AT&T
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CONVERSANT®
Voice Information System
Version 4.0 Change Description

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Acknowledgment

This document was prepared by the AT&T Technical Publications Department, Columbus OH.

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Version 4.0 Change Description

Version 4.0 Change Description

This document contains the following sections:

- CONVERSANT VIS Version 4.0 Product Description
- Exceptions for Version 4.0 — a listing of known problems and the recommended work-around for each problem
- Open Issues — a listing of general hints and work-arounds for different areas in the system (for example, Script Builder issues).
- Where to get help — information on using the maintenance book and reaching customer support services

CONVERSANT VIS Version 4.0 Product

The CONVERSANT VIS Version 4.0 product consists of software, hardware, and documentation, as follows:

- Version 4.0 software — Build 21, with the following exceptions:
  Build 21a — Script Builder, Graphical Speech Editor, Application package, SP driver
  Build 21b — Configuration program
  Build 21c — Speech Recognition - US English
- Version 4.0 hardware — The NEW hardware features tested by System Verification during V4.0 are as follows:
  CPU card D486DX/50-00-ATT Revision A BIOS 2.1
  CPU card D486SX/25-00-ATT Revision A BIOS 2.1
  FAX card TR114-I4L Version 5 Hardware, Version 1.3 Firmware
  FAX card TR112 Revision F Hardware and Firmware
  T/R card AYC16 IVP6-IU Series 0,1, Vintage 1, Revision 2
- Version 4.0 documentation — The NEW documentation for V4.0 is as follows:
  * Version 4.0 Change Description, 585-350-402
  * Version 4.0 Documentation Guide, 585-350-002
  * Version 4.0 Planning, 585-350-602
  * System Description, 585-350-207
  * Version 4.0 Upgrades, 585-350-110
  * Version 4.0 Software Installation, 585-350-111
  * Version 4.0 486 CPU Upgrade Kit for MAP/100 and MAP/100C, 585-350-211
  * Version 4.0 SCSI Disk Drive Upgrade Kit for MAP/100 and MAP/100C, 585-350-212
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  MAP/100 Voice Processing Hardware Installation, 585-350-107
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  * Script Builder, 585-350-704
  * Graphical Speech Editor, 585-350-705
  * WholeWord Speech Recognition, 585-350-813
  * FlexWord™ Speech Recognition, 585-350-814
  * FAX Attendant Co-residency, 585-350-210
  * Host Interface, 585-350-815
  * Call Classification, 585-350-811
  * Adjunct/Switch Application Interface, 585-350-812
  Asynchronous Host Toolkit for CONVERSANT VIS Version 4.0, 585-350-215
  * These titles begin with "CONVERSANT VIS"

Exceptions for Version 4.0

Listed on the following pages are the exceptions you must be aware of for this release of Version 4.0. An explanation of the impact and how to deal with it is provided for each item.

- **Problem description:**
  When using the **hsend** command, if the LU used for file transfer is not in the free or unassign state, you might see the LU changed from "file transfer" to "not available" and error messages HOST004 and HOST006 are logged.

  Work-around:
  Use the **hfree** command to ensure that the LU you are using to do file transfer is free. Then repeat the **hassign** command.

- **Problem description:**
  FST001 error message will sometimes appear even when you are not running Enhanced File Transfer.

  Work-around:
  If you are not using Enhanced File Transfer, and are getting FST001, perform the following steps:

  1. Edit the **/vs/data/fts_config** file by changing the POLL_START parameter to -1.
  2. Enter **stop_vs**
  3. Enter **start_vs**

- **Problem description:**
  The **tstop()** instruction will stop any voice activity on the channel (voice playback, voice coding, or text-to-speech). Past problems were caused by the fact that **tstop()** does not cause TSM to wait for a confirmation of PLAYSTOP (for voice playback) or CODECOMP (for voice coding) from VROP before continuing script execution.

  Work-around:
  The default behavior of the **tstop()** instruction may be changed by passing it an optional argument value of 1 (for example, **tstop(im.1)**). This action causes TSM to wait for voice activity on the channel to stop before resuming script execution. This new behavior makes **tstop()** a much more versatile and reliable instruction, but may also cause problems for scripts which depend too much on its default behavior of not waiting for voice activity to stop before resuming execution. Whenever possible the im.1 argument should be passed to **tstop()** to make it wait for voice activity to stop before script execution is resumed. Failure to wait during a **tstop()** could cause problems if the script executes other functions (for example, dialing digits) on the channel before voice activity actually stops.

Here are some ways that scripts may use **tstop()**:

1. If the interrupt routine using tstop() is only used to stop voice coding (by using the **event()** instruction to set interrupts to call this routine only while doing **vc()** and resetting it after the **vc()** to call a different routine at other times), then you may safely use the default **tstop()** or **tstop(im.0)** so that TSM will not cause the script to wait. If you then return from the interrupt routine without doing a wait (and making sure that r.0 is not negative when the return is done), the interrupted **vc()** instruction will be resumed and the correct return values will be assigned to all registers when the CODECOMP acknowlegdement comes.
2. If the interrupt routine is used more generally than above, **tstop(im.1)** should be used. After executing **tstop(im.1)**, the interrupt routine should first determine if **tstop()** stopped voice coding by checking the value of r.0. If r.0 is greater than 0, then it is a phrase number and it is voice coding that has been stopped. (Otherwise r.0 will be 0). If r.0 is greater than 0, then r.0, r.1 and r.2 should be loaded into global variables where the script may access them after the interrupt routine returns. Then, before returning, the interrupt routine should set r.0 to some relatively large negative value that is not used in r.0 by the **vc()** instruction (for example, -10). When the interrupt routine returns to the **vc()** instruction that was interrupted, the script should first test r.0 for the special negative value to see if it should get the register values from the global variables or from the registers directly.

- **Problem description:**
  The monochrome monitor type 324 draws some of the menus incorrectly when logged in from the console. The terminal type for a 324 monitor is usually set to "at386-m" or "AT386-M".

  You can check this setting by entering **echo $TERM** at the UNIX system prompt. When the terminal type is set to "at386-m" or "AT386-M", some of the form windows of the menus do not draw correctly. For example, when trying to fill out a form, you will not be able to see the input that you are typing. To correct this situation, you can change your terminal type by entering **TERM=*x*** where *x* is the terminal type you desire (at386, at386-m, AT386, etc.). When the terminal type is set to "at386" or "AT386", the borders of some of the menus will be invisible.

  Work-around:
  Set the terminal type to either "at386" or "AT386" when working in these form menus and note that some of the borders will not be drawn for the windows.

- **Problem description:**
  Playback of FlexWord™ recognition result using Text-to-speech (TTS) may sound incorrect. In certain cases, when using TTS to confirm the FlexWord recognition results, the TTS pronunciation may sound incorrect.

This problem will be most noticeable in cases where the word being recognized is a name. This phenomenon does not reflect on the specific behavior of the FlexWord recognizer. It arises due to the fact that the FlexWord recognizer works with a specific phonetic representation of each word that is recognizes, whereas the TTS recognizer works with a simple dictionary pronunciation plus a set of rules to determine phonetic representation.

Thus, the FlexWord recognizer can more accurately recognize words, but when TTS is used to speak back the result, the word may be mispronounced.

Work-around:
Record the names and use phrase playback instead of TTS to verify the FlexWord result.

