idle periods. Following are examples of these heartbeat messages:

```
ASAI: Received Heartbeat (CLID 7898 ind 1)
ASIA: Sending Heartbeat (CLID 2345)
```

LAN Trace Utilities

The LAN activity can be traced using the following commands:

- **arp**
- **netstat**
- **ping**
- **traceroute**
- **tcpdump**

The LAN trace utilities enable the field service personnel to diagnose problems on the customer's LAN. The LAN trace utilities have the following disadvantages:

- Only traffic on the subnet to which the product is attached can be traced.

- In some modes, tcpdump will seriously degrade the performance of the server.

- When traffic on the LAN is very heavy, some packets may be lost because the server cannot keep up with the flow.

Using the arp Command

The **arp** command provides information about Ethernet/IP address translation. The command can be used to detect systems on the LAN that are configured with an incorrect IP address. Use the **arp** command in the following manner:

- To display all of the current ARP entries by reading the table from the file kmem (default **/dev/kmem**) based on the kernel file unix (default **/kernel/unix**), use the **arp -a [unix[kmem]]** option.

- To delete an entry for the host called hostname, use the **arp -d hostname** option.

Note: This option may only be used by the super-user.

- • To read the file named filename and set multiple entries in the ARP tables, use the **arp -f filename** option.

- • To create an ARP entry for the host called hostname with the Ethernet address ether_address, use the **-s hostname ether_address [temp] [pub] [trail]** option.

For more information on the **arp** command, see Appendix A, "Summary of Commands" in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.

Using the netstat Command

The **netstat** command is used to display statistics about each network interface and socket, and statistics about the network routing table.

Use the **netstat** command with the following attributes:

- • **-a** — display the state of all sockets and all routing table entries

- • **-f** *address_family* — limits the statistics or address control block reports to those of the specified family

Note: The address family can be inet for the AF_INET family or unix for the AF_UNIX family

- • **-g** — display the multicast group memberships for all interfaces, use the option.

- **-i** — display the state of the interfaces that are used for TCP/IP traffic

- **-m** — display the STREAMS statistics

- **-n** — display the network addresses as numbers

- **-p** — display the address resolution tables, use the **-p** option.

- **-r** — display the routing tables

- **-s** — display the per-protocol statistics

- **-v** — display additional information for the sockets and the routing table

- **-I** *interface* — display the state of a particular interface

- **-M** — display the multicast routing tables

- **-P** *protocol* — limit the display of statistics or state of all sockets to those applicable to protocol

For more information on the **netstat** command, see Appendix A, "Summary of Commands" in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501

Using the ping Command

The **ping** command indicates whether a remote host can be reached. It can also display statistics about packet loss and delivery time. Use the **ping** command with the following attributes:

- **-d** — set the SO_DEBUG socket option
- **-l** — send the packet to the given host and back again
- **-L** — turn off loopback of multicast packets
- **-n** — display the network addresses as numbers
- **-r** — bypass the normal routing tables and send directly to a host on an attached network
- **-R** — set the IP record route option and store the route of the packet inside the IP header
- **-v** — list any ICMP packets, other than ECHO_RESPONSE, that are received
- **-i** — specify the outgoing interface to use for multicast packets
- **-I** — specify the interval between successive transmissions
- **-t ttl** — specify the IP time to live for multicast packets

For more information on the **ping** command, see Appendix A, "Summary of Commands" in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.

Using the traceroute Command

The **traceroute** command displays the route packets take going to a remote system. Information about the route is printed. Use the **traceroute** command with the following attributes:

- **-f** — set the initial time-to-live used in the first outgoing probe packet
- **-F** — set the "don't fragment" bit
- **-d** — enable socket level debugging
- **-g** — specify a loose source route gateway
- **-i** — specify a network interface to obtain the source IP address for outgoing probe packets
- **-l** — use the ICMP ECHO instead of UDP datagrams
- **-m** — set the max time-to-live (max number of hops) used in outgoing probe packets
- **-n** — print hop address numerically rather than symbolically
- **-p** — set the base UDP port number used in probes (default is 33434)
- **-r** — bypass the normal routing tables and send directly to a host on an attached network
- **-s** — use the following IP address (which usually is given as an IP number) as the source address in outgoing probe packets
- **-t** — set the type of service in probe packets to the following value

- **-v** — list the ICMP packets other than TIME_EXCEEDED and UNREACHABLE

- **-w** — set the time (in seconds) to wait for a response to a probe

- **-x** — toggle checksums

For more information on the **traceroute** command, see Appendix A, "Summary of Commands" in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.

Using the tcpdump Command

The **tcpdump** command prints the headers of packets, that match a boolean expression, on a network interface. The command is used to analyze protocol problems. Use the **tcpdump** command with the following attributes:

- **-a** — convert network and broadcast addresses to names

- **-c** — exit after receiving count packets

- **-d** — dump the compiled packet-matching code in a human readable form to standard output

- **-dd** — dump the packet-matching code as a C program fragment

- **-ddd** — dump the packet-matching code as decimal numbers

- **-e** — print the link-level header on each dump line

- **-f** — print foreign internet addresses numerically rather than symbolically

- **-F** — use the file as input for the filter expression, use the option.
- **-i** — listen on the interface
- **-l** — make **stdout** line buffered
- **-n** — do not convert addresses to names
- **-N** — do not print domain name qualification of host names
- **-O** — do not run the packet-matching code optimizer
- **-p** — do not put the interface into promiscuous mode
- **-q** — print less protocol information
- **-r** — read packets from a file
- **-s** — remove smaller bytes of data from each packet rather than the default of 68
- **-T** — force packets, selected by "expression," to be interpreted as the specified type
- **-S** — print absolute, rather than relative, TCP sequence numbers
- **-t** — avoid printing a time stamp on each dump line
- **-tt** — print an unformatted time stamp on each dump line
- **-v** — produce a slightly more verbose output
- **-vv** — produce a more verbose output
- **-w** — write the raw packets to file rather than parse and print files
- **-x** — print each packet in hex without the link level header

Simple Network Management Protocol

SNMP is the current working standard of the TCP/IP protocol suite concerned with network management information. The SNMP feature on the system allows network system administrators to use SNMP to consolidate the monitoring of remote systems from a central location. This remote monitoring takes place over a TCP/IP LAN or WAN. The SNMP feature makes this monitoring possible by providing a means for:

- Remote managed elements (Intuity CONVERSANT systems) to send alarm and resolution event notifications to a central management workstation

- The management workstation to get system status information from the remote managed elements

Management Information Bases Available with SNMP

The SNMP agent provides the following:

- Support for the standard Management Information Base (MIB)-II definition

- A private MIB defined by Lucent Technologies

MIB-II Compliance   The SNMP agent is MIB-II compliant; however, no all MIB-II variables are supported.

Private MIB   In addition to MIB-II support, the SNMP agent provides a private (enterprise-specific) MIB for the following system information:

- File system check
- IPC message queue status
- Voice system status
- Voice channels in service
- Software packages installed
- Circuit card information (display card)
- Channel information (includes channel number, card and port, state, service name, assignments, etc.)
- Service and DNIS information
- Hardware information (includes platform type, installed memory, size of the hard disk drive, and whether the RMB or a serial card is installed)
- Disk usage information
- Major, minor, and warning alarms active on the system

See MIB Definition on page 138.

SNMP Configuration

You must configure both HP Openview and the SNMP agent on the system to communicate with each other. See HP Openview documentation for details on how to complete this and to confirm communication between the manager and agent applications.

Customizing SNMP for HP Openview

To customize HP Openview, do the following:

Note: The following procedure must be done at least once to configure HP Openview for the system. If you are monitoring multiple systems with a single HP Openview, you must only perform this procedure once.

1. Enter **/vs/bin/util/snmp/util/snmpConfig.sh**

2. Enter **9 ftp2mrg**

3. Enter **1** (Enter /Change FTP login information). This allows you to transfer files to the management station (HP Openview).

4. Enter the IP address for the management station.

5. Enter the user directory as **/tmp/ov**

Note: The /tmp/ov directory must be created on the HP Openview prior to this procedure.

6. Enter **2** (FTP Intuity MIBs) to transfer Intuity MIBs.

7 Enter **3** (FTP HP Openview files) to transfer HP Openview related files.

8 Log onto the HP Openview.

9 Enter **cd /tmp/ov**

10 Enter **chmod 744 setupIntuity.sh**

11 Enter **./setupIntuity.sh**

Changing the Group Variable Names

You can change the group variable names contained in the default configuration file.

1 Enter **/vs/bin/util/snmp/util/snmpConfig.sh**

2 Enter **6** (listAgtConfig) to list the MIB-II group variable values.

- **~ SysDescr** — The description of the system (default: Intuity SNMP Agent - Lucent Technologies)
- **~ SysLocation** — The location of the system (default: down on the farm)
- **~ SysContact** — The owner of the system (default: System Administrator)

3 Change SysLocation to a meaningful location.

4 Make any other desired changes to the group variables.

5 Enter **8** (chgMgrAdd) to change the management station's IP address if desired.

Configuring the System for the HP Openview

To configure the system for the HP Openview, do the following:

1 Enter **cd /vs/bin/util/snmp/conf**

2 Enter **vi mrglist**

3 Enter *Mgmtstation_Name* **public**, where *Mgmtstation_Name* is the name of the HP Openview.

4 Enter **mkdir -p /vs/bin/util/snmp/data**

5 Enter **/vs/bin/util/snmp/util/snmpstart.sh** to start the SNMP process and register the alarmMon.sh process with inittab.

6 Enter **ps -ef**

7 Verify the following processes are running:

   ~ snmpdm

   ~ mib2agt

   ~ csagt

   ~ Alarmon.sh

Guidelines for Using SNMP

This section provides guidelines for using SNMP on the system.

Getting Information from SNMP Agents Once the MIB definition file is downloaded into HP Openview, you have access to the private (enterprise-specific) SNMP features on the system. See HP Openview documentation for information on how to integrate the SNMP feature with HP Openview.

Setting Polling Intervals You can set the time intervals at which the HP Openview polls the SNMP agents on the systems. Set the polling interval low enough to give you information when you need it, but high enough that the polling does not slow down operations.

Note: Lucent Technologies strongly recommends that you *not* use a polling interval of less than 15 minutes, as that puts a strain on system resources and slows down operations.

Obtaining MIB variables Retrieve MIB variables one at a time. If you attempt to retrieve MIB variables all at once, this can cause idle time to fall below normal values.

Setting the Timeout Interval Set the timeout interval on the HP Openview for more than 60 seconds. This value will allow the system enough time to respond to data requests. If the timeout interval is smaller than 60 seconds, data may not be available within the requested interval, thereby causing timeouts.

MIB Definition

```
CORNERSTONE-MIB DEFINITIONS ::= BEGIN
IMPORTS
    enterprises, OBJECT-TYPE, MODULE-IDENTITY
        FROM SNMPv2-SMI
    DisplayString, IpAddress, TimeTicks
        FROM SNMPv2-TC;
lucent          OBJECT IDENTIFIER ::= { enterprises 1751 }
lucentProducts  OBJECT IDENTIFIER ::= { lucent 1 }
lucentMibs      OBJECT IDENTIFIER ::= { lucent 2 }
intuityProducts OBJECT IDENTIFIER ::= { lucentProducts 10 }
intuityMibs     OBJECT IDENTIFIER ::= { lucentMibs 10 }
platformMIB MODULE-IDENTITY
    LAST-UPDATED    "9705010000Z"
    ORGANIZATION    "Lucent Technologies, Bell Labs"
    CONTACT-INFO    ""
    DESCRIPTION
            "MIB Module for Cornerstone Platform Entities"
     ::= { intuityMibs 2 }
csSystemStatus  OBJECT IDENTIFIER ::= { platformMIB 1 }
csSsMtce        OBJECT IDENTIFIER ::= { csSystemStatus 1 }
csSsVs          OBJECT IDENTIFIER ::= { csSystemStatus 2 }
csSwInst        OBJECT IDENTIFIER ::= { platformMIB 2 }
csHwInst        OBJECT IDENTIFIER ::= { platformMIB 3 }
ssMtceFsChk     OBJECT-TYPE
            SYNTAX      DisplayString
            MAX-ACCESS  read-only
            STATUS      current
            DESCRIPTION "file system check.This variable
```

```
                              returns a string stating whether
                              the check passed or failed."
               ::= { csSsMtce 1 }
ssMtceIpcQChk   OBJECT-TYPE
          SYNTAX        DisplayString
          MAX-ACCESS    read-only
          STATUS        current
          DESCRIPTION   "Ipc Queue Check.  This variable
                        returns a string stating whether
                        the check passedor failed."
          ::= { csSsMtce 2 }
ssVsStat        OBJECT-TYPE
          SYNTAX         DisplayString
          MAX-ACCESS     read-only
          STATUS         current
          DESCRIPTION    "Status of Voice System. Returns
                         a string saying whether it is up
                         or down depending on the run
                         level being 4 and some processes
                         in the running state"
          ::= { csSsVs 1 }
ssVsPurchvcprt  OBJECT-TYPE
          SYNTAX         INTEGER(0..64)
          MAX-ACCESS     read-only
          STATUS         current
          DESCRIPTION    "Number of purchased voice
                         ports."
          ::= { csSsVs 2 }
ssVsSvcvcprt    OBJECT-TYPE
          SYNTAX         INTEGER(0..64)
```

```
               MAX-ACCESS        read-only
               STATUS            current
               DESCRIPTION       "number of voice ports in service"
                ::= { csSsVs 3 }
      ssVsPurchrspch  OBJECT-TYPE
               SYNTAX        INTEGER(0..2000)
               MAX-ACCESS    read-only
               STATUS        current
               DESCRIPTION   "purchased hours of speech"
                ::= { csSsVs 4 }
      ssVsUsedhrspch  OBJECT-TYPE
               SYNTAX        INTEGER(0..2000)
               MAX-ACCESS    read-only
               STATUS        current
               DESCRIPTION   "used hours of speech"
                ::= { csSsVs 5 }
      ssVsPothrspch   OBJECT-TYPE
               SYNTAX        INTEGER(0..2000)
               MAX-ACCESS    read-only
               STATUS        current
               DESCRIPTION   "potential hours of speech"
                ::= {csSsVs 6}
      swInstPkg       OBJECT-TYPE
               SYNTAX SEQUENCE OF PkgInfo
               MAX-ACCESS    not-accessible
               STATUS        current
               DESCRIPTION   "Info on intuity packages installed.
                         This output is the same as pkginfo
                         on unix provides with the -l -c
                         options i.e. long and the category
```

```
                          intuity"
              ::= { csSwInst 1 }
pkgInfo      OBJECT-TYPE
            SYNTAX        PkgInfo
            MAX-ACCESS    not-accessible
            STATUS        current
            DESCRIPTION   "Info on package"
            INDEX         { pkgNumber }
             ::= { swInstPkg 1 }
PkgInfo::=
            SEQUENCE {
            pkgNumber INTEGER,
            pkgDescr  DisplayString
            }

pkgNumber    OBJECT-TYP
            SYNTAX        INTEGER(0..50)
            MAX-ACCESS    not-accessible
            STATUS        current
            DESCRIPTION      "Index for package description"
        ::= { pkgInfo 1 }
pkgDescr     OBJECT-TYPE
            SYNTAX        DisplayString
            MAX-ACCESS    read-only
            STATUS        current
            DESCRIPTION   "package description"
            ::= { pkgInfo 2 }
displayCard  OBJECT-TYPE
            SYNTAX SEQUENCE OF CardStatus
            MAX-ACCESSnot-accessible
```

```
                STATUS    current
                DESCRIPTION"table of entries with each entry
                           corresponding to description of each
                           card on the system. Info is same as
                           output of display card all except for
                           channel info.  Output includes card
                           number, state, class, os index, name,
                           options, and function"
        ::= { csHwInst 1 }
cardStatus    OBJECT-TYPE
            SYNTAX    CardStatus
            MAX-ACCESSnot-accessible
            STATUS    current
            DESCRIPTION  "entry for each card"
            INDEX    { dsplCardNum }
            ::= { displayCard 1 }
CardStatus ::=
        SEQUENCE {
            dsplCardNumINTEGER,
            dsplInfoDisplayString
        }
dsplCardNum   OBJECT-TYPE
            SYNTAX    INTEGER(0..24)
            MAX-ACCESSnot-accessible
            STATUS    current
            DESCRIPTION"card number"
            ::= { cardStatus 1 }
dsplInfo      OBJECT-TYPE
            SYNTAX    DisplayString
            MAX-ACCESSread-only
```

```
                STATUS    current
                DESCRIPTION"card information"
                ::= { cardStatus 2 }
displayChan     OBJECT-TYPE
                SYNTAX SEQUENCE OF ChanStatus
                MAX-ACCESSnot-accessible
                STATUS    current
                DESCRIPTION"table of entries with each entry
                        corresponding to one channel. Info
                        includes channel number card and port,
                        state, state change time, service name,
                        phone, group, opts and type"
                ::= { csHwInst 2 }
chanStatus      OBJECT-TYPE
                SYNTAX    ChanStatus
                MAX-ACCESSnot-accessible
                STATUS    current
                DESCRIPTION"entry for each channel"
                INDEX    { dsplCsChanNum }
            ::= { displayChan 1 }
ChanStatus ::=
        SEQUENCE {
            dsplCsChanNumINTEGER,
            dsplCsChanInfoDisplayString
        }
dsplCsChanNum   OBJECT-TYPE
                SYNTAX    INTEGER(0..96)
                MAX-ACCESSnot-accessible
                STATUS    current
```

```
                     DESCRIPTION"chan number"
               ::= { chanStatus 1 }
       dsplCsChanInfo  OBJECT-TYPE
               SYNTAX    DisplayString
               MAX-ACCESSread-only
               STATUS    current
               DESCRIPTION"chan info"
               ::= { chanStatus 2 }
       displaySvcs     OBJECT-TYPE
               SYNTAX SEQUENCE OF Svcs
               MAX-ACCESSnot-accessible
               STATUS    current
               DESCRIPTION"List of services provided on the
                          system.Info includes serial number and
                          service name"
               ::= { csHwInst 3 }
       svcs            OBJECT-TYPE
               SYNTAX    Svcs
               MAX-ACCESSnot-accessible
               STATUS    current
               DESCRIPTION""
               INDEX    { svcNum }
               ::= { displaySvcs 1 }
       Svcs ::= SEQUENCE {
               svcNumINTEGER,
               svcNameDisplayString
             }
       svcNum          OBJECT-TYPE
               SYNTAX    INTEGER(0..50)
               MAX-ACCESSnot-accessible
```

```
              STATUS    current
              DESCRIPTION"Service Name"
              ::= { svcs 1 }
svcName          OBJECT-TYPE
              SYNTAX    DisplayString
              MAX-ACCESSread-only
              STATUS    current
              DESCRIPTION"Service Name"
              ::= { svcs 2 }
displayDnis      OBJECT-TYPE
              SYNTAX SEQUENCE OF DnisAniSvcGp
              MAX-ACCESSnot-accessible
              STATUS    current
              DESCRIPTION"display dnis an ani service groups"
              ::= { csHwInst 4 }
dnisAniSvcGp     OBJECT-TYPE
              SYNTAX    DnisAniSvcGp
              MAX-ACCESSnot-accessible
              STATUS    current
              DESCRIPTION"One row corresponding to one service
                      with info on called from and to numbers
                      and calling from and to numbers"
              INDEX    { dnisIdx }
              ::= { displayDnis 1 }
DnisAniSvcGp::=
       SEQUENCE {
          dnisIdxINTEGER,
          dnisEntryDisplayString
       }
```

```
dnisIdx          OBJECT-TYPE
        SYNTAX    INTEGER(0..100)
        MAX-ACCESSnot-accessible
        STATUS    current
        DESCRIPTION"Index for entries displayed"
        ::= { dnisAniSvcGp 1 }
dnisEntry        OBJECT-TYPE
        SYNTAX    DisplayString
        MAX-ACCESSread-only
        STATUS    current
        DESCRIPTION"Display dnis entry"
        ::= { dnisAniSvcGp 2 }
dsplAssgn        OBJECT-TYPE
        SYNTAX SEQUENCE OF AssgnEntry
        MAX-ACCESSnot-accessible
        STATUS    current
        DESCRIPTION"Table of assignments to channels with
                channel number, service name and startup
                service"
        ::= { csHwInst 5 }
assgnEntry       OBJECT-TYPE
        SYNTAX    AssgnEntry
        MAX-ACCESSnot-accessible
        STATUS    current
        DESCRIPTION"Entry for one channel "
        INDEX     { dspChanNum }
        ::= { dsplAssgn 1 }
AssgnEntry ::=
     SEQUENCE {
        dspChanNumINTEGER,
```

```
                        dspAssgnEntryDisplayString
                }
        dspChanNum      OBJECT-TYPE
                SYNTAX    INTEGER(0..96)
                MAX-ACCESSnot-accessible
                STATUS    current
                DESCRIPTION"Channel Number"
                ::= { assgnEntry 1 }
        dspAssgnEntry   OBJECT-TYPE
                SYNTAX    DisplayString
                MAX-ACCESSread-only
                STATUS    current
                DESCRIPTION"Entry for Services assigned"
                ::= { assgnEntry 2 }
        hwMtce          OBJECT-TYPE
                SYNTAX SEQUENCE OF HwInfo
                MAX-ACCESSnot-accessible
                STATUS    current
                DESCRIPTION"A sequence of items regarding the
                        hardware installed on the system. This
                        info includes chassis type, installed
                        memory, hard drive
                        info, rmb and serial card installed"
                ::= { csHwInst 6 }
        hwInfo          OBJECT-TYPE
                SYNTAX      HwInfo
                MAX-ACCESS  not-accessible
                STATUS      current
                DESCRIPTION ""
```

```
              INDEX        { dummyidx }
              ::= { hwMtce 1 }
      HwInfo ::=
            SEQUENCE {
              dummyidx     INTEGER,
              hwChassis    DisplayString,
              hwInstMem    DisplayString,
              hwHd         DisplayString,
              hwRmb        DisplayString,
              hwSerial     DisplayString
               }
      dummyidx      OBJECT-TYPE
              SYNTAX    INTEGER(0..1)
              MAX-ACCESSnot-accessible
              STATUS    current
              DESCRIPTION "Dummy index since hwinfo is only one
                      row"
              ::= { hwInfo 1 }
      hwChassis       OBJECT-TYPE
              SYNTAX    DisplayString
              MAX-ACCESSread-only
              STATUS    current
              DESCRIPTION"Chassis type - map40, map100 etc"
              ::= { hwInfo 2 }
      hwInstMem        OBJECT-TYPE
              SYNTAX    DisplayString
              MAX-ACCESSread-only
              STATUS    current
              DESCRIPTION"Installed memory"
              ::= { hwInfo 3 }
```

```
hwHd            OBJECT-TYPE
        SYNTAX   DisplayString
        MAX-ACCESSread-only
        STATUS    current
        DESCRIPTION"Hard Drive Size and scsi id"
        ::= { hwInfo 4 }
hwRmb           OBJECT-TYPE
      SYNTAX       DisplayString
      MAX-ACCESS   read-only
      STATUS       current
      DESCRIPTION  "RMB installed or not"
      ::= { hwInfo 5 }
hwSerial   OBJECT-TYPE
      SYNTAX       DisplayString
      MAX-ACCESS   read-only
      STATUS       current
      DESCRIPTION  "Serial Card Installed or not"
      ::= { hwInfo 6 }
hwVs            OBJECT-TYPE
      SYNTAX SEQUENCE OF  VsEntry
      MAX-ACCESS   not-accessible
      STATUS       current
      DESCRIPTION  "table of vs hardware installed on
                    system with one row per card"
      ::= { csHwInst 7 }
vsEntry     OBJECT-TYPE
      SYNTAX       VsEntry
      MAX-ACCESS   not-accessible
      STATUS       current
      DESCRIPTION  "row with entries for one card"
```

```
            INDEX        { vsCard }
            ::= { hwVs 1 }
     VsEntry ::=
            SEQUENCE {
               vsCard        INTEGER,
               vsCardInfo    DisplayString
            }
     vsCard        OBJECT-TYPE
            SYNTAX    INTEGER(0..24)
            MAX-ACCESSnot-accessible
            STATUS    current
            DESCRIPTION"Card number"
            ::= { vsEntry 1 }
     vsCardInfo    OBJECT-TYPE
            SYNTAX    DisplayString
            MAX-ACCESSread-only
            STATUS    current
            DESCRIPTION"OS Index"
             ::= { vsEntry 2 }
     hwDiskUsage   OBJECT-TYPE
            SYNTAX    DisplayString
            MAX-ACCESSread-only
            STATUS    current
            DESCRIPTION"Percentage of disk used on the system"
            ::= { csHwInst 8 }
     csAlarms  OBJECT IDENTIFIER ::= { platformMIB 4 }

     csMajAlarms  OBJECT-TYPE
            SYNTAX    INTEGER (0..255)
            MAX-ACCESS read-only
```

```
               STATUS    current
               DESCRIPTION"Number of active major alarms on the system"
               ::= { csAlarms 1 }
csMinAlarms    OBJECT-TYPE
               SYNTAX    INTEGER (0..255)
               MAX-ACCESS read-only
               STATUS    current
               DESCRIPTIONNumber of active minor alarms on the system"
               ::= { csAlarms 2 }
csWrnAlarms    OBJECT-TYPE
               SYNTAX    INTEGER (0..255)
               MAX-ACCESSread-only
               STATUS    current
               DESCRIPTION"Number of active warning alarms on the
                          system"
               ::= { csAlarms 3 }
csAlarmsCurrLvl OBJECT-TYPE
               SYNTAX    INTEGER { normal(0), warning(1), minor(2),
                          major (3) }
               MAX-ACCESS read-only
               STATUS    current
               DESCRIPTION"Highest level/severity of the active alarms.
                          This is used by the alarm trap events to
                          determine the color of the Interchange
                          object."
               ::= { csAlarms 4 }
-- the alarm table contains a list of all the active alarms in
the system.
-- the columns available are: application id, alarm code, alarm
```

```
level and
-- a text string with the remaining fields.
csAlarmTable OBJECT-TYPE
    SYNTAX SEQUENCE OF CsAlarmEntry
    MAX-ACCESS       not-accessible
    STATUS           current
    DESCRIPTION      "A table of all the active alarms in the
                     system"
    ::= { csAlarms 5 }
csAlarmEntry OBJECT-TYPE
    SYNTAX           CsAlarmEntry
    MAX-ACCESS       not-accessible
    STATUS           current
    DESCRIPTION      "alarm entry - uniquely identified by
                     the application/module code and alarm
                     code"
    INDEX            { csAlarmApp, csAlarmCode }
    ::= { csAlarmTable 1 }
CsAlarmEntry ::=     SEQUENCE {
    csAlarmIndex     INTEGER (0..255),
    csAlarmApp       OCTET STRING,
    csAlarmCode      INTEGER (0..65535),
    csAlarmLvl       INTEGER,
    csAlarmText      DisplayString,
    csAlarmEvnInfo   DisplayString
}
csAlarmIndex OBJECT-TYPE
    SYNTAX           INTEGER (0..255)
    MAX-ACCESS       read-only
    STATUS           current
```

```
                  DESCRIPTION     "Index into the active alarms table"
         ::= { csAlarmEntry 1 }
         csAlarmApp   OBJECT-TYPE
            SYNTAX          DisplayString (SIZE (0..3))
            MAX-ACCESS      read-only
            STATUS          current
            DESCRIPTION     "Two letter application code of the
                            module raising the alarm. Typical
                            modules - MT: maintenance, VP: platform
                            etc"
         ::= { csAlarmEntry 2 }
         csAlarmCode   OBJECT-TYPE
            SYNTAX          INTEGER (0..65535)
            MAX-ACCESS      read-only
            STATUS          current
            DESCRIPTION     "Application/module specific code of
                            the alarm."
            ::= { csAlarmEntry 3 }
         csAlarmLvl   OBJECT-TYPE
            SYNTAX INTEGER    normal(0), warning(1), minor(2), major(3)}
            MAX-ACCESS       read-only
            STATUS           current
            DESCRIPTION    "Severity/level of the alarm, can take the
                            following values normal, major, minor,
                            warning. The normal value
                            indicates a resolution event and is only
                            used by the alarm traps."
            ::= { csAlarmEntry 4 }
         csAlarmText   OBJECT-TYPE
            SYNTAX          DisplayString
```

```
    MAX-ACCESS   read-only
    STATUS       current
    DESCRIPTION  "Text string of the other fields in the
                 alarm. This may be subdivided into each
                 individual field if required in later
                 versions."
    ::= { csAlarmEntry 5 }
csAlarmEvnInfo  OBJECT-TYPE
    SYNTAX       DisplayString
    MAX-ACCESS   read-only
    STATUS       current
    DESCRIPTION  "maintenance log - contains the event-id,
                 type and description"
    ::= { csAlarmEntry 6 }
csTraps   OBJECT IDENTIFIER ::= { platformMIB 5 }
csTrapAlarms NOTIFICATION-TYPE
    OBJECTS   {csAlarmText, csAlarmEvnInfo,
               csAlarmsCurrLvl }
    STATUS    current
    DESCRIPTION "Traps sent by the agent for alarm and
resolution
               events."
    ::= { csTraps 1 }
END
```

3 Common System Procedures

Overview

This chapter describes procedures for

- Cartridge tape and diskette drive operation

- Backup and restore

- Voice system administration

- Operating system administration

About Cartridge Drives and Tapes

Cartridge tapes provide for the storage of information used by the Intuity CONVERSANT system. The system reads information from and writes information to cartridge tapes through the tape drive. The tape drive is located in Bay 1.

Note: Any tapes smaller than 525-Mbytes created in a 2-Gbyte tape drive can be read by a 525-Mbyte tape drive provided the jumpers on the 525-Mbyte tape drive have been configured correctly.

Tapes created in a 525-Mbyte tape drive can be read by a 2-Gbyte tape drive provided the jumpers on the 525-Mbyte tape drive have been configured correctly.

When to Change Cartridge Tapes   The manufacturers of the cartridge tapes recommend that you replace a tape after approximately 30 full-capacity write or read operations. For example, if two tapes are being alternated for the unattended nightly backup, replace both tapes every two months.

Inserting and Removing Cartridge Tapes

This section details the procedures for inserting and removing cartridge tapes from a 2-Gbyte tape drive.

Inserting the Cartridge Tape

To insert a 2-Gbyte cartridge tape, do the following:

1 Locate the tape drive on the front of the platform ().

Figure 35.   Front View of the Platform
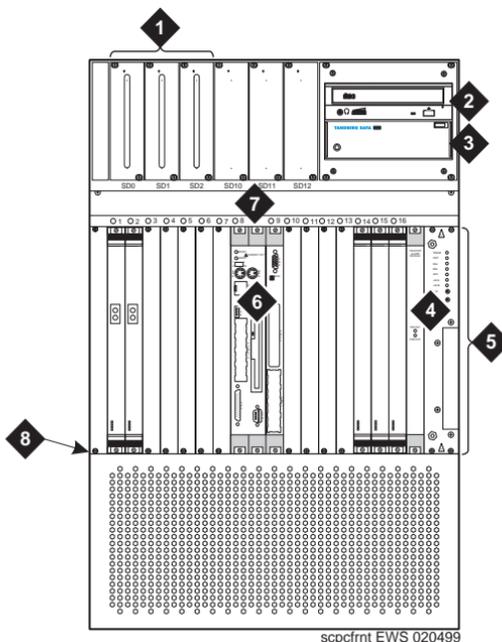
1. Hard disk drives
2. CD-Rom drive
3. Cartridge tape drive
4. Upper fans
5. Circuit card area
6. TAM
7. Filter panel

scpcfrnt EWS 020499

2 Check the read/write dial to make sure that the tape is not write-protected. The small dial on the front of the tape should be in the horizontal position.

3 Do the following to insert the tape in the drive.

  a Press the button on the upper right corner of the drive to open the drive door.

  b Insert the tape ().

  c Close the door to push in the tape.

Figure 36.   Tape Insertion with a 4-Gbyte Tape Drive
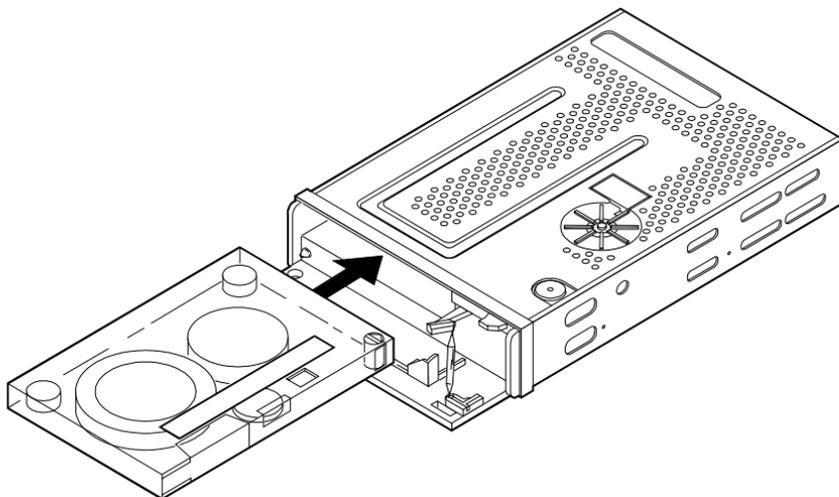
Note: The light on the drive will blink when the drive is in use. If the light
is lit and not blinking, the tape drive is idle.

**Removing the
Cartridge Tape**

⚠ **CAUTION:**
You can only remove the tape when the drive is idle, that is, when the light is not blinking.

To remove a cartridge tape from the tape drive, do the following:

1 Press the button on the upper right corner of the drive to reveal part of the tape.

2 Pull out the tape.

Formatting Cartridge Tapes

To format a cartridge tape, do the following:

1 Start at the Voice System Administration Menu ()

Figure 37. Voice System Administration Menu

```
        Voice System Administration

Application Package Administration
Backup/Restore
Configuration Management
Feature Packages
Reports
Script Builder Applications
Switch Interfaces
System Monitor
Unix Management
Exit
```

2 Select:

```
> UNIX Management

     > Format UNIX Floppy/Tape

          > Format Cartridge Tape
```
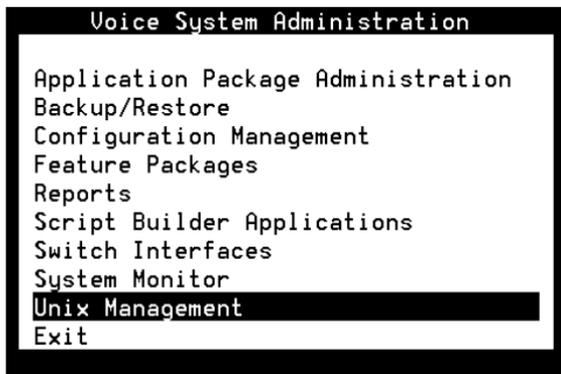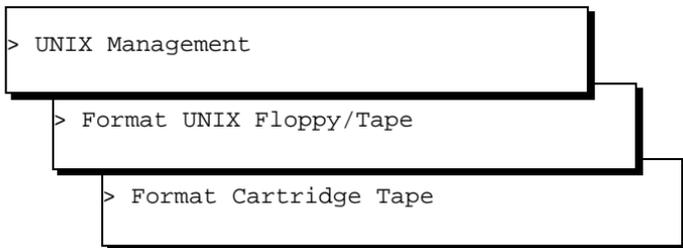
The system displays a Confirm window ().

Figure 38.   Confirm Window

```
┌─────────────────Confirm──────────────────┐
│ Insert a tape into the tape drive. This  │
│ operation may take a few minutes.        │
│ Please be patient.                       │
│                                          │
│ Press ⟨y⟩ to confirm.                    │
│ Press ⟨n⟩ to cancel.                     │
└──────────────────────────────────────────┘
```
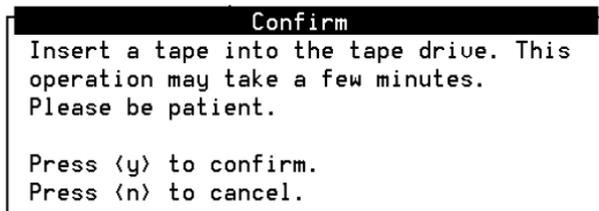
3 Verify that the tape is not write-protected and insert the tape into the cartridge tape drive.

4 Press **y**

The system displays a screen stating that the tape has been formatted.

5 Remove the tape from the cartridge tape drive.

6 Press **ENTER** to continue.

About Diskette Drives and Diskettes

Diskettes can provide for the storage of information used by the Intuity CONVERSANT system. If information must be transferred from an Intuity CONVERSANT system without a LAN card, diskettes must be used.

Types of Diskettes

The Intuity CONVERSANT system is not shipped with disks. If you need disks, obtain unformatted 3.5-inch disks. The disks can be either:

- High density (1.44-Mbyte)

- Low density (720-Kbyte)

Inserting and Removing Diskettes

Inserting the Diskette

To insert a diskette, do the following:

1 Locate the diskette drive on the front of the system (Figure 35 on page 157).

2 Check the read/write switch to make sure that the diskette is not write-protected.

3 Insert the diskette in the drive.

Note: The light on the diskette drive is on when the drive is in use. If the light is not on, the diskette drive is idle.

Removing the Diskette   You can only remove the diskette when the drive is idle, that is, when the light is not on.

To remove a diskette, do the following:

1 Press the button on the lower right corner of the diskette drive to reveal part of the diskette.

2 Pull out the diskette.

Formatting Diskettes

To format a diskette, do the following:

1 Start at the Voice System Administration Menu () and select:

```
> UNIX Management

  > Format UNIX Floppy/Tape

    > Format 3.5 inch 1.44 Mbyte (High Density)
```

The system displays a Confirm window ().

Figure 39.   Confirm Window

```
              Confirm
Insert a diskette into the disk drive.
This operation may take a few minutes.
Please be patient.

Press (y) to confirm.
Press (n) to cancel.
```
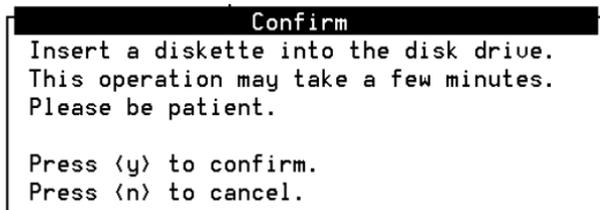
2 Verify that the diskette is not write-protected and insert the diskette into the disk drive.

3 Press **y**

The system displays a screen stating that the diskette has been formatted.

4 Remove the diskette from the disk drive.

5 Press **ENTER** to continue.

Backing Up the Intuity CONVERSANT System

Lucent Technologies suggests performing a full backup to baseline your system. See for recommended procedures for your system.

⚠ CAUTION:

Use the backup procedures described here to back up and restore files on the same machine only.

The utilities and procedures available to back up and restore the system are:

- — Backup/restore utility that copies the contents of a disk to cartridge tape (available for RAID and non-RAID systems)

- — Backup/restore utility for full and differential backups on cartridge tape

- — Backup/restore utility that writes the UnixWare operating system and CONVERSANT system software to cartridge tape

Always clearly label your backup tapes and include the following information:

- Date the backup tape was made

- Disk that was backed up, for systems with multiple disks

- Utility used to create the backup tape

Recommendations   Table 17 on page 167 contains information to help guide you to the type of backups to perform on your system. The best course of action is to use all the backup features listed for your system. At the least, a disaster recovery backup should be performed.

Table 17. Backup Recommendations

Any platform and the system is:	Recommendation:
SCSI, single disk	• QuickStart for disaster recovery • BRU for full backup • BRU for periodic differential backups
SCSI, two disks (second disk is used for speech)	• **mkimage** for disaster recovery • BRU for full backup • BRU for periodic differential backups
SCSI, two disks (second disk is used for ISV-provided software and data)	Consult the ISV for the recommended backup procedures. **Note:** If your ISV does not provide a recommendation, use the procedures below for SCSI, three or more disks (not RAID)
	1 of 2

Table 17.   Backup Recommendations

Any platform and the system is:	Recommendation:
SCSI or RAID	• QuickStart for individual disaster recovery images of each disk
	• **mkimage** for disaster recovery
	• BRU for full backup
	• BRU for periodic differential backups
	2 of 2

In addition, procedures are provided to back up the speech files and ORACLE database tables over a LAN:

Backing Up the System Using QuickStart

QuickStart provides a simple method on RAID and non-RAID systems to restore a failed disk drive to a working state. The QuickStart utility is used to copy a SCSI disk to cartridge tape to baseline your system and create disk image for disaster recovery. For restoring, QuickStart puts the image from the backup media onto a SCSI disk.

This utility should also be used whenever a change is made to the system configuration, such as the addition or deletion of hardware or the addition of a feature package that may include a driver. A good rule of thumb is to create a disaster recovery tape, using QuickStart, on a monthly basis.

The system does not need to have a functioning operating system for a backup to be performed with QuickStart. The QuickStart utility comes on a diskette from which the machine is booted.

Tape verification can be performed as a step in the backup procedure or deferred until the backup is complete and the system is operational.

Creating a Disaster Recovery Tape with QuickStart
Backup of an entire disk consists of two parts: copying the disk to cartridge tape and checksum verification. Each part takes about 1 hour per Gbyte to complete.

To perform this procedure, you must have the boot diskette labeled "QuickStart".

To create a disaster recovery tape using the QuickStart utility, do the following:

1 Log in as **root**.

2 Type **shutdown -g0 -y**

The system shuts down.

3 Insert the boot diskette labeled "QuickStart" into the diskette drive. See Inserting and Removing Diskettes on page 163.

4 Press the **Reset** button.

The system boots from the QuickStart diskette. After a few minutes the system displays the QuickStart main menu (Figure 40 on page 170).

Figure 40.   QuickStart Main Menu

Backup System	Verify Backup	Recover System	Configure QuickStart	Exit and Reboot

Within the QuickStart menus, use the **TAB** key to highlight the menu options and use the **ENTER** key to select an option.