- **Problem description:**
  If a Script Builder application has a variable that is defined to be greater than 127, the application space may get scribbled when the application executes a dbase call.

  Work-around:
  Do not define Script Builder variable greater than 127.

- **Problem description:**
  The command, **into_et**, used in VIS software generics prior to V3.1, can only be used to generate "old" (pre-V3.1 generic) logging messages in V3.1 and later generics. An old message is one of those messages defined in the header files located in */attmsgipc/etmsgs/*_et.h*. **into_et** will respond either to the explicit message number or mnemonic referred to in these header files. "into_et" CANNOT be used to generate "new" logging messages. A "new" message is one of those defined in the header files located in /usr/spool/log/head.

  Work-around:
  If it is necessary to have information appear in the logging files generated in V3.1 and later generics, the command **logit** will allow you to place arbitrary text in the logging files, with a specified priority, under a GEN002 message ID.

  If it is necessary to generate an explicit logging message, the only command currently available is **logTest**. While **logTest** can generate any valid logging message, it operates outside of the system which controls the normal distribution of logging messages and the priorities assigned to them.

It is the responsibility of the user to convert the symbolic destinations assigned to a specific message in the file */usr/spool/log/msgDst.rules* and defined in the file */usr/spool/log/Config* into a numeric bit mask and to supply the priority assigned to the message from **msgDst.rules** as well. As a test tool, **logTest** is capable of disdirecting and misassigning the priority of a message as well as generating "valid" and "legal" messages. Users of **logTest** need to be aware of these "test" capabilities.

Descriptions of the operation of **into_et**, **logit**, and **logTest** are available in *CONVERSANT VIS Version 4.0 Command Reference*, 585-350-209.

- **Problem description:**
  Converse Vector Step (CVS) fails on Line-Side T1 lines. Any application you might have that requires user input (either Text-to-speech or speech) from callers will not work. The application will not "hear" anything. The CVS TTS, on the other hand, will be received and transmitted properly.

  Work-around:
  If you have Definity G3V2 switch and are installing CONVERSANT VIS Version 4.0 with DS-1 and will be using CVS, you must verify the G3V2 switch load prior to implementing the CVS. Failures occur in feature operation unless the G3V2 switch running load is 04.2.0.096 or greater.

  G3V2 switch running load 04.2.0.096 (or greater) is currently only available through the AT&T Bell Labs-G3 field support organization. The problem will be addressed in the G3V2 release scheduled for general availability in late November, 1993.

  If you are implementing CVS prior to November, 1993, a switch running load 04.2.0.096 (or greater) may be obtained by calling your field support organization.

- **Problem description:**
  When some layer(s) on the host side goes down it cause that some LUs to get stuck in the recovery state. The some LUs can't communicate with the host. The terminal emulator shows the LU in a blank screen with
  "4O" on the lower left hand corner
  and
  "TOPSSEA" on the upper left hand corner.
  If you press Enter, the system responds with X(<) indefinitely, meaning that it's waiting for the host to respond.

  Work-around:

  1. Press Esc - s (sysreq) twice to push the LU into sending and getting screens as usual.
  2. Log out LUs before taking the host down and log them back when host is up.

- **Problem description:**
  In very rare cases the system loses its timing messages. This loss results in failure of the interprocess communication (message queue) on the system.

  Work-around:
  Reboot the system by pressing the RESET button on the front of the platform.

- **Problem description:**
  When using the IPCI card for the ASAI application with interrupt IRQ3, it may cause some serious system interruptions that lead to mishandling of the interrupts for the card that is using the IRQ7. Typically, the card using IRQ7 is the Host card when used in connection with the ASAI application. Once the problem occurs the Host driver timeout is reported and the following alarm will be reported:
  ** Mon Aug 16 13:38:54 1993 DIP0
  HOST004 HO CA 0 Failed to access the card on session -1. Reason: Bad response from card (error 166).

  Work-around:
  Use a different interrupt, instead of IRQ7, for the IPCI card.

- **Problem description:**
  The installation procedure for the Version 4.0 Application Software prompts for enabling the second serial port, but fails to do it. No errors are reported.

  Work-around:

  1. Edit the file /etc/conf/sdevice.d/asy, and remove the line:

     asy Y 1 7 1 3 2f8 2ff 0 0

  2. Write the file and continue to the next step. If the line does not exist, exit the editor and continue to the next step.
  3. Enter **face** at the UNIX system prompt.
  4. When the system displays the FACE menu, select System Administration.
  5. Select Peripherals Setup.
  6. Select Enable/Disable Second Serial Port
  7. Select Enable Serial Port. The kernel will be rebuilt. The system must now be rebooted. Depress and release the RESET button on your platform.
  8. After rebooting the system, enter **face**.
  9. When the system displays the FACE screen, select System Administration.

10. Select Peripherals Setup.
11. Select Serial Ports Setup. The screen should be updated as follows:

    Serial Port Number:02 (/dev/tty01) _____
    Device Type:Terminal _____
    Device Speed:9600

    Note that "Device Speed" and "Device Type" will be installation dependent.

- **Problem description:**
  Prompt & Collect not consistent handling ASR resource cases. This issue addresses a change to the way the Script-Builder Prompt & Collect statement handles the situation where the system does not have speech recognition resources available.

  In the Versions 2.1, 2.1.1, 3.0, and 3.0.1 releases the Prompt & Collect action statement handles the "Recognition Resource Not Available" event by taking the "Too Few Digits" case on page 3 of the Prompt & Collect statement.

  In the Versions 3.1 and 3.1.1 releases the same Prompt & Collect statement handles the "Recognition Resource Not Available" situation by going to the "Initial Timeout" case on the third page of the Prompt & Collect definition.

  Work-around:
  The only workaround for this change to the Prompt & Collect statement is to check a speech recognition script to ensure that the application handles the various cases within the Prompt & Collect as described above.

  Therefore, you need to be aware that speech recognition scripts may require modifications when a system upgrades from pre-V3.1 to V3.1 or V3.1.1.

- **Problem Description:**
  The Prompt and Collect window of Script Builder has a problem in page 3 of the Prompt and Collect definition. If Text to Speech is used in the Voice Response window of Confirm, Script Builder does not append a space to the end of each line of text as it does the Prompt Window of page 1. This missing space causes problems with the speaking of text because text from successive lines are running together.

  Work-around:
  Edit the **.t** file and manually add the necessary spaces to the text.

- **Problem Description:**
  When using the **stop_vs** command, the 60 second time allotment given by sb_logoff does not seem to be enough time.

  Work-around:
  Log off all LUs using the **hlogout** command and wait until all LUs are logged-out before issuing stopping the voice system. For information on the **hlogout** command, see *CONVERSANT VIS Version 4.0 Command Reference* , 585-350-209.

- **Problem description:**
  The system login prompt or command line prompt does not appear when the system is rebooted or stopped and started.

  Work-around:
  Once the message `The voice system is ready` is printed to the console, additional messages regarding file system checks and voice system status are directed to the console. To have the command line prompt or system login reappear, simply press ENTER. When the system reports that it is ready, that means that the system initialization has started. It requires some additional time before it can take calls.

- **Problem description:**
  The ORACLE Version 5.0 'imp' and 'exp' utilities fail to recognize end of medium for input and output files. This problem will be seen if you are upgrading from Version 2.1 to 3.1.

  Work-around:
  Check the amount of data you need to back up first. If it is more than 1.4 MB, it will not fit on one floppy disk. In this case, use either a cartridge tape or back up this disk to a UNIX file.

- **Problem description:**
  Both the boot floppy and a bootable SCSI disk print the following messages when booting:

  HA01 SCSI subsystem enabled (920909.1600)

  WARNING: SCSI: HA 0 DMA channel setting mismatch
  Board set at DMA channel 5.
  System configured at DMA channel 6.
  Attempting to use board settings.

  Work-around:
  This is a normal occurrence which does NOT cause a problem, so ignore this message.

- **Problem description:**
  Setting "reserve LU" Script Builder parameter to "yes" then changing this parameter to "no" will not automatically prevent the script from executing HOST_DOWN or HOST_UP labels of the script.

  This problem will show up in the following scenario:

  1. Develop an application with the Reserve LU parameter set to yes. The transaction component will automatically generate HOST_UP and HOST_DOWN labels.
  2. Develop the transaction as follows:

     ```
       Answer Phone
     HOST_DOWN:
       Quit
     HOST_UP:
       (communicate to host)
     ```

  3. Verify and install the script.
  4. Change the Reserve LU parameter to no.
  5. Verify and install the script.

  Work-around:
  If the reserve LU parameter is changed from yes to no, remove the HOST_DOWN portion of the script and the HOST_DOWN and HOST_UP labels.

- **Problem description:**
  Multiple file transfers will not work from initial file transfer menu. A message appears in the top left hand corner of the screen ": is not an identifier", and the File Transfer window will not come up. This happens every time you try to bring the menu up with this session.

  Work-around:
  Exit out of **sb_te**, then get right back in on this session.

- **Problem description:**
  AUDIX® Voice Power(m users may hear incorrect prompts if the "Pause for Touch Tone Input" parameter is changed to 4 from default value of 7. For example, when an AVP user is listening to a Voice Mail message, and presses "2" to rewind the message, they should hear:

  "Rewound. To play, press 3. To step back again, press 2."

  Instead, they hear:

  "Rewound. To play, press 3. To step back again. To listen, press 0. To respond or forward, press 1. To delete, press star D. To skip, press pound. To restart at the Activity Menu, press star R."

  Work-around:
  Give the "Pause for Touch Tone Input" parameter a higher value: 7 or higher. This is done via the AVP "System Parameter Administration" screen.

- **Problem description:**
  When CHOICES is selected under the host link, BSC option one of the available choices listed is EBCIDIC. This should be EBCDIC. If the EBCIDIC choice is made, it will accept it in the field, but fail it when BSC is attempted.

  Work-around:
  For the host links, under the BSC option, just type E to select the EBCDIC choice, do not use the CHOICES.

- **Problem description:**
  CCA feature may not work properly when used on an AYC9 SP card.

  Work-around:
  Always run CCA on AYC2B/Cs and not AYC9s. AYC9 shows up as SP-8 from display card command.

- **Problem description:**
  Sometimes when installing the Form Filler Plus package the following error message may appear on the screen and the installation will be terminated:
  "This package must use talkfile 9. However, there are phrases in talkfile 9. Please remove them".

  Work-around:
  Make sure that the talkfile 9 is empty by using "list phrase all in talkfile 9" and install the package again. Ensure that the voice system is started prior to installing this package.

- **Problem description:**
  Administration commands (remove, restore, diagnose) may not run properly when issued simultaneously.

  Work-around:
  Present these commands from being issued simultaneously by more than one user.

- **Problem description:**
  Restoring SCSI system using boot recovery floppy fails when the user elects not to repartition the disk.

  Work-around:
  Repartition the disk when recovering a SCSI system book recovery floppy. Recommended partition values are listed in the *CONVERSANT Voice Information System Version 4.0 Software Installation*, 585-350-111, book.

- **Problem description:**
  Restoring an application with a new name does not restore properly. The Voice System Administration menu on a system without Script Builder installed allows "Script builder applications" execution then allows the execution of "Add new applications" names then allows the restoration of a properly backed up SB script. Restoration of a script with a new name, however, will not "install" properly (response warns that the script has not been "verified" and aborts the installation, verification without SB installed is not possible).

  Work-around:
  Use the same name when restoring an application.

- **Problem description:**
  Multiple T/R cards on the same bus, but configured differently (one TALK, one TDM) may experience playback interruptions. For example:

  TR0 : channels 0-5 on TDM bus
  TR1 : channels 6-11 in TALK
  SP0 : for TR0

  Work-around:
  Keep T/R cards configured the same, TALK or TDM.

- **Problem description:**
  When fields from database reads are included in the call data events, Script Builder converts them to integers automatically. For large numbers (for example, 10 digit telephone numbers) this is a problem.

  Work-around:
  Copy the database variable to a script builder variable, which is defined as a sufficiently large character string, then use this variable as the call data event.

- **Problem description:**
  The date base fields created outside of Script Builder cannot be accessed using Script Builder.

  Work-around:
  If a data base field is created outside of Script Builder, run **stop_vs** followed by **start_vs** so that it can be accessed using Script Builder.

- **Problem Description:**
  CONVERSANT VIS Script Builder supports the DATE and TIME data type. ORACLE does not differentiate DATE and TIME. Instead, it only has a DATE data type to contain the composite information of DATE and TIME. A mapping has to be made between the Script Builder DATE and TIME datatype to the ORACLE DATE data type. The mapping is done in an internal table LDBCOLS created in the database. All tables created through Script Builder need not worry about the mapping since the update of LDBCOLS table and the mapping are taken of by the VIS software. However, if the table containing DATE datatype field(s) is not created through Script Builder,
  you need to update the LDBCOLS table manually.
  The LDBCOLS table is automatically created on any CONVERSANT VIS machine and on any non-VIS remote machine once the remote machine is connected by a VIS machine through the VIS Remote Database Access feature.

  Work-around:
  The following are steps to create the mapping environment:

  1. On the machine where the table exists, enter **sqlplus sti/sti** to invoke the SQL*Plus utility.
  2. After the SQL*Plus prompt, enter **insert into ldbcols values ('DATE|TIME','TABLE_NAME', 'FIELD_NAME');**

     where:
     - DATE|TIME is either DATE or TIME. You can only store either DATE or TIME information in the ORACLE DATE field.
     - TABLE_NAME is the table name.
     - FIELD_NAME is a the field name of the table that is ORACLE DATE data type.

     
     NOTE:
     ALL letters quoted in the single quote here are case sensitive. You must enter upper case DATE or TIME for the first value field. The TABLE_NAME and FIELD_NAME must be entered exactly in upper or lower case as the table and field are named.

     If the table has more than one DATE/TIME data type field, the command need to be typed for each of the DATE/TIME data type fields. In such a case, the TABLE_NAME field will be the same in each LDBCOLS entry, the DATE|TIME field may be different, and the FIELD_NAME must be different.

  3. Enter **quit;** to exit the SQL*Plus utility.

4. Stop and start the Voice System to make sure the database DIP is catching up with the new entry you just added in LDBCOLS table. Anyway, if the Script Builder cannot display the correct define of this DATE/TIME data type field, it is a good indication that a stop/start the Voice System procedure should be performed.

You need to perform the above procedure once; the environment is set up permanently.