5 Select Backup System and press **ENTER**.

The system displays the Backup System window (Figure 41 on page 171).

Figure 41. Backup System Window

```
              Backing Up System
    From:  Primary Master EIDE HD   ▼
      To:  First SCSI Tape Drive    ▼

           Start            Close
```

The Backup System window (Figure 41) displays the system's primary
hard disk drive and backup device.

6 Label the cartridge tape(s) **CONVERSANT Disaster Recovery Tape *x***
(QuickStart) *date*, where *x* indicates the insertion sequence, **QuickStart**
is the utility used to make this tape, and *date* is the current date.

7 Insert the first tape to be used for backup into the cartridge tape drive.
See Inserting and Removing Cartridge Tapes on page 156.

8 In the From: field, select the disk drive from which you want to back up
data. Use the **TAB** key and the arrow keys to select a disk drive from the
list.

9 In the To: field, select the backup device. For CONVERSANT, this field should be the First SCSI Tape Drive.

10 Press the **TAB** key to highlight the Start button, and then press **ENTER**.

The system displays a warning that indicates you are about to overwrite ALL data on your backup media.

11 Select **Continue**.

The system displays the Perform Auto-Verify dialog box.

12 Select **Yes** to automatically verify the backup tape. If you do not verify the QuickStart tape at the time of the backup, see .

The system displays the Backing Up System status window ().

Figure 42. Backing Up the System Status Window
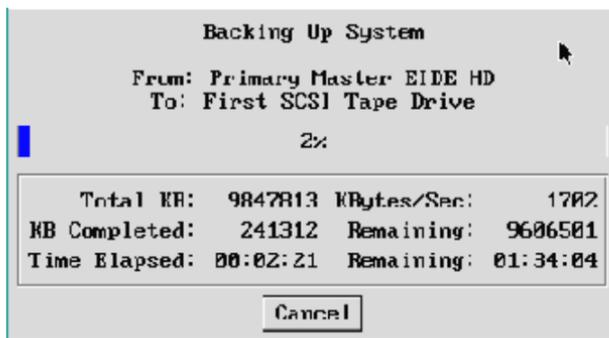
```
                  Backing Up System
          From: Primary Master EIDE HD
            To: First SCSI Tape Drive

                       2%

      Total KB:   9847813  KBytes/Sec:       1702
   KB Completed:   241312  Remaining:     9606501
   Time Elapsed: 00:02:21  Remaining:    01:34:04

                     Cancel
```

When the procedure is complete, the system displays the QuickStart main menu (Figure 40 on page 170).

13 Remove the QuickStart boot diskette from the diskette drive. See Inserting and Removing Diskettes on page 163.

14 Select **Exit and Reboot** to reboot the CONVERSANT system.

Verifying a Disaster Recovery Tape Made with QuickStart

To verify a disaster recovery tape made with QuickStart if the auto verification option was skipped at the time the tape was made, do the following:

1 Log in as **root**.

2 Type **shutdown -g0 -y**

The system shuts down.

3 Insert the boot diskette labeled "QuickStart" into the diskette drive. See <u>Inserting and Removing Diskettes on page 163</u>.

4 Press the **Reset** button.

The system boots from the QuickStart diskette. After a few minutes the system displays the QuickStart main menu (<u>Figure 40 on page 170</u>).

Figure 43. QuickStart Main Menu

| Backup System | Verify Backup | Recover System | Configure QuickStart | Exit and Reboot |

Within the QuickStart menus, use the **TAB** key to highlight the menu options and use the **ENTER** key to select an option.

5 Select **Verify Backup** and press **ENTER**.

The system displays the Verification menu.

6 In the From: field, select the disk drive from which you want to verify up data. Use the **TAB** key and the arrow keys to select a disk drive from the list.

7 Select **Continue**.

When the procedure is complete, the system displays the QuickStart main menu (<u>Figure 40 on page 170</u>).

8 Remove the QuickStart boot diskette from the diskette drive. See Inserting and Removing Diskettes on page 163.

9 Select **Exit and Reboot** to reboot the CONVERSANT system.

Backing Up the System Using BRU

Note: Use of BRU requires a functioning UnixWare operating system.

BRU is capable of writing a complete backup of all UnixWare files on the system to cartridge tapes. The backup tapes can be verified when the system is in operation on the same Intuity CONVERSANT system where the tape was made or another Intuity CONVERSANT system that has the BRU feature software loaded.

Once a full backup has been created, invoking BRU again writes only the files that have been changed since the last full backup.

Types of BRU
- Full - A full UnixWare-level backup of the system.
- Differential - A scheduled backup of files that have changed since the last full backup.

Performing a Full BRU Backup   You can perform this procedure while your system is up and running.

A full UnixWare-level backup consists of two components:

- Estimate — Determines how much has changed since the last backup.

- Backup — The actual backup performance

Note: The estimated time required to perform a full backup is 1 Gbyte per hour.

To perform a full UnixWare-level backup using the BRU utility, do the following:

1 Start at the Voice System Administration Menu (Figure 37 on page 161) and select:

```
> Backup/Restore

    > Full Backup

        > Estimate
```

The system displays a message similar to the following:

```
Please be patient, depending on the size of the backup this
could take several minutes

Performing Full Backup estimate...

bru:1volume xxxxx files, xxxxxx archive blocks xxxxxx Kbytes

Please press <ENTER> to return to menu.
```

2 Make sure you have enough cartridge tapes available to store the system data based on the number of Kbytes stated in the message.

3 Label each tape **CONVERSANT Full UNIX Backup Tape x (BRU) date** where x indicates the insertion sequence, **BRU** is the utility used to make this tape, and date is the current date.

4 Press **ENTER**.

The system displays the Full Backup menu (Figure 44 on page 177).

Figure 44. Full Backup Menu

```
              Full Backup

Backup
Estimate
```
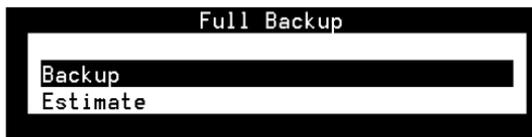
5 Select:

```
> Backup
```

The system displays the following message:

```
Please put a tape in the drive.
Press <Enter> to continue or q to quit.
```

6 Insert the first tape into the cartridge tape drive. See Inserting and Removing Cartridge Tapes on page 156.

7 Press **ENTER**.

The system displays the following message:

```
Performing full Backup (Level 0)

The output of this backup is being logged to
"/vs/data/backrest/brulog.o"
```

When the backup is complete, the system displays the following message:

```
The Full UNIX backup is now complete. Please remove the tape
and label it as "Full UNIX Backup, created [today's date]"
```

8 Verify the backup tape. See Verifying BRU Backups on page 179.

Verifying BRU Backups

Wait until the system is in operation to verify backup tapes made using BRU. You can perform the verification on the same Intuity CONVERSANT system where the tape was made or another Intuity CONVERSANT system that has the BRU feature software loaded.

Verifying a Full Backup Tape

To verify a full backup tape, do the following:

1 Insert the backup tape created using BRU into the cartridge tape drive. See Inserting and Removing Cartridge Tapes on page 156.

Note: You must insert the backup tape at this point in the procedure.

2 Start at the Voice System Administration menu (Figure 37 on page 161) and select:

```
> Backup/Restore

    > Verify Backup

        > Differential/Full
```

The system displays the following message:

```
Would you like to verify the tape labeled: xxx created: date
(y/n)
```

where *date* is the date the backup tape was made.

Note: NOTE: The system reads the date from the backup tape.

3 Enter **y**

The system displays the following message:

```
Please be patient. Depending on the size of the backup this
could take awhile!

The output of this verify is being logged to
"/vs/data/backrest/brulog.verify"

Verifying tape...
```

When the verification is complete, the system displays the following message:

```
Backup Tape Verification is now complete. Please remove the
tape, check that the label reflects whether the tape contains
root, full, or differential backup data, date and time it was
created then store it.
```

Scheduling a Differential UNIX-Level Backup Using BRU

You can schedule a differential backup to be performed at a particular time on a weekly basis or on selected days during the week.

Note: Be sure to have a tape loaded in the cartridge tape drive for a backup scheduled at a time when no operator is available. The backup waits for a tape to be inserted if there is not one already in the cartridge tape drive. Label the tape **CONVERSANT Differential UNIX Backup Tape *x* (BRU) *date*** where *x* indicates the insertion sequence, **BRU** is the utility used to make this tape, and *date* is the current date.

To schedule a differential UNIX-level backup, do the following:

1 Start at the Voice System Administration Menu (Figure 37 on page 161) and select:

```
> Backup/Restore

    > Differential Backup

        > Schedule
```
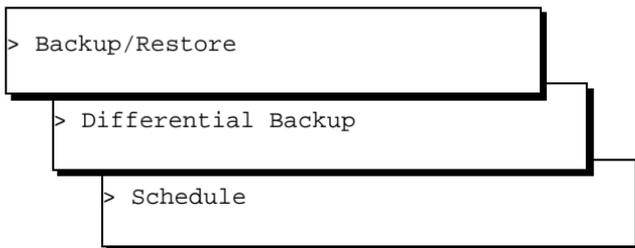
The system displays the Differential Backup Schedule window (Figure 45 on page 182).

Figure 45.   Differential Backup Schedule Window

```
 Backup Schedule

       Time: 02:30
     Sunday: NO
     Monday: YES
    Tuesday: YES
  Wednesday: YES
   Thursday: YES
     Friday: YES
   Saturday: NO
```

2 Set the hour at which the system backup will occur by doing the following:

   a Use the left ◄ and right ► arrows on your keyboard to move within the Time: field.

   b In the hour portion of the Time: field, enter number between 00 and 23.

   c In the minute portion of the Time: field, enter a number between 00 and 59.

   For example, entering 02:30 activates the backup process at 2:30 am.

3 Press the down ▼ arrow on your keyboard to move to the days of the week.

4 Type **YES** next to the day(s) that you want the differential backup to be performed.

5 Type **NO** next to the days that you do not want the differential backup to be performed.

6 Press **F3** (Save).

7 Press **F6** (Cancel) repeatedly to return to the main menu.

Backing Up the System Using mkimage

Note: Use **mkimage** to back up a RAID system. See Table 17 on page 167 for the recommended backup procedures and utilities for your system.

The **mkimage** utility is a mechanism to capture a system configuration so that a machine can be reloaded. It backs up to cartridge tape only a defined and fixed set of file systems that contain the essential Intuity CONVERSANT system files, such as the file systems on the system disk and a speech file system.

Any other file systems, such as file systems added to a second or subsequent disks, are not backed up by the **mkimage** utility.

The **mkimage** utility should also be used whenever a change is made to the system configuration, such as the addition or deletion of hardware or the addition of a feature package that may include a driver.

> ⚠ **CAUTION:**
> The backup procedures described here should be used for backing up and restoring files on the same machine only.

See Appendix A, "Summary of Commands," in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501, for additional information about the **mkimage** command.

Performing a mkimage Backup

To conduct a full system backup using **mkimage**, do the following:

1 Log in as **root**.

2 Stop the voice system. See .

3 Enter **mkimage**

The system displays the following message:

```
The UNIX kernel will be rebuilt now.  This will take some
time.  Please wait.
WARNING: This process will put the system in single
    user mode!!!
Do you wish to continue (y/n)?
```

4 Enter **y**

The system displays the following message:

```
The system will now be put in single user mode.  Re-login
after the prompt and re-execute this command to continue the
mkimage process.

Console Login:
```

5 Continue with .

Backing Up the Root File System

To back up the root file system, do the following:

1 Log in as **root**.

2 Enter **mkimage**

The system displays the following message:

```
Checking the system run level:  Please wait

The system is in single user mode: Continuing

The following are approximate tape counts required for this
backup for various tape drive sizes

150 Mbyte drive:    X tape(s)
320 Mbyte drive:    X tape(s)
525 Mbyte drive:    X tape(s)
```

```
1.2 Gbyte drive:    X tape(s)
2.0 Gbyte drive:    X tape(s)

Be sure to number the cartridge tapes consecutively in the
order they will be inserted.

Label the tapes 'CONVERSANT Image Tape x' where x indicates
the insertion sequence.  Also include the current date.

Note: Very large files, such as database files, take several
minutes to backup.  During this time you will not see any
progress reported to the console.  If the tape drive is
running and the system disk light is flashing, the operation
is in progress.

Please insert the first tape now.  Press 'ENTER' to start
image tape creation.
```

3 Label the appropriate number of cartridge tapes **CONVERSANT Image Tape *x* date,** where *x* indicates the insertion sequence, **Image** indicates the **mkimage** utility, and *date* is the current date.

4 Insert the tape labeled "CONVERSANT Image Tape 1" into the cartridge tape drive (see).

5 Press **ENTER**.

The system takes approximately 30 minutes to load the information onto one tape.

If your system backup requires more than one tape, the system displays the following message:

```
End of medium on output
Change to part 2 and press RETURN key. (q)
```

6 If your backup does not require more than one tape, continue with step 7.

If your system requires more than one tape, do the following:

a Remove the tape labeled "CONVERSANT Image Tape 1" and insert the tape labeled "CONVERSANT Image Tape 2" into the cartridge tape drive. See Inserting and Removing Cartridge Tapes on page 156.

b Press **ENTER**.

c Repeat step a through step b for all necessary tapes.

7 When the system displays the following message, remove the last tape from the cartridge tape drive. See Inserting and Removing Cartridge Tapes on page 156.

```
The image tapes will be verified now.
Make sure the tapes are inserted in the order they are made.

Press 'Enter' to start verification.
```

8 Press **ENTER**.

The system displays the following message:

```
Please insert the first tape now.  Press 'Enter' to continue.
```

9 Insert the tape labeled "CONVERSANT Image Tape 1" into the cartridge tape drive. See Inserting and Removing Cartridge Tapes on page 156.

10 Press **ENTER**.

The system takes as long to verify a tape as it did to create it.

The system will prompt for additional tapes if necessary.

11 If your system has speech files located on a second disk, perform the procedure in Backing Up the Speech Files on page 188.

If your system has only one disk, continue with the procedure in Verifying the mkimage Backup on page 191.

Backing Up the Speech Files

If your system contains speech files on Hard Disk Drive 2, the system displays the following message:

```
The following are approximate tape counts required for this
backup for various tape drive sizes

150 Mbyte drive:    X tape(s)
320 Mbyte drive:    X tape(s)
525 Mbyte drive:    X tape(s)
1.2 Gbyte drive:    X tape(s)
2.0 Gbyte drive:    X tape(s)

Be sure to number the cartridge tapes consecutively in the
order they will be inserted.
```

```
Label the tapes 'CONVERSANT Speech' Tape x where x indicates
the insertion sequence. Also include the current date.

Note: Very large files, such as database files, take several
minutes to backup.  During this time you will not see any
progress reported to the console.  If the tape drive is
running and the system disk light is flashing, the operation
is in progress.

Please insert the first tape now.  Press 'ENTER' to start
image tape creation.
```

To back up the speech files, using the **mkimage** command, do the following:

1 Label the appropriate number of tapes **CONVERSANT Speech Image Tape x (date)** where x indicates the insertion sequence and *date* is the current date.

2 Insert the tape labeled "CONVERSANT Speech Image Tape 1" into the cartridge tape drive. See Inserting and Removing Cartridge Tapes on page 156.

3 Press **ENTER**.

The system takes approximately 30 minutes to load the information onto one tape.

If your system backup requires more than one tape, the system displays the following message:

```
End of medium on output
Change to part 2 and press RETURN key. (q)
```

4 If your backup does not require more than one tape, continue with step 5.

If your backup requires more than one tape, do the following:

a Remove the tape labeled "CONVERSANT Speech Image Tape 1" from the cartridge tape drive and insert the tape labeled "CONVERSANT Speech Image Tape 2" into the cartridge tape drive. See Inserting and Removing Cartridge Tapes on page 156.

b Press **ENTER**.

c Repeat step a through step b for all necessary tapes.

5 When the system displays the following message, remove the last tape from the cartridge tape drive. See Inserting and Removing Cartridge Tapes on page 156.

```
The speech tapes will be verified now.
Make sure the tapes are inserted in the order they are made.

Press 'Enter' to start verification.
```

6 Press **ENTER**.

The system displays the following message:

```
Please insert the first tape now.  Press 'Enter' to continue.
```

7 Insert the tape labeled "CONVERSANT Speech Image Tape 1" into the cartridge tape drive. See Inserting and Removing Cartridge Tapes on page 156.

8 Press **ENTER**.

The system takes as long to verify a tape as it did to create it.

The system will prompt for additional tapes if necessary.

9 Continue with the procedure.

Verifying the mkimage Backup

When the system is done verifying a tape, it automatically reboots, returns to multi-user format, and displays the console login. To verify the backup, do the following:

1 Log in as **root**.

2 Enter **vi /SaveVsData/mkimage.log**

If the system displays the following message, the mkimage back up was successful.

```
Creation and verification of the CONVERSANT Image Tape is
complete.
```

If the system does not display this message, the mkimage back up was not successful. Repeat the procedure.

Backing Up Speech Files and ORACLE Database Tables Using a LAN

Note: The backup server must have an **ftp** program. Most operating systems have a built-in **ftp** program.

Identifying Speech Files and Database Tables

Before the speech files can be backed up over a LAN, you must perform the following procedures to locate the speech files and identify which talkfiles and database tables are being used:

- Locating Speech Files on page 192
- Identifying Talkfiles on page 193
- Identifying Database Tables on page 194

Locating Speech Files

To locate speech files, do the following:

1 Enter **grep SPEECHDIR /vs/data/irAPI.rc**

The system displays a message similar to the following message:

SPEECHDIR=/home2/vfs/talkfiles

This is the directory in which all of the speech files are located.

2 Enter **cd** *directory_name*

Note: Using the example in the previous step, enter **cd /home2/vfs/talkfiles**

3 Enter **ls**

The system displays a message similar to the following message:

```
1  100  102  104  106  108  110  112  201  40  9
10 10   103  105  107  109  111  2    206  41
```

Note: These are the talkfiles used by all applications on the system.

Identifying Talkfiles

To identify the talkfiles being used, do the following:

1 Enter **cd /speech/talk**

2 Enter **ls**

The system displays a message similar to the following message:

feature_tst.pl   transcribe.pl

3 View the **.pl** file associated with your application.

For example, to view the **.pl** file associated with the feature test application, enter **head feature_tst.pl**

The system displays a message similar to the following message:

```
1       Standard Speech for feature_tst
sit.det         1000    Special Information Tone detected
recog.1.3.no    1001    to use recognition type 1-3 and no,
enter 4 to.test 1002    To test
cant.dial.lu    1003    unable to dial into line unit
full.cca.b.1    1004    For full cca call bridge enter 1#
```

4 Locate the first field in the first line of the output. This is the talkfile that application uses.

In the example above the feature test application uses talkfile 1.

5 Record the number.

6 Repeat step 3 through step 5 for all appropriate applications.

Identifying Database Tables

To identify the database tables the system uses, do the following:

1 Enter **cd /save_directory**

where *save_directory* is the name of the directory you want to use as the intermediate directory during a backup or restore.

2 Enter **sb_table -l *application_name***

where *application_name* is the name of the application you are using.

The system displays a message similar to the following message:

```
TAB1
TAB2
TAB3
TAB4
TAB5
```

The tables listed in the message are the tables being used by the application.

3 Record the table names.

4 Enter **tblsav** *application_name tables*

where *application_name* is the name of the application you are using and *tables* are the tables recorded in step 3.

Note: Table names are case sensitive and must be separated by spaces.

Note: An explanation of the **tblsav** command can be found by entering **tblsav**, without any additional arguments, on the system. See *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501, for more information on system commands.

5 Repeat step 2 though step 4 for every application for which you want to save tables.

Backing Up Speech Files and Database Tables

Separate procedures are required to back up the speech files and database tables:

- Backing Up Speech Files on page 196
- Backing Up Database Tables on page 198

Note: These procedures apply to Windows NT or Windows 95 servers.

Backing Up Speech Files

To back up speech files, do the following:

1 On the server, create a directory for each talkfile to be backed up. It is advisable to have the same directory names on your server as on your system. For example, place files from talkfile 1 in a directory called 1.

2 From a DOS prompt on the server, enter **cd *backup_directory***

   where *backup_directory* is the name of the directory you want to use as the backup directory for the application speech.

3 Enter **ftp *machine_address_or_name***

   The system asks for the user login.

4 Enter an appropriate login id.

   The system asks for the user password.

5 Enter the user password.

6 Enter **cd *directory_name*** using the directory name entered in step 2 of Locating Speech Files on page 192.

7 Enter **prompt**

   This command toggles between interactive mode on and interactive mode off. The system should be set to interactive mode off.

8 Enter **bin**

   This command indicates binary transfer.

9 Enter **cd *talkfile***

   where *talkfile* is the talkfile being used by the application. This is the file t identified in step 4 of Identifying Talkfiles on page 193.

10 Enter **mget ***

   This command copies all files in the directory.

11 If there are additional talkfiles which need to be backed up, complete the following Steps a through c for each talkfile.

   a Enter **cd ../*new_talkfile***
   b Enter **lcd ../*new_backup_directory***
   c Enter **mget ***

12 Exit the **ftp** program.

Backing Up Database Tables

To back up database tables, do the following:

1 From a DOS prompt on the server, enter **cd *backup_directory***

where *backup_directory* is the name of the directory you want to use as the backup directory for the ORACLE tables.

2 Enter **ftp *machine_address_or_name***

The system asks for the user login.

3 Enter an appropriate login id.

The system asks for the user password.

4 Enter the user password.

5 Enter **cd /*save_directory***

where *save_directory* is the name of the directory in which the database tables were saved in Step 1 of .

6 Enter **prompt**

This command toggles between interactive mode on and interactive mode off. The system should be set to interactive mode off.

7 Enter **bin**

This command indicates binary transfer.

8 Enter **get *application_name*** for every file that you created in step 4 in Identifying Database Tables on page 194, where *application_name* is the name of the application you are using.

9 Exit the **ftp** program.

Restoring the Intuity CONVERSANT System

Three utilities are available to restore a system from backup tapes. You must use the same utility to restore as was used to perform each backup. If you followed the recommendations in Table 17 on page 167, you will use three restoration procedures:

- Restoring the System Using QuickStart on page 200 or Restoring the System Using mkimage on page 206 for disaster recovery

- Performing a Full Restore Using BRU on page 203

- Performing a Differential Restore using BRU on page 205

The ORACLE database directory is restored with the procedure in Restore the Database Directory on page 210

Procedures are also provided to restore speech files and the ORACLE database over a LAN:

- Restoring Speech Files on page 211

- Restoring Database Tables on page 212

Restoring the System Using QuickStart

To perform this procedure, you must have the "QuickStart" boot diskette.

Note: The CONVERSANT system must be shut down in order to restore an entire disk.

Note: If you have a backup created with any version of QuickStart prior to 1.3, you must recover using the same release that you used to create the backup.

To restore the system using QuickStart, do the following:

1 Log in as **root**.

2 Enter **shutdown -g0 -y**

   The system shuts down.

3 Insert the boot diskette labeled "QuickStart" into the diskette drive. See Inserting and Removing Diskettes on page 163.

4 Press the reset button on the Intuity CONVERSANT platform.

   The system boots from the diskette. After a few minutes, the system displays the QuickStart main menu (Figure 40 on page 170).

5 Use the **TAB** key to highlight Recover System and press **ENTER**.

   The system displays the Recovering a System window (Figure 46 on page 201).

Figure 46.   Recovering a System Window


```
              Recovering System
  From:  First SCSI Tape Drive    ▼
  To:    Primary Master EIDE HD   ▼

        Start            Close
                  ▶
```
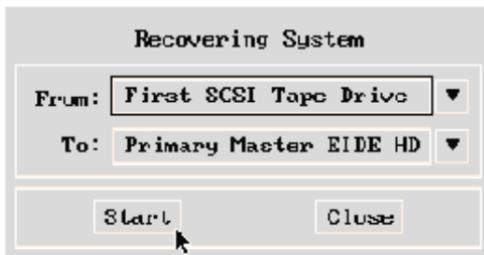
6 In the From: field, select the device from which you will recover the data. For CONVERSANT, this field should be the First SCSI Tape Drive.

7 In the To: field, select disk drive from which you want to restore data. Use the **TAB** and arrow keys to select a disk drive from the list and press **ENTER**.

8 Insert the tape labeled **CONVERSANT Disaster Recovery Tape *x* (QuickStart)** *date* in the cartridge tape drive. See Inserting and Removing Cartridge Tapes on page 156.

9 Press the **TAB** key to highlight the Start button, and then press **ENTER**.

The system displays a warning that indicates you are about to overwrite ALL data on your backup media.

1 Select **Continue**.

The system displays the Recovering System status window similar to Figure 42 on page 173.

When the procedure is complete, the tape rewinds and the system indicates that the restore was successful.

10 Select **OK** to return to the QuickStart main menu (Figure 40 on page 170).

11 Remove the QuickStart boot diskette from the diskette drive. See Inserting and Removing Diskettes on page 163.

12 Reboot the CONVERSANT system.

13 If you have made full a full backup using BRU, continue with Performing a Full Restore Using BRU on page 203.

Performing a Full Restore Using BRU

If you used BRU to perform a full backup, to restore the system, do the following:

1 Starting at the Voice System Administration Menu (Figure 3-6), select

```
> Backup/Restore

    > Restore
```

The system checks to see if the Intuity CONVERSANT Voice System is running.

2 If the voice system is not running, skip to step step 3.

If the voice system is running, enter **y**

The system displays the following message:

```
The Voice System is running, do you want to stop it for
Restore?
```

Note: If you choose N, the voice system is not stopped and the restoration does not continue.

   3 Insert the tape labeled "CONVERSANT Full UNIX Backup [latest date available]." See Inserting and Removing Cartridge Tapes on page 156.

   The system displays a message similar to the following message:

   ```
   Do you want to recover the following volume:
   Full Backup created on April 3, 1997: 2:30 A. M.
   Enter y to recover (y):
   ```

   4 Enter **y**

   Note: If more than one tape is required to restore, the system will prompt you to insert the additional tapes when they are needed.

   5 If you have made a differential backup, continue with Performing a Differential Restore using BRU on page 205.

Performing a Differential Restore using BRU

If you used BRU to perform a differential backup, to restore the system, do the following:

1 Start at the Voice System Administration Menu (Figure 37 on page 161), and select:

```
> Backup/Restore

    > Restore
```
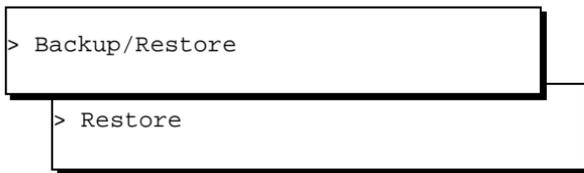
The system checks to see if the CONVERSANT Voice System is running. If the voice system is running, the system displays the following message: The system responds with the following message:

```
The Voice System is running, do you want to stop it for
Restore?
```

2 If the system is not running, skip to step 3.

If the system is running, enter **y**

Note: If you choose N, the voice system is not stopped and the restoration does not continue.

3 Insert the tape labeled "CONVERSANT Differential UNIX Backup [latest date available]." See Inserting and Removing Cartridge Tapes on page 156.

The system displays a message similar to the following message:

```
Do you want to recover the following volume:
Differential Backup created on April 3,1997: 2:30 A. M.
Enter y to recover (y):
```

4 Enter **y**

Note: If more than one tape is required to restore, the system will prompt you to insert the additional tapes when they are needed.

5 Press the reset button on the system.

Restoring the System Using mkimage

To restore the system using the **mkimage** utility, do the following:

1 From the "Installing Base System Software" chapter in the maintenance book for your platform, use the following procedures:

   a "Beginning the UnixWare Installation"

   b "Setting Up the UnixWare Environment"

   c "Initializing the Hard Disk Drives"

   d "Transferring the UnixWare Files"

The system displays the Application Server Media Type screen (Figure 47 on page 207).

Figure 47.   Application Server Media Type Screen

```
The Application Server software is available on diskette
or tape or network server. You must select the source
you will use to install the software.


Your choices are:

1. Diskette Drive 1
2. Unixware for Intuity CONVERSANT
3. Network Install Server
4. Intuity Image/Snap Tape

Press a number between '1' and '4' followed by 'ENTER':
```

6 Insert the system backup cartridge tape labeled "CONVERSANT Image Tape 1" into the tape drive. See Inserting and Removing Cartridge Tapes on page 156 for the procedure.

7 Enter **4**

The system displays the Insert Tape screen (Figure 48 on page 208).

Figure 48. Insert Tape Screen

```
Please insert the Intuity Image/Snap cartridge tape into the
tape drive and press 'ENTER'.


Your choices are:

1. The tape has been inserted in the tape drive.
2. Go back to previous menu.

Press '1' or '2' followed by 'ENTER':
```

8 Press **ENTER**.

This accepts the default of 1 to indicate the tape has been inserted and is ready for access.

The system displays the following message:

Installation in progress. This will take several minutes.
Please do not remove the tape.

The installation process takes 2 to 3 hours to complete. When the system installation is complete the system displays a message prompting you to remove the tape.

9 Remove the tape labeled "CONVERSANT Image Tape 1" from the tape drive. See Inserting and Removing Cartridge Tapes on page 156.

   10 Press **ENTER**.

   The system reboots.

   11 If your system has more than one hard disk drive, clean the secondary
   hard disk drives. See the "Replacing a Hard Disk Drive" chapter of your
   platform maintenance book.

   ## ⚠ CAUTION:
   Do not remove the partition on the root hard disk drive.

   12 Reboot the system. See Rebooting the UNIX System on page 225.

   13 Perform the ''Activating the Volume Manager'', procedure in the "Installing
   Base System Software" chapter of the maintenance book for your
   platform.

   The system is now ready for you to restore speech files or activate mirroring.
   To restore the speech files, see "Saving and Restoring," in Chapter 1,
   "Overview of Speech," in *Intuity CONVERSANT System Version 7.0 Speech
   Development, Processing, and Recognition*, 585-313-201. To activate
   mirroring, see the "Replacing a Hard Disk Drive" chapter of your platform
   maintenance book.

**Restore the
Database Directory**

To restore the database directory, do the following:

1 If the database system is running, stop it. See Stopping the Database System on page 227.

2 Perform the "Selective System Restore" procedure described in *Novell UnixWare Backup and Restore Services* book, which is part of the *UnixWare Documentation Set*, 585-350-908. Specify the directory **/oracle/dbs**.

3 If there are other database files created outside the **/oracle/dbs** directory, perform the "Selective System Restore" procedure for each of the files. See the *Novell UnixWare Backup and Restore Services* book which is part of the *UnixWare Documentation Set*, 585-350-908, for this procedure.

4 Start the database. See Starting the Database System on page 226.

5 Start the voice system. See Starting the Voice System on page 214.

Restoring Speech Files and ORACLE Database Tables Using a LAN

Note: The backup server must have an **ftp** program. Most operating systems have a built-in **ftp** program.

Use these procedures to restore the speech files or ORACLE database tables over a LAN.

Restoring Speech Files

To restore speech files, do the following:

1 Using the root login, enter **chmod 777 *directory*/***

   where *directory* is the name of the speech directory as found in step 1 of Locating Speech Files on page 192.

2 On the server, enter **ftp *machine_address_or_name***

   The system asks for the user login.

3 Enter an appropriate login id.

4 Enter the user password.

5 Enter **cd *directory_name*** using the directory name entered in step 2 of Locating Speech Files on page 192.

6 Enter **cd *talkfile***

   where *talkfile* is the speech file being used by the system. This is the file that was identified in step 4 of Identifying Talkfiles on page 193.

7 Enter **prompt**

   This command toggles between interactive mode on and interactive mode off. The system should be set to interactive mode off.

8 Enter **lcd *backup_directory***

   where *backup_directory* is the directory on the server to which the speech files were backed up.

9 Enter **mput ***

This command puts all files in the *talkfile* directory.

10 If there are additional talkfiles which need restored in a different server directory than those which were already restored in this procedure, do the following for each talkfile.

  a Enter **cd ../new_talkfile**
  b Enter **lcd new_backup_directory**
  c Enter **mput ***

11 Exit the **ftp** program.

12 Using the root login, enter **chmod 644 directory/***

where *directory* is the name of the speech directory as found in step 1 of Locating Speech Files on page 192.

Restoring Database Tables   To restore database tables, do the following:

1 On the server, enter **ftp machine_address_or_name**

The system asks for the user login.

2 Enter an appropriate login id.

The system asks for the user password.

3 Enter the user password.

4 Enter **cd /save_directory**

where *save_directory* is the name of the directory in which the database tables were saved in step 1 of Identifying Database Tables on page 194.

5 Enter **lcd backup_directory**

where *backup_directory* is the directory on the server to which the database tables were backed up.

6 Enter **prompt**

This command toggles between interactive mode on and interactive mode off. The system should be set to interactive mode off.

7 Enter **put application_name** for every application with tables that need restored.

where *application_name* is the name of the application you are using.

This command will put all files in *backup_directory* on the server.

8 Exit the **ftp** program.

9 Drop each table to be restored.

⚠ CAUTION:
If the existing tables are not dropped, the system appends the existing tables with the restored tables.

    10 On the system, enter **tblres** *application*

Note: An explanation of the **tblres** command can be found by entering **tblres**, without any additional arguments, on the system.

    11 Repeat <u>step 10</u> for each database table to be restored.

Administering the Voice System

Administering the voice system includes the following procedures:

- <u>Starting the Voice System on page 214</u>
- <u>Stopping the Voice System on page 217</u>
- <u>Shutting Down the Voice System on page 220</u>

Starting the Voice System

You can stop the voice system from either the windows or the command line.

Using the System Windows
To start the voice system, do the following:

1 Start at the Voice System Administration menu (Figure 37 on page 161), and select:

```
> Configuration Management

    > System Control

        > Start Voice System
```
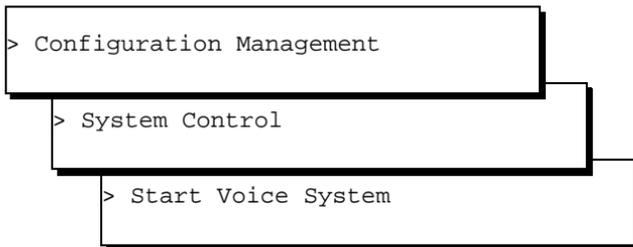
The system displays the following messages:

```
running bitmapmgr...
bitmapmgr completed.

ORACLE RDBMS is already started.

The Voice System is starting

The Voice System is initializing cards

The Voice System is still initializing cards
Please wait...

Startup of the Voice system is now complete.

Hit acknowledge key to continue.
```

2 Press **F1** (Acknowledge).

The system displays the System Control menu (Figure 49 on page 216).

Figure 49.   System Control Menu

```
                System Control

     Diagnose
     Renumber Voice Channels
     Report Voice System Status
     Shutdown System
     Start Voice System
     Stop Voice System
```
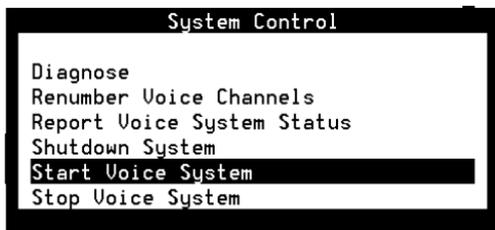
Using the Command Line

To start the voice system, do the following:

1 Enter **start_vs**

The system displays the following messages:

```
running bitmapmgr...
bitmapmgr completed.

ORACLE RDBMS is already started.

The Voice System is starting

The Voice System is initializing cards

The Voice System is still initializing cards
Please wait...

Startup of the Voice system is now complete.
```

Stopping the Voice System

You must stop the voice system to complete the following tasks:

• Replacing a component in the CompactPCI

• Performing routine backup and restore procedures

When the voice system is stopped, the entire system is placed in the idle state when all lines are free, the internal system tables are saved, and all processes are turned off.

The voice system can be stopped from either the windows or the command line.

Using the System Windows
To stop the voice system, do the following:

Note: Have the system administrator route calls away from the system before beginning this procedure.

1 Start at the Voice System Administration menu (Figure 37 on page 161) and select:

```
> Configuration Management

   > System Control

      > Stop Voice System
```
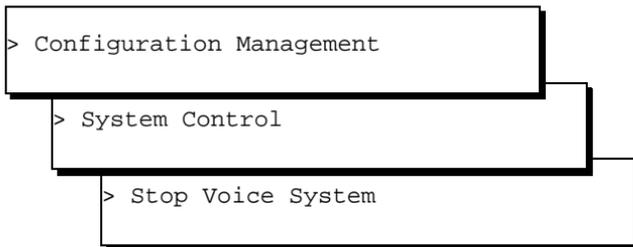
The system displays the Wait Time window (Figure 50 on page 218).

Figure 50.   Wait Time Window

```
Wait Time

Seconds: ■
```
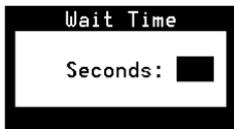
2 Enter a number between 60 and 600.

This is the number of seconds you want the system to wait for all calls to clear before stopping the voice system.

3 Press **F3** (Save).

The system displays the following messages:

The Voice System is now stopping.

Initiating request to clear all calls in the next X seconds.

Orderly idling of the system succeeded.

After the voice system has completely stopped, use the "Start Voice System" choice from the system control menu to restart the voice system.

The Voice System has stopped.

Press Enter to continue.

4 Press **ENTER**.

The system displays the System Control menu ().

Using the Command Line

To stop the voice system, do the following:

Note: Have the system administrator route calls away from the system before beginning this procedure.

1 Enter **stop_vs** *time*

where *time* is the time (60 to 600 seconds) that you want the system to wait before it begins the shut down procedure. The default wait time is 180 seconds.

The system displays the following message:

```
The Voice System is now stopping.
Initiating request to clear all calls in the next X seconds.
Orderly idling of the system succeeded.
```

After the voice system has completely stopped, use the "Start Voice System" choice from the system control menu to restart the voice system.

Shutting Down the Voice System

To shut down the voice system, do the following:

1 Start at the Voice System Administration menu (Figure 37 on page 161) and select:

```
> Configuration Management

    > System Control

        > Shutdown System
```
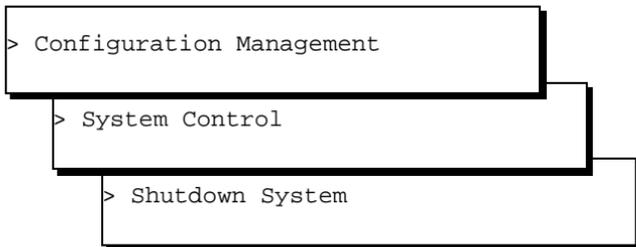
The system displays the Wait Time window (Figure 50 on page 218).

2 Enter a number between 0 and 60.

This is the number of seconds you want the system to wait for all calls to clear before shutting down the voice system.

3 Press **F3** (Save).

The system displays the following messages:

```
The Voice System is now stopping.

Initiating request to clear all calls in the next X seconds.

Orderly idling of the system succeeded.
```

After the voice system has completely stopped, use the to restart the voice system.

Administering the Operating System

Administering the operating system includes the following procedures:

Shutting Down the Operating System

There are two procedures to shut down the operating system:

- Using the System Windows on page 222
- Using the Command Line on page 224

Note: The system automatically resets the machine clock for daylight savings time. If your system is down at the time at that daylight savings time is updated (April and October), your machine clock will not indicate the correct time.

Using the System Windows

1 Stop the voice system. See Stopping the Voice System on page 217.

2 Enter **cvis_mainmenu**

The system displays the main menu.

3 Select:

```
> UNIX System Administration

    > Machine

        > shutdown
```

The system displays the Shut Down the Machine window (Figure 51 on page 223).

Figure 51. Shut Down the Machine Window

```
   3                 Shut Down the Machine

 Users currently logged on:

 root        console      Jul  8 06:39
 root        pts000       Jul  8 08:48
```

4 Press **F3** (Continue).

The system displays the next Shut Down the Machine window ().

Figure 52. Shut Down the Machine Window (continued)

```
┌─────────────────────────────────────────────────────────┐
│  4               Shut Down the Machine                    │
│                                                            │
│   Number of seconds before shutdown starts:        60     │
│                                                            │
│                                                            │
│   WARNING: Once started, this procedure CANNOT BE STOPPED! │
│            Strike SAVE to proceed with shutdown and exit OA&M.│
└─────────────────────────────────────────────────────────┘
```
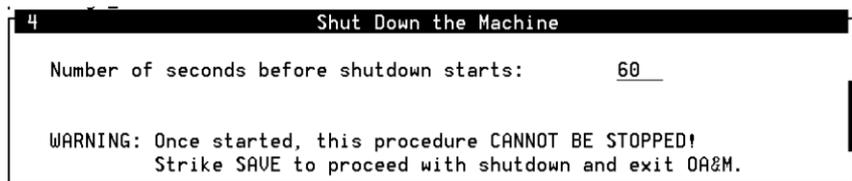
5 Enter the number of seconds the machine should wait to clear all calls before shutting down. Valid values are between 0 and 9999.

6 Press **F3** (Save).

If you selected "0," the shutdown starts immediately. In this case, all remote users (if any) are notified that a shutdown is starting immediately.

Using the Command Line

To shut down the operating system using the command line, do the following:

1 Stop the voice system. See .

2 Enter **shutdown -i0 -y -g0**

Rebooting the UNIX System

To reboot the UNIX system, do the following:

1 Stop the voice system. See .

2 Enter **shutdown i6 -y -g0**

Administering the Database System

Administering the database system includes the following procedures:

-
-
-
-

Starting the Database System

To start the database system, do the following:

1 Enter **/oracle/bin/ior w**

The system displays the following messages followed by the UNIX prompt.

```
ORACLE instance started.
Database mounted.
Database opened.
Total System Global Area      877716 bytes
Fixed Size                     24908 bytes
Variable Size                 410440 bytes
Database Buffers              409600 bytes
Redo Buffers                   32768 bytes
SQL*DBA complete.
```

If the database start-up fails, the system may hang, forcing you to press **DEL**, or the system may provide error information and return the system prompt. If the system returns error information, enter:

/oracle/bin/oerr ora *error_num*

where *error_num* is the ORACLE error number in the reason field of the error message.

The output will contain a brief explanation of the error, the cause, and the action to take to correct it.

Note: You can also refer to the *ORACLE Error Messages and Codes Manual* for the explanation. If the error is unique to the UNIX environment, you can also see the *ORACLE for UNIX Technical Reference Guide* for detailed information.

Follow the actions suggested to correct the problem.

Stopping the Database System

To stop the database system, do the following:

1 If the voice system is still running, stop it. See Stopping the Voice System on page 217.

2 Enter **/oracle/bin/ior s**

The system displays the following messages followed by the UNIX prompt:

Database closed.

Database dismounted.

ORACLE instance shut down.

SQL*DBA complete.

If the database shutdown was not successful, do the following:

a Press **DEL**.

The system displays the following message:

```
ORA-01013: user requested cancel of current operation
SQL*DBA complete.
```

b Enter **/oracle/bin/ior c**

The system displays the following message:

```
ORACLE instance shut down.
SQL*DBA complete.
```

Dropping a Database Table

If the table resides in a remote system machine, perform the following procedure on that remote machine.

Note: If the table resides in a non-system remote machine, contact the database administrator of the remote machine for assistance.

1 Enter **/oracle/bin/orastat** to verify that the database is running.

The system displays either the number 1 or the number 0.

~ If "1" is displayed, the database is not running. Start the database. See Starting the Database System on page 226.

~ If "0" is displayed, the database is running. Continue with step 2.

2 Enter **/oracle/bin/sqlplus sti/sti**

This will invoke the ORACLE SQL*PLUS utility.

The system displays the following message:

```
SQL*Plus: Release 3.1.1.9.1>
```

3 Enter **drop table *tblname***

where *tblname* is the name of the table to be dropped enclosed in double quotes.

Note: The table name is case sensitive. It must also be enclosed in double quotes appearing exactly as it appears in the system message.

~ If the table is dropped successfully, the system displays the following message:

```
Table dropped.
```

~ If the REASON field is ORA: 00942 table or view does not exist, continue with step 4.

~ If the table cannot be dropped, do the following:

a Enter **quit**

This will exit the SQL*PLUS utility.

b Stop the database. See Stopping the Database System on page 227.

---

    c Start the database. See <u>Starting the Database System on page 226</u>.

    d Repeat <u>step 3</u> of this procedure.

4 Enter **quit**

This will exit the SQL*PLUS utility.

Recreating the System Traffic Tables

To recreate the system traffic tables, do the following:

Note: All current system traffic data is lost after performing this procedure.

1 Stop the voice system. See <u>Stopping the Voice System on page 217</u>.

2 Enter **/oracle/bin/sqlplus \@ /oracle/dist/cdh.sql**

This drops and recreates all system traffic tables.

3 Start the voice system. See <u>Starting the Voice System on page 214</u>.

Verifying the Date and Time

Procedures to verify the date and time include:

•

•

Checking the UNIX Date and Time Window

To check the UNIX Date and Time window, do the following:

1 Start at the Voice System Administration Menu () and select:

```
> UNIX Management

   > UNIX Date and Time
```

The system displays the UNIX Date and Time window ().

Figure 53.   UNIX Date and Time Window
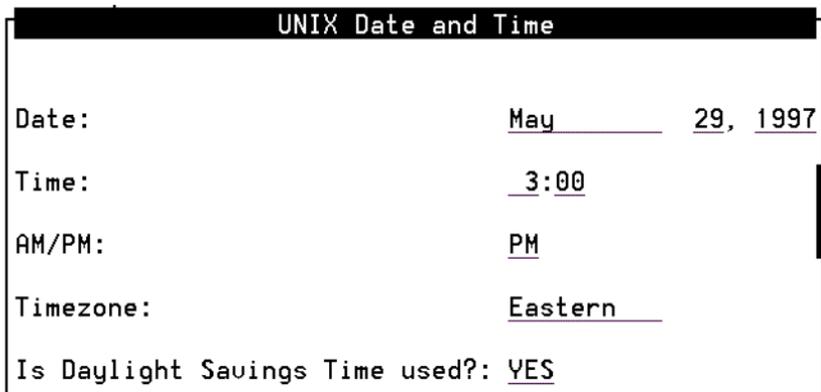
```
┌─────────────────────────────────────────────────────┐
│                UNIX Date and Time                     │
│                                                       │
│ Date:                              May       29, 1997 │
│                                                       │
│ Time:                               3:00              │
│                                                       │
│ AM/PM:                             PM                  │
│                                                       │
│ Timezone:                          Eastern            │
│                                                       │
│ Is Daylight Savings Time used?: YES                   │
└─────────────────────────────────────────────────────┘
```

2 Check each of the fields under UNIX Date and Time.

3 If all of the fields are correct, press **F6** (Cancel).

If a field contains incorrect information, continue with .

Changing the UNIX Date and Time Window

The user can change any of the displayed fields. To change one field in the Date and Time window, the user must either change or acknowledge the information in each field.

Changing the Date Field

The date field contains the month, day, and year.

Changing the Month

1 Place the cursor on the month portion of the Date: field in the UNIX Date and Time window.

2 If the month shown is not correct, do the following:

  a Press **F2** (Choices) to display the months of the year ().

Figure 54.   UNIX Month Choices Menu

```
┌─────────────┐
│   Month     │
│  January    │
│  February   │
│  March      │
│  April      │
│  May        │
│  June       │
│  July       │
│  August     │
│  September  │
│ >October    │
│  November   │
│  December   │
└─────────────┘
```
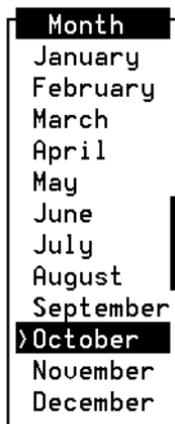
  b Use ▲ or ▼ to move the cursor and highlight the correct month.

  c Press **ENTER** to place the name of the correct month into the month field.

Note: The user can also select the current month by entering the corresponding alphabetic abbreviation from this list: **Ja**, **F**, **Mar**, **Ap**, **May**, **Jun**, **Jul**, **Au**, **S**, **O**, **N**, **D**.

Continue with .

If the month shown is correct, press **ENTER** for no change and continue with .

Changing the Day

If the day of the month shown is:

- Not correct, enter the correct day as a number from 1 to 31 and continue with .

- Correct, press **ENTER** for no change and continue with the next procedure .

Changing the Year

If the year shown is:

- Not correct, enter the correct year as a number from 1996 to 2038 and continue with .

- Correct, press **ENTER** for no change and continue with .

Changing the Time Field

If the time shown is:

- Not correct, enter the correct time in the form of *hours:minutes* and continue with .

- **Note:** Use a 12-hour a.m./p.m. standard. Do not use the 24-hour military standard.

- Correct, press **ENTER** for no change and continue with .

Changing the AM/PM Field

If AM/PM is:

- Not correct as shown, type **a** for a.m. or **p** for p.m. and continue with Changing the Time Zone Field on page 236.

- Correct as shown, press **ENTER** for no change and continue with Changing the Time Zone Field on page 236.

Changing the Time Zone Field

If the time zone shown is not correct, complete Steps 1 through 3 and continue with Changing the Is Daylight Savings Time Used Field on page 237.

1 Press **F2** (Choices) to display the list of time zones (Figure 55 on page 237).

Figure 55. UNIX Time Zone Choices Menu

```
┌──────────┐
│ Timezone │
│>Greenwich│
│ Atlantic │
│ Eastern  │
│ Central  │
│ Mountain │
│ Pacific  │
│ Yukon    │
│ Alaska   │
│ Bering   │
│ Hawaii   │
└──────────┘
```
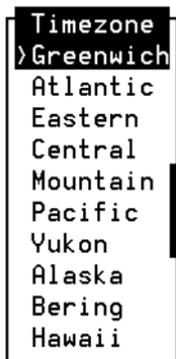
2 Use ▲ or ▼ to move the cursor and highlight the correct time zone.

3 Press **ENTER** to place the name of the correct time zone into the
Timezone: field.

If the time zone shown is correct, press **ENTER** for no change and continue
with .

Changing the Is Daylight Savings Time Used Field

1 Type **y** for yes or **n** for no depending upon whether or not daylight savings
time is used at any time during the year.

2 Press **F3** (Save) to save the changes and continue .

Acknowledging the Changes to the Date and Time Window

After the changes have been made to the Date and Time window you must ensure that the system recognizes the new information. To acknowledge the new information, do the following:

1 Reboot the system. See Rebooting the UNIX System on page 225.

At this time the date and time changes will take effect.

2 Start at the Voice System Administration Menu (Figure 37 on page 161) and select:

```
> UNIX Management

    > UNIX Date and Time
```

The system displays the UNIX Date and Time window (Figure 53 on page 232).

3 Check each of the fields under UNIX Date and Time to ensure that the changes have been recorded.

4 Alarms and Log Messages

Introduction

When the Intuity CONVERSANT system has problems or errors, it generates a system message. system messages are used to alert you to problems, potential problems, or a change in the state of the system. These messages are collected in the Messsage Log Report screen under the Reports Administration menu.

The information in this chapter details the actions you must take regarding these system-reported troubles. If the action requires you to contact your "remote maintenance service center," this means one of the following:

- If you are a field technician supporting a customer per a maintenance agreement or a time and material charge basis, you are the remote maintenance service representative. If the problem is more serious than you can handle, contact the next level of support or Lucent Technologies for assistance.

- If you are a support person assisting an end customer, you are the remote maintenance service representative. If you cannot solve the problem, contact the Technical Support Center (TSC) at 1-800-242-2121 for assistance.

ADM Alarms and Log Messages

ADM001

Alarm Level   Major.

Description   The Administration process encountered a system error while trying to access a file. The value of errno indicates the reason for the error.

Repair Procedure Perform the following procedures to correct the alarm. Contact your remote maintenance service center for assistance.

1 Check the file or directory named in the error message; it may be corrupted or missing.

2 Ensure that the **/** and **/usr** file systems are not out of free space.

3 Possible damaged file system (use **fchk** when the system is at a single user level).

4 Possible disk or disk controller problems.

ADM002

Alarm Level Major.

Description The Administration process encountered a problem while trying to send or receive an interprocess communication message. The value of **errno** indicates the reason for the error.

Repair Procedure Contact your remote maintenance service center for assistance.

ADM003

Alarm Level Minor.

Description The hardware configurator checker, **hconchk**, found a discrepancy between the configuration specified by the Hardware Resource Allocator (HRA) and the system device configuration. The error message describes the nature of the discrepancy. More detailed information about the discrepancy may be included in the output of hconchk. When the voice system is started, hconchk is executed and the output is written to /vs/data/hconchk.out. To resolve the descrepancy, use the HRA command, show_config, to view the HRA device settings or the command, configure, to add or remove devices or to modify the device settngs. If necessary, verify that the specified devices are installed in the system and that the hardware device settings are correct. Then execute the command hconchk to verify that the discrepency has been eliminated.

Repair Procedure   Perform the following procedures to correct the alarm. Contact your remote maintenance service center for assistance.

1 Execute the show_config command. See the "System Configuration" appendix in the maintenance book for your platform for more information.

2 If necessary, execute the configure command. See the "System Configuration" appendix in the maintenance book for your platform for more information.

ADM004

Alarm Level   Minor.

Description   The hardware configurator checker, hconchk, identified a configured system module that has not been configured by the Hardware Resource Allocator (HRA). This message does not necessarily indicate that there is an error, but it is a warning that there may be a device which has been installed in the system and has not been configured by the HRA. The HRA command, show_config, can be used to view all devices configured by the HRA, and the command configure can be used to add a device. If a system module is not included in HRA device table, then it cannot by configured by the HRA.

Repair Procedure   Perform the following procedures to correct the alarm. Contact your remote maintenance service center for assistance.

1 Execute the show_config command. See the "System Configuration" appendix in the maintenance book for your platform for more information.

2 If necessary, execute the configure command. See the "System Configuration" appendix in the maintenance book for your platform for more information.

ADMIN Alarms and Log Messages

ADMIN002

Alarm Level   Critical.

Description   **Note:** This alarm is always generated when an ADMIN003 alarm occurs.

The physical SCSI disk drive indicated is dead and must be replaced. This condition places the system in critical (degraded) mode. Although the system will continue to operate, if another physical drive fails, the system will fail. In the unlikely event that one of the existing drives encounters a bad block, the data stored in that block will be lost. Additional error messages may be found in the **/etc/log/gamevlog.log** file.

Note: Occasionally, a drive may encounter an intermittent problem resulting in a drive failure, but then be rebuilt automatically by the RAID controller.

Repair Procedure   Replace the drive. Follow the procedures in the "Replacing a Hard Disk Drive" chapter in the maintenance book for your platform.

Note: The physical device number (PHYSDEV) indicated by this alarm is the same as the SCSI ID of the failed disk drive. For example, if PHYSDEV 3 is the dead device, then the SCSI device in disk bay 3 should be replaced. See "Identifying a Failed Hard Disk Drive in a RAID System" in the "Replacing a Failed Hard Disk Drive" chapter in the maintenance book for your platform for more information on identifying a disk drive.

ADMIN003

Alarm Level   Minor.

Description   **Note:** This alarm is redundant with ADMIN002. It never occurs by itself.

The logical system drive indicated is in critical (degraded) mode, meaning it is not protected by RAID level 5. Although the system will continue to run normally, the system is no longer protected by RAID level 5. If another drive fails while the system is in critical mode, it will crash and need to be restored from an image tape. Additional error messages may be found in the **/etc/log/gamevlog.log** file.

Repair Procedure   The repair procedure for ADMIN002 also addresses this alarm.

> ⚠️ **CAUTION:**
> This alarm indicates one or more logical system drives are in critical mode.
> The logical system drive number does not correspond to any particular SCSI
> device.
>
> A typical scenario is that an ADMIN002 alarm occurs indicating that a
> particular physical device (SCSI disk) is dead, for example physical device 4,
> and must be replaced. Simultaneous with the ADMIN002 alarm, an
> ADMIN003 alarm is issued indicating that logical system drive 0 is in critical
> mode. The correct repair procedure is to replace the SCSI disk in drive bay 4.
> If the alarms are misinterpreted and SCSI disk 0 is removed, the system will
> crash.

ADMIN004

Alarm Level   None.

Description   A rebuild of the indicated system drive has been started. This rebuild was
probably started because a physical drive was replaced. During the rebuild
the system will continue to operate as usual, but it will not be protected by
RAID level 5. All data will be available, but disk access may be slower than
usual. Additional error messages may be found in the **/etc/log/gamevlog.log**
file.

Repair Procedure   No corrective action is necessary.

ADMIN005

Alarm Level   None.

Description   The rebuild of the indicated system drive is complete. After all logical system drives are rebuilt, the system will again be protected by RAID level 5. The ADMIN003 events can be viewed to see how many system drives were in critical mode. After the last logical system drive is rebuilt, the system returns to normal mode and is once again protected by RAID level 5. Additional error messages may be found in the **/etc/log/gamevlog.log** file.

Repair Procedure   No corrective action is necessary.

ADMIN006

Alarm Level   None.

Description   The rebuild of the indicated system drive was canceled before it was complete. The system will remain in critical (degraded) mode, meaning that it is not protected by RAID level 5. Generally, this alarm should not occur. If it does, it is likely that the rebuild was purposely cancelled by an operator. Additional error messages may be found in the **/etc/log/gamevlog.log** file.

Repair Procedure   **1** Attempt to rebuild the drive manually.

See "Performing a Manual Rebuild of a RAID Array" in the "Replacing the Hard Disk Drive" chapter in the maintenance book for your platform for the procedure to rebuild the disk drive.

2 If the second attempt fails, get another replacement drive and again attempt a rebuild of the disk drive.

See "Replacing a SCSI Hard Disk Drive in the RAID System" in the "Replacing the Hard Disk Drive" chapter in the maintenance book for your platform for the procedures to replace the disk drive.

3 If the second replacement drive also fails, contact your remote maintenance service center for assistance.

ADMIN007

Alarm Level   Minor.

Description   An error occurred during the rebuild of the indicated system drive.

Note: This does not mean that the rebuild was stopped.

Additional error messages may be found in the **/etc/log/gamevlog.log** file.

Repair Procedure
1. Check for additional event messages to determine if the rebuild completed or failed by entering **raidstat -y** at the UNIX prompt.

2. If the rebuild:

   ~ Failed, attempt to rebuild the drive manually. See "Performing a Manual Rebuild of a RAID Array" in the "Replacing the Hard Disk Drive" chapter in the maintenance book for your platform for the procedure to rebuild the disk drive.

   ~ Is still in progress, allow an additional 2 hours and then check to see if the rebuild completed or failed.

ADMIN 008

Alarm Level   Minor.

Description   The rebuild of the indicated system drive failed. Additional error messages may be found in the **/etc/log/gamevlog.log** file.

Repair Procedure   1. Attempt to rebuild the drive manually.

   See "Performing a Manual Rebuild of a RAID Array" in the "Replacing the Hard Disk Drive" chapter in the maintenance book for your platform for the procedure to rebuild the disk drive.

2 If the second attempt fails, get another replacement drive and again attempt a rebuild of the disk drive.

See "Replacing a SCSI Hard Disk Drive in the RAID System" in the "Replacing the Hard Disk Drive" chapter in the maintenance book for your platform for the procedures to replace the disk drive.

3 If the second replacement drive also fails, contact your remote maintenance service center for assistance.

ADMIN 009

Alarm Level   None

Description   A bad block was discovered on the drive indicated and has been remapped to another location. The RAID controller was able to recover the data stored at this bad block address from redundant data on the other physical drives. Additional error messages may be found in the **/etc/log/gamevlog.log** file.

Repair Procedure   No corrective action is necessary.

ALERT Alarms and Log Messages

ALERT001

Alarm Level   None.

Description   This messages indicates a threshold level change for the included message.

                       The action taken by the Alerter when a threshold change occurs is defined
                       with the System Messages Administration window under `Configuration
                       Management` in the Voice System Administration menu.

Repair Procedure   No corrective action is necessary.

ALERT002

Alarm Level   None.

Description   The Alerter has received a command to reset its statistics.

Repair Procedure   No corrective action is necessary.

ALERT003

Alarm Level   None.

Description   The Alerter has received a command to print or reset an invalid threshold.

An invalid threshold was entered by a user at the Alerter command interface.

Repair Procedure   No corrective action is necessary.

ALERT004

Alarm Level   None.

Description   The Alerter failed to convert the indicated threshold rules file to alerter thresholds for voice system messages. Thresholding for voice system messages will not function.

If no thresholds were specified, this message can be ignored.

Repair Procedure   Restore the thresholds rules file indicated using a system backup.

If no valid backup exists, reinstall the system software.

ALERT005

Alarm Level   None.

Description   The Alerter created the indicated number of message thresholds from the thresholds rules file.

Repair Procedure   No corrective action is necessary.

ALERT006

Alarm Level   None.

Description   The Alerter updated message thresholds from the threshold rules file.

Repair Procedure   No corrective action is necessary.

ALERT007

Alarm Level   None.

Description   The Alerter updated messages thresholds from the threshold rules file.

Repair Procedure   No corrective action is necessary.

ASAI Alarms and Log Messages

ASAI001

Alarm Level Critical.

Description The ASAI physical link has gone down. All ASAI-provided services will not function until the link has been re-established.

Repair Procedure Perform the following procedures to correct the alarm. Contact your remote maintenance service center for assistance.

1 If message ASAI025ASAI025 follows this message, no corrective action is necessary.

2 Check the ASAI link wiring between the INTUITY CONVERSANT System and the PBX for proper connection.

3 Diagnose the IPCI circuit card.

ASAI002

Alarm Level Critical.

Description   The ASAI physical link is up, but the link layer has gone down. All ASAI-provided services will not function until the link has been re-established.

Repair Procedure   Perform the following procedures to correct the alarm. Contact your remote maintenance service center for assistance.

   1 If message ASAI025ASAI025 follows this message, no corrective action is necessary.

   2 Check your PBX administrator to ensure that the ASAI port on the PBX has been administered with Fixed TEI=y and TEI=3.

   3 Diagnose the IPCI circuit cardCircuit_Card_Diagnostics___expanded.

ASAI003

Alarm Level   Major.

Description   The IPCI circuit card is being initialized. This should be a temporary state. All ASAI-provided services will not function until the link has been established.

Repair Procedure   Perform the following procedures to correct the alarm. Contact your remote maintenance service center for assistance.

   1 If message ASAI025 follows this message, no corrective action is necessary.

2 Take the IPCI circuit card offline. See Chapter 4, "Feature Package Administration" of *Intuity CONVERSANT System Version 7.0 Administration,* 585-313-501.

3 Initialize the IPCI circuit card. See Chapter 4, "Feature Package Administration" of *Intuity CONVERSANT System Version 7.0 Administration,* 585-313-501.

ASAI004

Alarm Level   Major.

Description   The IPCI circuit card is attempting to go offline. This should be a temporary state. All ASAI-provided services will not function until the link has been established.

Repair Procedure   Perform the following procedures to correct the alarm. Contact your remote maintenance service center for assistance.

1 If message ASAI025 follows this message, no corrective action is necessary.

2 Take the IPCI circuit card offline. See Chapter 4, "Feature Package Administration" of *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.

3 Initialize the IPCI circuit card. See Chapter 4, "Feature Package Administration" of *Intuity CONVERSANT System Version 7.0 Administration,* 585-313-501.

ASAI005

Alarm Level   Critical.

Description   The IPCI circuit card is in an unknown state. It is either missing or malfunctioning. All ASAI-provided services will not function until the link has been established or re-established.

Repair Procedure   Perform the following procedures to correct the alarm. Contact your remote maintenance service center for assistance.

    1 If message ASAI025ASAI025 follows this message, no corrective action is necessary.

    2 Take the IPCI circuit card offline. See Chapter 4, "Feature Package Administration" of *Intuity CONVERSANT System Version 7.0 Administration,* 585-313-501.

    3 Initialize the IPCI circuit card. See Chapter 4, "Feature Package Administration" of *Intuity CONVERSANT System Version 7.0 Administration,* 585-313-501.

4 Diagnose the IPCI circuit card.

5 If the IPCI circuit card is not installed, install the IPCI circuit card. See the "Installing or Replacing Circuit Cards" chapter in the maintenance book for your platform.

ASAI006

Alarm Level   None.

Description   The ASAI link should be up and running.

Repair Procedure   No corrective action is necessary.

ASAI007

Alarm Level   None.

Description   The ASAI link has been taken offline. All ASAI-provided services will be out of service until the link has been re-initialized.

Repair Procedure Perform the following procedures to correct the alarm. Contact your remote maintenance service center for assistance.

1 If message ASAI025 follows this message, no corrective action is necessary.

2 Take the IPCI circuit card offline. See Chapter 4, "Feature Package Administration" of *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.

3 Initialize the IPCI circuit card. See Chapter 4, "Feature Package Administration" of *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.

ASAI008

Alarm Level Major.

Description The data only script running on the specified virtual channel has stopped abruptly.

This may indicate a problem with the service assigned to the domain.

All ASAI messages related to that domain are lost.

Repair Procedure No immediate action is necessary as the script will restart automatically. To make sure the script restarted, see Chapter 4, "Feature Packages" of *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.

ASAI009

Alarm Level   Major.

Description   The Intuity CONVERSANT system agent on the specified channel could not be logged in. As a result, the ACD will not route calls to this channel.

The ACD domain corresponding to the Intuity CONVERSANT system agent is not administered.

Repair Procedure   Perform the following procedures to correct the alarm. Contact your remote maintenance service center for assistance.

1. If message ASAI028, for the same channel, follows this message, no corrective action is necessary.

2. Add a domain entry with type "ACD" and service "voice system." See Chapter 4, "Feature Package Administration" of *Intuity CONVERSANT System Version 7.0 Administration,* 585-313-501.

3. Enable the domain. See Chapter 4, "Feature Package Administration" of *Intuity CONVERSANT System Version 7.0 Administration,* 585-313-501.

ASAI010

Alarm Level   Major.

Description   The INTUITY CONVERSANT system agent on the specified channel could not be logged in. As a result, the ACD will not route calls to this channel.

The extension assigned to the channel on the INTUITY CONVERSANT system is incorrect.

Repair Procedure   Perform the following procedures to correct the alarm. Contact your remote maintenance service center for assistance.

1 Correct the extension assigned to the specified channel. See Chapter 4, "Feature Package Administration" of *Intuity CONVERSANT System Version 7.0 Administration,* 585-313-501.

2 Consult your PBX administrator to verify that the channel extension is a member of the ACD split.

ASAI011

Alarm Level   Major.

Description   The INTUITY CONVERSANT system agent on the specified channel could not be logged in. As a result, the ACD will not route calls to this channel.

The login request cannot be executed due to lack of switch resources.

Repair Procedure   If message ASAI028 follows this message, no corrective action is necessary. Otherwise, consult your PBX administrator.

ASAI012

Alarm Level   Major.

Description   The INTUITY CONVERSANT system agent on the specified channel could not be logged in. As a result, the ACD will not route calls to this channel.

The extension assigned to the specified channel on the INTUITY CONVERSANT system is not a member of the ACD split.

Repair Procedure   Have the PBX administrator add the extension to the ACD split.

ASAI013

Alarm Level   Major.

Description   The INTUITY CONVERSANT system agent on the specified channel could not be logged in. As a result, the ACD will not route calls to this channel.

The specified extension currently has an active call.

Repair Procedure   Perform the following procedures to correct the alarm. Contact your remote maintenance service center for assistance.

   1 If message ASAI028 follows this message, no corrective action is necessary.

   2 Log the channel out. See Chapter 4, "Feature Package Administration" of *Intuity CONVERSANT System Version 7.0 Administration,* 585-313-501.

   3 Retry the login request. See Chapter 4, "Feature Package Administration" of *Intuity CONVERSANT System Version 7.0 Administration,* 585-313-501.

ASAI014

Alarm Level Major.

Description The INTUITY CONVERSANT system agent on the specified channel could not be logged in. As a result, the ACD will not route calls to this channel.

The ACD split is not administered correctly. A request has been denied by the switch to log in a member of the autoavailable split.

Repair Procedure If message ASAI028 follows this message, no corrective action is necessary. Otherwise, consult your PBX administrator.

ASAI015

Alarm Level Critical.

Description The INTUITY CONVERSANT system agent on the specified channel could not be logged in. As a result, the ACD will not route calls to this channel.

Switching equipment congestion exists. The switch is not accepting the request at this time because of processor overload.

Repair Procedure Perform the following procedures to correct the alarm. Contact your remote maintenance service center for assistance.

 1 If message ASAI028 follows this message, no corrective action is necessary.

 2 Suggest that the adjunct or user retry the request later.

 3 If the problem persists, consult your PBX administrator.

ASAI016

Alarm Level Major.

Description The INTUITY CONVERSANT system agent on the specified channel could not be logged in due to an unknown error. As a result, the ACD will not route calls to this channel.

Repair Procedure If message ASAI028ASAI028 follows this message, no corrective action is necessary.

ASAI017

Alarm Level Critical.

Description The ASAI domain with the specified extension cannot be activated. Information about the call placed to this domain will not be reported to the service assigned to this domain.

Either the virtual channels are unavailable or they are all busy.

Repair Procedure Perform the following procedures to correct the alarm. Contact your remote maintenance service center for assistance.

1 If message ASAI029 follows this message, no corrective action is necessary.

2 Stop the voice systemStop_the_voice_system_stop_vs.

3 Edit the file /vs/data/irAPI.rc

a If a VCHANS=32 entry exists, change the number 32 to 40.

b If a VCHANS entry does not exist, add the line VCHANS=32.

4 Start the voice systemFrom_the_command_line.

ASAI018

Alarm Level   Major.

Description   The ASAI domain with the specified extension cannot be activated.
                     Information about the call placed to this domain will not be reported to the
                     service assigned to this domain.

                     The domain is in an initialization state.

Repair Procedure Perform the following procedures to correct the alarm. Contact your remote
                     maintenance service center for assistance.

   1 If message ASAI029 follows this message, no corrective action is
         necessary.

   2 Verify that the correct service has been assigned to the specified domain
         by completing Steps a and b below.

      a Disable the domain. See Chapter 4, "Feature Package Administration"
            of *Intuity CONVERSANT System Version 7.0 Administration,* 585-313-
            501.

      b Enable the domain. See Chapter 4, "Feature Package Administration"
            of *Intuity CONVERSANT System Version 7.0 Administration,* 585-313-
            501.

ASAI019

Alarm Level: Major.

Description: The ASAI domain with the specified extension cannot be activated. Information about the call placed to this domain will not be reported to the service assigned to this domain.

The extension corresponding to the specified ASAI domain is nonexistent on the PBX.

Repair Procedure: Consult your PBX administrator to add the specified domain to the PBX.

ASAI020

Alarm Level: Major.

Description: The ASAI domain with the specified extension cannot be activated. Information about the call placed to this domain will not be reported to the service assigned to this domain.

The switch limit for the maximum number of monitored domains has been exceeded.

Repair Procedure: If message ASAI029 follows this message the for same domain, no corrective action is necessary. Otherwise, consult your PBX administrator.

ASAI021

Alarm Level: Major.

Description: The ASAI domain with the specified extension cannot be activated. Information about the call placed to this domain will not be reported to the service assigned to this domain.

The specified ASAI domain is already monitored by another adjunct.

Repair Procedure: If message ASAI029ASAI029 follows this message for the same domain, no corrective action is necessary. Otherwise, the adjunct monitoring this domain has to disable the domain before the voice system can monitor it.

ASAI022

Alarm Level: Major.

Description: The ASAI domain with the specified extension cannot be activated. Information about the call placed to this domain will not be reported to the service assigned to this domain.

The specified ASAI domain may be either an adjunct- or vector-controlled split.

Repair Procedure: If message ASAI029 follows this message for the same domain, no corrective action is necessary. Otherwise, consult your PBX administrator to make sure that the domain extension is neither adjunct- nor vector-controlled split.

ASAI023

Alarm Level: Critical.

Description: The ASAI domain with the specified extension cannot be activated. Information about the call placed to this domain will not be reported to the service assigned to this domain.

Switching equipment congestion exists. The switch is not accepting the request at this time because of processor overload.

Repair Procedure: If message ASAI029 follows this message for the same domain, no corrective action is necessary. Otherwise, consult your PBX administrator.

ASAI024

Alarm Level: Major.

Description: The ASAI domain with the specified extension cannot be activated due to an unknown error.

Information about the call placed to this domain will not be reported to the service assigned to this domain.

Repair Procedure: If message ASAI029 follows this message for the same domain, no corrective action is necessary. Otherwise, see .

ASAI025

Alarm Level   None.

Description   The ASAI link has been established. All ASAI-provided services will start to function now.

Repair Procedure   No corrective action is necessary.

ASAI026

Alarm Level: Major.

Description: The service assigned to the voice system agent on the specified channel requested call information from the ASAI feature that was not available.

                       The call information about the call that is terminated to the specified channel has not arrived yet.

Repair Procedure: 1 Verify that the ACD split with service "voice system" has been administered and is in service. See Chapter 4, "Feature Package Administration" of *Intuity CONVERSANT System Version 7.0 Administration,* 585-313-501.

2 Verify that the PBX extension-to-channel assignments have been correctly administered. See Chapter 4, "Feature Package Administration" of *Intuity CONVERSANT System Version 7.0 Administration,* 585-313-501.

ASAI027

Alarm Level: Minor.

Description: ASAI protocol errors have been detected. An occasional report does not indicate a serious problem.

Repair Procedure: 1 Check the integrity of the cabling of the ASAI BRI link. See Chapter 3, "Making Cable Connections," in your new system installation book for link wiring information.

2 Diagnose the IPCI card diagnostics.

ASAI028

Alarm Level: None.

Description: The voice system agent on the specified channel has been logged in. The ACD will start routing calls to this channel.

Repair Procedure: No corrective action is necessary.

ASAI029

Alarm Level: None.

Description: The ASAI-administered domain with the specific extension is activated now. The events on this domain will now be reported to the service which is assigned to this domain.

Repair Procedure: No corrective action is necessary.

ASAI030

Alarm Level: Major.

Description: Unexpected routing messages have been received over the ASAI link for which there is no administered RTE domain. If an administered domain were available, event messages would have been sent to the assigned service. Since no service is available, the voice system discards the messages. The error message in the log indicates how many messages were discarded over a one minute period.

Repair Procedure: 1 Verify that the PBX has been correctly administered. Consult your PBX administrator.

2 Add an RTE domain with the specified extension. See Chapter 4, "Feature Package Administration" of *Intuity CONVERSANT System Version 7.0 Administration,* 585-313-501.

3 Enable the RTE domain. See Chapter 4, "Feature Package Administration" of *Intuity CONVERSANT System Version 7.0 Administration,* 585-313-501.

ASAI031

Alarm Level: Minor.

Description: Unknown messages are received over the ASAI link for which there is no administered CTL domain. If an administered domain were available, event messages would have been sent to the assigned service. Since no service is available, the voice system discards the messages. The error message in the log indicates how many messages were discarded over a one minute period. This does not indicate a serious problem.

Repair Procedure: No corrective action is necessary.

To prevent these messages from appearing, add a CTL domain with the specified extension. See Chapter 4, "Feature Package Administration" of *Intuity CONVERSANT System Version 7.0 Administration,* 585-313-501

ASAI032

Alarm Level: Major.

Description: The voice system has discarded messages that were received over the ASAI link for the specified domain. This is because the messages were not processed fast enough by the specified ASAI application. The ASAI application is not fully functional. Calls are not being processed.

Repair Procedure: **1** Verify that the correct service has been assigned to the specified domain. See Chapter 4, "Feature Package Administration" of *Intuity CONVERSANT System Version 7.0 Administration,* 585-313-501.

2 If correct domain administration does not eliminate the problem, there may be an error in the ASAI application specified in the message. Contact the ASAI application developer for further assistance.

BRDG Alarms and Log Messages

BRDG001

Alarm Level: Major.

Description: The Call Bridge feature failed to communicate with the voice system during call processing. The application is unable to bridge calls.

Repair Procedure: Reboot the operating system.

BRDG002

Alarm Level: Major.

Description: The Call Bridge feature failed to communicate with the voice system during call processing. The application is unable to bridge calls.

Repair Procedure: Reboot the operating system.

BRDG003

Alarm Level: Major.

Description: The Call Bridge feature failed to access a shared resource of the voice system during the initialization. The application is unable to bridge calls.

Repair Procedure: **1** Stop the voice system.

2 Start the voice system.

3 If the problem persists, reboot the operating system.

BRDG004

Alarm Level: Major.

Description: The Call Bridge feature failed to access a shared resource of the voice system. The application is unable to bridge calls.

Repair Procedure: **1** Stop the voice system.

2 Start the voice system.

3 If the problem persists, reboot the operating system.

BRDG005

Alarm Level: Minor.

Description: The Call Bridge feature failed to find an available channel in the equipment group specified in the message. The application may not be able to complete the call bridge.

The impact may be significant if the message occurs more frequently than the currently set threshold limit. In that case, you will see a threshold message similar to the following:

```
*C THR004    The first threshold level for BRDG_NOCHAN
exceeded. 10 messages have been generated in the last 5
minutes.
```

The threshold limits and threshold message priority shown above reflect the default values for this thresholded message.

Repair Procedure: **1** Verify that all Tip/Ring channels are assigned to the equipment group specified by the script bridge instruction.

2 Verify that all channels assigned to the equipment group specified are in service.

3 Check if all the channels assigned in the equipment group specified are not busy.

CGEN Alarms and Log Messages

CGEN001

Alarm Level: Minor.

Description: An internal voice system process received an unexpected message from the process identified in this message. The message has been ignored.

Repair Procedure: **1** Identify the source of the unexpected message.

    a If the source of the unexpected message is a customer application data interface process (DIP), contact the application developer.

    b Otherwise, perform the following steps:

      • Stop the voice system.

      • Start the voice system.

2 If the problem persists, confirm that all installed system software packages are compatible with the installed version of the Intuity CONVERSANT software package. See the "Installing the Optional Feature Software," chapter in the maintenance book for your platform.

3 Remove any software package that is incompatible and install the proper version. See the "Installing the Optional Feature Software," chapter in the maintenance book for your platform.

CGEN002

Alarm Level: Major.

Description: The voice system system table named in the message is corrupted or cannot be accessed by the source of the message. System functionality is severely impaired.

Repair Procedure: **1** Check the system to make sure that the number of cards installed is a legal configuration, that is, there are not too many channels.

                2 If *table_name* is DEVTBL do the following:

> ⚠ **CAUTION:**
> The following procedure will cause all system configuration information to be lost. This includes switch administration, service assignments, etc. When the voice system is restarted, the system configuration will use the default settings.

       a Stop the voice system.

       b Move the devtbl to another area. For example, enter:

          mv /gendb/shmem/devtbl /gendb/shmem/devtbl.old

       c Start the voice system.

                3 If *table_name* is other than DEVTBL, do the following:

       a Stop the voice system.

       b Start the voice system.

       c If the problem persists, reboot the operating system.

CGEN003

Alarm Level: Critical.

Description: An internal voice system process cannot communicate with other internal voice system processes. System functionality is severely impaired.

Repair Procedure: Reboot the operating system.

CGEN004

Alarm Level: Critical.

Description: An internal voice system process cannot communicate with other internal voice system processes. System functionality is severely impaired.

Repair Procedure: Reboot the operating system.

CGEN005

Alarm Level: Critical.

Description: The voice system cannot communicate with the specified process. System functionality is severely impaired.

> **Note:** If the reason given for this message is EAGAIN, an interprocess communication message queue capacity across all processes on the voice system is being exceeded. When this happens, all processes may have trouble communicating with one another. The process listed in the message may or may not be the process which caused the problem. This may affect only the receiving process listed in the message if the receiving process is not handling incoming messages often enough.
>
> Note the receiving process is the process which failed to get the message. If the receiving process listed is a customer application DIP, consult with the programmer to determine why the process is getting behind in reading its message queue. If the receiving process is a voice system process (for example, VROP, MTC, TSM, etc.) then it is more likely that all processes are having trouble communicating, and call handling will be severely impaired until the repair procedure below is followed.

Repair Procedure:
1. To gather data about this problem for later analysis, complete step a through step d:

   a. Enter **cd /usr/install**

   b. Enter **sar > sar.out**

   c. Enter **ps -ef > ps.out**

   d. Enter **ipcs -qop > ipcs.out**

2. Reboot the operating system.

   If the reason for this message is EAGAIN, and you have recently added hardware to the system, diagnose the circuit card to ensure that the card recently added has a unique index.

   For example, make sure that there are not two T1/E1 circuit cards that have the same switch setting for T1-2.

3. If the problem persists, follow the trouble escalation procedure and inform personnel that you have collected the data listed in step 1.

CGEN006

Alarm Level: Critical.

Description: The voice system failed to initialize properly. System functionality is severely impaired.

Repair Procedure: **Note:** If *reason* for this message is `Cannot remove initialization file <filename> <UNIX errno>`, the UNIX operating system was unable to perform a remove request on behalf of an internal voice system process. See INTRO(2) in the UnixWare documentation for more information on the operating system error.

Note: If the *reason* for this message is `Failed to get telephony type of channel`, the systems rmdb's NCHANNELS turnable of 121 is exceeded. Increment the NCHANNELS and rebuild the kernel

1 Stop the voice system.

2 Start the voice system.

3 If the system message is printed again, remove the file by entering:

   rm -f *filename*

4 If the file cannot be removed, consult the UnixWare documentation for more information on the operating system error.

5 If the problem persists, reboot the operating system.

CGEN007

Alarm Level: Critical.

Description: The voice system failed to allocate memory internally for data. System functionality is severely impaired.

Repair Procedure: **1** Stop the voice system.

2 Start the voice system.

3 If the problem persists, reboot the operating system.

~ If this message reports that space for a file **/vs/trans/script.D** could not be allocated, then the following may have occurred:

~ There may be a large number of script.D files in **/vs/trans**. Remove any **script.D** files that are no longer needed. Check that the **script.D** files that are needed have not been corrupted.

~ If the error message was reported by CDH, enter **/vs/bin/newscript**

This causes CDH to reread all the **/vs/trans/script.D** files.

~ If the error was reported by one of the reporting programs **cddrot** or **cdrpt**, rerun the report.

If the error persists, your system may either require more memory to function normally or there may be a process memory leak that requires examination by field support.

CGEN008

Alarm Level: Major.

Description: The voice system failed to open the Tip/Ring card driver. System Tip/Ring cards are unusable.

Repair Procedure:
1 If this problem occurs because the Tip/Ring driver was purposely removed and you do not wish to reinstall it, renumber the voice channels. See Chapter 3, "Voice System Administration," of *Intuity CONVERSANT System Version 7.0 Administration,* 585-313-501.

2 If the problem persists or if Tip/Ring circuit cards are present in the system, reboot the operating system.

3 If the problem persists, reinstall the Tip/Ring circuit card driver. See the "Installing or Replacing Circuit Cards," chapter in the maintenance book for your platform for the procedure.

CGEN009

Alarm Level: Major.

Description: The voice system failed to open or attach the SSP card driver. System SSP cards are unusable.

Repair Procedure: **1** Reboot the operating system.

                2 If the problem persists, reinstall the ASP driver. See the "Installing or Replacing Circuit Cards" chapter in the maintenance book for your platform.

CGEN010

Alarm Level: Major.

Description: The voice system failed to open the T1/E1 card driver. System T1/E1 cards are unusable.