Open Issues

For easier access, information is presented in the following categories:

- Security issues
  - — Toll Fraud - Unauthorized access to long distance facilities
  - — Passwords
- Installation and configuration issues
- Operation issues
- Host Package issues
- Script Builder issues
- Speech Production Kit issues
- Adjunct/Switch Application Interface issues
- Text-to-Speech issues
- Call Classification Analysis issues
- Speech Recognition issues
- SCSI and SCSI Mirroring issues
- CompuLert Issues
- Primary Rate Interface Issues
- Advanced script development issues

In addition to this section on helpful hints and exceptions, there is an online bulletin board to that provides up-to-date helpful hints and exceptions. This bulletin board is called Access. To subscribe to Access call (800) 242-6005 and ask for department 186.

Security Issues

Please be aware of the following CONVERSANT VIS security issues:

Toll Fraud Issues

Corporate security experts report that toll fraud (that is, the unauthorized access to long distance facilities) attempts through voice messaging systems and automated attendant systems have grown dramatically. Therefore, it is possible that some CONVERSANT VIS applications may lend themselves to toll fraud. **THIS IS COMPLETELY UNDER THE CONTROL OF THE APPLICATION DEVELOPER.** While AT&T is not responsible for the billing resulting from this toll fraud, the following information is provided to assist you in dealing with this problem.

Toll fraud is possible when the application allows the incoming caller to make a network connection with another person. Thus, bridging to an outbound call, call transfer, or 3-way-conferencing would be involved.

Several preventive measures can be used to avoid toll fraud. There are tradeoffs in each of these, and the method(s) selected will depend on the application. Preventive measures to consider are:

- Requiring callers to use passwords for applications that are susceptible to toll fraud.
- Having the application verify that long distance numbers are not being requested or verify that only permitted numbers are requested.
- Using appropriate switch translation restrictions. Please contact the AT&T Call Center Helpline at 1-800-344-9670 for switch-specific help.

Passwords

It is important that you protect your system from unauthorized users.

It is *imparitive* that you choose cryptic passwords for all passwords in your system, but especially for root, install, and oracle. All passwords must follow these general guidelines (DO NOT use the examples in the parenthesis!):

- Use at least 6 digits in all passwords
- Use and mix upper and lower case letters (ABcdEf)
- Use numbers (A1BcdE)
- Use punctuation marks (A1Bcd!)

An unauthorized user will try to gain access to your system by using common *known and unsecure* passwords. For this reason DO NOT use the following for passwords:

- common english words (like "system")
- your company name
- the word "root"
- A carriage return, <Enter>
- your machine name
- your name

NOTE:
It is encouraged that you install and use external passwords for modems.

To keep related information together with an existing CONVERSANT book, place the following pages with *CONVERSANT Voice Information System Version 4.0 Software Installation*, 585-350-111.

UNIX Operating System Issues

- When the CONVERSANT VIS interfaces with a non-AT&T switch (PBX or ACD), fine-tuning is sometimes required to maximize performance. If assistance is needed when using a non-AT&T switch, please obtain the tuning parameters for your switch from your switch administrator and then call the AT&T Technical Support Center at 1-800-344-9670.
- You can enter the **vdf** command (please refer to the **vdf** manual page in *CONVERSANT VIS Version 4.0 Command Reference*, 585-350-209) at the UNIX system prompt to check the total number of blocks the system thinks is available for speech in each speech file system.

To keep related information together with an existing CONVERSANT book, place the following pages with the hardware installation book for your platform.

Configuration Issues

- The Configuration Program assumes that the card configuration is capable of supporting customer applications. It does not warn the user of possible hardware resource limitations. For example, a 1SP-2CMP system can only support 12 channels of speech recognition. If the user has 24 network interface channels (T1 channels or TR channels), the Configuration Program will not "warn" the user that speech recognition resources could run out. A 24 channel system with 1SP-2CMP is fully operational given proper application management. If resource conflicts are encountered, contact AT&T Customer Support to increase configuration capacity.
- When an SP card is connected to exactly one Companion Board, the Companion Board must be card 0 (as determined by the DIP switch settings on the card). If the Companion Board is card 1, the system will believe the SP has two Companion Boards to use, and the SP will not be able to perform correctly. This will be evident by instances of messages like the following in the Event Log:

```
SPIP001  SP CA <equip #> Speechbreak detected on channel <chan #>.
         Cause Code: <cause #>.
```

  - Message priority:

    None.

  - Description and effect:

    A speech break has been detected during a coding or voice playback session involving an SP 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 SP card, or the SP card may be broken. The Cause Code field of the message may be used to further isolate the cause. If the Cause Code field is negative, the problem is caused by the companion card(s).