Repair Procedure: **1** If this problem occurs because the T1/E1 driver was purposely removed and you do not wish to reinstall it, renumber the voice channels. See Chapter 3, "Voice System Administration," of *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.

                2 If the problem persists or if T1/E1 cards are present in the system, reboot the operating system.

                3 If the problem persists, reinstall the T1/E1 circuit card driver. See Chapter 2, "Installing or Replacing Circuit Cards," in the maintenance book for your platform.

CGEN011

Alarm Level: Critical.

Description: The voice system failed to perform the indicated function on the Tip/Ring voice channel or card specified. System functionality is severely impaired.

Repair Procedure: **1** Perform the following diagnostics for the failed Tip/Ring card:

       a Enter **diagnose card *card_ number***
where *card_number* is the card number of the Tip/Ring card from the display card tr command output.

       b If the card passes diagnostics, place it back in service by entering
restore card *card_number*
where *card_number* is the card number of the Tip/Ring card you want to restore to service.

   2 If the problem persists, check the circuit card.

   3 If the problem still persists, reinstall the Intuity CONVERSANT Application Software Package. See the "Installing the Intuity CONVERSANT System Software" chapter in the maintenance book for your platform.

CGEN012

Alarm Level: Major.

Description: The voice system failed to perform the indicated function on the Tip/Ring voice channel or card specified. Tip/Ring card functionality is impaired.

Repair Procedure: **1** Perform the following diagnostics for the failed Tip/Ring card:

   a Enter **diagnose card *card_number***
   where *card_number* is the card number of the Tip/Ring card from the display card tr command output.

   b If the card passes diagnostics, place it back in service by entering **restore card *card_number***
   where *card _number* is the card number of the Tip/Ring card you want to restore to service.

   2 If the problem persists, check the circuit card.

   3 If the problem still persists, reinstall the Intuity CONVERSANT Application Software Package. See the "Installing the Intuity CONVERSANT System Software" chapter in the maintenance book for your platform.

CGEN013

Alarm Level: Major.

Description: The voice system failed to perform the indicated function on the SSP card specified. System functionality is severely impaired.

Repair Procedure:

1 If any packages (for example, ISDN PRI, Whole Word, Flex Word, CCA) have been removed from the system recently, verify that any related cards, functions, etc. have been unassigned from the application so that the affected card does not come up in the "Broken" state.

2 If the card remains in the BROKEN state, perform the Reducing Load procedure.

3 If the card remains in the "Broken" state, check the circuit card.

4 If the card remains in the "Broken" state, reinstall the SSP circuit card driver. See the"Installing or Replacing Circuit Cards," chapter in the maintenance book for your platform.

CGEN014

Alarm Level: Major.

Description: The voice system failed to perform the indicated function on the SSP card specified. SSP card functionality is impaired.

Repair Procedure: **1** Perform diagnostics for the failed SSP card.

    a Enter **diagnose card** *card_ number*

    where *card_number* is the card number of the SSP card from the display card sp command output.

    b If the card passes diagnostics, place it back in service by entering:

    restore card *card_number*

    where *card_number* is the card number of the SSP card you want to restore to service.

    2 If the problem persists, check the circuit card.

    3 If the problem persists, reinstall the ASP driver. See the "Installing or Replacing Circuit Cards" chapter in the maintenance book for your platform.

CGEN015

Alarm Level: Critical.

Description: The voice system failed to perform the indicated function on the T1/E1 voice channel or card specified. System functionality is severely impaired.

Repair Procedure: **1** Perform diagnostics for the failed T1/E1 card.

   a Enter **diagnose card *card_number***
   where *card_number* is the card number of the T1/E1 card from the display card t1 command output.

   b If the card passes diagnostics, place it back in service by entering:

   restore card *card_number*

   where *card_number* is the card number of the T1/E1 card you want to restore to service.

   2 If the problem persists, check the circuit card.

   3 If the problem still persists, reinstall the T1/E1 card. See the "Installing or Replacing Circuit Cards" chapter in the maintenance book for your platform.

CGEN016

Alarm Level: Major.

Description: The voice system failed to perform the indicated function on the T1/E1 voice channel or card specified. T1/E1 card functionality is impaired.

Repair Procedure: **1** Perform diagnostics for the failed T1/E1 card.

         a Enter **diagnose card *card_number*** where *card_number* is the card number of the T1/E1 card.

         b If the card passes diagnostics, place it back in service by entering:

         restore card *card_number*

         where *card_number* is the card number of the T1/E1 card you want to restore to service.If the problem persists, check the circuit card.

     2 If the problem still persists, reinstall the T1/E1 card. See the "Installing or Replacing Circuit Cards" chapter in the maintenance book for your platform.

CGEN017

Alarm Level: Major.

Description: The system was unable to save configuration changes made by the user (for example, script assignments to a channel, or card remove/restores) on disk. Shared memory updates will be lost when system is rebooted. Call processing is not affected until then.

Repair Procedure:
   1 Reboot the operating system.

   2 If the problem persists, restore the system from backup.

CGEN018

Alarm Level: Major.

Description: A hardware failure has been detected on the Tip/Ring voice channel or circuit card specified. Tip/Ring circuit card functionality is impaired.

Repair Procedure: 1 Perform diagnostics for the failed Tip/Ring circuit card.

   a Enter **diagnose card *card_number***
   where *card_number* is the card number of the Tip/Ring circuit card
   from the display card tr command output.

   b If the card passes diagnostics, place it back in service by entering
   restore card *card_number*
   where *card_number* is the card number of the Tip/Ring circuit card you
   want to restore to service.

2 If the problem persists, check the circuit card.

3 If the problem persists, reinstall the Intuity CONVERSANT Application
   Software Package. See the "Installing the Intuity CONVERSANT System
   Software" chapter in the maintenance book for your platform.

CGEN019

Alarm Level: Critical.

Description: Cannot determine whether the system software is installed.

Repair Procedure: Contact your remote maintenance service center for assistance.

CGEN020

Alarm Level: Critical.

Description: An incoming call has not been processed because no service was assigned to the specified channel or the dialed number identification service (DNIS) and automatic number identification (ANI).

Repair Procedure:
1 Determine how new calls on the channel number indicated by the message should be routed to services.

New calls can be routed based on channel number or based on DNIS and/or ANI.

2 If new calls on the channel number should be routed based on channel number, enter:

assign service *service* to chan *chan*

where *service* is the name of the service to be assigned and *chan* is the channel number indicated by the message.

3 If new calls on the channel number should be routed based on DNIS and/or ANI, enter:

assign service *service* to *dnis* phone list [ani *phone_list*]

where *service* is the name of the service to be assigned and *dnis* is either the DNIS of the new call to be routed, or the word "any", and *phone_list* is either the ANI number of the new call to be routed, or the word *any*.

4 See the **assign** command in Appendix A, "Summary of Commands," in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.

CGEN021

Alarm Level: Critical.

Description: An internal software error occurred when describing channel characteristics to the Resource Manager. The identified channel is unusable.

Repair Procedure: **1** If the error is EINVAL, check the system to make sure that the number of cards installed is a legal configuration, that is, there are not too many channels. See *Intuity CONVERSANT System Version 7.0 System Description,* 585-313-204, for channel maximums.

2 Renumber the voice channels. See Chapter 3, "Voice System Administration," in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.

3 If the problem persists, or if the error is not EINVAL,

   a Stop the voice system.

   b Start the voice system.

   c If the problem persists, reboot the operating system.

   d If the problem still persists, see *Intuity CONVERSANT System Version 7.0 Application Development with Script Builder*, 585-313-206, for more information about the specific error listed in the reason text.

CGEN022

Alarm Level: Minor.

Description: The voice system failed to reset the restriction list for a channel. System functionality may be impaired if applications are assigning resource restrictions to channels (irRestrictResource(3irAPI)).

Repair Procedure: **1** Make sure AD or the customized default owner is run as root.

   2 If AD or the customized default owner is run as root, perform the following Steps a and b:

   a Stop the voice system.

   b Start the voice system.

3 If the problem persists, reboot the operating system.

4 If the problem persists, reinstall the Intuity CONVERSANT Application Software Package. See the "Installing the Intuity CONVERSANT System Software" chapter in the maintenance book for your platform.

5 If the problem persists, contact your remote maintenance service center.

CGEN023

Alarm Level: Major.

Description: A channel was returned to the default owner because of an abrupt exit of the prior channel owner. This message may indicate an IRAPI application failed to release (irDeinit(3irAPI)) prior to exit (2) or an IRAPI application core dump. Any outstanding activities on the channel are cancelled and the channel is made available to take new calls.

If a transient IRAPI process does not wait for an IRE_DEINIT_DONE event before exiting, they will generate a CGEN023 alarm. The IRAPI process must call **(void) irSetEvent(cid, IRE_DEINIT_DONE, IRF_NOTIFY);** to the **IRE_DEINIT_DONE** event to be generated.

Repair Procedure: No corrective action is necessary.

CGEN024

Alarm Level: Critical.

Description: The voice system service *service* provided by process *process* has failed to startup, therefore an incoming call has not been processed.

Repair Procedure:
1 If the messages indicate that the process is a permanent process, go to step 2, otherwise, complete step a and step b.

   a Stop the voice system.

   b Start the voice system.

   c If the problem persists, check that the process is correctly entered in the /etc/inittab file. *See Intuity CONVERSANT System Version 7.0 Application Development with Script Builder*, 585-313-206, for more details.

2 To determine whether or not the permanent process is running, enter:

   ps -ef.

   If the process is running, go to step 3.

   If the *process* is not running, make sure that it is correctly entered in the **/etc/inittab** file. See I*ntuity CONVERSANT System Version 7.0 Application Development with Script Builder*, 585-313-206 for more details.

The application developer should try to determine why the process failed before continuing to use the system.

3 Check that the process *process* exists and is executable by entering:

ls -l *process*

where *process* is the process indicated in the message.

a If the process is not executable, enter **chmod +rx *process***

b If the process is executable, check to make sure the service assigned to the channel is a valid service by entering:

display service

If the service is on the list, it is a valid service.

If the service is not on the list, reassign the service.

CGEN025

Alarm Level: Critical.

Description: A voice system service registration file has a bad format or is the wrong version. The service corresponding to this registration file may be started incorrectly and, therefore, not function properly.

Repair Procedure: **1** If the service indicated in the message (*service*) is a TSM service, using Script Builder, verify and install the service *service*.

2 If the service indicated in the message (*service*) is not a TSM service, the registration file should be rebuilt by entering **defService *service*** where *service* is the service specified in the message.

See the **defService** command in Appendix A, "Summary of Commands," in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.

CGEN026

Alarm Level: None.

Description: Timeout on attempt to idle channel.

Repair Procedure: No corrective action is immediately necessary. Automatic recovery occurs within 60 seconds If this event occurs frequently or if resources are underutilized, which will be reported by other messages, then do the following:

1 Stop the voice system.

2 Start the voice system.

CGEN027

Alarm Level: None.

Description: Could not open file.

Repair Procedure: No corrective action is necessary.

CGEN028

Alarm Level: Minor.

Description: Call to third party API failed.

Repair Procedure: No corrective action is necessary.

CGEN029

Alarm Level: Minor.

Description: In-service channels occupancy off high water mark.

Repair Procedure: No corrective action is necessary.

CGEN030

Alarm Level: None.

Description: The voice system detected that the occupancy of the in-service channels is below the high water mark.

Repair Procedure: No corrective action is necessary.

CGEN031

Alarm Level: Major.

Description: An internal software error occurred when describing an equipment group to the Resource Manager. Applications that use the equipment group identified in the message may not function correctly.

Repair Procedure:
1 Stop the voice system.

2 Start the voice system.

3 If the problem persists, reboot the operating system.

4 If the problem persists, see *Intuity CONVERSANT System Version 7.0 Application Development with Script Builder*, 585-313-206 for more information about the specific error listed in the reason text.

CGEN032

Alarm Level: Critical.

Description: A voice system system file is corrupted and cannot be accessed by the internal voice system process that describes channel and SSP characteristics to the Resource Manager. SSP resources cannot be accessed. Functions provided by SSP cards, such as Speech Recognition and Text-to-Speech, are not available. Voice coding and playback are not available for systems that require an SSP for these services.

Repair Procedure: **1** Use the **pkgrm** command to remove any packages installed on the system that are in the following list:

- ~ Intuity Call Classification Analysis
- ~ Intuity ISDN Primary Rate Interface Package
- ~ Intuity Speech Recognition Package - Canadian French
- ~ Intuity Speech Recognition Package - UK English
- ~ Intuity Speech Recognition Package - US English
- ~ Intuity Speech Recognition Package - Mexican Spanish
- ~ Intuity Text-to-Speech Package
- ~ Intuity FlexWord™ Recognition Package

2 Use pkgrm command to remove the ASP Driver Package.

3 Reinstall the Intuity CONVERSANT ApplicationSoftware Package. See the "Installing the Intuity CONVERSANT System Software," chapter in the maintenance book for your platform.

4 If the problem persists, reinstall the ASP driver. See the "Installing or Replacing Circuit Cards" chapter in the maintenance book for your platform.

5 Reinstall all of the other packages removed in step 1. See the "Installing the Optional Feature Software," chapter in the maintenance book for your platform.

CGEN033

Alarm Level: None.

Description: Some unexpected information was found in a file containing resource characteristic information. This information will be ignored.

Repair Procedure: No corrective action is necessary.

CGEN034

Alarm Level: Major.

Description: A voice system system file is corrupted or cannot be accessed by the internal voice system process that describes channel and SSP characteristics to the Resource Manager. SSP resources cannot be accessed. Functions provided by SSP cards, such as Speech Recognition and Text-to-Speech, are not available. Voice coding and playback are not available for systems that require an SSP card for these services.

Repair Procedure:
1 Stop the voice system.
2 Start the voice system.
3 If the problem persists, reboot the operating system.

CGEN035

Alarm Level: Major.

Description: The internal UNIX kernel variable *1bolt* is approaching the maximum possible variable of 248 days since the last reboot. If the system is not rebooted, several problems could occur when *1bolt* reaches the maximum possible value. System timeouts could occur prematurely or fail to occur.

A reboot of the system should be scheduled to occur within the number of days specified or an automatic reboot will occur. By manually performing the reboot, it may be possible to reduce the impact service caused by the reboot.

Repair Procedure: Reboot the system at a time of low system activity.

CGEN036

Alarm Level: None.

Description: The voice system detected the indicated Feature Licensing values for the function not specified.

Repair Procedure: No corrective action is necessary.

CGEN037

Alarm Level: Major.

Description: The voice system failed to enable Feature Licensing for some features. Functionality of some features may be impaired.

Repair Procedure: Contact your remote maintenance service center for assistance.

CGEN038

Alarm Level: Critical.

Description: The voice system failed to enable Feature Licensing. Functionality of features is impaired.

Repair Procedure: Contact your remote maintenance service center for assistance.

CGEN039

Alarm Level: Critical.

Description: The voice system failed to enable Feature Licensing. System functionality is impaired.

Repair Procedure: Contact your remote maintenance service center for assistance.

CGEN040

Alarm Level: Critical.

Description: The voice system detected an invalid configuration. System functionality is impaired.

Repair Procedure: Reconfigure the system using the Hardware Resource Allocator. See the "System Configuration," appendix in the maintenance book for your platform for the procedure.

CHRIN Alarms and Log Messages

CHRIN001

Alarm Level: Critical.

Description: An internal software error occurred when describing channel and SSP characteristics to the Resource Manager. System functionality is severely impaired.

Repair Procedure: **1** Stop the voice system.

2 Start the voice system.

3 If the problem persists, reboot the operating system.

CHRIN002

Alarm Level: Major.

Description: A voice system system file is corrupted or cannot be accessed by the internal voice system process that describes channel and SSP characteristics to the Resource Manager. The ASAI channels cannot provide ASAI capabilities. ASAI functionality is severely impaired.

Repair Procedure: **1** Stop the voice system.

2 Start the voice system.

3 If the problem persists, reboot the operating system.

4 If the problem still persists, do the following:

   a Record the ASAI Channel and Domain Administration information. For more information on the ASAI Channel and Domain Administration, See the "ASAI Administration" section in Chapter 4, "Feature Package Administration" of *Intuity CONVERSANT System Version 7.0 Administration,* 585-313-501.

   b Stop the voice system.

   c Remove the Intuity CONVERSANT System Version 7.0 Adjunct/Switch Applications Interface package using the **pkgrm** command.

  d Install the Intuity CONVERSANT System Version 7.0 Adjunct/Switch
   Applications Interface package using the pkgadd command.

  e Start the voice system.

  f Administer the ASAI Channel and Domain Administration information
   from the information recorded earlier.

CIOX Alarms and Log Messages

CIOX001

Alarm Level: Major.

Description: The indicated file can not be accessed for the reason specified in the
    message. Applications requiring playing from or recording to the file will be
    incomplete.

Repair Procedure: **1** Consult the application developer to verify the application. See CIOX001
    — Application Developer Notes:.

    2 If the application is correct, restore the speech file(s) from the backup. If
    the backup is not available, consult the application developer to recreate
    the speech file.

    3 If the problem persists, reboot the operating system.

CIOX001 —
Application
Developer Notes:

1 Verify that the application refers to the correct speech file.

2 Verify that the speech file is in existence with the correct access permission.

CIOX002

Alarm Level: Major.

Description: The indicated file can not be reserved for the reason specified in the message. Applications requiring recording to the file will be incomplete.

Repair Procedure: **1** Verify that the file system in which the speech file is to be reserved has enough free space by entering **dfspace**

2 Verify that the directory or directories in which the speech file is to be reserved has the correct access permission by entering **ls -l** in the directory.

DB Alarms and Log Messages

DB001

Alarm Level: Major.

Description: An attempt to write a traffic record into the specific database table has failed either during call processing or processing a call data maintenance job.

This message is usually caused by one of several reasons.

If the source is Call Data Handler (CDH), the traffic record is not recorded in the database. If the source is CCA_Summary, the Call Classification (CCA) data report for the date the error was logged will not be correct. If the source is CDH_Summary, the nonCCA traffic data reports for the date the error was logged will not be correct.

There is no impact on call processing.

Repair Procedure: 1 If the reason field of the error message is:

ORA00942:table or view does not exist

Recreate the system traffic tables.

2 If the reason field of the error message is:

ORA1000: Maximum open cursor exceeded

or

Can't connect cursor to ORACLE

Consult the application developer to reduce the number of database references to the database. This may be done by reducing the number of applications involving database access simultaneously running on the system. See "Database Access Limitations" in Chapter 6, "Database Administration," in *Intuity CONVERSANT System Version 7.0, Administration*, 585-313-501.

3 For other error reasons, do the following:

  a Stop the voice system.

  b Stop the database system.

  c Start the database system.

  d If the database system failed to start because of database file corruption, the database files must be recovered from a mkimage backup. Restore the database from backup.

  e Start the voice system.

4 If the problem persists, recreate the system traffic tables.

DB002

Alarm Level: Critical.

Description: An attempt to write a database record to an application table has failed during call processing. The record will be lost. Application functionality may be severely impaired.

Repair Procedure: **1** If the reason field of the error message is:

ORA1031 Insufficient privileges

give the user **sti** the necessary permissions by doing the following:

a Login to SQL*PLUS as the original table owner.

b Enter **grant all** on *table_name* to sti

Note: The original owner must already have the proper permissions for the table.

2 If the reason field of the error message is:

ORA00942:table or view does not exist

consult the application developer to verify the application. See the <u>For Application Developer</u> section.

3 If the reason field of the error message includes:

```
Can't find select descriptor for table <table name>
```

this indicates that the application erroneously tried to modify the table before reading it. See .

4 If the reason field of the error message is:

```
ORA1000: Maximum open cursor exceeded
```

or

```
Can't connect cursor to ORACLE
```

increase the cursor limit.

You may also consult the application developer to reduce the number of database references to the database. This may be done by reducing the number of applications involving database access simultaneously running on the system. See Chapter 6, "Database Administration," in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.

5 For other error reasons, do the following:

  a Stop the voice system.

  b Stop the database system.

  c Start the database system.

d If the database system failed to start because of database file corruption, the database files must be recovered from a mkimage backup. Restore the database from backup.

e Start the voice system.

6 If the database system started successfully but the problem persists, do the following:

a Stop the voice system.

b Drop the database.

c Restore the application table from backup.

Note: If the table resides on a remote machine, restore the table to the remote machine.

d Start the voice system.

**DB002 —
Application
Developer Notes:**

1 Check the application and make sure that the application refers to the correct table name.

2 Make sure the table is read before an attempt is made to modify it.

3 If the application refers to a wrong table, change the application.

4 If the application is correct, restore the application table from the backup. If no backup is available, recreate the application table.

DB003

Alarm Level: Major.

Description: An attempt to read a record from the specified system traffic table has failed. This error message is reported by one of the call data maintenance jobs (that is, CCA_Summary, CCA_Deletion, CDH_Summary, or CDH_Deletion) that are responsible for summarizing and cleaning up the traffic data.

If the source is CCA_Summary or CCA_Deletion, the Call Classification (CCA) data report for the date the error was logged will not be correct. If the source is CDH_Summary or CDH_Deletion, all nonCCA traffic data reports for the date the error was logged will not be correct.

There is no impact on call processing.

Repair Procedure: **1** If the reason field of the error message is

ORA00942:table or view does not exist

recreate the system traffic tables.

2 For other error reasons, do the following:

  a Stop the voice system.
  b Stop the database system.
  c Start the database system.

---

d If the database system failed to start because of database file corruption, the database files must be recovered from a mkimage backup. Restore the database from backup.

e Start the voice system.

f If the problem persists, recreating the system traffic tables.

DB004

Alarm Level: Critical.

Description: An attempt to read a record from the specified application table has failed during call processing. Application functionality may be severely impaired.

Repair Procedure: **1** If the reason field of the error message is

ORA00942:table or view does not exist

or

Can't find table descriptor for table table_name

See DB004 — Application Developer Notes: on page 321.

2 For other error reasons, do the following:

a Stop the voice system.

b Stop the database system.

    c Start the database system.

    d If the database system failed to start because of database file corruption, the database files must be recovered from a mkimage backup.

    e Start the voice system.

  3 If the database system started successfully but the problem persists, do the following:

    a Stop the voice system.

    b Drop the database table *table_name*.

    c Restore the application table from backup.

  Note: If the table resides on a remote machine, restore the table to the remote machine.

    d Start the voice system.

DB004 —
Application
Developer Notes:

  1 Check the application and make sure that it refers to the correct table name.

  2 If the application refers to a wrong table, change the application.

  3 If the application is correct, restore the application table from the backup. If no backup is available, recreate the application table.

DB005

Alarm Level: Major.

Description: An attempt to delete records from the specified system traffic table has failed. This error message is reported by one of the call data maintenance jobs, CCA_Deletion or CDH_Deletion, that are responsible for deleting the old traffic data.

If the source is CCA_Deletion, the Call Classification (CCA) data report for the date the error was logged will not be correct. If the source is CDH_Deletion, all nonCCA traffic data reports for the date the error was logged will not be correct.

There is no impact on call processing.

Repair Procedure: **1** If the reason field of the error message is:

ORA00942:table or view does not exist

recreate the system traffic tables.

2 For the other error reasons, do the following:

   a Stop the voice system.

   b Stop the database system.

   c Start the database system.

  d If the database system failed to start because of database file corruption, the database files must be recovered from a mkimage backup.

  e Start the voice system.

  f If the problem persists, recreate the system traffic tables.

DB006

Alarm Level: Critical.

Description: An attempt to delete one or more records from the application table has failed during call processing. The records to be deleted will remain in the table. Application functionality may be severely impaired.

Repair Procedure: **1** If the reason field of the error message is:

ORA00942:table or view does not exist

consult the application developer to verify the application. See DB006 — Application Developer Notes: on page 324.

  2 For other problems, do the following:

  a Stop the voice system.

  b Stop the database system.

      c Start the database system.

      d If the database system failed to start because of database file corruption, the database files must be recovered from a mkimage backup.

      e Start the voice system.

  3 If the database system started successfully but the problem persists, do the following:

      a Stop the voice system.

      b Drop the database table *table_name*.

      c Restore the application table from backup.

  Note: If the table resides on a remote machine, restore the table to the remote machine.

      d Start the voice system.

**DB006 —
Application
Developer Notes:**

  1 Check the application and make sure that it refers to the correct table name.

  2 If the application refers to a wrong table, change the application.

  3 If the application is correct, restore the application table from the backup. If no backup is available, recreate the application table.

DB007

Alarm Level: Major.

Description: Either the database is out of space or the system traffic table reached the maximum allowable number of extents. The system traffic table specified (or the rollback segment) cannot grow further to accommodate more data. New traffic data added will be lost.

There is no impact on call processing.

Repair Procedure: **1** Check the maximum number of extents. See Chapter 6, "Database Administration," in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.

2 If the maximum number of extents is reached, perform the "Redefining the Database Table Storage" procedure in Chapter 6, "Database Administration," in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.

3 Perform the "Checking the Database Free Space" procedure in Chapter 6, "Database Administration," in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.

4 If the database is running out of free space, do the following:

   a See Chapter 6, "Database Administration," in *Intuity CONVERSANT Administration*, 585-313-501, for information on verifying and reducing the rollback segment size.

   b If the rollback segment size is normal, add more space to the database. See Chapter 6, "Database Administration,"in *Intuity CONVERSANT System Version 7.0*, 585-313-501, for information on increasing the database size.

DB008

Alarm Level: Critical.

Description: Either the database is out of space or the application table reached the maximum allowable number of extents during call processing. The table specified (or the rollback segment) cannot grow further to accommodate more data. The service running on the channel will not be able to add more database records. Application functionality may be severely impaired.

Repair Procedure: **1** Perform the "Checking the Maximum Number of Extents" procedure in Chapter 6, "Database Administration," in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.

2 If the maximum number of extents is exceeded, perform the "Redefining the Database Table Storage" procedure in Chapter 6, "Database Administration," in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.

3 Perform the "Checking the Database Free Space" procedure in Chapter 6, "Database Administration," in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.

4 If database is running out of free space, do the following:

   a See Chapter 6, "Database Administration," inIntuity CONVERSANT System Version 7.0 *Administration*, 585-313-501, for information on verifying and reducing the rollback segment size.

   b If the rollback segment size is normal, add more space to the database. See Chapter 6, "Database Administration," in *Intuity CONVERSANT Administration*, 585-313-501, for information on increasing the database size.

DB009

Alarm Level: Major.

Description: The call data handling process or one of the call data maintenance jobs specified failed to initialize itself. If the source is Call Data Handler (CDH), no traffic data will be logged in the database (including call data events records).

If the source is CCA_Summary or CCA_Deletion, the Call Classification (CCA) data report for the date the error was logged will not be correct. If the source is CDH_Summary or CDH_Deletion, all nonCCA traffic data reports for the date the error was logged will not be correct.

There is no impact on call processing.

Repair Procedure: **1** Stop the voice system.

2 Stop the database system.

3 Start the database system.

4 If the database system cannot be started, reboot the system.

5 If the database failed to start after reboot, restore the database directory from the system backup.

6 Start the voice system.

7 If the database started successfully but the problem persists, do the following:

   a Stop the voice system.

   b Recreate the system traffic tables.

DB010

Alarm Level: Critical.

Description: The ORACLE database interface process (**ORALDB**) failed to initialize itself after the voice system was started. The process will continue to respawn as long as the voice system is running. Services assigned to channels will not be able to access the database being referenced by the Source of this message. The database may be remote or local.

Application functionality may be severely impaired.

Repair Procedure:

1 Determine whether the database being accessed is a local or a remote database by checking the Source field of the message.

If the database is remote, check the ORACLE network. If the problem persists, proceed to step 2.

2 Stop the voice system.

3 Stop the database system.

4 Start the database system.

5 If the database system cannot be started (file corruption), restore the database directory from the system backup.

6 Start the voice system.

7 If the problem persists, reboot the system.

DB011

Alarm Level: Major.

Description: This is a general database error that is reported by either the call data handling process or one of the call data maintenance jobs.

If the source is Call Data Handler (CDH), the traffic records (including call data events) will not be created. If the source is CCA_Summary or CCA_Deletion, the Call Classification (CCA) data report for the date the error was logged will not be correct. If the source is CDH_Deletion or CDH_Summary, all nonCCA traffic data reports for the date the error was logged will not be correct.

There is no impact on call processing.

Repair Procedure: **1** Enter **/oracle/bin/oerr ora *error_num***

where *error_num* is the ORACLE error number in the reason field of the error message.

The output will contain a brief explanation of the error, the cause of the error, and the action to take to correct the error.

Note: You should also see the ORACLE Error Messages and Codes Manual for the explanation. Many times the online explanation will not be as complete as the manual explanation. If the error is unique to the UNIX environment, you can also see the ORACLE for UNIX Technical Reference Guide for detailed information.

---

2 Take the actions provided to correct the problem.

3 Reboot the system.

4 If the database system cannot be started (file corruption), restore the database directory from the system backup.

If no backup is available, remove and reinstall the Base ORACLE DBMS 7.3.1 package. See the "Installing the Optional Feature Software" section in the maintenance book for your platform.

Note: All current database data will be lost after the package is reinstalled.

DB012

Alarm Level: Critical.

Description: This is a general database error that is reported by the database interface process (ORALDB) during call processing.

Depending on the error, application functionality may be impaired.

Repair Procedure: **1** If the reason field of error message is:

```
ORA1000: Maximum open cursor exceeded
```

consult the application developer to reduce the number of database references to the database. This may be done by reducing the number of applications involving database access simultaneously running on the system. See "Database Access Limitations" in Chapter 6, "Database Administration," in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.

2 Perform the repair procedure for system message .

3 If the problem persists and the database is remote, check the ORACLE network.

DB013

Alarm Level: Major.

Description: The connection that this database process was logged onto has been dropped during call processing. The database could be a local or remote database. This may be a result of network congestion, the network going down, the remote machine going down, or other reasons. The negative number in the reason field is the ORACLE error code. See the ORACLE RDBMS Error Messages and Codes Manual for further information about this

error. The process will try to respawn and reconnect to the database. However, if the problem is the network or remote machine, the process may not be able to reconnect without manual intervention.

The service running on the channel will not be able to make any database request until the problem is resolved.

Sometimes when the remote database connections are dropped, the dedicated server process on the remote machine may be orphaned. If too many such orphaned processes exist, the ORACLE server on the remote machine will become overloaded with defunct processes. At this point, the CONVERSANT machine may not be able to connect to the remote database successfully. If this is the case, you probably need to restart the remote database to remove the defunct server processes. Consult the Database Administrator of the remote database for assistance.

Repair Procedure: If the system stopped to generate this message, the database process has logged onto the database successfully since the error message was recorded. No action needs to be taken. If the error message continues to be generated, do the following:

  1 Determine whether the database being accessed is a local or a remote database by checking the SOURCE field of the message.

   If the database is remote, check the ORACLE network. If the problem persists, proceed to step 2.

  2 Stop the voice system.

3 Stop the database system.

4 Start the database system.

5 If the database system cannot be started (file corruption), restore the database directory from the system backup.

6 Start the voice system.

7 If the problem persists, reboot the system.

DB014

Alarm Level: Critical.

Description: The database interface process (ORALDB) has timed out on a database request during call processing. The initial timeout has the default value 45 seconds (defined in **/vs/data/ldbdip.rc**). Any of the following reasons can cause this timeout to occur:

- The timeout value set is too small

- The application was searching a huge nonindexed table

- The network was congested

- The network went down

- The remote machine went down

ORALDB will continue to wait for the response from the database (local or remote) until the final timeout occurs (DB015). After the final timeout occurs (default 300 seconds), ORALDB will to try to reconnect to the database (remote or local). Messages queued are deleted to prevent the message queue from overflowing.

Application functionality may be severely impaired.

Repair Procedure: 1 Consult the application developer to verify the application. See DB014 and DB015 — Application Developer Notes:.

2 Check the ORACLE network.

3 Reboot the system.

DB014 and DB015 — Application Developer Notes: If the database is remote and the above actions did not resolve the problem, or if the database is local, do the following:

1 Determine if the application is searching a nonindexed table. (If the table was created through Script Builder, the table is not indexed.) If the application searches a table containing more than 1000 records, you should index the table. See Chapter 6, "Database Administration," in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501, for information on creating the indexed table.

2 If the searched table is small or the table is indexed, check the **TIMEOUT** values in **/vs/data/ldbdip.rc** file. Make sure the **FIRST_TMOUT** and **SECOND_TMOUT** values are not less than 10 seconds.

See Chapter 5, "Database Administration," in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501, for information on modifying the ORALDB timeout values if necessary.

DB015

Alarm Level: Critical.

Description: This error usually follows a few occurrences of DB014 error messages. It indicates that the database interface process (ORALDB) times out on a database request after waiting for a specified interval (defined in /vs/data/ldbdip.rc). ORALDB will exit and respawn in order to reconnect to the database (remote or local). It will continue to do so until either the database connection is successfully established or the voice system is stopped.

If the reconnection attempt is not successful, no database requests will be processed. Application functionality is severely impaired.

Repair Procedure:
1 Consult the application developer to verify the application. See DB014 and DB015 — Application Developer Notes: on page 335.

2 Check the ORACLE network.

3 Reboot the system.

DB016

Alarm Level: Major.

Description: The Call Data Handler (CDH) failed to communicate to the voice system. The traffic data may not be recorded correctly.

There is no impact on call processing.

Repair Procedure: Reboot the system.

DIP Alarms and Log Messages

DIP001

There is one alarm message for the data interface process (DIP), as described below.

Alarm Level: None.

Description: Error in software.

Repair Procedure: When this error is logged, the message log contains additional text indicating the nature of the problem. Examples include the following:

DCDIP: VS startup failed

DCDIP: Cannot attach shared memory

This alarm occurs when there is an internal software error. Contact your remote maintenance service center for assistance.

DSKMG Alarms and Log Messages

DSKMG001

Alarm Level: Major.

Description: The indicated file cannot be accessed for the reason specified in the message. Applications requiring reserving speech files may fail.

Repair Procedure: 1 If the reason field indicates that the file or directory cannot be created, check to see if the speech file system is out of space:

   a Enter **vdf** at the system prompt and note the resulting message.

   If the free space is less than three percent, contact your remote maintenance service center.

2 If the reason field indicated a failure on a library call, make sure the irAPI libraries **libirAPI.so** and **libirEXT.so** are in existence in the **/usr/lib directory**.

3 If the reason field indicates a system call failure, reboot the system.

DSKMG002

Alarm Level: Major.

Description: The indicated file cannot be reserved for the reason specified in the message. Applications requiring recording to the file will be incomplete.

Repair Procedure: **1** If the reason field indicates that the file or directory cannot be created, check to see if the speech file system is out of space.

    a Enter **vdf** at the system prompt and note the resulting message.

       If the free space is less than three percent, contact your remote maintenance service center.

    b If the **vdf** command shows there is space on the device, the problem may be that there are no inodes left on the system. Remove files to free up the inodes.

2 If the reason field indicated a failure on a library call, make sure the irAPI libraries **libirAPI.so** and **libirEXT.so** are in existence in the **/usr/lib directory**.

3 If the reason field indicates a system call failure, reboot the system.

DWIP Alarms and Log Messages

DWIP001

There is one message for the DWIP process, as listed below:

Alarm Level: Critical.

Description: The DWIP process is unable to read PRI messages from the T1/E1 cards. PRI calls can not be processed on any T1/E1 cards that have the D-channel.

Repair Procedure: **1** Stop the voice system.

2 Start the voice system.

3 Reboot the system.

4 If the problem persists, reinstall the T1/E1 circuit card driver. See the "Installing or Replacing Circuit Cards," chapter in the maintenance book for your platform.

FFE Alarms and Log Messages

FFE001

Alarm Level: Major.

Description: The Form Filler Plus feature cannot successfully initialize. Applications using the Form Filler Plus feature will fail.

Repair Procedure:

1 Stop the voice system.

2 Start the voice system.

3 Reboot the system.

4 If the problem persists and a Form Filler Plus backup is available, restore the backup.

Note: The Form Filler Plus database speech must be restored before the Form Filler Plus database files.

5 If the problem persists or a Form Filler Plus backup is not available, remove and reinstall the Form Filler Plus package. See the "Installing Optional Feature Packages" chapter in the maintenance book for your platform.

Note: All current Form Filler Plus data will be lost as the result of reinstalling this package.

FFE002

Alarm Level: None.

Description: There are no Tip/Ring or T1 channels in the system during Form Filler Plus initialization. The initialization will continue but the Form Filler Plus feature will not be available.

Repair Procedure: No corrective action is necessary.

FFE003

Alarm Level: Major.

Description: An internal error has occurred in the Form Filer Plus feature during call processing. Applications using the Form Filler Plus feature will fail.

Repair Procedure: **1** Enter **rm /vs/data/ff/delete.ph**

     2 Stop the voice system.

     3 Start the voice system.

     4 If the problem persists, reboot the system.

FFE004

Alarm Level: Major.

Description: The Form Filler Plus feature failed to access the database during call processing. It is possible that the Form Filler Plus database is corrupted. Applications using the Form Filler Plus feature will fail.

Repair Procedure:
1 Stop the voice system.

2 Start the voice system.

3 Reboot the system.

4 If the problem persists and a Form Filler Plus backup is available, restore the backup.

Note: The Form Filler Plus database speech must be restored before the Form Filler Plus database files.

5 If the problem persists or a Form Filler Plus backup is not available, remove and reinstall the Form Filler Plus package. See the "Installing Optional Feature Packages" chapter in the maintenance book for your platform.

Note: All current Form Filler Plus data will be lost as the result of reinstalling this package.

FFE005

Alarm Level: Major.

Description: An application has made an invalid Form Filler Plus request. This is due to a script programming error. The indicated script will fail.

Repair Procedure:

1 Consult the application developer to verify the application.

2 Reboot the system.

3 If the problem persists and a Form Filler Plus backup is available, restore the backup.

Note: The Form Filler Plus database speech must be restored before the Form Filler Plus database files.

4 If the problem persists or a Form Filler Plus backup is not available, remove and reinstall the Form Filler Plus package. See the "Installing Optional Feature Packages" chapter in the maintenance book for your platform.

Note: All current Form Filler Plus data will be lost as the result of reinstalling this package.

FFE006

Alarm Level: Major.

Description: The Form Filler Plus feature failed to communicate with the voice system during call processing. Applications using the Form Filler Plus feature will fail.

Repair Procedure: Reboot the system.

FFE007

Alarm Level: Major.

Description: The Form Filler Plus feature failed to access a shared resource of the voice system. Applications using the Form Filler Plus feature will fail.

Repair Procedure: **1** Stop the voice system.

   2 Start the voice system.

   3 Reboot the system.

FFE008

Alarm Level: Major.

Description: The Form Filler Plus feature failed to access a shared resource of the voice system. Applications using the Form Filler Plus feature will fail.

Repair Procedure: **1** Stop the voice system.

                  2 Start the voice system.

                  3 Reboot the system.

FFE009

Alarm Level: Major.

Description: The Form Filler Plus feature failed to communicate with the voice system during call processing. Applications using the Form Filler Plus feature will fail.

Repair Procedure: Reboot the system.

FTS Alarms and Log Messages

FTS001

Alarm Level: Critical.

Description: The File Transfer System cannot find any session that is in the "File Transfer" state. The File Transfer System cannot transfer the files between the host and the voice system.

Repair Procedure: **1** Enter **hstatus**

2 Find a free session number N on host card 0 (a session within 0-127 and a state of either "free" or "unassign").

3 Enter **hassign** *application_name* **to** *N* **FTSCRT**

where *application_name* is the application service name and *N* is the free session number.

FTS002

Alarm Level: Major.

Description: The File Transfer System cannot send the file to the host because there is no response from the host within timeout period. The file transfer may fail again.

Repair Procedure: **1** This message may indicate a line problem.

2 Enter **sb_te *session_numbers***
where *session_numbers* is one or more session numbers.

The system displays the following message:

Check the terminal emulatorís status line indicator at the bottom of the display. If X SYSTEMS or X appear, the host is working slowly. Try to send the file again later.

FTS003

Alarm Level: Major.

Description: The File Transfer System cannot send the file to the host because the options in the send command are not correct. The file transfer may fail again unless the options have been corrected.

Repair Procedure: Edit PARAM1, PARAM2, or PARAM3 in the **/vs/data/fts_config** file. See *Intuity CONVERSANT System Version 7.0 Communication Development*, 585-313-202, for more information.

Each parameter must be one of the available options for the send command.

FTS004

Alarm Level: Major.

Description: If there is any host error message (HOST) in the log, the system may fail to transfer any file. If there are not host error messages in the log, then the mainframe session is actively performing another file transfer, and nothing is wrong in the system.

Repair Procedure: If this message occurs in conjunction with any other host (HOST) error message, See that message for the appropriate repair procedure. Otherwise, change the permissions on the indicated file by entering

chmod 744 *filename*

where *filename* is the file name in the error message.

FTS005

Alarm Level: Major.

Description: The File Transfer System cannot send the file to the host because the system cannot open the key mapping file zancomm.key. The system will not be able to send any file to the host. This happens when the "DataTalker 3270 UX, CLEO Communication" package is improperly installed or the file zancomm.key has improper permissions or is corrupted.

See the maintenance book for your platform for repair procedures.

The above description should state "cleo_3270, Feature Level 1" package instead of "DataTalker 3270 U-X, CLEO Communication" package.

Repair Procedure:
1 Remove the linkix_3270, Feature Level 1 package, and if you have any of the following packages, remove them also using the instructions below:

~ cleo_sib, link level

~ cleo_proc, link level

~ cleo_tkrn, link level package

a Log in as root as the system prompt.

b Enter pkgrm

c Follow the instructions provided on the screen.

2 Reinstall the cleo_3270 software. See the "Installing Optional Feature Software," chapter in the maintenance book for your platform.

FTS006

Alarm Level:	Major.
Description:	The File Transfer System cannot receive the file from the host because there is no response from the host within timeout period. The file transfer may fail again.
Repair Procedure:	See the repair procedure for system message HOST001.