    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.
```

(Please note that this message can be caused by other configuration/load problems.) As expected, if the SP has two Companion cards, they should be cards 0 and 1.

- The AYC9 SP card is to be used for Text-To-Speech only. Attempts to use this card for any other SP functionality may disrupt the normal working of the VIS.

To keep related information together with an existing CONVERSANT book, place the following pages with the hardware installation book for your platform.

Hardware Issues

- Occasionally, when CTRL - ALT - DEL keystroke sequence is entered at the `Reboot the System Now` prompt, the system will not respond to the sequence and will not reboot. If this happens, simply depress and release the reset switch to reboot the system.
- Occasionally, if the system is turned on after having been off (power cycled), the status LEDs on the front of the unit will come on properly, but the system will fail to enter the Power On Self Test (POST). (Allow at least 10 seconds for the system to enter POST after turning power on). If this happens, simply depress and release the reset switch to re-initiate system initialization.
- When the system comes up from power on or reset, the CPU BIOS startup routines set the keyboard's character repeat timing to be very fast by sending a parameter to the keyboard. (The character repeat timing determines how fast the keyboard will send out characters when a single key is depressed and held). If the keyboard is unplugged after the operating system is up, then plugged back in (or if the keyboard is plugged in after the system was booted without it plugged in), the keyboard's character repeat timing is reset to default (slow) values. This creates the appearance that the CPU is running slow. In fact, only the keyboard repeat parameter is slow. This can be annoying, especially in text editing situations.

  Unfortunately, this is a conventional trait of all PC-AT CPUs. The only way to make the character repeat timing fast again is to shutdown the operating system and reboot with the keyboard plugged in.

To keep related information together with an existing CONVERSANT book, place the following pages with *CONVERSANT VIS Version 4.0 Maintenance*, 585-350-112.

Maintenance Issues

- The following information is an additional troubleshooting guideline to be added to Chapter 2 of the maintenance book:

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

- The following is a correction to MTC003 system message found in Chapter 3 of the maintenance book:

  In the second paragraph of the description and effect statement for message MTC003, the first sentence needs corrected.

  Old sentence:

  If the identified card is the only SP card on the system and was providing speech playback functionality for the T/R cards on the system, the voice system will automatically change the equipment option of the T/R cards from "tdm" to "talk".

New sentence:

If the identified card is the only SP card on the system that was providing speech playback functionality for the T/R cards, the equipment option of the T/R cards must be manually changed from "tdm" to "talk".

- The following is a correction to DB015 system message found in Chapter 3 of the maintenance book:

  The first sentence of the description and effect statement for message DB015 is incorrect. A DB015 message usually follows DB014 messages. It is *not* followed by DB014 messages.

  Old sentence:

  This error is usually followed by a few occurrences of DB014 error messages.

  New sentence:

  This error usually follows a few occurrences of DB014 error messages.

- When a card is automatically put into the **BROKEN** state, and then a stop_vs and start_vs occurs, if the card passes TDM diagnostics it will be placed **MANOOS.** The card should be diagnosed to ensure that it is functional. If the card passes diagnostics, it may be restored to **INSERV**.

- There has been some confusion regarding components on the DataTalker* EMULEX synchronous card (for 3270 host interfaces). Some of the synchronous interface cards are delivered with three components in the upper left-hand corner missing. These parts are a FIFO(Z20), a PAL(Z26), and a 7416 TTL part(Z25), and they are not used for CONVERSANT VIS applications. Therefore, the card may have these components or an empty socket. Both card versions work the same for CONVERSANT VIS applications.

* Registered trademark of CLEO Communications

To keep related information together with an existing CONVERSANT book, place the following pages with *CONVERSANT VIS Version 4.0 Operations*, 585-350-703.

Operation Issues

- After renumbering the voice channels (by selecting the *Renumber Voice Channels* option in the "System Control" window), you need to return to the "CONVERSANT VIS Version 4.0" window before doing any other administration of the CONVERSANT VIS. Otherwise, you may see error messages of various types. For example, assigning a function to an SP may result in the following error message:

  Invalid card number(s) found.
  The card should be between 0 and <some negative number>.

  These results do not occur in all situations, and the situation is corrected by returning to the "CONVERSANT VIS Version 4.0" window.

- Diagnostics on T1 cards take approximately 3 minutes for each card. The system may appear to be idle during this period; however, diagnostics are being performed on the designated card(s).

- It is recommended that you not take individual T1 channels out of service. If you must take a channel out of service, make the whole card MANOOS.

  If the entire card is taken out of service, calls will no longer be routed to the card from the switch. If some channels on the T1 card are INSERV and others are MANOOS, calls will be still routed to all channels on the card, based on the switches routing algorithm. If the called channel is MANOOS, the caller will hear busy; if the called channel is INSERV, the caller will be processed by the VIS.

  If a T1 card with some channels INSERV and some channels MANOOS is diagnosed, the behavior of the card changes. After diagnostics, callers connected to the MANOOS T1 channels will hear "ring no answer". If, at VIS start up (*start_vs*), a T1 card is partially INSERV, the INSERV channels will process calls correctly while the MANOOS channels will provide "ring- no answer".

- In some instances when the **remove**, **restore**, or **diagnose** commands are aborted, the system may not respond immediately. This is attributed to the system attempting to return to the hardware states which existed prior to the **remove**, **restore**, or **diagnose** commands being issued. The system is not idle but is processing the abort request.

  Continuous, rapid aborts may result in the system not being able to successfully return to the original hardware states. If this occurs diagnose the appropriate card(s) with the "immediate" option enabled.

- Be careful not to create multiple, simultaneous User Interface windows. This could severely impact system performance.

  Example of what to avoid:

  If you have a VIS window displayed and you press the *FRM-MGMT* function key to access the UNIX system prompt, then from the UNIX system prompt you enter **cvis_menu** to display another user interface window, and finally proceed to press *FRM-MGMT* to access the UNIX system prompt again, you create several simultaneous layers of software and this cycle ultimately locks up the system.

- The REMOVE option in the "Application Administration" window removes only the data and fields of a local database table. After a remove of this type, the table still exists and is undefined, and this may be a cause of confusion.

  You must access Script Builder to delete the table name from the database. This is done via the "Table Names" window.

- Although the *CONVERSANT VIS Version 4.0 Operations*, 585-350-703, document indicates that a *Traffic Report* can be issued for today's data, the voice system does not provide data on activity after the most recently passed midnight.

- Occasionally, the *Call Data Detail* report will show the call duration to be one second less than the actual time. The *Call Data Summary* report call hold time information is correct.

- Occasionally, there will be two entries in the *Traffic Summary* and *Call Data Summary* reports for the hour between 12:00 AM and 1:00 AM. When this occurs, the calls are actually being summarized twice, and if the first duplicate record of each report is ignored, the remaining information is correct.

- In the unlikely event that the extension assignment of the ACD type domain that has 'VIS' service assigned must be changed, first LOGOUT all ASAI channels in the **Channel Administration** window. After assigning the new extension to the domain, then LOGIN the channels again. If this procedure is not followed, and the channels are already logged in under the old split extension, they will remain logged in to the old extension until the system is restarted or the channels are logged out and then logged back in.

Host Interface Issues

- The following is a Host troubleshooting guideline to be added to Chapter 4 of *CONVERSANT VIS Host Interface*, 585-350-815:

Trouble Indication	Corrective Action
VIS could not recognize the Host screen	Make sure the identifiers from the host do not contain oversized characters and/or change the identifier being used.

- Your SNA address could be configured incorrectly if you do not enter the SNA address in decimal. The field reports that you can enter this address as Hex, but the system will only accept decimal. Make sure you make this entry in decimal.
- CLEO's file transfer menu has the following problems:
  - — Doing file transfer in batch mode does not work for LUs that are greater than 0.
- When defining the host interface in Script Builder, you are allowed to administer the parameter "LU_AVAIL". This defines the length of time in seconds that a script will wait for an LU to become available.

NOTE:
Large LU_AVAIL values are not recommended. LU_AVAIL defines the amount of time a caller will hear ring-no-answer before the script that does not have an LU answers the call. If a script answers the call and does not have an LU, it is up to the application to handle the exception condition gracefully.

To keep related information together with an existing CONVERSANT book, place the following pages with *CONVERSANT VIS Version 4.0 Application Development*, 585-350-208.

Application Development Issues

- For Mexico–CONVERSANT VIS 4.0 PBX/PSTN Switch Interface Package users
  and Hong Kong–CONVERSANT VIS 4.0 PBX/PSTN Switch Interface Package users:

  When the CONVERSANT VIS is connected to switches that provide unconventional disconnect indicators and dial-tones, the following "Events" must be added to the transaction at the script level:

  - ERINGTONE–ring tone event. This event is triggered when the "ring tone" is detected on a channel. The register value passed to the event subroutine is ERINGTONE for r.0. If no event subroutine is set, the script exits as if the Quit instruction was encountered.
  - EBUSYTONE–busy tone event. This event is triggered when the "busy tone" is detected on a channel. The register value passed to the event subroutine is EBUSYTONE for r.0. If no event subroutine is set, the script exits as if the Quit instruction was encountered.
  - REORDERTONEorder tone event. This event is triggered when the "reorder tone" is detected on a channel. The register value passed to the event subroutine is REORDERTONE for r.0. If no event subroutine is set, the script exits as if the Quit instruction was encountered.

  Each of these 3 tones trigger the EHANGUP event. These events are typically disabled unless the VIS system used one of the configuration listed above (Mexico and Hong Kong).

- If the SP is removed from service ungracefully, it is possible that the SP's capacity will be degraded. Repeated degradations could lead to the complete inability of the SP to handle calls.

  There are three situations which will bring the SP down ungracefully. One situation results from the SP dying and automatically being taken out of service by the VIS. This is very rare and easily detected. The second two situations are a result of specific administrative actions. These actions are (1) changing an SP card's state with the immediate option set to yes and (2) diagnosing an SP card with the immediate option set to yes.

- Systems with under-allocated disk space for the Call Data Handler (CDH) database stop writing call records when the space is full. However, calls will continue to be processed. Administrators should carefully size this space per instructions found in the *CONVERSANT VIS Version 4.0 Operations* , 585-350-703, document, Appendix C, "Database

Environment." An indication that the database may be full is a significant increase is the response time to retrieve Call Data reports.

When the database is full, the message "Call database is full" is generated to the **Message Log Report** window with no other explicit alarming. Space can be re-allocated by following the instructions provided in the operations book, Appendix C, "Database Environment."

To keep related information together with an existing CONVERSANT book, place the following pages with *CONVERSANT Voice Information System Script Builder User Guide, 585-350-702*.

Script Builder Issues

- When defining or removing database tables (found in Chapter 6 of the *CONVERSANT Voice Information System Script Builder User Guide, 585-350-702), keep the following in mind:*

  A database table that is currently locked by some other process cannot be redefined. The following message displays on screen to indicate the table is currently locked:

  ```
  Alter failed...Can't drop original table.
  ```

  Make sure that the table is not currently accessed by other processes before redefining the table. If the problem persists, you may want to restart the database to clear the condition. The database may keep a table locked inappropriately. Restarting the database (where the table resides) may clear the condition.

- A new return value has been added for the $MATCH_FOUND field in the READ_TABLE external action (see "Defining Read Table" in Chapter 8 of the Script Builder book for information on $MATCH_FOUND). If the database DIP experiences difficulties and drops its connection with the database, a new return value of -4 will appear in the $MATCH_FOUND field.

- It is possible to enter Script Builder when the voice system is not running. This may result in strange behavior. Local databases will appear undefined. Problems may be encountered attempting to perform speech administration. Before escalating Script Builder problems, please verify that the voice system is running by entering **who -r**. Verify that the system is at run-level **4**.

- The phrases billion and trillion have been added to the standard speech file. However, these numbers are too large to be spoken with the tnum() instruction. Users who wish to speak such large numbers may start with an ascii string, parse the string (getting the amounts of billions and trillions as substrings), then convert the three remaining substrings to integer values and speak them with the tnum() instruction, inserting a talk() instruction with the phrase for trillion or billion where appropriate.

- When removing a service from the system with the "Script Builder Applications" window, first make sure that the service is not being referenced in the "Assign Service to Called Number" window. This information is not automatically checked before the service is removed, and the system will complain about an invalid service if you try to unassign the removed service from a called number (using the "Assign Service to Called Number" window) when the service is no longer in the

VIS.

If you find yourself in this situation, you can add the service back to the system, unassign the service from called numbers, then remove the service again.

- When defining the *To Initiate Transfer* field in the "Analog Interfaces" window, the sequence `FW9W`, *Flash - Wait for dial tone - Dial 9 - Wait for dial tone*, will not dial the "9" as specified. The work around is to perform a `FP9W`, *Flash - Pause for 3 seconds - Dial 9 - Wait for dial tone*.

  NOTE:
  This work around does not wait for dial tone before dialing the "9". It blindly dials the 9 after the pause is complete.

- If it is the intent to use A_Tran to transfer to tie trunks, the destination number should be specified using the following format:

  TXXXX#

  (Where 'T' is the Trunk Access Code (TAC), 'XXXX' is the number you wish to dial and '#' must be used to terminate the dialed number).

  For example, to transfer a call to number '1234' on a tie trunk with trunk Access code of '70', specify the Destination Number in A_Tran as '701234#'. Note that the total number of characters cannot exceed 10.

- The *Transfer Call* action expects only one reconnect sequence for reconnect on busy. This may not be the situation if calls are transferred to stations both internal and external to a local PBX (Public Branch Exchange, or switch), although many times the reconnect sequence is the same for both. If your application needs multiple reconnect sequences and assistance is needed, contact the AT&T Call Center Helpline at 1-800-344-9670.

- Spoken output for time fields, date fields, or number fields in any language other than English are not supported. The reason for this is that the rules for concatenating numbers varies depending on the language. The standard speech currently includes number 1-20, 30, 40, 50, 60, 70, 80, 90, 100, 1000, and 10000. The method used supports English only to form numbers by combining these standard numbers.

- The VIS will not allow the use of a primary and secondary speech pool if the primary speech pool is empty. Script Builder will fail to install the application and the **tas** command (see the *CONVERSANT VIS Version 4.0 Application Development*, 585-350-208, book) will indicate it can't find the phrase by printing a message similar to the following:

  File "chantst.t", Line 24: ' talk ("enter four touch tone digits")'
  'Too few arguments to 'talk''

- In the Prompt and Collect touch tone terminator field, it is possible to activate touch tone termination with a "yes" without specifying the touch tone termination key. This will result in the default termination key of "#" being used.
- When selecting the Action in the third page (Analyze Input) of the *Prompt and Collect* Script Builder action step, the *Continue* choice can be selected only through the use of the "CHOICES" key.
- Remote access (for example, AT&T 605-BCT) to the "Speech Administration" window can result in a garbled screen display. This problem occurs less frequently at faster line speeds. Use the system console to avoid this problem.
- When re-recording a phrase that already exists, applications that are currently playing the phrase will be adversely affected. This will only occur when a phrase is simultaneously being recorded by one party and played by an application. The listening party (that is, the caller) will hear garbage at the moment the phrase is installed. Future playbacks of the new phrase will not be affected.

  NOTE:
  This should be considered by applications that play long messages that are re-recorded on a regular basis (that is, applications that provide up-to-date news and information bits).

- Local database date field information must be entered using the *mmddyyyy* format (month, day, year). When records are read from the local database table by the field date, the information must be retrieved using the *yyyymmdd* format (year, month, day).

  Also, when editing a local database for a date field, the acceptable format is *mm/dd/yy* or *mm/dd/yyyy*. However, when the date is entered as *mm/dd/yy* and saved, it appears in the *mm/dd/yyyy* format.
- Script Builder will not directly allow a field name to be defined as a database field and then changed to be another type of field. If a field name is initially defined to be a database field and it needs to be changed to another type, all references to that name must be completely removed from the script before it can be used in the new way. Therefore, the field name must be removed from the database table and the script. Then, the name can be re-used for any purpose.
- When an application reads a local database table to look for matches on a specified search key, each call for that application is limited to 148 Read Table requests *for the same search key*. (See the *Defining Read Table* section of Chapter 9 of the *CONVERSANT VIS Script Builder User Guide, 585-350-702*.) When the system variable $MATCH_FOUND reaches 149, all VIS calls will be dropped.

Because 149 Read Table requests with the same search key for one call is unusual and time consuming, most applications should not find this limitation to be overly restrictive. With the exception of this "148 same search key" restriction, the number of Read Table requests for a call is unlimited.

- There are cases when using external actions that the Script Builder incorrectly locates an integer at an odd address. In these cases, integer values returned to the application from external actions/functions are lost.

  An application is prone to this problem if it specifies a 'char' field for storing integers returned from external actions/functions.