FTS007

Alarm Level: Major.

Description: The File Transfer System cannot receive the file from the host because the options in the receive command are not correct. The file transfer may fail again unless the options have been corrected.

Repair Procedure: Edit PARAM1, PARAM2, or PARAM3 in the **/vs/data/fts_config** file. See *Intuity CONVERSANT System Version 7.0 Communication Development,* 585-313-202, for more information.

Each parameter must be one of the available options for the send command.

FTS008

Alarm Level: Major.

Description: If there is any host error message (HOST) in the log, the system may fail to transfer any file. If there are no host error messages in the log, then the mainframe session is actively performing another file transfer, and nothing is wrong in the system.

Repair Procedure:
- If this message occurs in conjunction with any other host (HOST) error message, see that message for the appropriate repair procedure.

- Otherwise, change the permissions on the indicated file by entering

  chmod 744 *filename*

  where *filename* is the file name in the error message.

FTS009

Alarm Level: Major.

Description: The File Transfer System cannot receive the file from the host because the system cannot open the key mapping file zancomm.key. The system will not be able to send any file to the host. This happens when the DataTalker 3270 UX, CLEO Communication" package is improperly installed or the file zancomm.key has improper permissions or is corrupted. See the maintenance book for your platform for repair procedures.

Note: The above description should state "cleo_3270, Feature Level 1" package instead of "DataTalker 3270 U-X, CLEO Communication" package.

Repair Procedure: 1 Remove the cleo_3270, Feature Level 1 package, and if you have any of the following packages, remove them also using the instructions below:

- ~ cleo_sib, link level 2
- ~ cleo_proc, link level2
- ~ cleo_tkrn, link level package:
- a Log in as root at the system prompt.
- b Enter pkgrm
- c Follow the instructions provided on the screen.

2 Reinstall the cleo_3270 software. See the "Installing Optional Feature Software," chapter in the maintenance book for your platform.

FTS010

Alarm Level: Major.

Description: The File Transfer System cannot receive the file from the host because the file name in the receive command does not exist in the host. The file transfer may fail again unless the file name has been changed or the file has been added in the host.

Repair Procedure: Correct the ORIGINATION file name in /vs/data/fts_config or add the file into the host.

FTS011

Alarm Level: Major.

Description: The File Transfer System cannot send the file to the host because of an error encountered by the comsend command. The TRANSxxx mnemonic in the error message identifies the reason the file transfer failed. Consult the CLEO 3270 Userís Guide for a further explanation and repair procedure for the TRANSxxx error message.

Repair Procedure: 1 This message may indicate a line problem.

2 Enter **sb_te *session_numbers***

where *session_numbers* is one or more session numbers.

The system displays the following message:

Check the terminal emulatorís status line indicator at the bottom of the display. If X SYSTEMS or X appear, the host is working slowly. Try to send the file again later.

FTS012

Alarm Level: Major.

Description: The File Transfer System cannot send the file to the host because of an error encountered by the comreceive command. The TRANSxxx mnemonic in the error message identifies the reason the file transfer failed.

Consult the CLEO 3270 Userís Guide for a further explanation and repair procedures for the TRANSxxx error message. See the maintenance book for your platform for repair procedures.

Repair Procedure: Edit PARAM1, PARAM2, or PARAM3 in the **/vs/data/fts_config** file. See *Intuity CONVERSANT System Version 7.0 Communication Development*, 585-313-202, for more information.

Each parameter must be one of the available options for the send command.

FXAUD Alarms and Log Messages

FXAUD001

Alarm Level: None.

Description: The fax job database audit has been started.

Repair Procedure: No corrective action is necessary.

FXAUD002

Alarm Level: None.

Description: An error occurred initializing the softFax process. The reason is identified in the message.

     The fax operation will not operate.

Repair Procedure: Contact your remote maintenance service center for assistance.

FXAUD003

Alarm Level: None.

Description: The fax audit could not establish communication with softFAX.

Repair Procedure: Contact your remote maintenance service center for assistance.

FXAUD004

Alarm Level: None.

Description: The fax audit could not cancel job.

Repair Procedure: No corrective action is necessary.

FXAUD005

Alarm Level: None.

Description: The fax audit cancelled the job successfully.

Repair Procedure: No corrective action is necessary.

FXAUD006

Alarm Level: None.

Description: The number of jobs that were cancelled successfully.

Repair Procedure: No corrective action is necessary.

FXAUD007

Alarm Level: None.

Description: The fax job database audit has been completed.

Repair Procedure: No corrective action is necessary.

FXAUD008

Alarm Level: None.

Description: The spool file has been successfully removed.

Repair Procedure: No corrective action is necessary.

FXAUD009

Alarm Level: None.

Description: The spool file was not successfully removed..

Repair Procedure: No corrective action is necessary.

FXAUD010

Alarm Level: None.

Description: The fax audit could not find the job to cancel.

Repair Procedure: No corrective action is necessary.

FXAUD011

Alarm Level: None.

Description: The fax audit could not find the log for the job to cancel.

Repair Procedure: No corrective action is necessary.

FXAUD012

Alarm Level: None.

Description: The fax audit successfully deleted the log for the job.

Repair Procedure: No corrective action is necessary.

FXAUD013

Alarm Level: None.

Description: The number of log jobs completed successfully.

Repair Procedure: No corrective action is necessary.

FXAUD014

Alarm Level: None.

Description: The spool area cleanup has been started.

Repair Procedure: No corrective action is necessary.

FXAUD015

Alarm Level: None.

Description: The number of spool files successfully removed.

Repair Procedure: No corrective action is necessary.

FXAUD016

Alarm Level: None.

Description: The spool area cleanup has been completed.

Repair Procedure: No corrective action is necessary.

FXAUD017

Alarm Level: Minor.

Description: The voxem file system is low on space..

Repair Procedure: Contact your remote maintenance service center for assistance.

FXAUD018

Alarm Level: None.

Description: The log dump directory not found.

Repair Procedure: No corrective action is necessary.

FXAUD019

Alarm Level: None.

Description: The fax log dump audit has been started.

Repair Procedure: No corrective action is necessary.

FXAUD020

Alarm Level: None.

Description: The log dump files removed.

Repair Procedure: No corrective action is necessary.

FXAUD021

Alarm Level: None.

Description: The number of log dump files successfully removed.

Repair Procedure: No corrective action is necessary.

FXAUD022

Alarm Level: None.

Description: The fax log dump audit completed.

Repair Procedure: No corrective action is necessary.

FXAUD023

Alarm Level: None.

Description: The system could not truncate the sferror file.

Repair Procedure: No corrective action is necessary.

FXAUD024

Alarm Level: None.

Description: The new sferror file size.

Repair Procedure: No corrective action is necessary.

FXMON Alarms and Log Messages

FXMON001

Alarm Level: None.

Description: The fax maintenance process started.

Repair Procedure: No corrective action is necessary.

FXMON002

Alarm Level: Minor.

Description: The fax maintenance process cannot write to a file.

                     The fax subsystem will not log events and future transmission problems may
                     be difficult to diagnose.

Repair Procedure: Contact your remote maintenance service center for assistance.

FXMON003

Alarm Level: None.

Description: No voice channels have been purchased and no fax channels have been
                     enabled.

Repair Procedure: Confirm that the RTU mechanism was not used to purchase channels.

FXMON004

Alarm Level: None.

Description: The fax maintenance process could not initialize softFAX.

Repair Procedure: Contact your remote maintenance service center for assistance.

FXMON005

Alarm Level: None.

Description: The fax maintenance process could not start the softFAX daemon.

Repair Procedure: Contact your remote maintenance service center for assistance.

FXMON006

Alarm Level: None.

Description: The fax platform daemon has been started.

Repair Procedure: There is no corrective action necessary.

FXMON007

Alarm Level: None.

Description: The fax maintenance process could not establish communication with softFAX.

Repair Procedure: WAITING FOR INFORMATION FROM KIM. Contact your remote maintenance service center for assistance.

FXMON008

Alarm Level: None.

Description: The fax maintenance process could not add a softFAX user vexvm.

Repair Procedure: Contact your remote maintenance service center for assistance.

FXMON009

Alarm Level: None.

Description: There is no product ID administered. The system is using the default NSF.

Repair Procedure: No corrective action is necessary.

FXMON010

Alarm Level: Major.

Description: The fax maintenance process could not add a softFAX channel.

The channels indicated will not be capable of performing fax operations. This error may be caused by either:

- An attempt to enable more channels than licensed
- A corruption of the softFAX database

Repair Procedure: Contact your remote maintenance service center for assistance.

FXMON011

Alarm Level: Minor.

Description: The fax maintenance process cannot open a file.

The fax subsystem will not be able to log FAX events properly. The ability to transmit FAX data should be unaffected.

Repair Procedure: Contact your remote maintenance service center for assistance.

FXMON012

Alarm Level: Major.

Description: The fax maintenance process could not enable a softFAX channel.

The channels indicated will not be capable of performing FAX operations.

Repair Procedure: Contact your remote maintenance service center for assistance.

FXMON013

Alarm Level: Minor.

Description: The fax maintenance process is continuing to wait for the MTC process to complete.

Repair Procedure: Contact your remote maintenance service center for assistance.

FXMON014

Alarm Level: Major.

Description: The fax maintenance process could not disable a softFAX channel.

The error indicates a possible corruption of the softFAX line database.

Repair Procedure: Contact your remote maintenance service center for assistance.

FXMON015

Alarm Level: None.

Description: The fax maintenance process successfully disabled a softFAX channel.

Repair Procedure: No corrective action is necessary.

FXMON016

Alarm Level: Major.

Description: The fax maintenance process could not disable a softFAX channel.

Repair Procedure: Contact your remote maintenance service center for assistance.

FXMON017

Alarm Level: None.

Description: The fax maintenance process successfully deleted the softFAX channels from the database.

Repair Procedure: No corrective action is necessary.

FXMON018

Alarm Level: None.

Description: The fax maintenance process could not select events to monitor.

Repair Procedure: Contact your remote maintenance service center for assistance.

FXMON019

Alarm Level: None.

Description: The fax maintenance process received a softFAX event error.

Repair Procedure: Contact your remote maintenance service center for assistance.

FXMON020

Alarm Level:	Major.
Description:	The fax maintenance process could not hard reset a channel.
	This alarm indicates that one or more channels are inoperable for fax transmission.
Repair Procedure:	Contact your remote maintenance service center for assistance.

FXMON021

Alarm Level:	None.
Description:	The fax maintenance process received a softFAX disable event.
Repair Procedure:	No corrective action is necessary.

FXMON022

Alarm Level:	None.
Description:	The event monitor received an unexpected event.
Repair Procedure:	No corrective action is necessary.

FXMON023

Alarm Level: None.

Description: The fax maintenance process could not shutdown the softFAX daemon.

Repair Procedure: Contact your remote maintenance service center for assistance.

FXMON024

Alarm Level: None.

Description: The fax maintenance process received a softFAX line malfunction event.

Repair Procedure: Contact your remote maintenance service center for assistance.

FXMON025

Alarm Level: None.

Description: The fax maintenance process could not start DEVICE TABLE.

Repair Procedure: Contact your remote maintenance service center for assistance.

FXMON026

Alarm Level: None.

Description: The fax maintenance process could not open DEVICE TABLE.

Repair Procedure: Contact your remote maintenance service center for assistance.

FXMON027

Alarm Level: None.

Description: The fax maintenance process could not read DEVICE TABLE.

Repair Procedure: Contact your remote maintenance service center for assistance.

FXMON028

Alarm Level: None.

Description: The fax maintenance process could not read BDTBL TABLE.

Repair Procedure: Contact your remote maintenance service center for assistance.

FXMON029

Alarm Level: None.

Description: The fax maintenance process could not read NITBL TABLE.

Repair Procedure: Contact your remote maintenance service center for assistance.

FXMON030

Alarm Level: None.

Description: The fax platform daemon shutdown..

Repair Procedure: If the reason is "unexpected death," reboot the system.

If the reason is not "unexpected death," no corrective action is necessary.

FXMON031

Alarm Level: None.

Description: The fax maintenance process could not halt line.

Repair Procedure: Contact your remote maintenance service center for assistance.

FXMON032

Alarm Level: None.

Description: The fax maintenance process could not find job.

Repair Procedure: No corrective action is necessary.

FXMON033

Alarm Level: None.

Description: The fax maintenance process job failed.

Repair Procedure: No corrective action is necessary.

FXMON034

Alarm Level: None.

Description: The system was unable to initialize a channel for the reason specified in the message.

Repair Procedure: No corrective action is necessary. If the problem persists, stop and start the voice system

FXMON035

Alarm Level: None.

Description: The system was unable to place a call in a given group for the reason specified in the message.

Repair Procedure: **1** Verify that the group listed in the message exists and has some channels in it.

   2 If the problem persists, stop and start the voice system.

FXMON036

Alarm Level: None.

Description: The system was unable to handle an incoming fax for the reason specified in the message.

Repair Procedure: If the problem persists, stop and start the voice system.

FXMON037

Alarm Level: None.

Description: The system was unable to get information on a given fax group for the reason specified in the message.

Repair Procedure: 1 Verify that the fax group specified is valid.

2 If the problem persists, stop and start the voice system.

FXMON038

Alarm Level: None.

Description: The fax failed because the given fax group contains a non-fax capable channel.

Repair Procedure: Remove non-fax capable channels from the group. See "Voice Equipment: in Chapter 3, Voice system Administration," of *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.

FXMON039

Alarm Level: None.

Description: The necessary resources to handle the fax could not be allocated

Repair Procedure: 1 Verify that the number of right-to-use fax licenses is sufficient.

2 Enter **display card ssp** to determine if the SSP circuit cards are in service.

3 Verify that fax service is assigned to the appropriate number of SSP circuit cards.

FXMON040

Alarm Level: None.

Description: The system operation is being jeopardized by requests for too much rasterization of text messages for faxing.

Repair Procedure: Contact your remote maintenance service center for assistance.

FXNSF Alarms and Log Messages

FXNSF001

Alarm Level: Major.

Description: NSF update: Could not initialize softFAX.

Repair Procedure: Contact your remote maintenance service center for assistance.

FXNSF002

Alarm Level: Major.

Description: NSF update: Could not start softFAX daemon.

                        This alarm indicates that an attempt to udate the NSF identifier failed.

Repair Procedure: Contact your remote maintenance service center for assistance.

FXNSF003

Alarm Level: Major.

Description: NSF update: Could not establish communication with softFAX.

This alarm indicates that an attempt to update the NSF identifier failed.

Repair Procedure: Contact your remote maintenance service center for assistance.

FXNSF004

Alarm Level: Major.

Description: NSF update: Update of softFAX channel failed.

Repair Procedure: Contact your remote maintenance service center for assistance.

FXNSF005

Alarm Level: None.

Description: NSF update of softFAX channel passed

Repair Procedure: No corrective action is necessary.

GEN Alarms and Log Messages

GEN001

Alarm Level: None.

Description: An internal voice system process has encountered a general error described in the message text. System functionality is impaired.

Repair Procedure: No corrective action is necessary.

GEN002

Alarm Level: None.

Description: An internal voice system process has logged general status information with this message.

Repair Procedure: No corrective action is necessary.

GEN020

Alarm Level: None.

Description: An internal voice system process has received a command with the incorrect number of arguments. The source of the message is ALERTER, which indicates that a user command was issued with incorrect arguments. The command has been ignored.

Repair Procedure: No corrective action is necessary.

GEN022

Alarm Level: None.

Description: An internal voice system process has received a command which it does not recognize.

   If the source of the command is ALERTER, the message indicates that a user command was badly formed or unrecognized by the Alerter. The command has been ignored.

Repair Procedure: No corrective action is necessary.

GEN024

Alarm Level: None.

Description: An internal voice system process has attempted to open the specified file and failed.

Repair Procedure: No corrective action is necessary.

GEN050

Alarm Level: None.

Description: An internal voice system process has received a command to change one of its internal parameters. The name of the parameter and its old and new values are printed in the message.

Repair Procedure: No corrective action is necessary.

HOST Alarms and Log Messages

HOST001

Alarm Level: Major.

Description: The application cannot access the host to get data for the call. Either a mismatch exists between the voice system and host configurations, the host has not responded within the Initial Timeout specified in the application for a Send Host Screen action, or the host connection is down.

Repair Procedure:
1 Ensure that the host connection is made and the voice system host configuration agrees with the host configuration.

   Specifically, check the Constant Carrier parameter with the DUPLEX parameter from the host.

2 Also, a noisy connection may cause the host to retransmit screens excessively, resulting in slow response times from the host.

HOST002

Alarm Level: None.

Description: The applications cannot get correct data for the call. The host has sent an unexpected screen within the Unrecognized Screen Timeout specified in the application for a Get Host Screen action.

For some applications, unexpected screens are part of the normal flow of the application and can be ignored. However, for other applications, this might show that either the application is not recognizing the screen sent by the host or the host is taking too long to respond with the expected screen.

Repair Procedure: For many applications no corrective action is necessary. If the message persists, check the application logic.

HOST003

Alarm Level: Critical.

Description: The applications cannot access the host to get data for calls. Either the host is down, the application running on the host (for example, CICS or TSO) is down, a mismatch exists between the voice system and host configurations, or a logic problem exists in the voice system application.

Repair Procedure: **1** Re-establish the connection with the host if resetting the card has disconnected the link. For dialup lines, this involves having the modem dial to or from the host.

       2 Free a session of the card by entering **hfree *session_number***

          where *session_number* is the number of the session you want to free.

          A message is displayed confirming the success or failure of the hfree command.

       3 Start the 3270 Terminal Emulation software by entering

          sb_te *session_numbers*

          The Terminal Emulator (TE) displays the current screen of the LU. The 3270 status line appears at the bottom of the screen to inform you whether or not the host is active. See Appendix B, "Status Line Information," of the *3270 User's Guide* for information about the indicators shown in the 3270 status line and what those values mean.

HOST004

Alarm Level: Major.

Description: The application cannot access the host to get data for the call. The host card failed to do the specified action. Either the keyboard is locked, the host link is down, the session is owned by someone else, or the problem is with the card or configuration.

Repair Procedure:

1 If the keyboard is locked or you could not write to the card complete the following Steps a through c:

   a Free a session of the card by entering **hfree *session_number***

      where *session_number* is the number of the session you want to free.

      A message is displayed confirming the success or failure of the hfree command.

   b Enter **sb_te *session_numbers***

      where *session_numbers* is one or more session numbers.

      You are asked to press to display the screen currently displayed by the sessions.

   c Press the key configured as the 3270 reset key to unlock the keyboard. It is likely that the application assigned to that session at one point sent a screen at an inappropriate time, causing the host to lock the keyboard. See the repair procedure for HOST013 system message to debug the host application section below.

2 If you could not write to the card, ensure that connection between the host and the voice system is not broken as described in the repair procedure for HOST006.

3 If the session is owned by someone else, enter **ps ef**

   This will check if another program, like the terminal emulator or file transfer, is using the session.

If so, terminate those programs and reassign the application to the session by entering **hassign *session_number***

where *session_number* is the number of the session to which you want to assign application.

4 If the card is not responding, it may be broken, complete the following Steps a through d:

    a Reset the card through the Host Link screen.

    b Stop the voice system.

    c Start the voice system.

5 If the session has not been configured, add the session through the Host Link screen. Ensure the configuration file on the host also has the session configured.

HOST005

Alarm Level: Major.

Description: The application cannot access the host on the specified session to get data for the call. The host has stopped polling or checking the voice system. Either the host is down, a mismatch exists between the voice and host configurations, or the host link is disconnected.

Repair Procedure: **1** If a HOST017 message is not in the message log, enter hstatus to determine if the sessions are recovering or logging in.

2 If the sessions are recovering or logging in, wait until this process is complete. No additional Steps are necessary.

3 If the sessions are not recovering or logging in, wait until a HOST017 message appears in the message log then reset the host card through Host Link screen by completing the following Steps a through e:

  a Stop the voice system.

  b Start the voice system.

  c If the problem persists, free the specified session of the card by entering **hfree *session_number***

   where *session_number* is the number of the session you want to free.

   A message appears, confirming the success or failure of the hfree command.

  d Enter **sb_te *session_numbers***

   where *session_numbers* is one or more session numbers.

   The Terminal Emulator (TE) displays the current screen of the LU. The 3270 status line appears at the bottom of the screen to inform you whether or not the host is active. See Appendix B, "Status Line Information," of the *3270 User's Guide* for information about the indicators shown in the 3270 status line and what those values mean.

   e If the problem persists, See the repair procedure for system message
      HOST006 for how to bring up the host link.

HOST006

Alarm Level: Critical.

Description: The applications cannot access the host to get data for calls. There is no
                 cable, dialup, or session connection to the host.

Repair Procedure: **1** Ensure that the connection between the host and the voice system is not
                      broken.

                   2 If you are using a modem for a dialup link to the host, ensure that the
                      voice visual indicator lights on the modem are flashing. This shows that
                      modems are talking to one another.

                      If the visual indicator lights are not flashing, attempt to redial the host
                      through the modem. Once the link is reestablished, the sessions will
                      starting logging in.

                   3 If the problem persists, ensure that the voice system host configuration is
                      set to agree with the hostís configuration.

                      Specifically, check the Poll Address parameter with the PU_ADDR
                      parameter from the host. See *Intuity CONVERSANT System Version 7.0
                      Communication Development*, 585-313-202, for further information.

HOST007

Alarm Level: Major.

Description: The application cannot send a screen of data to the host to get data for the call. The application either tried to send the wrong screen or to write onto a protected field on the screen.

Repair Procedure: **1** Display the screen currently displayed by the session. Enter

hspy *session_ number*

where *session_number* is the session number you want to display.

You are asked to press **ENTER**. The application may have tried to send a different screen or to write into a protected field.

2 Redefine the logic of your host application to either send the correct screen or not write to the protected field, and reverify and reinstall the host application.

3 Free the specified session. Enter **hfree *session_number***

where *session_number* is the number of the session you want to free.

A message appears, confirming the success or failure of the hfree command.

4 To move from the current screen back to the login base screen using the proper screens and keys, enter *sb_te **session_numbers***

   where *session_numbers* is one or more session numbers.

   You are asked to press **ENTER** to display the screen currently displayed by the sessions.

5 If the session does not respond to your input, check the terminal emulator's status line indicator at the bottom of the display.

   The Terminal Emulator (TE) displays the current screen of the LU. The 3270 status line appears at the bottom of the screen to inform you whether or not the host is active. See Appendix B, "Status Line Information," of the *3270 User's Guide* for information about the indicators shown in the 3270 status line and what those values mean.

6 Reassign the application back to the session. Enter

   hassign *application_name* to *session_number*

   where *application_name* is the name of the application and *session_number* is the number of the session to which you want to assign the application.

   A message appears, confirming the success or failure of the hassign command.

7 If the problem persists, use the sb_trace command as described in the "For Application Developer" section of the HOST013 message.

HOST008

Alarm Level: Major.

Description: The application cannot access the host to get data for the call. The application wants to send a screen when the host has not yet responded to a previous send of another screen.

Repair Procedure: Check the logic of the application. See Chapter 12, "Using Advanced Features," of *Intuity CONVERSANT System Version 7.0 Application Development with Script Builder*, 585-313-206, for information.

HOST009

Alarm Level: Major.

Description: The application cannot access the host to get data for the call. The application failed to log in. The specified session could not attempt to log in to the host because all the applicationís login IDs/passwords are being used by other sessions.

Repair Procedure: Either add more login IDs/passwords to the application or do not use any more sessions than login IDs/passwords. See Chapter 12, "Using Advanced Features," of *Intuity CONVERSANT System Version 7.0 Application Development with Script Builder*, 585-313-206, for information.

HOST010

Alarm Level: Critical.

Description: The application will not run because it is incomplete or improperly defined.

Repair Procedure: Check the logic of the application. See Chapter 12, "Using Advanced Features," of *Intuity CONVERSANT System Version 7.0 Application Development with Script Builder*, 585-313-206, for information.

HOST011

Alarm Level: Major.

Description: The application cannot access the host to get data for the call. The application depends on the HELPER DIP to identify fields on the screens.

Repair Procedure: 1 Stop the voice system.

2 Stop the voice system.

3 If the problem persists, check the logic of the application. See Chapter 12, "Using Advanced Features," of *Intuity CONVERSANT System Version 7.0 Application Development with Script Builder*, 585-313-206, for information.

HOST012

Alarm Level: Major.

Description: The application cannot access the host to get data for the call. Either not enough sessions have been assigned to the application or some sessions assigned to the application are not logged in to take calls.

Repair Procedure: **1** Verify that there are as many sessions defined as there are voice channels assigned to the application. Enter

hstatus *application_name* or ***session_number*** or ***range*** or ***all***

where *application_name* is the host application name and *session_number*, *range*, or *all* is the number, range, or all of the sessions for which you want to display status.

If the LUs are in the "not available" state, See Chapter 3, "Voice System Administration," of *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501, to configure the LUs.

2 Verify that the application has enough sessions logged in ready to handle calls. Enter

hstatus *application_name* or ***session_number*** or ***range*** or ***all***

where *application_name* is the host application name and *session_number*, *range*, or *all* is the number, range, or all of the sessions for which you want to display status.

a If the application is not assigned to this LU, assign as many sessions as needed by entering

hassign *application_name* to *session_number*

where *application_name* is the name of the application and *session_number* is the number of the session to which you want to assign the application.

A message appears, confirming the success or failure of the hassign command.

b If a LU is assigned to application but in the "logged out" state, enter

hlogin *session_number*

to log in logged out sessions.

3 Determine if some sessions are in the recovery state. This could be caused by faulty logic in the application. Enter

hstatus *application_name* or ***session number*** or ***range*** or ***all***

where *application_ name* is the host application name and *session_number*, *range*, or *all* is the number, range, or all of the sessions for which you want to display status.

4 If some sessions are in recovery, check the logic of the application. See the repair procedure for system message HOST013 to debug the host application.

HOST013

Alarm Level: Major.

Description: The application cannot access the host to get data for the call. Either the host is down, the application running on the host (for example, CICS or TSO) is down, or a logic problem exists in the application.

This message can also be caused by stopping the voice system before all session were logged out.

Repair Procedure: 1 Free a session of the card. Enter **hfree *session_number***

where *session_number* is the number of the session you want to free.

A message appears, confirming the success or failure of the hfree command.

2 Enter **sb_te *session_numbers***

where *session_numbers* is one or more session numbers.

Check the terminal emulatorís status line indicator at the bottom of the display. The Terminal Emulator (TE) displays the current screen of the LU. The 3270 status line appears at the bottom of the screen to inform you whether or not the host is active. See Appendix B, "Status Line Information," of the *3270 User's Guide* for information about the indicators shown in the 3270 status line and what those values mean.

3 If this message occurred because a stop_vs was performed before all sessions logged out, use the following procedure:

    a Free all sessions assigned to the application or the card by entering

    hfree *application* or *session_number* or *range* or *all*

    where *application* is the name of the host application and *session_number*, *range*, or *all* is the number of the session(s) you want to free.

    A message appears, confirming the success or failure of the hfree command.

    b Use the terminal emulator on all of the recovering sessions to manually move the sessions to the login base screen using the screens and keys. Enter **sb_te session_numbers**

    where *session_numbers* is one or more session numbers.

    The current screen on the sessions is displayed.

    c Use the hassign command to reassign the application to all the sessions and verify that all sessions become logged in.

Note: The next time a **stop_vs** is executed, use the **hlogout** command prior to **stop_vs** to log out the sessions before stopping the voice system.

4 See .

HOST013 for Application Developer

1 Determine if some sessions are in the recovery state. This could be caused by faulty logic in the application. Enter
hstatus *application_ name* or ***session_number*** or ***range*** or ***all***
where *application_name* is the host application name and *session_number*, or *range*, or *all* is the number, range, or all of the sessions for which you want to display status.

2 Display the screen currently displayed by the session. The application may not recognize or expect the screen sent by the host. Enter
hspy *session_number*
where *session_number* is the session number you want to display.

You are asked to press **ENTER**.

3 If the screen is new, changed, or improperly identified in the application, recapture and identify this screen through the Script Builder Define Host Screens menu.

4 Assure that the screen is received and sent in the proper places in the application.

5 Verify and reinstall the application if changes were made to the application and/or screens.

6 If the problem persists, repeat Steps 1-5 until all screens are properly defined.

7 If all the screens are properly defined and accounted for in the application, free all sessions assigned to the application or the card, if necessary. Enter
hfree *application* or *session_number* or *range* or *all*
where *application* is the name of the host application and
session_number, or *range*, or *all* is the number of the session(s) you want to free.

A message appears, confirming the success or failure of the **hfree** command.

8 Use the terminal emulator on one of the recovering sessions to determine what current screen the host is displaying. This could help locate the trouble area in the application.

9 To move from the current screen back to the login base screen using the proper screens and keys, enter **sb_te** *session_numbers*
where *session_numbers* is one or more session numbers.
The current screen on the sessions is displayed.

10 If the session does not respond to your input, check the terminal emulatorís status line indicator at the bottom of the display.

The Terminal Emulator (TE) displays the current screen of the LU. The 3270 status line appears at the bottom of the screen to inform you whether or not the host is active. See Appendix B, "Status Line Information," of the *3270 User's Guide* for information about the indicators shown in the 3270 status line and what those values mean.

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11 Save all screens sent and received from/to that session. This might show extra screens not accounted for in the application. Enter
sb_trace *session_number*
where *session_number* is the number of the session you want to trace.

A message appears, confirming the success or failure of the sb_trace command.

12 Reassign the application back to that session. Enter
hassign *application_name* to *session_number(s)*
where *application_name* is the name of the host application name and *session_number(s)* is the number of the session(s) you want to assign to the specified application.

A message appears, confirming the success or failure of the hassign command.

13 Place a call into the application if necessary to make the session go into recovery.

14 Verify that the session is recovering. Enter
hstatus *application_ name* or *session_number* or *range* or *all*
where *application_name* is the host application name and *session_number*, or *range,* or *all* is the number, range, or all of the sessions for which you want to display status.

15 Once recovering, use the hfree command to free the session and look through the screens saved by sb_trace to identify the point where the wrong screen is being sent or received.

16 Use the terminal emulator as described in Step 9 to bring this session and all others back to the login base screen.

17 Capture or redefine the appropriate screens and fix the logic of the application to reflect the sequence of screens sent and received. See Chapter 4, "Defining the Host Interface," Chapter 5, "Creating Database Tables," Chapter 10, "Application Administration," and Appendix A, "Sample Application," in *Intuity CONVERSANT System Version 7.0 Application Development with Script Builder, 585-313-206,* for more help in defining the application.

18 Reverify and reinstall the host application.

19 Reassign the application on one session by entering
hassign *application_name* to *session_number(s)*
where *application_name* is the name of the host application and *session_number(s)* is the number of the session(s) you want to assign to the specified application.

A message appears, confirming the success or failure of the hassign command.

20 Verify that the application logs in and returns to loggedin after a call is finished.

21 If it does not return to loggedin, repeat the debugging steps above.

22 Use the hassign command to reassign the application to the rest of the sessions and verify that all sessions become logged in.

HOST014

Alarm Level: None.

Description: At least one session has recovered and is now logged in for the application to take a call.

Repair Procedure: No corrective action is necessary.

HOST015

Alarm Level: Critical.

Description: The applications cannot access the host to get data for calls. The HOST DIP has stopped handling calls. This is normal when the voice system is stopped, and in this case the message can be ignored. If the voice system is still running, the message might indicate internal problems in the HOST DIP.

Repair Procedure: **1** If the voice system is running, determine if the HOST DIP is running. Enter **hstatus all**

2 If all sessions are shown "not available," the HOST DIP is not running. Complete the following Steps a and b:

   a Stop the voice system.

   b Start the voice system.

HOST016

Alarm Level: Critical.

Description: The system cannot communicate with the host. This shows that the HOST DIP cannot open the host card. This problem occurs when the host card is stuck in an inactive state. It is typically caused by an error between the voice system and the host (a dropped host link, power hit on the voice system, etc).

Repair Procedure: **1** Shut down the operating system.

   2 Reboot the operating system.

HOST017

Alarm Level: Major.

Description: The session assigned to the application is not available to handle calls. It will continue to retry the login and/or recover sequences specified in the application. Either the host is down, the application running on the host (for example, CICS or TSO) is down, or a logic problem exists in the application.

Repair Procedure: See the repair procedure for system message HOST013.

HOST018

Alarm Level: None.

Description: The session assigned to the application is now available to handle calls.

Repair Procedure: No corrective action is necessary.

ICK Alarms and Log Messages

ICK001

Alarm Level: Minor.

Description: The integrity checking process has received an invalid request. The request has been ignored.

Repair Procedure: **1** Verify that commands being sent to the integrity checking process are using **iCkCmd**. See Appendix A, "Summary of Commands," in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501, for more information.

2 Verify that the files **/vs/bin/vrs/iCk** and **/vs/bin/util/iCkCmd** have the same date.

ICK002

Alarm Level: Minor.

Description: The integrity checking process has encountered an internal error.

Repair Procedure: **1** If the description is similar to:

```
Activity index <NN> is out of range: <MMM> Current limits: 0
to <NN>
```

the integrity checking process will automatically correct the problem.

2 If the description is similar to:

```
Time computation failed  <XXX>
```

edit the **/vs/etc/ick.rules** file and correct the time description *XXX*.

ICK003

Alarm Level: None.

Description: The integrity checking process has received a command request.

Repair Procedure: No corrective action is necessary.

ICK004

Alarm Level: None.

Description: The integrity checking process has just completed reading its rules file.

Repair Procedure: No corrective action is necessary.

ICK005

Alarm Level: None.

Description: The integrity checking process has changed the state of the UNIX kernel auto-reboot flag to state identified.

Repair Procedure: No corrective action is necessary.

ICK006

Alarm Level: None.

Description: The identified action has been taken by the integrity checking process.

Repair Procedure: No corrective action is necessary.

ICK007

Alarm Level: Major.

Description: The directory in which the integrity checking process rules file appears is accessible by nonauthorized users. The rules file is insecure and is vulnerable to corruption which may impact system functionality.

Repair Procedure: **1** Verify that the directory in which the rules file appears is owned by root and is not writable by any other user. Enter **ls ld /vs/etc**

The output should be similar to:

```
drwxrxrx 3 root bin 64 Dec 30 12:11 /vs/etc
```

2 If the mode is not drwxrxrr, enter **chmod 755 /vs/etc**

3 If the owner is not root, enter **chown root /vs/etc**

4 If the group is not bin, enter **chgrp bin /vs/etc**

ICK008

Alarm Level: Major.

Description: The rules file used by the integrity checking process is accessible by nonauthorized users. The rules file is insecure and is vulnerable to corruption which may impact system functionality.

Repair Procedure: **1** Verify that the rules file is owned by root and is not writable by any other user. Enter **ls ls /vs/etc/iCk.rules**

The output should be similar to:

```
-r--r--r-- 1 root other 6815 Dec 30 12:11 /vs/etc/iCk.rules
```

   2 If the mode is not `-r--r--r--`, enter **chmod 444 /vs/etc/iCk.rules**

   3 If the owner is not `root`, enter **chown root /vs/etc/iCk.rules**

ICK009

Alarm Level: None.

Description: The integrity checking process has found the specified file to be larger than allowed by a rule which has been executed, or to not be regular. The specified reduction procedure has been performed.

Repair Procedure: No corrective action is necessary.

ICK010

Alarm Level: Minor.

Description: The integrity checking process has found a file specified by a rule that does not comply with the requirements of the rule. Depending upon the rule, the integrity checking process may attempt to correct the problem or just report it.

Repair Procedure: If the message does not indicate that the problem has been automatically corrected, determine why the specified file is failing the rule test and correct it using one of the following:

  1 If the message indicates an error with the mode, use the **chmod** command to change the mode.

  2 If the message indicates an error with the group, use the **chgrp** command to change the group.

  3 If the message indicates an error with the owner, use the **chown** command to change the owner.

  4 If the message indicates that the file does not exist, create the file. If the file is a UNIX file, see a UNIX reference manual for additional information. If the file is specific to your application, consult your application developer.

ICK011

Alarm Level: None.

Description: The integrity checking process is changing to the specified run level. A change in run level affects which rules are in force.

Repair Procedure: No corrective action is required.

INIT Alarms and Log Messages

INIT001

Alarm Level: Critical.

Description: The system configuration from the previous operation of the voice system is completely lost. All administered values are set to their default states. Administrative action is required to assign services to channels and put channels in the INSERV state. Card functionality must be specified in order for the system to operate under any configuration other than the default settings.

No calls can be processed until the system has been readministered.

Repair Procedure: This alarm requires remote maintenance center intervention.

INIT002

Alarm Level: Major.

Description: The identified card, previously recognized to be present in the system, cannot be located. Call processing may be impaired.

Repair Procedure: **5** Remove the card from the system and do not replace it. See the "Installing or Replacing Circuit Cards" chapter in the maintenance book for your platform.

1 Renumber the voice channels. See Chapter 3, "Voice System Administration," in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.

INIT003

Alarm Level: None.

Description: The identified card has been added to the system. The card is initialized with default values and requires administration before it is operational.

Repair Procedure: No corrective action is necessary.

INIT004

Alarm Level: None.

Description: Channels have been renumbered at the request of a system administrator.

Repair Procedure: No corrective action is necessary.

INIT005

Alarm Level: Major.

Description: Cannot save system configuration data to hard disk.

> ⚠️ **CAUTION:**
> If the voice system is stopped and started, some or all of the voice system administered values may be lost.

Repair Procedure: This alarm requires remote maintenance center intervention.

INIT006

Alarm Level: Critical.

Description: Cannot determine type of SSP card.

An error occured when trying to determine the number for the voice system card. The card is not operational. The resources on the card are not available. Call processing may be impaired.

Repair Procedure: 1 Check the circuit card.

2 If the CPU has recently been replaced, verify that the card is set up correctly. See the "Installing or Replacing Circuit Cards" chapter in the maintenance book for your platform.

INIT007

Alarm Level: Major.

Description: The unassigned protocol has been assigned to the card. The identified card has been re-assigned to the unassigned protocol. The reason for the reassignment is indicated in the reason field of the message. The card should be re-administered.

Repair Procedure: • If the reason is:

```
Packfile <packfile name> does not exist
```

either the protocol that provides this packfile is no longer installed on the system, or the rate of the card has been changed and no such protocol exists for this card. Do the following:

1 Log in as root.

   a Determine the protocol assigned to the indicated card and the card rate by entering **display card *card_number***

      where *card_number* is the number indicated in the message.

   b Determine if the package that provides that protocol is installed on the system by entering **pgkinfo**

      The packages and the protocols provided and card rates supported are shown in Table 18 on page 417.

c If the package is not installed, it must be installed to use the protocol. See the "Installing the Optional Feature Software" chapter in the maintenance book for your platform for information on installing software. Check that the desired protocol is supported for that card rate.

• If the reason is:

```
Boards in D-channel group <group number> are not contiguous
```

the cards in the PRI D-channel group must be made contiguous. See Chapter 5, "Switch Interface Administration," in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.

Table 18.   T1/E1 Protocol Rates

Package	Protocol	Rate
t1em	E&M	T1
lse1d	LSE1D	E1
lst1d	LST1D	T1
lst1g	LST1G	T1
p2aus	CAS	E1
pri	PRI	T1/E1
r2mex	CAS	E1

INIT008

Alarm Level: None.

Description: IChannels have been renumbered as a result of a change in hardware.

Repair Procedure: **Note:**   This alarm occurs when a card in the system has been replaced by another card of the same class, but of a different name or running at a different rate. Therefore an automatic renumber of the cards has occurred and the new card has default settings. (For example, a card in the class Analog at osindex 0 with name AYC28 has been replaced by another card as osindex 0, with name AYC30.)

The new circuit card may need to be re-administered if the default settings, protocols, or functions are not appropriate. See Chapter 3, "Voice System Administration," in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.

INIT009

Alarm Level: Minor.

Description: A change in configuration was detected. An automatic renumbering has not occured because the manual renumber option is set. A renumbering of channels should be done as soon as possible.

Note that this alarm will only appear is your remote maintenance center activates it.

Repair Procedure: Renumber the voice channels. See Chapter 3, "Voice System Administration," in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.

INIT010

Alarm Level: None.

Description: Unable to update the T1/E1 configuration file. T1/E1 cards with the unassigned protocol should be re-administered.

Repair Procedure: Re-administer all cards that currently have the unassigned protocol assigned to them. See Chapter 3, "Voice System Administration," in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.

LOG Alarms and Log Messages

LOG001

Alarm Level: None.

Description: The voice system logger has started a new message log file.

Repair Procedure: No corrective action is necessary.

LOG002

Alarm Level: None.

Description: The voice system logger has closed one message log file and is starting a new message log file.

Repair Procedure: No corrective action is necessary.

LOG006

Alarm Level: Message priority based on the priority of the message ID passed to the Logger.

Description: The voice system logger has been asked to log a message type which is invalid and which it cannot expand into a readable form for the message log.

Repair Procedure: **1** Identify the source of the unexpected message. The name of the source should be part of the compressed message format of the invalid message.

2 If the source of the unexpected message is a customer application data interface process (DIP), consult your application developer.

Otherwise, confirm that all installed voice system software packages are compatible with the installed version of the system software. Remove any software package that is incompatible and install the proper version.

LOG007

This message can have different values for the string1 and string2 fields. The description and effect statement and the corresponding repair procedure differs for each of the values. Use the list of messages below to determine the proper description and effect statement and repair procedure for the LOG007 message you have encountered.

```
LOG007  logDaemon: msgrc=1, errno NOT EINTR:
```

Alarm Level: Critical.

Description: The voice system message Logger cannot communicate with other internal voice system processes. Logger functionality is severely impaired.

Repair Procedure: Reboot the system.

LOG007   logDaemon: PID <pid> <msg>.:

Alarm Level: None.

Description: The voice system message Logger has been started or reinitialized. This message will appear in each log file maintained by the Logger.

Repair Procedure: No corrective action is necessary.

LOG007   logDaemon: REINITIALIZED.:

Alarm Level: None.

Description: The voice system message Logger has received a command to reinitialize.

Repair Procedure: No corrective action is necessary.

LOG007   logDaemon: Exiting upon request.:

Alarm Level: None.

Description: The voice system message Logger has received a command to exit.

Repair Procedure: No corrective action is necessary.

```
LOG007   logDaemon: Unable to open: <command>.:
```

Alarm Level: Critical.

Description: The voice system message Logger is unable to execute the UNIX command indicated by the message. Logger functionality is impaired.

Repair Procedure:
  1 Make sure the UNIX command file being executed by the Logger exists and is executable.

  2 If necessary, restore the missing or corrupted UNIX command file indicated in the message from a system backup.

  3 If no valid backup copy exists reinstall the Intuity CONVERSANT software. See the "Installing the Intuity CONVERSANT System Software" chapter in the maintenance book for your platform.

MTC Alarms and Log Messages

MTC001

Alarm Level: Major.

Description: The card identified in the message is unable to provide TDM clock to the system. This may indicate a possible hardware problem with the card. The card state has been changed to BROKEN. Applications dependent on this card will not function.

Repair Procedure: **1** Diagnose the card by entering:

         diagnose card *card_number*

         where *card_number* is the number of the card.

         2 After the diagnose command has completed, display the state of the card by entering:

         display card *card_number*

         where *card_number* is the number of the card.

3 If the card state has changed to MANOOS, restore the card into service by entering:

restore card *card_number*

where *card_number* is the number of the card.

4 If the card state remains BROKEN, check the circuit card.

MTC002

Alarm Level: None.

Description: The identified card has had a state transition. The card state has been changed to BROKEN. Applications dependent on this card will not function.

If the identified card is the only SSP card on the system that was providing speech playback functionality for the Tip/Ring cards, the equipment option of the Tip/Ring cards must be manually changed from "tdm" to "talk". See INTUITY CONVERSANT System Version 7.0 Administration, 585-313-501. This option is shown under "OPTS" heading when the "display card" command is invoked.

Changing this option enables the Tip/Ring cards to perform speech playback on their own, in the absence of an SP card, thus maintaining overall system functionality. However, note that this configuration does not support barge-in functionality. Once the SP card is restored to service, the Tip/Ring card options need to be manually changed to "tdm".

Repair Procedure:

1 Check for any loose cables.

2 If the indentified card is the only SSP card on the system that was providing speech playback functionality for Tip/Ring cards. See Chapter 3, "Voice System Administration," of *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.

3 If any packages have been removed from the system recently, verify that any related cards, functions, etc, have been unassigned from the application so that the affected card does not come up in the Broken state. See Chapter 3, "Voice System Administration," of *Intuity CONVERSANT System Verion 7.0 Administration*, 585-313-501.

4 If the state transition was not initiated by a diagnose command, diagnose the card by entering:

diagnose card *card_number*

where *card_number* is the number of the card.

5 After the diagnose command has completed, display the state of the card by entering:

display card *card_number*

where *card_number* is the number of the affected card.

6 If the card is in the MANOOS state, do the following:

   a Diagnose the bus by entering **diagnose bus 1**

   b Display the state of the card by entering:

   display card *card_number*

   where *card_number* is the number of the card.

   c If the card is in the BROKEN state, check the circuit card.

   d If the card is in the MANOOS state, restore the card into service by entering:

   restore card *card_number*

   where *card_number* is the number of the card.

7 If the card is in the BROKEN state, check the circuit card.

MTC003

Alarm Level: Major.

Description: The identified card has had a state transition. The card state has been changed to BROKEN. Applications dependent on this card will not function.

      If the identified card is the only SP card on the system that was providing speech playback functionality for the Tip/Ring cards, the equipment option of the Tip/Ring cards must be manually changed from "tdm" to "talk". See Intuity CONVERSANT System Version 7.0 Administration. This option is shown under "OPTS" heading when the display card command is invoked. Changing this option enables the Tip/Ring cards to perform speech playback on their own, in the absence of an SP card, thus maintaining overall system functionality. However, note that this configuration does not support barge-in functionality. Once the SP card is restored to service, the Tip/Ring card options need to be manually changed to "tdm."

Repair Procedure: **1** Check for any loose cables.

    2 If the indentified card is the only SP card on the system that was providing speech playback functionality for Tip/Ring circuit cards. See Chapter 3, "Voice System Administration," in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.

3 If any packages have been removed from the system recently, verify that any related cards, functions, etc, have been unassigned from the application so that the affected card does not come up in the BROKEN state. See Chapter 3, "Voice System Administration," in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.

4 If the state transition was not initiated by a diagnose command, diagnose the card. Enter

   diagnose card *card_number*

   where *card_number* is the number of the card.

5 After the diagnose command has completed, display the state of the card by entering:

   display card *card_number*

   where *card_number* is the number of the card.

6 If the card is in the MANOOS state, do the following:

   a Diagnose the bus by entering **diagnose bus 1**

   b Display the state of the card by entering:

   display card *card_number*

   where *card_number* is the number of the card.

   c If the card is in the BROKEN state, check the circuit card.

      d If the card is in the MANOOS state, restore the card into service by entering:

      restore card *card_number*

      where *card_number* is the number of the card.

   7 If the card is in the BROKEN state, check the circuit card.

MTC004

Alarm Level:	None.
Description:	Diagnostic tests have been started on the identified card.
Repair Procedure:	No corrective action is necessary.

MTC005

Alarm Level:	None.
Description:	The identified card has successfully passed all diagnostic tests performed.
Repair Procedure:	No corrective action is necessary.

MTC006

Alarm Level: Major.

Description: The identified card has failed one or more diagnostic tests. The card state has been changed to BROKEN. Applications dependent on this card will not function.

Repair Procedure: Check the circuit card.

MTC007

Alarm Level: Critical.

Description: An internal software error occurred when requesting a resource from, or releasing a resource to the Resource Manager. The request could not be processed. The identified card or channel is not available.

Repair Procedure: **1** Stop the voice system.

2 Start the voice system.

3 If the problem persists, reboot the system.

Note: If the reason is User requested abort, an abort of a remove or restore request for a card or channel was initiated while the request was still being processed. The state of the card or channel may not be accurate. Check the circuit card.

MTC008

Alarm Level: None.

Description: The clock has been restored on the card identified in the message.

Repair Procedure: No corrective action is necessary.

MTC009

Alarm Level: Major.

Description: An error occured loading the card in the message. Applications dependent on this card may not function. Call processing may be impaired.

Repair Procedure: 1 Check to see if an INIT006 message has been logged for this card. If there is, follow the repair procedure for INIT006 on page 415 first.

This message occurs until the problem causing the INIT006 message is cleared. See Chapter 3, "Voice System Administration," in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501, for information on the log report.

2 If the card is an SP card without any CMP cards, verify that the function(s) assigned to the card do not require CMP hardware. For example, WholeWord and FlexWord Speech Recognition and Echo Cancellation all require a CMP card when assigned to an SP card.

3 Verify that all functions assigned to the card are still installed on the system.

For example, if tts is assigned to the card, verify that the package that provides Text-to-Speech is installed on the system by entering **pgkinfo**

If any function is assigned to the card but not installed on the system, either install the software package, or change the assignment of the card to remove the function. See the "Installing the Optional Feature Software" chapter in in the maintenance book for your platform, for information on installing software. See Chapter 3, "Voice System Administration" in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501, for information on card assignments.

Note: If FlexWord is assigned to the card, a wordlist must be administered. See Chapter 5, "Recognizing FlexWord Speech Input," in *Intuity CONVERSANT System Version 7.0 Speech Development, Processing, and Recognition*, 585-313-201.

4 Change the assignment of the card to the defaults of play+code. See Chapter 3, "Voice System Administration" in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501, for information on assigning functions to SSP card.

---

5 Diagnose the SSP card by doing the following:

   a Enter **diagnose card *card_number***

   where *card_number* is the number of the SSP card.

   b If the card passes diagnostics, re-administer the original functions on the card. See Chapter 3, "Voice System Administration," in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.

   c Try to place it into service by entering

   restore card *card_number*

   where *card_number* is the card number of the SSP card you want to restore to service.

MTC010

Alarm Level: Major.

Description: The identified bus has failed one or more diagnostics tests. One or more cards have been changed to BROKEN. Applications dependent on these cards will not function.

Repair Procedure:

1 Check the bus connections.

2 Ensure that the cable is secure on each of the cards.

3 If the problem persists, try a new cable.

4 If the problem still occurs, a card on the bus is likely causing the problem. Remove cards from the bus, one at a time, until the problem is eliminated. See the "Installing or Replacing Circuit Cards" chapter in the maintenance book for your platform.

MTC011

Alarm Level: None.

Description: The identified bus has successfully passed all diagnostics tests performed.

Repair Procedure: No corrective action is necessary.

MTC012

Alarm Level: None.

Description: Diagnostics tests have been started on the identified bus.

Repair Procedure: No corrective action is necessary.

MTC013

Alarm Level: Major.

Description: The identified card is not receiving clock. The card may not be on the bus. In order to use this card, it must be connected to the bus. The state of this card has been changed to BROKEN. Applications dependent on this card will not function.

Repair Procedure: **1** Check the bus connections.

                        2 Ensure that the cable is secure on each of the cards.

                        3 If the problem persists, try a new cable.

PRI Alarms and Log Messages

PRI001

Alarm Level: Major.

Description: The ISDN D-channel has gone out-of-service and no calls can be placed or received by the associated primary rate interface (PRI) channels. Active calls are unaffected, but customers will not be able to place calls to or from the voice system

                      This message does not typically indicate a problem with the PRI software; instead it points to either a circuit card problem or a problem with the external equipment that terminates the D-channel (another switch). Repeated or frequent failures followed by subsequent recoveries of a specific voice system D-channel indicate faulty equipment, along the D-channel connection, that should be replaced.

Repair Procedure: **1** Display the status of the D-channel and the status of the specific card indicated by the *equip #* by entering:

                      display channel all | grep PRID

The D-channel number appears in the first column, the associated T1/E1 card in the first field of the second column, and the D-channel state in the third column.

If multiple D-channels are configured, it is important to make sure that the line you check is the one that has a card number (in the first field of the second column) that matches the *equip #* value in the alarm message, or that has the same D-channel group ID as the SSP card that reports the alarm.

The D-channel state can be INSERV (in-service), FOOS (far-end out-of-service), NETOOS (network out-of-service), or HWOOS (hardware out-of-service).

2 Continue as follows according to the state of the D channel:

~ If the D channel state is INSERV, the failure was temporary and the D channel has recovered (PRI002 message has been logged).

~ If the D channel state is FOOS, a T1/E1 failure has occurred. Go to <u>step a</u>.

~ If the D channel is NETOOS, the voice system cannot correctly establish the D-channel with the terminating switch. Go to <u>step a</u>.

~ If the D-channel is HWOOS, the associated SSP card (identified by *equip #* is not in service. Go to <u>step a</u>.

a Look for any TWIP messages in the system message log that indicate a T1/E1 failure for associated T1/E1 card (T1/E1 card number was obtained in step 1).

b Follow the recommendations for any of these messages in order to restore the T1/E1 to service.

c Check the status of the SSP card by entering **display card *equip #***

The card can be either MANOOS (Manual out-of-service) or BROKEN.

d If the SSP card is MANOOS, it has been removed from service. Do the following:

- Examine the system message log to determine why the SSP card was removed.

- Resolve any problems that led to the SSP card being removed.

- When the problems are resolved or if you are unable to determine why the card was removed, then restore the card by entering: **restore card *equip #***

e If the SSP card is BROKEN, there has been a communication problem between the SSP card and the voice system. Do the following:

- Block all calls (at the terminating switch) from coming into the voice system.

- Diagnose the SSP card.

- If the SSP card passes diagnostics, stop and then start the voice system.

- Start again at step 1 to ensure that the D-channel restores correctly, and restore traffic from the terminating switch to the voice system once the D-channel has returned to service.

  If diagnostics fail, the check the circuit card.

f The D-channel status should be checked at the terminating switch and any associated switch problems should be resolved.

g If you are not able to determine or resolve any switch problems, do the following:

- Block all calls (at the terminating switch) from coming into the voice system.

- Stop the voice system.

- Start the voice system.

- Start again at step 1 to ensure that the D-channel restores correctly, and restore traffic from the terminating switch to the voice system once the D-channel has returned to service.

PRI002

Alarm Level: None.

Description: The ISDN D-channel has come in-service.

Repair Procedure: No corrective action is necessary.

PRI003

Alarm Level: Major.

Description: The primary rate interface (PRI) software has rejected an incoming call because the B-channel was either out-of-service, already active or unavailable due to an application problem. This could be a single channel, T1/E1 interface, or system wide problem. If this alarm occurs frequently or repeatedly, then it is a T1/E1 interface or system wide problem.

    This message indicates that one or more calls has failed. The impact is likely to be significant if the message occurs more frequently then the currently set threshold limit. In that case, you will see a threshold message similar to the following:

```
*C THR004 -- -- --- The first threshold for the PRI_CALLBLK
exceeded. 5 messages have been generated in the last 5
minutes.
```

This threshold message could indicate a serious problem which will cause numerous calls to fail in a very short interval.

Repair Procedure: **1** Determine the status of the identified channel by entering:

display channel *chan #*

or, if it appears to be a system-wide problem, by entering:

display channel all

2 The channel(s) can be either MANOOS (Manual out-of-service) or not MANOOS. If the channel(s) are MANOOS, do the following:

a Immediately block all calls (at the terminating switch) from coming into the voice system.

b Once all calls have been cleared, stop and then start the voice system.

c Restore traffic from the terminating switch to the voice system.

PRI004

Alarm Level: None.

Description: The ISDN D channel has been removed from service because of administrative action. No calls can be placed or received by associated Primary Rate Interface (PRI) channels.

Repair Procedure: No corrective action is necessary.

PRI005

Alarm Level: Major.

Description: A bad dialed number string was passed to the system. An attempt will be made to use the service assigned to the dialed number "ANY" to handle the call. If this attempt fails, the TSM001 message will be logged.

Repair Procedure: This message indicates an ISDN protocol error. It is not likely to be a problem originating within the system. Contact your network service provider to help resolve this problem.

PRI007

Alarm Level: Major.

Description: A network protocol error, or other internal error, of the type indicated by the message has occurred on the PRI channel specified by this message. The call being handled by that channel has been disconnected as a result. If no specific channel could be identified, the channel is displayed as -1.

Note: This message can result from a timeout from the network or a provisioning type error.

Repair Procedure: This message indicates an ISDN protocol error or an internal PRI error. Contact your network service provider if help is needed to resolve this problem. lists possible error types that should help you identify the specific cause.

The PRIERR_STATE and PRIERR_BADCRV errors can occur if there are delays in starting the assigned application and the original caller has hung up before the application answers the incoming call. These alarms can generally be ignored unless they occur frequently or other load-related problems are observed.

Table 19. PRI007 Error Types

Error Type	Error Value	Meaning
CV_NULL	0	No cause value present
CV_UN	1	Unassigned number
CV_NRTSTN	2	No route to specific transit network
CV_CHUN	6	Channel unacceptable
CV_NCC	16	Normal call clearing
CV_UB	17	User busy
CV_NUR	18	No user responding
		1 of 6

Table 19.   PRI007 Error Types

Error Type	Error Value	Meaning
CV_CR	21	Call rejected
CV_NC	22	Number changed
CV_INF	28	Invalid number format
CV_FR	29	Facility rejected
CV_RTSE	30	Response to status enquiry
CV_NU	31	Normal; unspecified
CV_NCOCA	34	No circuit or channel available
CV_NETFAIL	38	Network out of order
CV_TFAIL	41	Temporary failure
CV_SEC	42	Switching equipment congestion
CV_UID	43	User information discarded
CV_RCCNA	44	Requested circuit/channel not available
CV_PREEMPT	45	Call preempted

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Table 19. PRI007 Error Types

Error Type	Error Value	Meaning
CV_RFNS	50	Requested facility not subscribed
CV_OCB	52	Outgoing calls barred
CV_ICB	54	Incoming calls barred
CV_BCNPA	58	Bearer capability not presently available
CV_SONA	63	Service/option not available
CV_BCNI	65	Bearer capability not implemented
CV_CTNI	66	Channel type not implemented
CV_RFNI	69	Requested facility not implemented
CV_ICR	81	Invalid call reference
CV_ICDNE	82	Identified channel does not exist
CV_ID	88	Incompatible destination
CV_MIEIM	96	Mandatory IE missing
CV_MTNEONI	97	Message type nonexistent or not implemented

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Table 19. PRI007 Error Types

Error Type	Error Value	Meaning
CV_MNCWTCS	98	Message incompatible with call state
CV_IIEC	100	Invalid IE contents
CV_ROTE	102	Recovery on timer expiry
CV_IOCU	127	Interworking; or cause unknown
PRIERR_NETWORK	256	Network didnít respond as expected
PRIERR_STATE	257	Request was received in wrong state
PRIERR_OOSVC	258	B-channel is out of service
PRIERR_INMTC	259	B-channel is in maintenance state
PRIERR_GLARE	260	Out going call failed due to glare
PRIERR_BADCMD	261	Bad command, not understood
PRIERR_BADDCHAN	262	Bad D-channel
PRIERR_BADBCHAN	263	Bad B-channel
PRIERR_DCHANDEAD	264	D-channel is dead
PRIERR_DCHANOFF	265	D- channel is turned off

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Table 19. PRI007 Error Types

Error Type	Error Value	Meaning
PRIERR_DCHANCONF	266	D-channel configuration error
PRIERR_BUSY	267	B-channel was already busy
PRIERR_OVERFLOW	268	Q931 window resource problems
PRIERR_IEMISS	269	Missing information element
PRIERR_MSGFAIL	270	Unable to send PRI message
PRIERR_ACTAPPL	271	Application already active
PRIERR_NUMBCH	272	Invalid number of B-channels
PRIERR-WINDOW	273	Q931 window resource problems
PRIERR_NOTAPPL	274	Application does not own channel
PRIERR_DOCHANACT	275	D-channel is active (UP)
PRIERR_CRECMAX	276	Unable to allocate call record

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Table 19.   PRI007 Error Types

Error Type	Error Value	Meaning
PRIERR_BADCRV	277	CRV does not match CRV for channel
PRIERR_COMPAND	278	Companding error on SETUP
PRIERR_CHTYPE	279	Invalid channel type on SETUP
		6 of 6

RECOG Alarms and Log Messages

RECOG001

Alarm Level: Major.

Description: The speech recognition feature failed to communicate with the voice system during call processing. Applications using the speech recognition feature will fail.

Repair Procedure: Reboot the system.

RECOG002

Alarm Level: Major.

Description: The speech recognition feature received an invalid response from the SSP cards or experienced a timeout in communicating with the SSP cards during call processing. Applications using the speech recognition feature will be incomplete.

Repair Procedure: **1** Diagnose the SSP card by doing the following:

    a Enter **diagnose card** *card_number*

      where *card_number* is the card number of the SSP card.

    b If the card passes diagnostics, place it back in service by entering:

      restore card *card_number*

      where *card_number* is the card number of the SSP card you want to restore to service.

2 Check the circuit card.

3 If the problem persists, complete step a and step b:

    a Stop the voice system.

    b Start the voice system.

RECOG003

Alarm Level: Major.

Description: The speech recognition feature failed to communicate with the voice system during call processing. Applications using the speech recognition feature will fail.

Repair Procedure: Reboot the system.

RECOG004

Alarm Level: Minor.

Description: An invalid wholeword grammar or subword wordlist number was used by the **getdig** script instruction. Recognition failed.

Repair Procedure: **1** Verify the application to ensure that the getdig() instruction is using a valid wholeword grammar or subword wordlist number.

2 If the problem persists, reinstall the speech recognition languages or the subword vocabulary.

SBIRFAX Alarms and Log Messages

SBIRFAX001

Alarm Level: Major.

Description: File I/O failed. The script request to transmit a file to the caller failed because the file requested could not be found.

Repair Procedure: Verify that the file exists and was specified appropriately in the script. If the problem persists, contact your remote maintenance service center for assistance.

SBIRFAX003

Alarm Level: Major.

Description: The Fax_Send process failed for the reason specified in the message. The reasons are too numerous to cite. Examples include: "Fax stopped prematurely by receiver" and "Fax stopped prematurely by sender."

Repair Procedure: If the solution to the problem is not evident from the message, contact your remote maintenance service center for assistance.

SBIRFAX004

Alarm Level: Major.

Description: The fax recorder (FAX_Get) failed for the reason specified in the message. The reasons are too numerous to cite.

Repair Procedure: If the solution to the problem is not evident from the message, contact your remote maintenance service center for assistance.

SBIRFAX008

Alarm Level: Major.

Description: The sbFaxProc process died because it failed to register to IRAPI.

Repair Procedure: Run a trace and save the trace output by doing the following:

1 Log in as **root**.

2 Enter **trace sbFaxProc level all area all tsm chan all > *file***

   where *file* is a the name of a temporary file to store the trace output.

3 If the solution to the problem is not evident from the output of the **trace** command, contact your remote maintenance service center for assistance

---

SBIRFAX010

Alarm Level: Critical.

Description: A nonsupported fax external action was called from the application script and passed to the sbFaxProc process.

Repair Procedure: Use only the actions supported by the sbFaxProc process:

- FAX_SEND
- FAX_COVRPAGE
- FAX_QUEUE
- FAX_GET
- EXEC_UNIX

SSP Alarms and Log Messages

SP001

Alarm Level: None.

Description: Pack files running on SSP cards can "print" information by having it logged. Such "print" requests appear in the log files as SP001 (LGSP_PRINTF) event messages.

Repair Procedure: No corrective action is necessary.

SP002

Alarm Level: None.

Description: A pack file running on an SSP card has made an illegal "remote procedure call" (RPC) request. Incidents should be escalated to your support organization.

Repair Procedure: No corrective action is necessary.

SP003

Alarm Level: None.

Description: A pack file running on an SSP card has encountered an error and wishes to log certain information which may help the support personnel in diagnosing the problem.

In addition, an alarm will be logged if manual intervention is required.

Repair Procedure: No corrective action is necessary.

SP004

Alarm Level: None.

Description: A pack file running on an SSP card has encountered an error from which it cannot recover. It is logging some information that may help the support organization in diagnosing the problem.

In addition, an alarm will be logged if manual intervention is required.

Repair Procedure: No corrective action is necessary.

SP005

Alarm Level: None.

Description: A pack file running on an SSP card is logging certain information about the termination of an activity running on the SSP card. These messages will not appear unless the pack file is specifically requested to generate them. They are used by the support organization.

Repair Procedure: No corrective action is necessary.

SP006

Alarm Level: None.

Description: A pack file running on an SSP card is logging certain information about the termination of a process running on the SSP card. These messages will not appear unless the pack file is specifically requested to generate them. They are used by the support organization.

Repair Procedure: No corrective action is necessary.

SP007

Alarm Level: None.

Description: A pack file running on an SSP card is logging certain information about the condition of a process stack on the SSP card. These messages will not appear unless the pack file is specifically requested to generate them. They are used by the support organization.

Repair Procedure: No corrective action is necessary.

SPIP Alarms and Log Messages

SPIP001

Alarm Level: None.

Description: A speech break has been detected during a coding or voice playback session involving an SSP card. The coded voice is incomplete, or inappropriate silence was inserted into the playback session. This condition may be attributed to excessive load either on the system or the SSP card, or the SSP card may be broken. The Cause Code field of the message may be used to further isolate the cause.

The impact of this error is not severe and no action is warranted if the message is reported less frequently than the threshold limit.

The impact may be significant if the message occurs more frequently than the currently set threshold limit. In that case, you will see a threshold message similar to the following:

```
** THR003 -- -- -- The first threshold level for SPIP_SBRK
exceeded. 50 messages have been generated in the last 3
minutes.
```

The threshold limits and threshold message priority shown above reflect the default values for this thresholded message.

Repair Procedure: **Note:** Perform the following procedure if the thresholded message is reported for SPIP001.

1 If the Cause Code in the message is 0, 1, 8, or 9, the problem may be caused either by a broken SSP or an overloaded card.

Do the following:

- **a** Check the circuit card.
- **b** If the problem persists, reduce the load.

Note: Perform the following procedure if you have more than one SSP card and see SPIP001 repeatedly for the same SSP card.

2 Diagnose the card by entering:

diagnose card *card_number*

where *card_number* is the card number of the SSP card.

3 If the problem persists, replace the SSP card. See the "Installing or Replacing Circuit Cards" chapter in the maintenance book for your platform.

SPIP002

Alarm Level: Minor.

Description: The output signal level on an SSP timeslot approached the level deemed too loud for a telephone network by the FCC. The output signal was thus interrupted until the signal level dropped below the threshold of noncompliance. The caller will hear inappropriate silence or chopped speech during the speech playback session.

Repair Procedure:
1 Consult the application developer and check the speech phrases of the application. The speech may have been recorded at too high a volume level. Rerecord the speech following the procedures documented in Chapter 8, "Producing Speech," of Intuity CONVERSANT System Version 7.0 Application Development with Script Builder 585-313-206.

2 Reduce the current analog or digital OVOL value depending on the channel type if it exceeds the default. See Chapter 5, "Switch Interface Administration," in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501, for information on checking the outgoing speech volume (OVOL). The default OVOL is 1000 for analog and 707 for digital.

3 If the problem persists, replace the SSP card. See the "Installing or Replacing Circuit Cards" chapter in the maintenance book for your platform.

SPIP003

Alarm Level: None.

Description: Unexpected speech recognition behavior occurred on the SSP card. The SSP has automatically recovered. The impact of this error is not severe and no action is warranted if the message is reported less frequently than the threshold limit.

The impact of this error is not severe and no action is warranted if the message is reported less frequently than the threshold limit.

The impact may be significant if the message occurs more frequently than the currently set threshold limit. In that case, you will see a threshold message similar to the following:

```
** THR003   The first threshold level for SPIP_SBRK
exceeded. 50 messages have been generated in the last 3
minutes.
```

The threshold limits and threshold message priority shown above reflect the default values for this thresholded message.

Repair Procedure: **Note:** Perform the following procedure if the thresholded message is reported for SPIP003.

1 Enter **diagnose card *card_number***

where *card_number* is the card number of the SSP card.

2 If the card passes diagnostics, place it back in service by entering:

restore card *card_number*

where *card_number* is the card number of the SSP card you want to restore to service.

3 Check the circuit card.

SPIP004

Alarm Level:	Critical.
Description:	An error occurred on the SSP card. The SSP card set was not able to recover from this error. Applications using the SR feature may fail.
Repair Procedure:	Check the circuit card.

SPIP005

Alarm Level:	Critical.
Description:	An internal UNIX System error has occurred. Application functionality may be severely impaired.
Repair Procedure:	Reboot the system.

SPIP009

Alarm Level: None.

Description: VROP is not delivering speech fast enough to the SSP card. A possible effect of this problem is a gap in speech. This condition may be attributed to excessive load either on the system or the SSP card.

The impact of this error is not severe and no action is warranted if the message is reported less frequently than the threshold limit.

The impact may be significant if the message occurs more frequently than the currently set threshold limit. In that case, you will see a threshold message similar to the following:

```
**THR003 -- -- --- The first threshold level for SPIP_VSLOW
exceeded. 50 messages have been generated in the last 3
minutes.
```

Repair Procedure: No corrective action is necessary.

SYS Alarms and Log Messages

SYS001

Explanation: These alarms are for UNIX operating system errors. The description below applies to them all.

Description: An internal voice system process has requested that the UNIX operating system perform a function on its behalf. That function has failed. The number of the error corresponds to the UNIX errno (See INTRO(2) of the *UNIX System V/386 Release 3.2 Programmerís Reference Manual*). The impact and severity of this error on the voice system depends on the context of the error and the process which has encountered the error.

THR Alarms and Log Messages

THR001

Alarm Level: None.

Description: This is a threshold message. Typically, threshold messages indicate that too many messages of a particular type are being generated. Threshold messages may indicate an escalation of priority.

To find out which message was thresholded, examine the threshold message text. The text will contain the message mnemonic. For example, a typical threshold message may look like:

```
THR001 -- -- -- The first threshold level for LG_MSGNAME
exceeded. 100 messages have been generated in the last 1
hour.
```

The message *mnemonic* in this example is LG_MSGNAME. The message text gives the currently set threshold limits for the thresholded message.

Repair Procedure: **1** Enter **explain *mnemonic***

2 Note the message ID that appears in the header of the explain output.

THR002

Alarm Level: Minor.

Description: This is a threshold message. Typically, threshold messages indicate that too many messages of a particular type are being generated. Threshold messages may indicate an escalation of priority.

To find out which message was thresholded, examine the threshold message text. The text will contain the message mnemonic. For example, a typical threshold message may look like:

```
* THR002 -- -- --  The first threshold level for LG_MSGNAME
exceeded. 100 messages have been generated in the last 1
hour.
```

The message *mnemonic* in this example is LG_MSGNAME. The message text gives the currently set threshold limits for the thresholded message.

Repair Procedure: **1** Enter **explain *mnemonic***

        2 Note the message ID that appears in the header of the explain output.

THR003

Alarm Level: Major.

Description: This is a threshold message. Typically, threshold messages indicate that too many messages of a particular type are being generated. Threshold messages may indicate an escalation of priority.

To find out which message was thresholded, examine the threshold message text. The text will contain the message mnemonic. For example, a typical threshold message may look like:

```
** THR003 -- -- -- The first threshold level for LG_MSGNAME
exceeded. 100 messages have been generated in the last 1
hour.
```

The message *mnemonic* in this example is LG_MSGNAME. The message text gives the currently set threshold limits for the thresholded message.

Repair Procedure: **1** Enter **explain *mnemonic***

2 Note the message ID that appears in the header of the explain output.

THR004

Alarm Level: Major.

Description: This is a threshold message. Typically, threshold messages indicate that too many messages of a particular type are being generated. Threshold messages may indicate an escalation of priority.

To find out which message was thresholded, examine the threshold message text. The text will contain the message mnemonic. For example, a typical threshold message may look like:

```
*C THR004 -- -- -- The first threshold level for LG_MSGNAME
exceeded. 100 messages have been generated in the last 1
hour.
```

The message *mnemonic* in this example is LG_MSGNAME. The message text gives the currently set threshold limits for the thresholded message.

Repair Procedure: 1 Enter **explain *mnemonic***

2 Note the message ID that appears in the header of the explain output.

TR Alarms and Log Messages

TR001

Alarm Level: Minor.

Description: The voice system has detected that more than 25 percent of the channels are out of service.

Repair Procedure: No corrective action is necessary.

TR002

Alarm Level: None.

Description: The specified channel has been busied out by removing the channel from service.

Repair Procedure: No corrective action is necessary.

TRIP001

Alarm Level: Critical.

Description: A failure has been detected in the UNIX system. The voice system is unable to process calls on Tip/Ring channels.

Repair Procedure: Reboot the system.

TRIP002

Alarm Level: None.

Description: A parity error has been detected on the indicated timeslot. The voice system may experience an anomaly in speech functionality.

Repair Procedure: No corrective action is necessary.

TRIP003

Alarm Level: Critical.

Description: The voice system received too many simultaneous signals from the network. The voice system is unable to process calls on Tip/Ring cards.

Repair Procedure: **1** Stop the voice system.

The network/PBX administration may be the source of these messages to the voice system Tip/Ring channels. Some network/PBX parameters may need to be tuned differently. For example, some PBXs generate a "howler tone" if a channel is off hook for a certain amount of time without any activity. A howler tone could be made up of a series of touch tones, "*", and "#." Each touch tone results in a separate event in the Tip/Ring channels. The rate at which these events are generated may be beyond what the voice system can handle.

Consult your network/PBX administrator.

2 Check your application for network/PBX interactions. They may cause the network/PBX to respond in a certain way resulting in this error condition.

Consult your network/PBX administrator.

3 Start the voice system.

TRIP004

Alarm Level: Minor.

Description: A speech break was detected during a voice coding or playback session. The impact of this error is not severe and no action is warranted if the message is reported less frequently than the threshold limit.

The impact may be significant if this message occurs more than the currently set threshold limit. In that case, you will see a threshold message similar to the following:

```
** THR003   The first threshold level for TRIP_SBRK
exceeded. 50 messages have been generated in the last 3
minutes.
```

The threshold limits and threshold Alarm Level: shown above reflect the default values for this thresholded message.

Repair Procedure: **Note:**   Perform the following procedure if the thresholded message is reported for TRIP004.

   1 Make sure that the system is not configured with channels more than the maximum recommended number of your application. See Chapter 6, "Capacity and Performance Considerations," of INTUITY CONVERSANT System Version 7.0 System Description for information. Reduce the number of channels in the system if necessary.

2 Check the amount of memory on your system. Enter /sbin/memsize

The system displays the following message:

```
12189696
You must have at least 16 Mbyte of memory.
```

3 Check the application. This condition may arise due to playback of very short phrases; that is, phrases shorter than 0.5 seconds. The larger the number of short phrases, the greater the likelihood of the problemís occurrence.

4 Determine if the number of speech buffers configured in the system is sufficient to handle the current load. To determine the number of speech buffers currently configured in the system, enter cat /vs/data/spchconfig

5 The system displays a message similar to the following message:

```
nbufs 240
max_phrases 32000
```

The nbufs parameter should be 3 times the number of channels available in the system. If your application needs more speech buffers than indicated by the number nbufs, increase the speech buffers. Edit the file /vs/data/spchconfig and change the parameters nbufs to the number desired. Stop and Start the voice system.

6 Analyze your application. Record frequently grouped phrases as one single phrase to increase efficiency.

TRIP005

Alarm Level: Minor.

Description: The channel indicated in the message has lost loop current. If the loop current is lost during an active transaction on this channel, the transaction will be terminated and the channel will be automatically taken out of service. The channel will be automatically returned to service when loop current returns.

Repair Procedure:
1 Make sure the line is plugged in the channel indicated and appropriate network/switch connections are made. See Chapter 1, "Getting Started," of your platform installation book for information.

2 Examine the line cord for damages. Replace the cord if it is damaged.

3 Plug in the line in a telephone and make sure it works by completing the following Steps a through e:

 a Pick up the handset. Most switches provide dialtone.
 b Dial the number from another telephone.
 c Make sure it rings and the connection is established.
 d Dial another number from this line.
 e Make sure the connection is established.

      4 If these tests do not pass, consult your network/switch administrator for help.

      5 If these tests pass, plug in a known working line into the channel indicated. The channel should come up in service automatically.

TRIP006

Alarm Level: None.

Description: Loop current has been restored for the channel indicated. The channel is automatically restored to service.

Repair Procedure: No corrective action is necessary.

TSM Alarms and Log Messages

TSM001

Alarm Level: Critical.

Description: An incoming call has not been processed because no service was assigned to the specified channel or dialed number identification service (DNIS).

Repair Procedure: Examine the logged message to determine if it contains the string:

    DNIS: dnis

where *dnis* is a dialed number string, and do one of the following:

1 If there is no dialed number (DNIS) indicated by the message, enter:

assign service *script* to chan *chan*

where *script* is the name of the service to be assigned and *chan* is the channel number indicated by the message.

2 If there is a dialed number (DNIS) indicated by the message, enter:

assign service *script* to chan *dnis*

where *script* is the name of the service to be assigned and *dnis* is the DNIS indicated by the message, or enter:

assign service *script* to *dnis* any

to assign the service to "any" DNIS.

Note: The service assigned to "any" DNIS is used if a DNIS provided by a new call has no service specifically assigned to it.

TSM002

Alarm Level: Critical.

Description: The voice system has tried to load a script program file that is missing or corrupted.

If this message contains a channel number of 1, any incoming calls using this script will not be processed. Attempts by a DIP to run the script with a "soft seizure" request will also fail.

If this message contains a channel number greater than 1, an attempt to process a call or "soft seizure" with this script has failed on the channel indicated.

Repair Procedure: **1** Verify that the script named in the system message is a valid script name.

2 If the script name is not valid, then determine if another application is attempting to execute the invalid script using the script **exec** instruction, or an IRAPI application is attempting to use **irExecp ()** to execute an invalid script name.

TSM003

Alarm Level: Minor.

Description: The service running on the indicated channel was unable to perform the specified function because the SSP card was overloaded. This is a temporary condition due to the dynamic nature of SSP resource allocation on the system. This condition will be relieved when the systemís demand on SSP resources decreases or the systemís SSP capacity increases. Call processing on the channel has been degraded.

The impact may be significant is the message occurs more frequently than the currently set threshold limit. In that case, you will see a threshold message similar to the following:

```
** THR003 -- -- -- The first threshold level for TSM_SPBUSY
exceeded. 10 messages have been generated in the last 1
minute.
```

The threshold limits and threshold message priority shown above reflect the default values for this thresholded message.

Repair Procedure: **1** Some SSP cards assigned to the indicated function may be out of service, thus putting too much load on the SSP cards that remain in service.

Determine if any SSP cards assigned the indicated function are out of service by entering **display card sp**

a If any SSP cards with the indicated function are in the Manoos state, enter:

restore card *card_number*

where *card_number* is the card number obtained from the previous display command output to restore the card to service.

b If any SSP cards are in a state other than Manoos, check the circuit card.

c If the CMP show Not diag, enter

diagnose card *card_number*

where *card_number* is the number of the SP card that has the CMP(s) that are not Not diagnose associated with it. This places the CMP(s) into service.

   2 If all SSP cards with the indicated function are in service and the problem
   persists, determine if the system load is exceeding the total rated capacity
   for all SSP cards assigned this function.

   If this message is being reported under system load conditions that do not
   exceed the total rated capacity of the SSP card for the indicated function,
   check the circuit card.

   Otherwise, reduce the load.

TSM004

Alarm Level: Critical.

Description: The service running on the indicated channel was unable to perform the
specified function. There is not a sufficient number of SSP cards in service
that perform this function. Call processing has been degraded or inhibited
completely on all channels needing this SSP function.

   Note: A TTS error may be logged even if TTS is not installed. If TTS is
   not installed, the TTS portion of the message can be ignored.

Repair Procedure: There may be no SSP cards assigned to the indicated function, or all SSP cards that are assigned to that function may be out of service.

1 Determine if any SSP cards assigned the indicated function are out of service by entering **display card sp**

2 If any SSP cards with the indicated function are in the Manoos state, enter:

   restore card *card_number*

   where *card_number* is the card number obtained from the previous display command output, to restore the card to service.

3 If any SSP cards are in a state other than Manoos, enter:

   diagnose card *card_number*

   where *card_number* is the number of the card you want to diagnose.

   a If the card passes diagnostics, enter:

   restore card *card_number*

   where *card_number* is the number of the card you want to restore to service.

   b If the card does not pass diagnostics, check the circuit card.

4 If there are no SSP cards assigned to the indicated function, you can assign the function to an SSP card by completing the following Steps a through d:

a If the SSP card is in the Inserv state, remove it from service by entering:

remove card *card_number*

where *card_number* is the card number of the SSP obtained from the display card sp command output.

b Assign the appropriate function to the SSP card(s). Seethe "Voice System Administration," chapter in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.

c Enter **diagnose card *card_number***

where *card_number* is the number of the SSP card on which you want to run diagnostics.

d Enter **restore card *card_number***

where *card_number* is the number of the SSP card that you want to restore to service with the appropriate function.

TSM006

Alarm Level: Minor.

Description: The application script indicated in this message has tried to speak back a field that has a space, asterisk (*), pound sign (#), or some other unrecorded or nonstandard phrase. No speech corresponding to the indicated character is heard by the caller. For example, if the script tried to play the string *123*abc*, the caller would hear "123abc" and this message would be logged for the *∗* character.

Repair Procedure: This revised program has a checklist that requires the input to be all digits. If the event log message is being issued because of speaking back a field that was returned from a host or database lookup, the field to be spoken back must first be stripped of any spaces.

In the case of speaking caller input, or fields from a host or database lookup, this event log message is not a Major message. Rather, it is an informational message telling you that part of the field being spoken back contains some unexpected characters that can not be spoken back; that is, a space, an asterisk, or a pound sign.

Developers using native script language instead of Script Builder, should check fields used with the **tchars()** instruction for invalid characters.

```
start:
Answer Phone
Prompt & Collect
        Prompt
            Speak With Interrupt
                Phrase: "Please enter your 3 or 4 digit PIN"
        Input
            Min Number Of Digits: 03
            Max Number Of Digits: 04
        Checklist
        Case: "Input Ok"
            Continue
        Case: "Initial Timeout"
            Reprompt
        Case: "Too Few Digits"
            Reprompt
        Case: "No More Tries"
            Quit

    End Prompt & Collect
Set Field Value
        Field: pin_num = $CI_VALUE
Announce
        Speak With Interrupt
            Phrase: "The PIN you entered was"
            Field: pin_num As Cmmf
Quit
```

The checklist used in the getdig statement allows for any touchtone including the pound sign or an asterisk. If the caller enters "123*," the Announce statement in Step 4 tries to speak back the field "123*." The caller hears only the "123," but a message similar to following TSM message appears in the event log:

```
* TSM006 T1 CH 001 Script <app1>: No phrase for í*í character
```

This appears because the routine that speaks out fields is trying to map the asterisk (*) to a standard phase in the talkfile. This can also occur when speaking a field from a host or database lookup and the field contains one or more leading or trailing spaces.

To help prevent this event log message from being printed, make sure to check all of your Prompt and Collect statements and change the checklist as appropriate. For this example, the checklist should be changed to allow the digits 0-9 as follows:

```
    start:
Answer Phone
Prompt & Collect
      Prompt
         Speak With Interrupt
             Phrase: "Please enter your 3 or 4 digit PIN"
      Input
         Min Number Of Digits: 03
         Max Number Of Digits: 04
      Checklist
         Case: "nnn"
```

```
                   Continue
          Case: "nnnn"
             Continue
          Case: "Not On List"
             Reprompt
          Case: "Initial Timeout"
             Reprompt
          Case: "Too Few Digits"
             Reprompt
          Case: "No More Tries"
             Quit

     End Prompt & Collect

Set Field Value
          Field: pin_num = $CI_VALUE
Announce
       Speak With Interrupt
          Phrase: "The PIN you entered was"
          Field: pin_num As Cmmf
Quit
```

TSM008

Alarm Level: Minor.

Description: The service running on the indicated channel was unable to perform the specified function because a Feature License was overloaded. This is a temporary condition resulting from the dynamic nature of license allocation on the system. This condition will be relieved when the systemís demand for this Feature License decreases.

It may be useful to purchase a Feature License for a larger number of simultaneous users of this feature to avoid degraded service.

The impact may be significant is the message occurs more frequently than the currently set threshold limit. In that case, you will see a threshold message similar to the following:

```
** THR003    The first threshold level for TSM_SPBUSY
exceeded. 10 messages have been generated in the last 1
minute.
```

The threshold limits and threshold message priority shown above reflect the default values for this thresholded message.

Repair Procedure: Contact your service representative to purchase more feature licenses.

TSM009

Alarm Level: Major.

Description: The service running on the indicated channel was unable to perform the specified function because no Feature License has been purchased for an optional feature.

It will be necessary to purchase a Feature License for the optional feature in order for this service to perform as designed.

Repair Procedure: Contact your service representative to purchase more feature licenses.

TTS Alarms and Log Messages

TTS001

Alarm Level: Major.

Description: The Text-To-Speech feature has encountered a system failure during calling processing. Applications using the Text-To-Speech feature to read from a text file will fail.

Repair Procedure: Reboot the system.

TTS002

Alarm Level: Major.

Description: The Text-To-Speech feature failed to access the text file indicated during call processing. Applications requiring access to this file will be incomplete.

Repair Procedure: **1** Verify that the application refers to the correct text file name.

2 Verify that the text file is in existence in the correct directory. Note that if text file is not located in the **/vs/data/tts_files** directory, the text file name must be a full path name.

3 If the application is correct, restore the text file(s) from the backup. If the backup is not available, consult the application developer to recreate the text file.

4 If the problem persists, reboot the system.

TTS003

Alarm Level: Major.

Description: The Text-To-Speech feature failed to access a shared resource of the voice system during initialization. Applications using the Text-To-Speech feature to read from a text file will fail.

Repair Procedure:

> ⚠️ **WARNING:**
> **The following procedure causes all system configuration information to be lost. This includes switch administration, service assignments. When the voice system is restarted, the system configuration uses the default settings.**

   1 Stop the voice system.

   2 Move the devtbl to another area. For example, enter:

   mv /gendb/shmem/devtbl /gendb/shmem/devtbl.old

   3 Start the voice system.

TTS004

Alarm Level: Major.

Description: The Text-To-Speech feature failed to access a shared resource of the voice system during initialization. Applications using the Text-To-Speech feature to read from a text file will fail.

Repair Procedure: **1** Stop the voice system.

   2 Start the voice system.

   3 If the problem persists, reboot the system.

TTS005

Alarm Level: Major.

Description: The Text-To-Speech feature failed to communicate with the voice system during call processing. Applications using the Text-To-Speech feature to read from a text file will fail.

Repair Procedure: Reboot the system.

TTS006

Alarm Level: Major.

Description: The Text-To-Speech feature failed to communicate with the voice system during call processing. Applications using the Text-To-Speech feature to read from a text file will fail.

Repair Procedure: Reboot the system.

TWIP Alarms and Log Messages

TWIP001

Alarm Level: Major.

Description: An attempt to place a call on the identified T1/E1channel failed as a result of the networkís failure to return a wink. The voice system is expecting the wink once the T1/E1channel has been taken offhook. This acknowledgment enables the voice system to know when to begin dialing.

Repair Procedure: 1 The identified T1/E1trunk is using robbedbit, winkstart, E&M protocol. Contact the network switch administrator to verify that the switch is administered with compatible options.

                          2 If this T1/E1interface is intended to use ISDN PRI protocol, administer the card for ISDNPRI Layer 1 Protocol as described in Chapter 3, "Voice System Administration," in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.

   3 If the switch and the voice system interfaces have both been verified as correct and the message occurs infrequently, the problem can be caused by lack of DTMF tone receivers on the switch. If the number of failures is unsatisfactory, reduce the call rate from the voice system to the switch or check with the network switch administrator to increase the number of available DTMF tone receivers. See TWIP001 — Application Developer Notes: on page 495 for additional information.

   4 If this message is occurring frequently (that is, not a result of the situation described in step 3) and another T1/E1card exists in the voice system and is functioning properly, complete step a though step e to determine if the problem can be attributed to an external factor rather than the card.

   a Remove the functioning T1/E1card from service by entering:

   remove card *card_number*

   where *card_number* is the number of the functioning T1/E1card.

   b Swap the cables to both T1/E1cards.

   c Restore the previously functioning T1/E1card to service by entering:

   restore card *card_number*

   where *card_number* is the number of the functioning T1/E1card.

   d Observe the two T1/E1cards to see if the problem migrates with the cable.

   e Return the cables to their original cards.

5 If, as a result of [step 4](#), the problem is observed to migrate with the cable, or if a second T1/E1card is not available to perform [step 3](#), check the cable between the 15-pin connector on the back of the T1/E1card that connects to the switch.

   a Check cable continuity on pins 1, 3, 9, and 11.
   b Look for broken wires or a dislodged connector.

6 If this is a new installation, verify that the transmit and receive wire pairs are not reversed. See the sections on digital connections "Making Digital Connections," in Chapter 3, "Making Cable Connections and Power-Up," in *Intuity CONVERSANT System Version 7.0 New System Installation*, 585-313-106.

TWIP001 — Application Developer Notes: If you determine this message is occurring due to occasional lack of DTMF tone receivers on the switch and the number of failures is infrequent enough to not warrant adding switch resources or reducing call rates, you should add error checking in the application script to detect this type of failure during call origination (**tic** or Make Call) and reattempt the call.

TWIP002

Alarm Level: Major.

Description: An attempt to place a call on the identified T1/E1channel failed as a result of unexpected network behavior.

Repair Procedure: This problem is usually due to the use of a T1/E1configuration option not normally used by the voice system.

This alarm is logged as a result of the indicated T1/E1channel having encountered an excessively long wink. Typically, this is due to the presence of incoming calls on trunks that have been administered for outbound calls only (glare).

1. Verify that this trunk has been administered, via the **/vs/data/t1_config** file, with the desired configuration.

2. If the desired configuration is not for outbound calls only, edit the file **/vs/data/t1_config** for two-way calling.

Note: This is *not* a standard procedure. Information in the file provides a guide to making this change. The card numbering in this file corresponds to the number of the T1/E1card. To determine the number for the card, enter:
display card t1

The number displayed is for the T1/E1card on which the identified channel resides.

3 If the desired configuration is for outbound calls only, contact the network switch administrator to verify that the switch is administered to prevent calls from the switch to the voice system.

4 Contact the network switch administrator to verify that the length of the wink being returned by the switch to the voice system is always between 150 and 350 msec.

TWIP003

Alarm Level: None.

Description: The network failed to go on-hook within 25 seconds after completion of the previous call on this channel. The T1/E1card was able to automatically recover from this error.

Repair Procedure: No corrective action is necessary.

TWIP004

Alarm Level: Minor.

Description: The identified T1/E1channel, which has been configured for outbound calls only, has received an unexpected inbound call. This call has been ignored by the voice system.

Repair Procedure: This problem is usually due to the use of a T1/E1configuration option not normally used by the voice system.

                       This alarm is logged as a result of the indicated T1/E1channel, configured for outbound calls only, having detected an incoming call.

 1 Verify that this trunk has been administered, via the **/vs/data/t1_config** file, with the desired configuration.

 2 If the desired configuration should allow incoming calls, edit the file **/vs/data/t1_config** to enable incoming calls on the desired channels.

Note: This is *not* a standard procedure. Information in the file provides a guide to making this change. The card numbering in this file corresponds to the number of the T1/E1card. To determine the number for the card, enter:
display card t1

       The number displayed is for the T1/E1card on which the identified channel resides.

3 If the desired configuration is for outbound calls only, contact the network switch administrator to verify that the switch is administered to prevent calls from the switch to the voice system.

TWIP005

Alarm Level: Major.

Description: An outbound call has not completed because the network answered before all digits were dialed.

Repair Procedure: This problem is usually due to a configuration or application error.

A script is attempting to outdial on the designated channel using a dialed number which is longer than the network is expecting.

1 Determine which script is attempting to outdial on the indicated channel.

2 If the dial string is incorrect, correct it and re-attempt.

3 If the problem persists and dial string is correct, contact the network switch administrator to verify that the switch is administered to accept the same number of digits as the application is attempting to dial.

TWIP006

Alarm Level: Major.

Description: The identified T1/E1channel is configured for inbound calls only. Calls cannot originate on this channel.

Repair Procedure: This problem is usually due to the use of a T1/E1configuration option not normally used by the voice system.

This alarm is logged as a result of the indicated T1/E1channel, configured for inbound calls only, having received a request from the system to originate an outbound call.

  4 Verify that this trunk has been administered, via the **/vs/data/t1_config** file, with the desired configuration.

  5 If the desired configuration is should allow outbound calls, edit the file **/vs/data/t1_config** to enable outbound calls on the desired channels.

Note: This is *not* a standard procedure. Information in the file provides a guide to making this change. The card numbering in this file corresponds to the number of the T1/E1card. To determine the number for the card, enter:

  display card t1

  The number displayed is for the T1/E1card on which the identified channel resides.

6 If the desired configuration is for inbound calls only, verify that the switch is administered to allow calls from the voice system to the switch.

TWIP007

Alarm Level: Major.

Description: The identified T1/E1channel has been administered with an unrecognized or illegal channel option. Calls on this channel may not be processed correctly.

Repair Procedure: This alarm is logged as a result of the indicated T1/E1channel having been configured with an invalid option. The channel resorts to its default behavior for the affected option.

1 Remove the card from service. Enter:

remove card *card_number*

where *card_number* is the number of the affected card.

2 Administer the card as described in Chapter 3, "Voice System Administration," in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.

3 Restore the card to service. Enter:

restore card *card_number*

where *card_number* is the number of the affected card.

4 If the problem persists, then a channel parameter not normally used by the voice system is incorrect. It must be changed by editing the file **/vs/data/t1_config**.

Note: This is *not* a standard procedure. Information in the file provides a guide to making this change. The card numbering in this file corresponds to the number of the T1/E1card. To determine the number for the card, enter:

display card t1

The number displayed is for the T1/E1card on which the identified channel resides.

TWIP008

Alarm Level: Critical.

Description: The voice system is unable to communicate with the T1/E1cards in the system. Calls cannot be processed on any T1/E1card.

Repair Procedure: **1** Stop the voice system.

2 Start the voice system.

3 If the problem persists, reboot the system.

   4 If the problem persists, reinstall the T1/E1driver. See the "Installing or Replacing Circuit Cards " chapter in the maintenance book for your platform.

TWIP009

Alarm Level: Major.

Description: The identified T1/E1card has been administered with an unrecognized or illegal card option. Calls on this card may not be processed correctly.

Repair Procedure: This alarm is logged as a result of the indicated T1/E1card having been configured with an invalid option. The card resorts to its default behavior for the affected option.

   1 Remove the card from service. Enter:

   remove card *card_number*

   where *card_number* is the number of the affected card.

   2 Administer the card as described in Chapter 3, "Voice System Administration," in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.

3 Restore the card to service. Enter:

restore card *card_number*

where *card_number* is the number of the affected card.

4 If the problem persists, then a card parameter not normally used by the voice system is incorrect. It must be changed by editing the file **/vs/data/t1_config**.

Note: This is not a standard documented procedure. Information in the file provides a guide to making this change. The card numbering in this file corresponds to the number of the T1/E1card. To determine the number for the card, enter:

display card t1

The number displayed is for the T1/E1card on which the identified channel resides.

TWIP010

Alarm Level: Critical.

Description: All communication between this and all other cards over the bus has been disrupted, resulting in a loss of all bridging and SSP card functionalities.

If a TWIP011 message for this card has been logged following this message, the problem has corrected itself and no further action is necessary.

Repair Procedure: If a TWIP011 message has not been logged for this card indicating the clock has returned, perform the following Steps until the problem is corrected.

Note: TWIP011 is logged as an event and does not appear in the log if you are displaying only alarms.

1 Diagnose the card by entering:

diagnose card *card_number*

where *card_number* is the number of the affected card.

2 If the problem persists, check the bus.

3 If the problem persists, check the circuit card.

TWIP011

Alarm Level: None.

Description: The communication problem previously reported by a TWIP010 message to be disrupted has been restored. All bridging and SSP functionality previously lost has been restored.

Repair Procedure: No corrective action is necessary.

TWIP012

Alarm Level: Critical.

Description: The identified T1/E1channel is experiencing overload. The voice system is unable to process calls on this channel.

Repair Procedure: **1** Stop the voice system.

2 Start the voice system.

3 If the problem persists, reboot the system.

4 If the problem persists, make certain that the problem is not attributed to other parts of the system. (This may be observable as a result of other load related alarms having been logged.)

TWIP013

Alarm Level: Major.

Description: The identified T1/E1card is not receiving a valid signal from the network. The voice system is unable to process calls on this card.

Repair Procedure: 1 Check the cable between the 15-pin connector on the back of the T1/E1card which connects to the switch and/or CSU.

    a Check cable continuity on pins 1, 3, 9, and 11.

    b Look for broken wires or a dislodged connector.

    c If this is a new installation, verify that the transmit and receive wire pairs are not reversed. See the sections on digital connections in Chapter 3, "Making Cable Connections and Power-Up the System," in *Intuity CONVERSANT System Version 7.0 New System Installation*, 585-313-106.

2 If the cabling/connections appear to be correct and if another T1/E1card exists in the voice system and is functioning properly complete step a though step e to determine if the problem can be attributed to an external factor rather than the card.

    a Remove the functioning T1/E1card from service by entering:

        remove card *card_number*

        where *card_number* is the number of the functioning T1/E1card.

    b Swap the cables to both T1/E1cards.

    c Restore the previously functioning T1/E1card to service by entering:

        restore card *card_number*

        where *card_number* is the number of the functioning T1/E1card.

    d Observe the two T1/E1cards to see if the problem migrates with the cable.

    e Return the cables to their original cards.

3 If the problem is observed to migrate with the cable complete step a and step b:

    a Contact the network switch administrator to verify that service is turned on at the switch.

    b If a CSU is being used, verify that it is operating correctly. If this is a new installation, verify that the CSU has been properly wired and optioned.

4 If the problem is observed to migrate to the card, check the circuit card.

TWIP014

Alarm Level: Major.

Description: The identified T1/E1card is experiencing an extreme number of bipolar violations in the DS1 signal. The voice system is unable to process calls on this card.

Repair Procedure:

1 Check and administer the framing/line coding option of the card as described in Chapter 3, "Voice System Administration," in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.

2 Contact the network switch administrator to verify that the switch is administered with compatible options.

3 If another T1/E1card exists in the voice system and is functioning properly, complete step a through step e to determine if the problem can be attributed to an external factor rather than the card.

   a Remove the functioning T1/E1card from service by entering:

   remove card *card_number*

   where *card_number* is the number of the functioning T1/E1card.

   b Swap the cables to both T1/E1cards.

   c Restore the previously functioning T1/E1card to service by entering:

   restore card *card_number*

   where *card_number* is the number of the functioning T1/E1card.

   d Observe the two T1/E1cards to see if the problem migrates with the cable.

   e Return cables to their original cards.

4 If, as a result of [step 3](#), the problem is observed to migrate with the cable, or if a second T1/E1card is not available to perform [step 3](#), check the cable between the 15-pin connector on the back of the T1/E1card which connects to the switch and/or CSU.

   a Check cable continuity on pins 1, 3, 9, and 11.

   b Look for broken wires or a dislodged connector.

5 If this is a new installation, verify that the transmit and receive wire pairs are not reversed. See the sections on digital connections in Chapter 3, "Making Cable Connections and Power-Up the System," in *Intuity CONVERSANT System Version 7.0 New System Installation*, 585-313-106.

6 If a CSU is being used, verify that it is operating correctly. If this is a new installation, verify that the CSU has been properly wired and optioned.

7 Check that the cable is shielded and that the shield is properly grounded at the switch.

TWIP015

Alarm Level: Major.

Description: The identified T1/E1card is detecting excessive cyclic redundancy check (CRC) errors in the DS1 signal. The voice system is unable to process calls on this card.

Repair Procedure:

1 Check and administer the framing/line coding option of the card for ESF framing and B8ZS zero suppression, as described in Chapter 3, "Voice System Administration," in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.

2 Contact the network switch administrator to verify that the switch is administered with compatible options.

3 If another T1/E1card exists in the voice system and is functioning properly, check if the problem can be attributed to an external factor and not the card.

   a Remove the functioning T1/E1card from service by entering:

     remove card *card_number*

     where *card_number* is the number of the functioning T1/E1card.

   b Swap the cables to both T1/E1cards.

   c Restore the previously functioning T1/E1card to service by entering:

     restore card *card_number*

     where *card_number* is the number of the functioning T1/E1card.

   d Observe the two T1/E1cards to see if the problem migrates with the cable.

   e Return cables to their original cards.

4 If, as a result of step 3, the problem is observed to migrate with the cable, or if a second T1/E1card is not available to perform step 3, check the cable between the 15-pin connector on the back of the T1/E1card which connects to the switch and/or CSU.

    a Check cable continuity on pins 1, 3, 9, and 11.

    b Look for broken wires or a dislodged connector.

5 If this is a new installation, verify that the transmit and receive wire pairs are not reversed. See "Making Digital Connections," in Chapter 3, "Making Cable Connections and Power-Up the System," in *Intuity CONVERSANT System Version 7.0 New System Installation*, 585-313-106.

6 If a CSU is being used, verify that it is operating correctly. If this is a new installation, verify that the CSU has been properly wired and optioned.

7 Check that the cable is shielded and that the shield is properly grounded at the switch.

TWIP016

Alarm Level: Major.

Description: The identified T1/E1card is not detecting any signal from the network. The voice system is unable to process calls on this card.

Repair Procedure: **1** If another T1/E1card exists in the voice system and is functioning properly, check if the problem can be attributed to an external factor and not the card.

    a Remove the functioning T1/E1card from service by entering:

      remove card *card_number*

      where *card_number* is the number of the functioning T1/E1card.

    b Swap the cables to both T1/E1cards.

    c Restore the previously functioning T1/E1card to service by entering:

      restore card *card_number*

      where *card_number* is the number of the functioning T1/E1card.

    d Observe the two T1/E1cards to see if the problem migrates with the cable.

    e Return cables to their original cards.

2 If, as a result of step 1, the problem is observed to migrate with the cable, or if a second T1/E1card is not available to perform step 1, check the cable between the 15-pin connector on the back of the T1/E1card which connects to the switch and/or CSU.

    a Check cable continuity on pins 1, 3, 9, and 11.

    b Look for broken wires or a dislodged connector.

   3 If this is a new installation, verify that the transmit and receive wire pairs are not reversed. See "Making Digital Connections," in Chapter 3, "Making Cable Connections and Power-Up the System," in *Intuity CONVERSANT System Version 7.0 New System Installation*, 585-313-106.

   4 If a CSU is being used, verify that it is operating correctly. If this is a new installation, verify that the CSU has been properly wired and optioned.

   5 Check that the cable is shielded and that the shield is properly grounded at the switch.

TWIP017

Alarm Level: Major.

Description: The identified T1/E1card is detecting an allones (AIS) condition from the network. This alarm usually indicates that the network is out of service. The voice system is unable to process calls on this card.

Repair Procedure: **1** Contact the network switch administrator to verify that service is turned on at the switch.

   2 If a CSU is being used, verify that it is operating correctly. If this is a new installation, verify that the CSU has been properly wired and optioned. Typically, a CSU sends an allones (AIS) signal to the voice system if it is not receiving a signal from the switch.

    3 Check and administer the framing/line coding option of the card as described in Chapter 3, "Voice System Administration," in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.

    4 Contact the network switch administrator to verify that the switch is administered with compatible options.

    5 If a CSU is being used, verify that it supports the framing type.

TWIP018

Alarm Level: Major.

Description: The identified T1/E1card is detecting a remote frame alarm (yellow alarm). The network is experiencing problems receiving the DS1 signal sent by the T1/E1card. The voice system is unable to process calls on this card.

Repair Procedure: **1** Contact the network switch administrator to determine what problem is being noted by the switch.

    If the switch is not receiving a signal from the voice system, check the cable between the 15-pin connector on the back of the T1/E1card which connects to the switch and/or CSU. To do so, do the following:

    a Check cable continuity on pins 1, 3, 9, and 11.

    b Look for broken wires or a dislodged connector.

2 If this is a new installation, verify that the transmit and receive wire pairs are not reversed. See "Making Digital Connections," in Chapter 3, "Making Cable Connections," in *Intuity CONVERSANT System Version 7.0 New System Installation*, 585-313-106.

3 If a CSU is being used, verify that it is operating correctly. If this is a new installation, verify that the CSU has been properly wired and optioned.

4 Verify that the voice system, switch, and CSU (if being used) are configured with the same options by doing the following:

   a Check and administer the framing/line coding option of the card as described in Chapter 3, "Voice System Administration," in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.

   b Contact the network switch administrator to verify that the switch is administered with compatible options.

   c If a CSU is being used, verify that it supports the framing type.

TWIP019

Alarm Level: None.

Description: The T1/E1facility previously reported as being out of service has been automatically restored to service.

Repair Procedure: No corrective action is necessary.

TWIP020

Alarm Level: Critical.

Description: A possible problem has been detected in the identified circuit of the T1/E1card. The voice system is unable to process calls on this card.

Repair Procedure: Occasionally, a poor or miswired T1/E1cable, switch, or CSU can cause this failure. The following procedure determines if the cause is external or within the card.

1 Disconnect the T1/E1cable from the back of the T1/E1circuit card.

2 Diagnose the card by entering:

diagnose card *card_number*

where *card_number* is the card number specified in the message text.

Note: Additional instructions are provided by the diagnose command.

3 With the T1/E1cable disconnected, if the "T1/E1link test" indicates `No signal from the switch,` a problem could exist with one or more of the following:

   ~ The T1/E1cable is poorly or improperly wired. See "Making Digital Connections," in Chapter 3, "Making Cable Connections," in *Intuity CONVERSANT System Version 7.0 New System Installation*, 585-313-106, for proper T1/E1cable wiring instructions.

   ~ The T1/E1card may not be properly administered. See Chapter 3, "Voice System Administration," and Chapter 4, "Switch Administration," in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.

   ~ The switch may not be properly administered (provisioned) to work with the voice system T1/E1card. See Chapter 3, "Voice System Administration," and Chapter 4, "Switch Administration," in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.

   ~ If there is a CSU installed between the voice system T1/E1card and the switch, verify this is properly wired and administered and is functioning properly.

4 If the diagnose commandís T1/E1 link test continues to indicate `T1/E1 Framing Circuit Failure,` or `T1/E1 Transceiver Failure` while the T1/E1card is disconnected, the card is faulty. Replace the circuit card. See Chapter 2, "Installing or Replacing Circuit Cards," in the maintenance book for your platform.

TWIP021

Alarm Level: Minor.

Description: The identified T1/E1 card detected the shown number of bipolar violations in the DS1 within the previous minute. The T1/E1 card was able to recover automatically from this error.

Repair Procedure: **1** Check and administer the framing/line coding option of the card as described in Chapter 3, "Voice System Administration," in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.

2 Contact the network switch administrator to verify that the switch is administered with compatible options.

3 If another T1/E1 card exists in the voice system and is functioning properly, do the following to determine if the problem can be attributed to an external factor rather than the card.

   a Remove the functioning T1/E1 card from service by entering:

   remove card *card_number*

   where *card_number* is the number of the functioning T1/E1 card.

   b Swap the cables to both T1/E1 cards.

    c Restore the previously functioning T1/E1 card to service by entering:

    restore card *card_number*

    where *card_number* is the number of the functioning T1/E1 card.

    d Observe the two T1/E1 cards to see if the problem migrates with the cable.

    e Return cables to their original cards.

4 If, as a result of step 3, the problem is observed to migrate with the cable, or if a second T1/E1 card is not available to perform step 3, check the cable between the 15-pin connector on the back of the T1/E1 card which connects to the switch and/or CSU. To do so, do the following:

    a Check cable continuity on pins 1, 3, 9, and 11.

    b Look for broken wires or a dislodged connector.

5 If this is a new installation, verify that the transmit and receive wire pairs are not reversed. See the section on digital connections in Chapter 3, "Making Cable Connections," in *Intuity CONVERSANT System Version 7.0 New System Installation*, 585-313-106.

6 If a CSU is being used, verify that it is operating correctly. If this is a new installation, verify that the CSU has been properly wired and optioned.

7 Check that the cable is shielded and that the shield is properly grounded at the switch.

TWIP022

Alarm Level: Critical.

Description: The identified T1/E1 card has stopped operating. The voice system is unable to process calls on this card.

Repair Procedure: **Note:** This message may result when the **smc_setup** command is used. When **smc_setup** is used, T1/E1 cards may be reset and experience problems. This results in the TWIP022 message that reports that the card in inoperable. The card is usually diagnosed and returned to service in approximately 5 minutes. The **smc_setup** command should not be used when the voice system is active.

  1 Stop the voice system.

  2 Start the voice system.

  3 If the problem persists, reboot the system.

TWIP023

Alarm Level: Major.

Description: An attempt to place a call on the identified LST1 or LSE1 channel failed as a result of the failure to detect dialtone. The voice system is expecting the dialtone once the channel has been taken off-hook. This acknowledgement enables the voice system to know when to begin dialing.

Repair Procedure: • If the problem occurs infrequently, and primarily when there is high call activity on the DEFINITYÆ ECS, the DEFINITY ECS may have insufficient dial tone registers for the expected call volume.

Consult your DEFINITY administrator.

• If all outbound calls are failing, there may be incompatible options in the system or DEFINITY ECS administration for LST1/LSE1.

Consult your DEFINITY administrator and check for consistent administration of options.

UNIX Alarms and Log Messages

UNIX001

Alarm Level: None.

Description: The UNIX system kernel has detected an error which has been logged on the system console. The voice system message Logger has put a copy of this message in the message log to keep a more durable record of it. The impact of this error on voice system functionality depends on the content of the specific UNIX message and the severity of the problem. In general, the severity corresponds to the priority of the logged message.

NOTICE (UNIX001) messages generally indicate problems of a less severe nature than WARNING (UNIX002) messages.

Repair Procedure: No corrective action is necessary.

UNIX002

Alarm Level: Minor.

Description: The UNIX system kernel has detected an error which has been logged on the system console. The voice system message Logger has put a copy of this message in the message log to keep a more durable record of it. The impact of this error on voice system functionality depends on the content of the specific UNIX message and the severity of the problem. In general, the severity corresponds to the priority of the logged message.

WARNING (UNIX002) messages may not cause a system halt (PANIC) but usually indicate that system functionality is severely impaired.

Repair Procedure: Repair of UNIX system problems require a significant level of expertise on UNIX operating system administration. Some problems (for example, timeout, inode or file table overflows) may be fixed by changing tunable system parameters. Chapter 5 of the *UNIX System V/386 System Administrator's Guide* gives instructions on changing tunable parameters.

UNIX003

Alarm Level: Major.

Description: The UNIX system kernel has detected an error which has been logged on the system console. The voice system message Logger has put a copy of this message in the message log to keep a more durable record of it. The impact of this error on voice system functionality depends on the content of the specific UNIX message and the severity of the problem. In general, the severity corresponds to the priority of the logged message.

Repair Procedure: Repair of UNIX system problems require a significant level of expertise on UNIX operating system administration. Some problems (for example, timeout, inode or file table overflows) may be fixed by changing tunable system parameters. Chapter 5 of the *UNIX System V/386 System Administratorís Guide* gives instructions on changing tunable parameters.

UNIX004

Alarm Level: Critical.

Description: The UNIX system kernel has detected an error which has been logged on the system console. The voice system message Logger has put a copy of this message in the message log to keep a more durable record of it. The impact of this error on voice system functionality depends on the content of the specific UNIX message and the severity of the problem. In general, the severity corresponds to the priority of the logged message.

Major (UNIX004) messages correspond to UNIX PANIC messages. The system halts when they are issued.

Repair Procedure: Repair of UNIX system problems require a significant level of expertise on UNIX operating system administration. Some problems (for example, timeout, inode or file table overflows) may be fixed by changing tunable system parameters. Chapter 5 of the *UNIX System V/386 System Administratorís Guide* gives instructions on changing tunable parameters.

VROP Alarms and Log Messages

VROP001

Alarm Level: Minor.

Description: The user's attempt to run an administrative command (for example, list phrases, add a phrase to the speech file system, copy a phrase from a speech file system to a UNIX file, or erase a phrase) has failed. Call processing is not affected.

Repair Procedure: At a convenient time, do the following:

    1 Stop the voice system.

    2 Start the voice system.

    3 If the problem persists, reboot the system.

VROP002

Alarm Level: Major.

Description: An attempt to record or add a phrase to the system has failed because all of the speech file systems are configured as *read only*. All further attempts will continue to fail, but the system will continue to play existing phrases properly.

Repair Procedure: **1** Enter **vdf**

The system displays a message similar to the following message:

```
speechFS /home2/vts/talkfiles
10107 free blocks of 19073 available (52% free)
READWRITE (blocksize=16384)
```

where *talkfiles* is the name of one of the speech file systems.

2 For each of the speech file systems noted above, enter:

ls -ld *speech_file system_name*

The system displays a message similar to the following message:

```
drwxr-xr-xrootsys409Feb516:57/home2/vfs/talkfiles
```

3 If the mode is not drwsrwxr-x, enter:

chmod 775 /*speech_file system_name*

VROP003

Alarm Level: Minor.

Description: An SSP card was unable to perform a voice coding or playback request made by the system. The code or play request failed. This normally happens when the system is overloaded; that is, the total amount of coding or playback being attempted for all channels on the system is more than the available SSP cards can handle. In this case, most requests will be completed and only those for which a message is generated will fail. Each time a failure occurs, one message is generated.

                The impact may be significant if the message occurs more frequently than the currently set threshold limit. In that case, you will see a threshold message similar to the following:

```
** THR003 -- -- -- The first threshold level for VROP_NOSPBUF
exceeded. 20 messages have been generated in the last 1
minute.
```

                The threshold limits and threshold message priority shown above reflect the default values for this thresholded message.

Repair Procedure: **1** Display the state of the cards by entering display card

                     2 Verify that all SSP cards assigned for VOICE function are in INSERV state.

3 If all SSP cards assigned for VOICE function are INSERV state, reduce the load.

4 If a card is in the BROKEN state, diagnose the card by entering:

diagnose card *card_number*

where *card_number* is the number of the affected card.

5 If the card is in the MANOOS state, restore the card into service by entering:

restore card *card_number*

where *card_number* is the number of the affected card.

6 Display the state of the card by entering:

display card *card_number*

where *card_number* is the number of the affected card.

7 If the card is in the BROKEN state, check the circuit card.

8 If the card is in the MANOOS state, restore the card into service by entering:

restore card *card_number*

where *card_number* is the number of the affected card.

VROP004

Alarm Level: Major.

Description: A voice function may have failed. The request has been cancelled. The transaction may be hung (that is, the caller will hear nothing and nothing else will happen for the call until the call is terminated by the caller). Each time a failure occurs, one message is generated.

Repair Procedure: Determine the severity level of the message. The default severity level is MAJOR, yet the message may be a MINOR alarm in some cases in the software. If the severity level of the message is:

- MINOR, no corrective action is necessary.

- MAJOR, do the following:

  1 Stop the voice system.

  2 Start the voice system.

VROP005

Alarm Level: Critical.

Description: Erroneous speech playback or coding may have occurred. The speech that was heard or recorded may have been terminated prematurely or replaced with other speech. Subsequent speech coding or playback may also be affected until the system is restarted.

Repair Procedure: **1** Stop the voice system.

2 Start the voice system.

VROP006

Alarm Level: Major.

Description: The speech configuration file, **/vs/data/spchconfig**, is unreadable or has an invalid, duplicate, or missing entry. The system will use default values for missing or invalid entries for the numbers of speech buffers and/or maximum allowable phrases until this is corrected. For duplicate entries, the first value is used. The default numbers may be unsatisfactory for this system and could cause load problems, inability to access some phrases, or other performance problems.

Repair Procedure: **1** Determine if the number of speech buffers configured in the system is sufficient to handle the current load. Enter:

display chan all

The system displays a channel state table.

2 To determine the number of speech buffers currently configured in the system, enter **cat /vs/data/spchconfig**

The system displays an nbufs and max_phrases table.

3 Increase the nbufs parameter listed in the nbufs and max_phrases table by completing step a through step c:

a Edit the file **/vs/data/spchconfig** and change the parameter nbufs to the number desired.

b Stop the voice system.

c Start the voice system.

VROP007

Alarm Level: Major.

Description: An attempt to add a new phrase to the speech file system failed. This could have impacted administrative commands or the coding of speech spoken by a caller. Additional similar attempts will also fail.

Repair Procedure:

1 Determine the amount of space available in the speech file system by entering **vdf**

2 Write down the free blocks available.

3 Stop the voice system.

4 Start the voice system.

5 Determine the space available in the speech file system by entering **vdf**

6 If this does not result in more space, the speech file system must be increased in size, a new speech file system must be added, or existing phrases must be removed from the system.

The system administrator should determine this.

7 See <u>VROP007 — For Application Developer Notes:</u>.

VROP007 — For Application Developer Notes:

A common cause of running out of space in the speech file system is that applications that dynamically code speech from callers may not remove this speech when it is no longer needed. If Form Filler Plus is in use, make sure users are deleting messages after reviewing them. If other applications on the system code the speech of callers, make sure the application is deleting speech when no longer needed for that application. Removing phrases safely requires some understanding of the applications that are installed on the system. Some guidelines are as follows:

1 Determine which applications are loaded on the machine and consider removing any applications not currently in use. These can be backed up to disk before removing them. The Script Builder Applications menu item in the **cvis_menu** shows all Script Builder applications. The UNIX directory **/speech/talk** contains list files for each application.

2 The command list phrase all in talkfile all shows all the phrases and talkfiles on the system. Any phrase that has no "PHRASE_NAME" listed may not be currently used for prompts for applications currently loaded on the system. However, phrases may have been coded from customer input, and should not be removed until it is verified that the phrases are not of this type (see below).

   ~ Talkfiles numbered less that 200 may be used for customer recorded speech by application packages such as AUDIX Voice Power, Form Filler Plus, or others and generally should not be removed.

   ~ If any applications developed with Script Builder use the Voice Coding statement to record customer speech, and a talkfile is being used, the developer of that application must be consulted in order for these phrases to be removed.

VROP009

Alarm Level: Major.

Description: An application attempted to play a phrase that has not been recorded or does not currently exist on the system. The system skips that phrase and continues with the rest of the application. The message typically occurs when new applications are being developed or tested on the system. It could happen at a later time if a phrase was never recorded, or if a phrase has been removed inadvertently or corrupted and cleared by an audit. The message can also be caused by an error in the application that causes it to perform a play script instruction (or a Script Builder Announce action using the NX format) with garbage input. (Note that an invalid argument to a **tchar** instruction does not cause this message; a TSM message is generated instead.)

This error may cause the caller to miss important information, but be unaware of this fact. For example, if the unrecorded phrase was a number such as "thousand," then "5205" will be spoken as "fivetwentyfive" instead of "five thousand two hundred five". This can be extremely serious for some applications.

Repair Procedure: **1** List the phrase by entering:

list phrase *phrase_num* in talkfile *talkfile_num*

where *phrase_num* and *talkfile_num* are the phrase and talkfile number from the error message. This should report No such phrase exists.

2 Determine which applications or scripts use the phrase.

Each talkfile that was created using Script Builder has an associated phrase list file, a UNIX system file, stored in the directory **/speech/talk** and uses the naming convention of application name.pl. The phrase list file contains the talkfile number and the phrase numbers and tags for every phrase tag used in a Script Builder application.

Applications may have a list file with different naming conventions, such as **list.*application_name*** (for example, **list.cabnt**). These files must be searched to locate the application that uses the missing phrase. See Chapter 3, "Speech Data," of *Intuity CONVERSANT System Version 7.0 Application Development with Script Builder*, 585-313-206, for more information on the content of these speech files.

3 If the phrase has been recorded, restore the phrase from a backup. See **restore** in Appendix A, "Summary of Commands," in *Intuity CONVERSANT System Version 7.0 Administration*, 585-313-501.

If the phrase has not been recorded, record the phrase. See *Intuity CONVERSANT System Version 7.0 Application Development with Script Builder*, 585-313-206, for additional information.

VROP010

Alarm Level: Major.

Description: A failure occurred while performing the indicated action on a phrase. The action was aborted. This is caused by excessive voice activity load on the system.

Repair Procedure:
1 Stop the voice system.

2 Start the voice system.

3 If the problem persists and there is heavy load on the system, reduce the load.

VROP011

Alarm Level: Major.

Description: Insufficient speech buffers are allocated to service the number of channels in the system. Each time the message occurs, an action has failed.

Repair Procedure: **1** Determine if the number of speech buffers configured in the system is sufficient to handle the current load by entering:

cat /vs/data/spchconfig

~ The system displays an nbufs and max_phrases table.

~ The nbufs parameter should be three times the number of channels available in the system.

2 If your application needs more speech buffers than indicated by the number shown for nbufs, increase the nbufs parameter listed above by doing the following:

a Edit the file **/vs/data/spchconfig** and change the parameter ínbufsí to the number desired.

b Stop the voice system.

c Start the voice system.

VROP012

Alarm Level: Major.

Description: An attempt to add a new phrase to the speech file system failed. This could have impacted administrative commands or the coding of speech spoken by a caller. Other attempts will also fail.

Repair Procedure: Either increase the **max_phrases** limit in the speech configuration file **/vs/data/spchconfig** by performing repair procedure for system message or eliminate unused phrases on the voice system by performing repair procedure for system message .

VROP013

Alarm Level: None.

Description: The system is not able to service speech playback or coding requests fast enough to guarantee that no speech gaps occur. Gaps may occur between phrases or within a phrase.

Repair Procedure: Reduce the load.

VROP014

Alarm Level: Critical.

Description: **VROP/CIOX** failed to access the speech file indicated during processing. Applications requiring access to this file will be incomplete.

Repair Procedure: **1** Consult the application developer to verify the application. See .

2 If the application is correct, restore the speech file(s) from the backup. If the backup is not available, consult the application developer to recreate the speech file.

3 If the problem persists, reboot the system.

VROP014 — Application Developer Notes: **1** Verify that the application refers to the correct speech file name.

2 Verify that the speech file is in existence with the correct access permission.

VROP015

Alarm Level: Major.

Description: A phrase is being added to the speech file system or copied from the speech file system to a UNIX file (typically during speech backups or restores), and the UNIX file cannot be accessed.

Repair Procedure: • If the error message indicates `No space left on device`, remove unnecessary files from the UNIX file system, particularly in **/tmp** directory.

• Any other error message indicates a problem with the UNIX operating system.

Reboot the system.

VROP016

Alarm Level: Major.

Description: A phrase in the speech file system has been corrupted. The phrase cannot be played or removed until the problem has been corrected. Call processing for other phrases is not affected.

Repair Procedure:

1 List the phrase by entering:

list phrase *phrase_num* in talkfile *talkfile_num*

where *phrase_num* and *talkfile_num* are the phrase and talkfile number from the error message.

The system displays a talkfile table.

2 If the Coding Type is Unknown, restore the phrase from backup.

3 If the phrase is still in error, divide the Size In Bytes by four.

If there is a remainder, the phrase has been corrupted. Rerecord the phrase.

VROP017

Alarm Level: None.

Description: An unexpected event occurred during an action. This action corresponds to a script instruction or administrative request (play a phrase, code a phrase, remove a phrase, fetch, create, or update). The system detected some type of anomaly while performing the action specified. The voice response action may not have completed successfully. The root cause could be either excessive system load or a problem with an SSP or Tip/Ring circuit card reported with another message.

Repair Procedure: 1 If the message field is Bad tag, probably time expired or Nonoutstanding tag, probably time expired, check the log for a VROP019 on page 544 message and perform the repair procedure for that message.

2 If any other information appears in the message field, this could be due to an error in the system software.

VROP018

Alarm Level: Critical.

Description: The system has failed to play or code a phrase. This is likely to recur until the problem has been resolved.

Repair Procedure: Reboot the system.

VROP019

Alarm Level: Major.

Description: A timeout failure occurred while performing the indicated action on a phrase. The action was aborted. This could be due to excessive load on the system. The cause could also be a problem with the Tip/Ring or SSP card.

Repair Procedure: 1 Determine the value for the event field.

If the event is one of the following, complete step a through step c.

- • BKLAVAIL

- • BUFVALID

- • NEW_PHRASE_NUM

- READ_DONE

- RELSEBK

- REMOVE_DONE

- RENAME_DONE

- SPWINAVAIL

- UPDATE_DONE

- WRITE_DONE

a Reduce the load.

b Stop the voice system.

c Start the voice system.

If the event is one of the following, complete step d through step f.

- SPSTAT_COMP

- SP_VCBUF

- TR_VCODE

- TR_VPLAY

      d Diagnose the card by entering:

      diagnose card *card_number*

      where *card_number* is the number of the affected card.

      Display the state of the card by entering **display card**

      The card should be in INSERV state.

      e If the card is in the BROKEN state, check the circuit card.

      f If the card is in the MANOOS state, restore the card into service by entering:

      restore card *card_number*

      where *card_number* is the number of the affected card.

VROP020

Alarm Level: Major.

Description: Erroneous speech processing occurred in the application script. Subsequent speech processing may also be affected until the application script is corrected.

Repair Procedure: **1** Determine which application is causing the error by entering:

display chan *channel_number*

where *channel_number* is the channel number from the error message.

The system displays a channel table.

2 Correct the error in the application.

VROP020, #2

Alarm Level: Major.

Description: The indicated file can not be reserved for the reason specified in the message. Applications requiring recording to the file will be incomplete.

Repair Procedure: **1** Verify that the file is a speech file.

2 Record the speech again using one of the coding algorithms supported by the system.

VROP021

Alarm Level: None.

Description: The maximum number of Customer Input/Output processes has been reached. The speech playback or coding might be delayed. This condition may be attributed to excessive load on the system. The impact of this event is not severe and no action warranted.

Repair Procedure: No corrective action is necessary.

VROP022

Alarm Level: Major.

Description: The indicated file can not be reserved for the reason specified in the message. Applications requiring recording to the file will be incomplete.

Repair Procedure:
1 Verify that the file is a speech file.

2 Record the speech again using one of the coding algorithms supported by the system.

VROP023

Alarm Level: None.

Description: A speech stutter was detected during a speech playback session.

Repair Procedure: No corrective action is necessary.

VXMDI Alarms and Log Messages

VXMDI001

Alarm Level: None

Description: The the startup of the DI is complete.

Repair Procedure: No corrective action is necessary.

VXMDI002

Alarm Level: Major.

Description: An in-progress fax process is exiting because of an unrecoverable error, such as an operating system problem, or a phone line problem.

Repair Procedure: **1** Reinitiate the fax transmission.

               2 If the problems persists, stop and start the voice system.

VXMDI003

Alarm Level: Major.

Description: The fax transmission occuring at the time that the error was reported failed. There has been an illegal transition. A fax was being sent to or received from a fax machine that does not meet international fax standards, or the circuit card may be experiencing a hardware problem.

Repair Procedure: **1** Note the brand and model number of the fax machine.

2 Divert fax traffic to another fax machine.

3 If the problem cannot be traced to the fax machine:

   a Diagnose the card ty entering

   diagnose card *card_number*

   where *card_number* is the circuit card on which the channel is located.

   b If the problem persists, assume a potentially bad hardware platform or an irreparable fault in the system software. If it is happening on the same circuit card in all cases, try replacing or swapping the circuit card.

VXMDI004

Alarm Level: Major.

Description: There has been an internal assertion failure.The fax transmission occuring at the time that the error was reported failed.

Repair Procedure: **1** Save any **core** files and the contents of /**voxem/sf2.0/logs**.

   2 Contact your remote maintenance service center for assistance.

VXMDI005

Alarm Level: Major.

Description: The driver called failed.The fax transmission occuring at the time that the error was reported failed.

Repair Procedure: If the problem persists, stop and start the voice system.

Numerics

23B+D

23 bearer (communication) and 1 data (signaling) channel on a T1 PRI circuit card.

30B+D

30 bearer (communication) and 1 data (signaling) channel (plus framing channel 0) on an E1 PRI circuit card.

3270 interface

A link between one or more Intuity CONVERSANT machines and a host mainframe. In Intuity CONVERSANT system documentation, the 3270 interface specifically means the link between one or more system machines and an IBM host mainframe.

47B+D

47 bearer (communication) and 1 data (signaling) channel on two T1 PRI circuit cards.

4ESS®

A large Lucent central office switch used to route calls through the telephone network.

A   **AC**

alternating current

ACD

automatic call distributor

AD

application dispatch

AD-API

application dispatch application programming interface

adaptive differential pulse code modulation

A means of encoding analog voice signals into digital signals by adaptively predicting future encoded voice signals. This adaptive modulation method reduces the number of bits required to encode voice. See also "pulse code modulation."

adjunct products

Products (for example, the Adjunct/Switch Application Interface) that the Intuity system administers via cut-through access to the inherent management capabilities of the product itself; this is in opposition to the ability of the Intuity CONVERSANT system to administer the switch directly.

Adjunct/Switch Application Interface

An optional feature package that provides an Integrated Services Digital Network-based interface between Lucent Technologies PBXs and adjunct processors.

ADPCM

adaptive differential pulse code modulation

ADU

asynchronous data unit

advanced speech recognition

A speech recognition ability that allows the system to understand WholeWord and FlexWord™ inputs from callers.

affiliate

A business organization that Lucent controls or with which Lucent is in partnership.

AGL

application generation language

alarm relay unit

A unit used in central office telecommunication arrangements that transmits warning indicators from telephone communications equipment (such as an Intuity CONVERSANT system) to audio.

ALERT

System alerter process

alerter

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

American Standard Code for Information Interchange

A standard code for data representation that represents alphanumeric characters as binary numbers. The code includes 128 upper- and lowercase letters, numerals, and special characters. Each alphanumeric and special character has an ASCII code (binary) equivalent that is 1 byte long.

analog

An analog signal, such as voice or music, that varies in a continuous manner. An analog signal may be contrasted with a digital signal, which represents only discrete states.

ANI

automatic number identification

announcement

A message the system plays to the caller to provide information. The caller is not asked to give a response. Compare to "prompt."

API

Application programming interface

application

The automated transaction (interactions) among the caller, the voice response system, and any databases or host computers required for your business. See also "application script."

application administration

The component of the Intuity CONVERSANT system that provides access to the applications currently available on your system and helps you to manage and administer them.

application installation

A two-step process in which the Intuity CONVERSANT system invokes the TSM script assembler for the specific application name and moves files to the appropriate directories.

application script

The computer program that controls the application (the transaction between the caller and the system). The Intuity CONVERSANT system provides several methods for creating application scripts, including Voice@Work, Script Builder, Transaction Assembler Script (TAS) language, and the Intuity Response Application Programming Interface (IRAPI).

application verification

A process in which the Intuity CONVERSANT system verifies that all the components needed by an application are complete.

ASCII

American Standard Code for Information Interchange

ASI

analog switch integration

ASR

advanced speech recognition

asynchronous communication

A method of data transmission in which bits or characters are sent at irregular intervals and spaced by start and stop bits rather than by time. Compare to "synchronous communication."

asynchronous data unit

An electronic communications device that allows computer systems to communicate over asynchronous lines more than 50 feet (15 m) in length.

automatic call distributor

That part of a telephone system that recognizes and answers incoming calls and completes these calls based on a set of instructions contained in a database. The ACD can send the call to an operator or group of operators as soon as the operator has completed a previous call or after the system has played a message to the caller.

automatic number identification

A method of identifying the calling party by automatically receiving a string of digits that identifies the calling station of a particular customer.

AYC5B

The IVP6 Tip/Ring (analog) circuit card.

AYC10

The IVC6 Tip/Ring (analog) circuit card.

AYC21

The E1/T1 (digital) circuit card.

AYC30

The NGTR (analog) circuit card.

AYC43

The speech and signal processor (SSP) circuit card.

B
back up

The preservation of the information in a file in a different location, so that the data is not lost in the event of hardware or system failure.

backing up an application

Using a utility that makes an archive copy of a completed application or an interim copy of an application in progress. The back-up copy can be restored to the system if the on-line version is damaged, or if you make revisions and want to go back to the previous version.

barge-in

A capability provided by WholeWord speech recognition and Dial Pulse Recognition (DPR) that allows callers to speak or enter their responses during the prompt and have those responses recognized (similar to the Speak with Interrupt capability). See also "echo cancellation."

batch file

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

BB

bulletin board

binary synchronous communications

A character-oriented synchronous link protocol.

blind transfer protocol

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

bps

bits per second

BRDG

call bridging process

bridging

The process of connecting one telephone network connection to another over the Intuity CONVERSANT system TDM bus. Bridging decreases the processing load on the system since an active bridge does not require speech processing, database access, host activity, etc., for the transaction.

BSC

binary synchronous communications

bundle

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

byte

A unit of storage in the computer. On many systems, a byte is 8 bits (binary digits), which is the equivalent of one character of text.

C   call classification analysis

A process that enables application designers to use information available within the system to classify the disposition of originated and transferred calls. Intelligent CCA is provided with the system. Full CCA is an optional feature package.

call data event

A parameter that specifies a list of variables that are appended to a call data record at the end of each call.

call data handler process

A software process that accumulates generic call statistics and application events.

called party number

The number dialed by the person making a telephone call. Telephone switching equipment can use this number to selectively route an incoming call to a particular department or agent.

caller

The party who calls for a service, gets connected to the Intuity CONVERSANT system, and interacts with it. As the Intuity CONVERSANT system can also make outbound calls for service, the caller can also be the person who responds to those outbound calls.

call flow

See "transaction."

call progress tones

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

card cage

An area within a Intuity CONVERSANT system platform that contains and secures all of the standard and optional circuit cards used in the system.

cartridge tape drive

A high-capacity data storage/retrieval device that can be used to transfer large amounts of information onto high-density magnetic cartridge tape based on a predetermined format. This tape can be removed from the system and stored as a backup, or used on another system.

CAS

channel associated signalling

caution

An admonishment or advisory statement used in Intuity CONVERSANT system documentation to alert the user to the possibility of a service interruption or a loss of data.

CCA

call classification analysis

CDH

call data handler process

CELP

code excited linear prediction

central office

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

central processing unit

See "processor."

CGEN

Voice system general message class

channel

See "port."

channel associated signaling

A type of signaling that can be used on E1 circuit cards. It occurs on channel 16.

CICS

Customer Information Control System

circuit card upgrade

A new circuit card that replaces an existing card in the platform. Usually the replacement is an updated version of the original circuit card to replace technology made obsolete by industry trends or a new system release.

cluster controller

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

CMS

Call Management System

CO

central office

code excited linear prediction

A means of encoding analog voice signals into digital signals that provides excellent quality with use of minimum disk space.

command

An instruction or request the user issues to the system software to make the system perform a particular function. An entire command consists of the command name and options.

configuration

The arrangement of the software and hardware of a computer system or network. The Intuity CONVERSANT system configuration includes either a standard or custom processor, peripheral equipment (for example, printers and modems), and software applications. Configuration also refers to the way the switch network is set up; that is, the types of products that are in the network and how those products communicate.

configuration management

The component of the system that allows you to manage the current configuration of voice channels, host sessions, and database connections, assign scripts to run on specific voice channels or host sessions, assign functionality to SSP and E1/T1 circuit cards, and perform various maintenance functions.

connect and disconnect (C and D) tones

DTMF tones that inform the system when the attendant has been connected (C) and when the caller has been disconnected (D).

connected digits

A sequence of digits that the system can process as a group, rather than requiring the caller to enter the digits one at a time.

Converse Data Return (conv_data)

A Script Builder action that supports the DEFINITY® call vectoring (routing) feature by enabling the switch to retain control of vector processing in the system environment. It supports the DEFINITY "converse" vector command to establish a two-way routing mechanism between the switch and the system to facilitate data passing and return.

controller circuit card

A circuit card used on a computer system that controls its basic functionality and makes the system operational. These circuit cards are used to control magnetic peripherals, video monitors, and basic system communications.

copying an application

A utility in which information from a source application is directed into the destination application.

coresidency

The ability of two products or services to operate and interact with each other on a single hardware platform. An example of this is the use of an Intuity CONVERSANT system along with a package from a different vendor on the same system platform.

CPE

customer provided equipment or customer premise equipment

CPN

called party number

CPT

call progress tones

CPU

central processing unit

crash

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

CSU

channel service unit

custom speech

Unique words or phrases to be used in Intuity CONVERSANT system voice prompts that Lucent Technologies custom records on a per-customer basis.

custom vocabulary

A specialized package of unique words or phrases created on a per-customer basis and used by WholeWord or FlexWord speech recognition.

Customer Information Control System

Part of the operating system that manages resources for running applications (for example, IND$FILE). Note that TSO and CMS provide analogous functionality in other host environments.

CVS

converse vector step

D **danger**

An admonishment or advisory statement used in Intuity CONVERSANT system documentation to alert the user to the possibility of personal injury or death.

data interface process

A software process that communicates with Script Builder applications.

database

A structured set of files, records, or tables.

database field

A field used to extract values from a local database and form the structure upon which a database is built.

database record

The information in a database for a person, product, event, etc. The database record is made up of individual fields for each information item.

database table

A structure, made up of columns and rows, that holds information in a database. Database tables provide a means of storing information that changes too often to "hard-code," or store permanently, in the transaction outline.

dB

decibel

DB

database

DBC

database checking process

DBMS

database management system

DC

direct current

DCE

data communications equipment

DCP

digital communications protocol

debug

The process of locating and correcting errors in computer programs; also referred to as "troubleshooting."

default

The way a computer performs a task in the absence of other instructions.

default owner

The owner of a channel when no process takes ownership of that channel. The default owner holds all idle, in-service channels. In terms of the IRAPI, this is typically the Application Dispatch process.

diagnose

The process of performing diagnostics on a bus or on Tip/Ring, E1/T1, or SSP circuit cards.

dial ahead

The ability to collect and process touch-tone inputs in sequence, even when they are received before the prompts.

dial pulse recognition

A method of recognizing caller pulse inputs from a rotary telephone.

dialed number identification service

A service that allows incoming calls to contain information about the telephone number for which it is destined.

dial through

A capability provided by touch-tone and dial pulse recognition that allows callers to enter their responses during the prompt and have those responses recognized (similar to the Speak with Interrupt capability). See also "barge-in" and "echo cancellation".

dictionary

A reference book containing an alphabetical list of words, with information given for each word including meaning, pronunciation, and etymology.

DIMM

dual in-line memory module

DIO

disk input and output process

DIP

data interface process

directory

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

display errdata

A command that displays system errors sent to the logger.

DMA

direct memory address

DNIS

dialed number identification service

DPR

dial pulse recognition

DSP

digital signal processor

DTE

data terminal equipment

DTMF

dual tone multi-frequency

DTR

data terminal ready

dual 3270 links

A feature that provides an additional physical unit (PU) for a cost-effective means of connecting to two host computers. The customer can connect a system to two separate FEPs or to a single FEP shared by one or more host computers. Each link supports a maximum of 32 LUs.

dual tone multi-frequency

A touch-tone sound that is an audio signal including two different frequencies. *DTMF feedback* is the process of the "switch" providing this information to the system. *DTMF muting* is the process of ignoring these tones (which might be simulated by human speech) when they are not needed for the application.

dump space

> An area of the disk that is fixed in size and should equal the amount of RAM on the system. The operating system "dumps" an image of core memory when the system crashes. The dump can be fetched after rebooting to help in analyzing the cause of the crash.

E

E&M

> Ear and Mouth

E1 / T1

> Digital telephony interfaces, commonly called *trunks*. E1 is an international standard at 2.048 Mbps. T1 is a North American standard at 1.544 Mbps.

Ear and Mouth

> A common T1 trunking protocol for connection between two "switches."

EBCDIC

> Extended Binary Coded Decimal Interexchange Code

echo cancellation

The process of making the channel quiet enough so that the system can hear and recognize WholeWord and dial pulse inputs during the prompt. See also "barge-in."

ECS

Enterprise Communications Server

editor system

A system that allows speech phrases to be displayed and edited by a user. See "Graphical Speech Editor."

EFT

Enhanced File Transfer

EIA

Electronic Industries Association

EISA

Extended Industry Standard Architecture

EMI

electromagnetic interference

enhanced basic speech

Pre-recorded speech available from Lucent Technologies in several languages. Sometimes called "standard speech."

Enhanced File Transfer

A feature that allows the transferring of files automatically between the Intuity CONVERSANT system and a synchronous host processor on a designated logical unit.

Enhanced Serial Data Interface

A software- and hardware-controlled method used to store data on magnetic peripherals.

Enterprise Communications Server

The telephony equipment that connects your business to the telephone network. Sometimes called a "switch."

error message

A message on the screen indicating that something is wrong with a possible suggestion of how to correct it.

ESD

electrostatic discharge

ESDI

Enhanced Serial Data Interface

ESS

electronic switching system

EST

Enhanced Software Technologies, Inc.

ET

error tracker

Ethernet

A name for a local area network that uses 10BASE5 or 10BASE2 coaxial cable and InterLAN signaling techniques.

event

The notification given to an application when some condition occurs that is generally not encountered in normal operation.

EXTA

external alarms feature message class

external actions

Specific predefined system tasks that Script Builder can call or *invoke* to interact with other products or services. When an external action is invoked, the systems displays a form that provides choices in each field for the application developer to select. Examples are Call_Bridge, Make_Call, SP_Allocate, SR_Prompt, etc. In Voice@Work, external actions are treated as "external functions."

external functions

Specific predefined (or customer-created) system tasks that Voice@Work or Script Builder can call or *invoke* to interact with other products or services. The function allows the application developer to enter the argument(s) for the function to act on. Examples are concat, getarg, length, substring, etc. See also "external actions."

F   FAX Actions

An optional feature package that allows the system to send fax messages.

FCC

Federal Communications Commission

FDD

floppy disk drive

feature

A function or capability of a product or an application within the Intuity
CONVERSANT system.

feature package

An optional package that may contain both hardware and software resources to
provide additional functionality to a standard system.

feature_tst script package

A standard Intuity CONVERSANT system software program that allows a user to
perform self-tests of critical hardware and software functionality.

FEP

front end processor

FFE

Form Filler Plus feature message class

field

See "database field."

FIFO

first-in-first-out processing order

file

A collection of data treated as a basic unit of storage.

file transfer

An option that allows you to transfer files interactively or directly to and from UNIX using the file transfer system (FTS).

filename

Alphabetic characters used to identify a particular file.

FlexWord™ speech recognition

A type of speech recognition based on subword technology that recognizes phonemes or parts of words in a specific language. See also "subword technology."

foos

    facility out-of-service state

Form Filler Plus

    An optional feature package that provides the capability for application scripts to record a caller's responses to prompts for later transcription and review.

FTS

    file transfer process message class

Full CCA

    A feature package that augments the types of call dispositions that Intelligent CCA can provide.

function key

    A key, labeled F1 through F8, on your keyboard to which the Intuity CONVERSANT system software gives special properties for manipulating the user interface.

G GEN

    PRISM logger and alerter general message class

grammar

The inputs that a recognizer can match (identify) from a caller.

Graphical Speech Editor

A window-driven, X Windows/Motif based, graphical user interface (GUI) that can be accessed to perform different functions associated with the creation and editing of speech files for applications. The editing is done on the Intuity CONVERSANT system.

GSE

Graphical Speech Editor

GUI

graphical user interface

H   **hard disk drive**

A high-capacity data storage/retrieval device that is located inside a computer platform. A hard disk drive stores data on nonremovable high-density magnetic media based on a predetermined format for retrieval by the system at a later date.

hardware

The physical components of a computer system. The central processing unit, disks, tape, and floppy drives, etc., are all hardware.

Hardware Resource Allocator

A software program that resolves or blocks the allocation of CPU and memory resources for controlling and optional circuit cards.

hardware upgrade

Replacement of one or more fundamental platform hardware components (for example, the CPU or hard disk drive), while the existing platform and other existing optional circuit cards remain.

HDD

hard disk drive

High Level Language Applications Programming Interface

An application programming interface that allows a user to write custom applications that can communicate with a host computer via an API.

HLLAPI

High Level Language Applications Programming Interface

HOST

> host interface process message class

host computer

> A computer linked to a network to provide a range of services, such as database access and computation. The host computer operates in a time-sharing manner with other computers linked to it via the network.

hwoos

> hardware out-of-service state

Hz

> Hertz

IBM

> International Business Machines

iCk or ICK

> The system integrity checking process.

ID

identification

IDE

integrated disk electronics

idle channel

A channel that either has no owner or is owned by its default owner and is onhook.

IE

information element

IND$FILE

The standard SNA file transfer utility that runs as an application under CICS, TSO, and CMS. IND$FILE is independent of link-level protocols such as BISYNC and SDLC.

independent software vendor

A company that has an agreement with Lucent Technologies to develop software to work with the Intuity CONVERSANT system to provide additional features required by customers.

indexed table

A table that, unlike a nonindexed table, can be searched via a field name that has been indexed.

industry standard architecture

A PC bus standard that allows processors and other circuit cards to communicate with each other.

INIT

voice system initialization message class

initialize

To start up the system for the first time.

inserv

in-service state

Integrated Services Digital Network

A network that provides end-to-end digital connectivity to support a wide range of voice and data services.

Integrated Voice Processing (IVP) circuit card

The IVP6 circuit card that provides Tip/Ring connections. The NGTR (AYC30) card also provides the same functions.

intelligent CCA

Monitoring the line after dialing is complete to determine whether a busy, reorder (fast busy), or other failure has been encountered. It also recognizes when the extension is answered or if the extension is not answered after a specified number of rings. The monitoring capabilities are dependent on the network interface circuit card and protocol used

interface

The access point of a system. With respect to the Intuity CONVERSANT system, the interface is designed to provide you with easy access to the software capabilities.

interrupt

The termination of voice and/or telephony functions when some condition occurs.

Intuity Response Application Programming Interface

A library of commands that provide a standard development interface for voice-telephony applications.

IPC

interprocess communication

IPC

intelligent ports card (IPC-900)

IPCI

integrated personal computer interface

IRAPI

Intuity Response Application Programming Interface

IRQ

interrupt request

ISA

industry standard architecture

ISDN

Integrated Services Digital Network

ISV

independent software vendor

ITAC

International Technical Assistance Center

IVC6 circuit card (AYC10)

A Tip/Ring (analog) circuit card with six channels.

IVP6 circuit card (AYC5B)

A Tip/Ring (analog) card with six channels.

K **Kbps**

kilobytes per second

Kbyte

kilobyte

keyboard mapping

In emulation mode, this feature enables the keyboard to send 3270 keyboard codes to the host according to a configuration table set up during installation.

keyword spotting

A capability provided by WholeWord speech recognition that allows the system to recognize a single word in the middle of an entire phrase spoken by a caller in response to a prompt.

L **LAN**

local area network

LDB

local database

LED

light-emitting diode

library states

The state information about channel activities maintained by the IRAPI.

LIFO

last-in-first-out processing order

line side E1

A digital method of interfacing an Intuity CONVERSANT system to a PBX or "switch" using E1-related hardware and software.

line side T1

A digital method of interfacing an Intuity CONVERSANT system to a PBX or "switch" using T1-related hardware and software.

listfile

An ASCII catalog that lists the contents of one or more talkfiles. Each application script is typically associated with a separate listfile. The listfile maps speech phrase strings used by application scripts into speech phrase numbers.

local area network

A data communications network in a limited geographical area. The LAN provides communications between computers and peripherals.

local database

A database residing on the Intuity CONVERSANT system.

LOG

Intuity CONVERSANT system logger process message class

logical unit

A type of SNA Network Addressable Unit.

logdaemon

A UNIX system information and error logging process.

logger

See "logdaemon."

logging on/off

Entering or exiting the Intuity CONVERSANT system software.

LSE1

line side E1

LST1

line side T1

LU

[logical unit]

M magnetic peripherals

Data storage devices that use magnetic media to store information. Such devices include hard disk drives, floppy disk drives, and cartridge tape drives.

main screen

The Intuity CONVERSANT system screen from which you are able to enter either the System Administration or Voice System Administration menu.

maintenance process

A software process that runs temporary diagnostics and maintains the state of circuit cards and channels.

manoos

manually out-of-service state

MAP/100P

multi application platform 100P

MAP/100C

> multi application platform 100C

MAP/40P

> multi application platform 40P

MAP/5P

> multi application platform 5P

masked event

> An event that an application can ignore (that is, the application can request not to be informed of the event).

master

> A circuit card that provides clock information to the TDM bus.

Mbps

> megabits per second

MByte

> megabyte

megabyte

A unit of memory equal to 1,048,576 bytes (1024 x 1024). It is often rounded to one million.

menu

Options presented to a user on a computer screen or with voice prompts.

MF

[multifrequency](#)

MHz

megahertz

Microsoft

A manufacturer of software products, primarily for IBM-compatible computers.

mirroring

A method of data backup that allows all of the data transactions to the primary hard disk drive to be copied and maintained on a second identical drive in near real time. If the primary disk drive crashes or becomes disabled, all of the data stored on it (up to 1.2 billion bytes of information) is accessible on the second mirrored disk drive.

ms

> millisecond

msec

> millisecond

MS-DOS

> A personal computer disk operating system developed by the Microsoft Corporation.

MTC

> maintenance process

multifrequency

> Dual tone digit signalling (similar to DTMF), used for trunk addressing between network switches or by network operators.

multithreaded application

> A single process/application that controls several channels. Each thread of the application is managed explicitly. Typically this means state information for each thread is maintained and the state of the application on each channel is tracked.

N   **NCP**

Network Control Program

NEBS

Network Equipment Building Standards

NEMA

National Electrical Manufacturers Association

netoos

network out-of-service state

NetView

An optional feature package that transmits high-priority (major or critical) messages to the host as operator-generated alerts (OGAs) over the 3270 host link. The NetView Alarm feature package does not require a dedicated LU.

next generation Tip/Ring (AYC30) circuit card

An analog circuit card with six channels.

NFAS

non-facility associated signalling

NFS

network file sharing

NGTR

next generation Tip/Ring (AYC30) circuit card

NM-API

Network Management - Application Programming Interface

NMVT

network management vector transport

nonex

nonexistent state

nonindexed table

A table that can be searched only in a sequential manner and not via a field name.

nonmasked event

An event that must be sent to the application. Generally, an event is nonmaskable if the application would likely encounter state transition errors by trying to it.

NRZ

non return to zero

NRZI

non return to zero inverted

null value

An entry containing no value. A field containing a null value is normally displayed as blank and is different from a field containing a value of zero.

O **obsolete hardware**

Hardware that is no longer supported on the Intuity CONVERSANT system.

OEM

original equipment manufacturer

OGA

operator-generated alert

on-line help

Messages or information that appear on the user's screen when a "function key" (F1 through F8) is pressed.

operator-generated alert

A system-monitoring message that is transmitted from the Intuity CONVERSANT system or other computer system to an IBM host computer and is classified as critical or major.

option

An argument used in a command line to modify program output by modifying the execution of a command. When you do not specify any options, the command executes according to its default options.

ORACLE

A company that produces relational database management software. It is also used as a generic term that identifies a database residing on a local or remote system that is created and maintained using an ORACLE RDBMS product.

P

P&C

Prompt and Collect Script Builder action step

PBX

private branch exchange

PC

personal computer

PCB

printed circuit board

PCI

peripheral component interconnect

PCM

pulse code modulation

PEC

price element code

peripheral (device)

Equipment such as printers or terminals that is in addition to the basic processor.

peripheral component interconnect

A newer, higher speed PC bus that is gradually displacing ISA for many components.

permanent process

A process that starts and initializes itself before it is needed by a caller.

phoneme

A single basic sound of a particular spoken language. For example, the English language contains 40 phonemes that represent all basic sounds used with the language. The English word "one" can be represented with three phonemes, "w" - "uh" - "n." Phonemes vary between
languages because of guttural and nasal inflections and syllable constructs.

phrase filtering (screening)

The rejection of unrecognized speech. The WholeWord and FlexWord speech recognition packages can be programmed to reprompt the caller if the Intuity CONVERSANT system does not recognize a spoken response.

phrase tag

A string of up to 50 characters that identifies the contents of a speech phrase used by an application script.

platform migration

See "platform upgrade."

platform upgrade

The process of replacing the existing platform with a new platform.

pluggable

A term usually used with speech technologies, in particular standard speech, to indicate that a basic algorithmic technique has been implemented to accept one or more sets of parameters that tailors the algorithm to perform in one or more languages.

poll

A message sent from a central controller to an individual station on a multipoint network inviting that station to send if it has any traffic.

polling

A network arrangement whereby a central computer asks each remote location whether it wants to send information. This arrangement enables each user or remote data terminal to transmit and receive information on shared facilities.

port

A connection or link between two devices that allows information to travel to a desired location. See "telephone network connection."

PRI

Primary Rate Interface

Primary Rate Interface

An ISDN term for connections over E1 or T1 facilities that are usually treated as trunks.

private branch exchange

A private switching system, either manual or automatic, usually serving an organization, such as a business or government agency, and usually located on the customer's premises.

processor

In Intuity CONVERSANT system documentation, the computer on which UnixWare and Intuity CONVERSANT system software runs. In general, the part of the computer system that processes the data. Also known as the "central processing unit."

prompt

A message played to a caller that gives the caller a choice of selections in a menu and asks for a response. Compare to "announcement."

prompt and collect (P and C)

A message played to a caller that gives the caller a choice of selections in a menu and asks for a response. The responses is collected and the script progresses based on the caller's response.

pseudo driver

A driver that does not control any hardware.

PS&BM

power supply and battery module

PSTN

public switch telephone network

pulse code modulation

A digital modulation method of encoding voice signals into digital signals. See also "adaptive differential pulse code modulation."

R **RAID**

redundant array of independent disks

RAID array

An assembly of disk drives configured to provide some level of RAID functionality.

RAM

random access memory

RDMBS

ORACLE relational database management system

RECOG

speech recognition feature message class

recognition type

The type of input the recognizer can understand. Available types include touch-tone, dial pulse, and Advanced Speech Recognition (ASR), which includes WholeWord and FlexWord speech recognition.

recognizer

The part of the system that compares caller input to a grammar in order to correctly match (identify) the caller input.

record

See "database record."

recovery

The process of using copies of the Intuity CONVERSANT system software to reconstruct files that have been lost or damaged. See also "restore."

remote database

Information stored on a system other than the Intuity CONVERSANT system that can be accessed by the Intuity CONVERSANT system.

remote maintenance circuit card

An Intuity CONVERSANT system circuit card, available with a built-in modem, that allows remote personnel (for example, field support) to access all Intuity CONVERSANT system machines. This card is standard equipment on all new MAP/100, MAP/40, and MAP/5P purchases.

REN

ringer equivalence number

reports administration

The component of Intuity CONVERSANT system that provides access to system reports, including call classification, call data detail, call data summary, message log, and traffic reports.

restore

The process of recovering lost or damaged files by retrieving them from available back-up tapes or from another disk device. See also "recovery."

restore application

A utility that replaces a damaged application or restores an older version of an application.

reuse

The concept of using a component from a source system in a target system after a software upgrade or platform migration.

RFS

remote file sharing

RM

resource manager

RMB

remote maintenance circuit card

roll back

To cancel changes to a database since the point at which changes were last committed.

rollback segment

A portion of the database that records actions that should be undone under certain circumstances. Rollback segments are used to provide transaction rollback, read consistency, and recovery.

RTS

request to send

S **SBC**

sub-band coding

screen pop

A method of delivering a screen of information to a telephone operator at the same time a telephone call is delivered. This is accomplished by a complex chain of tasks that include identifying the calling party number, using that information to access a local or remote ORACLE database, and pulling a "form" full of information from the database using an ORACLE database utility package.

script

The set of instructions for the Intuity CONVERSANT system to follow during a transaction.

Script Builder

An optional software package that provides a menu-oriented interface designed to assist in the development of custom voice response applications on the Intuity CONVERSANT system (see also "Voice@Work").

SCSI

small computer system interface

SDLC

synchronous data link control

SDN

software defined network

shared database table

A database table that is used in more than one application.

shared speech

Speech that is a part of more than one application.

shared speech pools

A parameter that allows the user of a voice application to share speech components with other applications.

SID

station identification

signal processor circuit card (AYC2, AYC2B, AYC2C, or AYC9d)

A speech processing circuit card that is an older, lower-capacity version of the speech and signal processor (SSP) circuit card (AYC43).

SIMMs

single inline memory modules

single inline memory modules

A method of containing random access memory (RAM) chips on narrow circuit card strips that attach directly to sockets on the CPU circuit card. Multiple SIMMs are sometimes installed on a single CPU circuit card.

single-threaded application

An application that runs on a single voice channel.

slave

A circuit card that depends on the TDM bus for clock information.

SLIP

serial line interface protocol

small computer system interface

A disk drive control technology in which a single SCSI adapter circuit card plugged into a PC slot is capable of controlling as many as seven different hard disks, optical disks, tape drives, etc.

SNA

systems network architecture

SNMP

simple network management protocol

software

The set or sets of programs that instruct the computer hardware to perform a task or series of tasks — for example, UnixWare software and the Intuity CONVERSANT system software.

software upgrade

The installation of a new version of software in which the existing platform and circuit cards are retained.

source system

The system from which you are upgrading (that is, your system as it exists *before* you upgrade).

speech and signal processor circuit card (AYC43)

The high-performance signal processing circuit card introduced in V6.0 capable of simultaneous support for various speech technologies.

speech energy

The amount of energy in an audio signal. Literally translated, it is the output level of the sound in every phonetic utterance.

speech envelope

The linear representation of voltage on a line. It reflects the sound wave amplitude at different intervals of time. This envelope can be plotted on a graph to represent the oscillation of an audio signal between the positive and negative extremes.

speech file

A file containing an encoded speech phrase.

speech filesystem

A collection of several talkfiles. The filesystem is organized into 16-Kbyte blocks for efficient management and retrieval of talkfiles.

speech modeling

The process of creating WholeWord speech recognition algorithms by collecting thousands of different speech samples of a single word and comparing them all to obtain a statistical average of the word. This average is then used by a WholeWord speech recognition program to recognize a single spoken word.

speech space

An area that contains all digitized speech used for playback in the applications loaded on the system.

speech phrase

A continuous speech segment encoded into a digital string.

speech recognition

The ability of the system to understand input from callers.

SPIP

signal processor interface process

SPPLIB

speech processing library

SQL

structured query language

SR

speech recognition

SSP

speech and signal processor circuit card (AYC43)

standard speech

The speech package available in several languages containing simple words and phrases produced by Lucent Technologies for use with the Intuity CONVERSANT system. This package includes digits, numbers, days of the week, and months, each spoken with initial, medial, and falling inflection. The speech is in digitized files stored on the hard disk to be used in voice prompts and messages to the caller. This feature is also called enhanced basic speech.

standard vocabulary

A standard package of simple word speech models provided by Lucent Technologies and used for WholeWord speech recognition. These phrases include the digits "zero" through "nine," "yes," "no," and "oh," or the equivalent words in a specific local language.

string

A contiguous sequence of characters treated as a unit. Strings are normally bounded by white spaces, tabs, or a character designated as a separator. A string value is a specified group of characters symbolized by a variable.

structured query language

A standard data programming language used with data storage and data query applications.

subword technology

A method of speech recognition used in FlexWord recognition that recognizes phonemes or parts of words. Compare to "WholeWord speech recognition."

switch

A software and hardware device that controls and directs voice and data traffic. A customer-based switch is known as a "private branch exchange."

switch hook

The device at the top of most telephones that is depressed when the handset is resting in the cradle (in other words, is *on hook*). The device is raised when the handset is picked up (in other words, when the telephone is *off hook*).

switch hook flash

A signaling technique in which the signal is originated by momentarily depressing the "switch hook."

switch interface administration

The component of the Intuity CONVERSANT system that enables you to define the interaction between the Intuity CONVERSANT system and switches by allowing you to establish and modify switch interface parameters and protocol options for both analog and digital interfaces.

switch network

Two or more interconnected telephone switching systems.

synchronous communication

A method of data transmission in which bits or characters are sent at regular time intervals, rather than being spaced by start and stop bits. Compare to "asynchronous communication."

SYS

UNIX system calls message class

sysgen

system generation

System 75

An advanced digital switch supporting up to 800 lines that provides voice and data communications for its users.

System 85

An advanced digital switch supporting up to 3000 lines that provides voice and data communications for its users.

system administrator

The person assigned the responsibility of monitoring all Intuity CONVERSANT system software processing, performing daily system operations and preventive maintenance, and troubleshooting errors as required.

system architecture

The manner in which the Intuity CONVERSANT system software is structured.

system message

An event or alarm generated by either the Intuity CONVERSANT system or end-user process.

system monitor

A component of the Intuity CONVERSANT system that tests to verify that each incoming telephone line and its associated Tip/Ring or T1 circuit card is functional. Through the "System Monitor" component, you are able to see displays of the Voice Channel and Host Session Monitors.

T

T1

A digital transmission link with a capacity of 1.544 Mbps.

table

See "database table."

tag image file format

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

talkfile

An ASCII file that contains the speech phrase tags and phrase tag numbers for all the phrases of a specific application. The speech phrases are organized and stored in groups. Each talkfile can contain up to 65,535 phrases, and the speech filesystem can contain multiple talkfiles.

talkoff

The process of a caller interrupting a prompt, so the prompt message stops playing.

target system

The system to which you are upgrading (that is, your system as you expect it to exist *after* you upgrade).

TAS

transaction assembler script

TCC

Technology Control Center

TCP/IP

transmission control protocol/internet protocol

TDM

time division multiplexing

TE

terminal emulator

telephone network connection

The point at which a telephone network connection terminates on an Intuity CONVERSANT
system. Supported telephone connections are Tip/Ring, T1, and E1.

terminal emulator

Software that allows a PC or UNIX process to look like a specific type of terminal. In particular, it allows the Intuity CONVERSANT system to temporarily transform itself into a "look alike" of an IBM 3270 terminal. In addition to providing full 3270 functionality, the terminal emulator enables you to transfer files to and from UNIX.

text-to-speech

An optional feature that allows an application to play US English speech directly from ASCII text by converting that text to synthesized speech. The text can be used for prompts or for text retrieved from a database or host, and can be spoken in an application with prerecorded speech. text-to-speech application development is supported through Voice@Work and Script Builder.

ThickNet

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

ThinNet

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

TIFF

tag image file format

time-division multiplex

A method of serving a number of simultaneous channels over a common transmission path by assigning the transmission path sequentially to the channels, with each assignment being for a discrete time interval.

Tip/Ring

Analog telecommunications using four-wire media.

token ring

A ring type of local area network that allows any station in the network to communicate with any other station.

trace

A command that can be used to monitor the execution of a script.

traffic

The flow of information or messages through a communications network for voice, data, or audio services.

transaction

The interactions (exchanges) between the caller and the voice response system. A transaction can involve one or more telephone network connections and voice responses from the Intuity CONVERSANT system. It can also involve one or more of the system optional features, such as speech recognition, 3270 host interface, FAX Actions, etc.

transaction assembler script

The computer program code that controls the application operating on the voice response system. The code can be produced from Voice@Work, Script Builder, or by writing directly in TAS code.

transaction state machine process

A multi-channel IRAPI application that runs applications controlled by TAS script code.

transient process

A process that is created dynamically only when needed.

TRIP

Tip/Ring interface process

troubleshooting

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

TSO

Technical Services Organization

TSO

time share operation

TSM

transaction state machine process

TTS

text-to-speech

TWIP

T1 interface process

U **UK**

United Kingdom

US

United States of America

UNIX Operating System

A multiuser, multitasking computer operating system originally developed by Lucent Technologies.

UNIX shell

The command language that provides a user interface to the UNIX operating system.

upgrade scenario

The particular combination of current hardware, software, application and target hardware, software, applications, etc.

usability

A measurement of how easy an application is for callers to use. The measurement is made by making observations and by asking questions. An application should have high usability to be successful.

USOC

universal service ordering code

UVL

unified voice library

V **VDC**

video display controller

vi editor

A screen editor used to create and change electronic files.

virtual channel

A channel that is not associated with an interface to the telephone network (Tip/Ring, T1, LSE1/LST1, or PRI). Virtual channels are intended to run "data-only" applications which do not interact with callers but may interact with DIPs. Voice or network functions (for example, coding or playing speech, call answer, origination, or transfer) will not work on a virtual channel. Virtual channel applications can be initiated only by a "virtual seizure" request to TSM from a DIP.

vocabulary

A collection of words that the Intuity CONVERSANT system is able to recognize using either WholeWord or FlexWord speech recognition.

vocabulary activation

The set of active vocabularies that define the words and wordlists known to the FlexWord recognizer.

vocabulary loading

The process of copying the vocabulary from the system where it was developed and adding it to the target system.

Voice@Work

> An optional software package that provides a graphical interface to assist in development of voice response applications on the Intuity CONVERSANT system (see also "Script Builder").

voice channel

> A channel that is associated with an interface to the telephone network (Tip/Ring, T1, E1, LSE1/LST1, or PRI). Any Intuity CONVERSANT system application can run on a voice channel. Voice channel applications can be initiated by being assigned to particular voice channels or dialed numbers to handle incoming calls or by a "soft seizure" request to TSM from a DIP or the **soft_szr** command.

voice processing co-marketer

> A company licensed to purchase voice processing equipment, such as the Intuity CONVERSANT system, to market and sell based on their own marketing strategies.

voice response output process

> A software process that transfers digitized speech between system hardware (for example, Tip/Ring and SSP circuit cards) and data storage devices (for example, hard disk, etc.)

voice response unit

A computer connected to a telephone network that can play messages to callers, recognize caller inputs, access and update a databases, and transfer and monitor calls.

voice system administration

The means by which you are able to administer both voice- and nonvoice-related aspects of the system.

VPC

voice processing co-marketer

VROP

voice response output process

VRU

voice response unit

W warning

An admonishment or advisory statement used in Intuity CONVERSANT system documentation to alert the user to the possibility of equipment damage.

WholeWord speech recognition

An optional feature, available in several languages, based on whole-word technology that can recognize the numbers one through zero, "yes", and "no" (the key words). This feature is reliable, regardless of the individual speaker. This feature can identify the key words when spoken in phrases with other words. A string of key words, called *connected digits*, can be recognized. During the prompt announcement, the caller can speak or use touch tones (or dial pulses, if available). See also "whole-word technology."

whole-word technology

The ability to recognize an entire word, rather than just the phoneme or a part of a word. Compare to "subword technology."

wink signal

An interruption of current to a busy lamp indicating that there is a line on hold.

word

A unique utterance understood by the recognizer.

wordlist

A set of words available for FlexWord recognition by an application during a Prompt & Collect action step.

word spotting

The ability to search through extraneous speech during a recognition.

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