  NOTE:
  Not all external actions/functions return numbers. External actions/functions that declare arguments in the following format will return numbers:

  DEFARG(argX, num, out) DEFARG(argX, num, both)

  Currently applications only have to be careful when using

  - the message coding external action
  - the unpacking NX number external function

  To avoid this problem, make sure that 'num' type is specified for external action/function arguments (fields and constants) that are of type 'num'.

Speech Production Kit Issues

- There is an unknown set of steps that could lead the speech production kit to record speech that is grossly distorted. This is a very rare occurrence. If this should happen report the problem to your customer support center.

  Before attempting to re-record the speech, save all changes. Re-record the speech by exiting all administration screens saving any changes that have been made, then re-enter Script Builder from the Voice System Administration Window.

- On a T/R card, there are two modular plug hook-ups. When using the Speech Production Kit to record speech, the person recording the speech must call into the system to listen to and edit recorded speech. The Speech Production Kit and the caller must be hooked up to the same card, one to each of the 2 modular hookups. The line from the Speech Production Kit to the card should be direct, and should not go through any device that might remap the active wire pairs that are used.

To keep related information together with an existing CONVERSANT book, place the following pages with *CONVERSANT Voice Information System Local Area Network, 585-350-809*.

Local Area Network Issues

- In the *CONVERSANT Voice Information System Local Area Network, 585-350-809* book, use the following information to correct some documentation discrepancies:
  - In Chapter 2, "Installing LAN Hardware and Software" there is a called "Installing the TCP/IP Interface Release R2.0 Software." The name of this package has been changed to Enhanced TCP/IP WIN/386 Interface Package R3.0.

To keep related information together with an existing CONVERSANT book, place the following pages with *CONVERSANT Voice Information System Adjunct/Switch Application Interface, 585-350-804*.

Adjunct/Switch Application Interface Issues

- In the *CONVERSANT Voice Information System Adjunct/Switch Application Interface, 585-350-804* book, use the following information to correct some documentation discrepancies:
  - In Chapter 4, "ASAI Administration," there is a section called "Virtual Channel Administration." There is a sentence that reads, "A maximum of 32 virtual channels may be administered on the VIS." For clarification, this sentence means that ASAI installation sets the number of virtual channels to 32.
  - In Chapter 5, "Administering ASAI," there is section called "Administering the VIS ACD Split Domain." In Step 10 of the procedure, the first sentence should read, "Press the arrow keys until the domain is highlighted."
  - In Chapter 6, "ASAI Script Builder Actions," there is a section called "Defining A_Event." Use the following information to add 2 new entries to the table called "Fields Returned by A_Event for Each Event" -

Table 1. Fields Returned by A_Event for Each Event

	Event		
A_Event Field	CONNECT ABANDON END	ROUTE REQUEST	ABNORMAL ROUTE END
Cause Value	•	•	•
Return Field	•	•	•

  - In Chapter 6, "ASAI Script Builder Actions," there is a section called "Defining A_RouteSel." In the explanation of the Return Field, you should use the following list of values:
    - -1 - A_RouteSel could not send the request to route the call to ASAI. Check the Message Log Report for system errors. Refer to Chapter 4, "Report Administration" in *CONVERSANT VIS Version 4.0 Operations*, 585-350-703, for more information.
    - -2 - A_RouteSel did not receive a response from the ASAI for the request to route the call. Check to see if the ASAI system is running.

- -3 - The ASAI system could not route a call. Check the Cause Value field for information on why the call could not be routed.
- -4 - ASAI Link is down and route select information cannot be received from the switch. Refer to Appendix D, "Troubleshooting for ASAI" in this book for information on troubleshooting the ASAI digital link.
- -5 - illegal request. The channel using A_RouteSel is not for a RTE domain. A_RouteSel is being used in a script that has not been assigned to an RTE domain. Refer to Chapter 4, "ASAI Administration" in this book for information on assigning A_RouteSel to a domain.
- -6 - Switch did not respond after receiving the route select information.
- -7 - Bad Routing ID. The Routing ID specified in A_RouteSel is invalid. Check to make sure that the same Routing ID received from ROUTE REQUEST Event is used in the A_RouteSel action.
-
- -8 - ASAI doesn't have a pending ROUTE REQUEST for this ROUTE SELECT message.
- -9 - ASAI could not send the request the switch. Refer to Appendix D, "Troubleshooting ASAI," in this book for more information on troubleshooting the ASAI digital link.
- -11 - Destination Number exceeds 20 characters.
- -13 - Split Extension exceeds 5 characters.
- -15 - Routing ID is 0 or less.

— In Chapter 6, "ASAI Script Builder Actions," there is a section called "Defining A_Tran." In the explanation of the Return Field, you should use the following list of values:

- -1 - A_Tran could not send the request to take control of the original call. Check the Message Log Report for system errors. Refer to Chapter 4, "Report Administration" in *CONVERSANT VIS Version 4.0 Operations*, 585-350-703, for more information.
- -2 - A_Tran did not receive a response from the ASAI for the request to take control of the original call. Check to see if the ASAI system is running.
- -4 - ASAI Link is down and transfer information cannot be performed. Refer to Appendix D, "Troubleshooting for ASAI" in this book for information on troubleshooting the ASAI

digital link.

- -5 - illegal request. The call is not being monitored so no transfer information is available. Refer to Chapter 4, "ASAI Administration" in this book for information on Channel administration and Domain administration.
- -6 - Switch did not respond with the transfer information.
- -8 - Original call doesn't exist on the specified channel.
- -9 - ASAI could not send the request the switch. Refer to Appendix D, "Troubleshooting ASAI," in this book for more information on troubleshooting the ASAI digital link.
- -10 - ASAI ran out of all cluster IDs.
- -11 - Destination Number exceeds 20 characters.
- -12 - Destination Number cannot be empty (0 characters or less).
- -13 - Split Extension exceeds 5 characters.
- -14 - VIS Data exceeds 20 characters.
- -16 - A_Tran did not receive an error from the ASAI system when trying control of the original call. Check the Cause Value field for information on why the request failed.
- -17 - A_Tran received an error from the ASAI system when trying to put the original call on hold. Check the Cause Value field for information on why the request failed.
- -18 - A_Tran received an error from the ASAI system when trying to place the to the Destination Number. Check the Cause Value field for information on why the request failed.
- -19 - A_Tran received an error from the ASAI system when trying to complete (merge) the transfer. Check the Cause Value field for information on why the request failed.
- -20 - A_Tran dialed out to the Destination Number but the call was busy or denied. Check the Call State and Cause Value fields for the reason why the request failed.

— In Appendix A, "Sample Scripts" there is a section called "Sample Routing Script." Use the following information to correct Steps 1, 2, and 3:

```
start:
# This is a sample routing script making use of the A_Event action.
# This script would be given, via administration, a "RTE" type
# designation and therefore would receive only route requests (that is,
# no CONNECT, ABANDON, or END messages would be received or processed
# by this script). A local database is used to route the call based
```

```
# on ANI.  A local database is read in an attempt to match the ANI
# for the call.  If a match is found, the table provides an agent
# extension and a split extension which are used to route the call
# to a specific agent within a split (direct agent routing).  If no
# match is found, the call is routed to a default split (for example,
# to a VIS T/R split to collect additional information).
#
# Fields dest_num (agent extension) and split_num (split extension) for
# direct agent routing are returned from the table when a match is
# found.
#
begin_loop:
#
1.  External Action: A_Event
                connected: connect_num
                calling: calling_num
                called: called_num
                switchdata: switch_data
                trunkid: trunk_num
                callid:          call_id
                otherid: other_id
                laidisplay: lai_info
                visdata: vis_data
                routingid: routing_id
                cause value: cause
                Return Field: event_return
   End External Action
#
# Check to make sure a ROUTE REQUEST was received.  If a ROUTE REQUEST was
# not received, go back and get the next event.
#
2.   Evaluate
                If event_return != "'R'"
3.   Evaluate
                If event_return = "'r'"
```

— In the unlikely event that the extension assignment of the ACD type domain that has 'VIS' service assigned must be changed, first LOGOUT all ASAI channels in the **Channel Administration** window. After assigning the new extension to the domain, then LOGIN the channels again. If this procedure is not followed, and the channels are already logged in under the old split extension, they will remain logged in to the old extension until the system is restarted or the channels are logged out and then logged back in.

— If Tip/Ring channels are logged in to the 'VIS' ACD split and the ASAI link should go down (for example, Basic Rate Interface cable is disconnected), the channels will remain logged in even though the **Channel Administration** window indicates that they are in state HWOOS. The reason for this is that the channels are logged

in and out using messages over the ASAI link. If the ASAI link should go down without warning, there is no time for the VIS to send logout messages to the PBX. Therefore the channel will remain in a logged in state. (The PBX will not automatically logout the channels). It is therefore important to have a ’backup’ voice script which can answer calls to the Tip/Ring channel.

There are two methods that can be used to handle link down conditions.

- All Tip/Ring channels (on the ACD split) should be assigned to DNIS service (*DNIS_SVC). Your primary service script used while ASAI is operational (that is, script contains A_Callinfo and/or A_Tran) should be assigned to the Called Number(s) that are expected. The backup script in case of ASAI link failure (that is, script does not contain A_Callinfo or A_Tran) should be assigned to Called Number ’ANY’. When ASAI service is down, no DNIS will be received for calls to the Tip/Ring channels, thus the VIS will invoke the backup script assigned to Called Number ’ANY’.
- If use of DNIS service to start up scripts is not wished, A_Callinfo may be used to check if the ASAI link is down. If the "Return Field of A_Callinfo" field returns -80, and the "Cause Value" field returns the value 41, then the ASAI link is down. In this case, the user’s script should use "Call Transfer" instead of "A_Tran".

To keep related information together with an existing CONVERSANT book, place the following pages with *CONVERSANT VIS Text to Speech*, 585-350-807.

Text-To-Speech Issues

- Some TTS customers may experience problems with their AYC9 SP cards going BROKEN intermittently. When diagnosed, these cards pass all the SP tests and get put back into service by the system, but after a period of time they end up going BROKEN again.

  This type of unpredictable failure by an AYC9 SP can result from misuse of the escape sequences documented in Chapter 7 of the TTS book.

  The AYC9 SP card is very sensative to these escape characters and improper use them could cause the AYC9 card to die and go BROKEN.

  First of all, the character strings \! and \(have special meaning to the TTS software and should NEVER be embedded in text to be spoken by the AYC9 SP card unless they are being used as part of an escaped sequence. These strings act as flags to the TTS software and they cause the AYC9 card to change its current mode of operation. If for some reason the string \! or \! appears in some text and it is not intended to signal an escape sequence to the board, it MUST be either removed from the text, OR a space or some other character must be placed between the 2 characters.

  Another sensative area dealing with TTS escape sequences has to do with the silence delays discussed in chapter 7. The valid ranges for the 3 types of delays is very important, and the use of an out-of-range value could cause the AYC9 to fail. The valid ranges for the 3 types of silence delays are as follows:

  si<n> where $1 < n < 100$
  sf<n> where $1 < n < 60$
  n]) where $1 < n < 100$

  Another thing to note – Even if the silence sequences are used properly but appear too close together in the text this could cause a failure on the AYC9. So if you plan to use the special silence delays please be aware that if they appear too densely in the text it could cause problems for the AYC9 cards.

  One additional warning – The "Sample Application Using Escape Sequences" which appears in chapter 7 of the TTS book contains the following errors in Step 2 (the Set Field Value):

  the string " nar " should be "nar"
  the string " nac " should be "nac"
  the string " npr " should be "npr"
  the string " npc " should be "npc"
  the string " nnr " should be "nnr"

the string " nnc " should be "nnc"
the string " si70 " should be "si70"
the string " (*[70]) " should be "70])"
the string " sf70 " should be "sf50"
the string " r4 " should be "r4"

- Compound words (two words which are hyphenated) are incorrectly recognized and mispronounced by TTS when they start a sentence and are preceded by a space. When the words are within a sentence or occur at the beginning of a new line, they are correctly recognized and pronounced.
- If an application comprises only TTS prompts and no voice prompts, compilation of the application will fail with the message:

  No speech exists for application <*application*>

  If this occurs, do the following:

  1. Enter the Speech Administration window.
  2. Cancel out of the Speech Administration window.
  3. Verify and install the application.

To keep related information together with an existing CONVERSANT book, place the following pages with *CONVERSANT VIS Call Classification Analysis*, 585-350-811.

Call Classification Analysis Issues

- The specifications for the supported CCA tones and levels conform to LSSGR standards. Specifically, CCA will recognize tone conforming to
  Section 6.4, LSSGR Issue 2, July 1987 TR-TSY-000506

  The system conforms to special information tones as specified in section FSD 20-06-0500. Sections can be ordered from Bell Core by calling (908) 699-5800

  NOTE:
  Full CCA is intended for use in North America only

- Occasionally, advanced CCA (Call Classification Analysis) on digital interfaces (T1 and PRI) does not recognize speech energy. The application is not likely to notice this because the digital interfaces provide answer supervision. There may be some instances, however, in which voice energy would have been detected more quickly than answer supervision. In addition, if network announcements are received with no SIT tones, the system may interpret this as a "High and Dry" disposition (because there is no answer supervision and voice energy is not detected).

To keep related information together with an existing CONVERSANT book, place the following pages with *CONVERSANT VIS SCSI Mirroring*, 585-350-204, or in the hardware installation book for your platform.

SCSI and SCSI Mirroring Issues

- In Chapter 3, "Using SCSI Mirroring," make the following corrections to the "Using FACE to Verify Mirrors" procedure:
  - — In Step 6, the words "Verify Disk" should read "Verify Mirror."
  - — Step 7 should read, "Press CHOICES (F3) and select a slice from the choices presented. Choose a slice after both are in the ACTIVE state."
- In Chapter 4, "Maintaining SCSI Mirroring," the following clarification is needed in the procedure "Removing a Failed Mirrored Boot Disk:"
  - — If you need to disable mirroring, follow Steps 1a–1e of "Removing a Failed Mirrored Boot Disk."
  - — After Step 2, insert the following steps:
    a. Rebuild your kernel. Enter **/etc/conf/bin/idbuild**
    b. Reboot the system. Enter **shutdown -g0 -y -i6**
  - — You must press SAVE to proceed at Step 10.
  - — Step 13 should read "Shut the power off to your platform."
- When rebooting a mirrored SCSI disk, you might get the following messages:

  ```
  MD: Disk Partition 0, 17 moved to OOD state. Error:
  4DF0D004 MD: Disk Partition 0, 18 moved to OOD state.
  Error: 4DF0D004
  ```

  This is a normal occurrence, and does not cause a problem.

To keep related information together with an existing CONVERSANT book, place the following pages with *CONVERSANT VIS CompuLert/SCCS*, 585-350-808, or in the hardware installation book for your platform.

CompuLert Issues

- In Chapter 2 of *CONVERSANT VIS CompuLert/SCCS*, 585-350-808, the figure depicting the switch setting is incorrect. Use the figure below instead of the figure in the book:

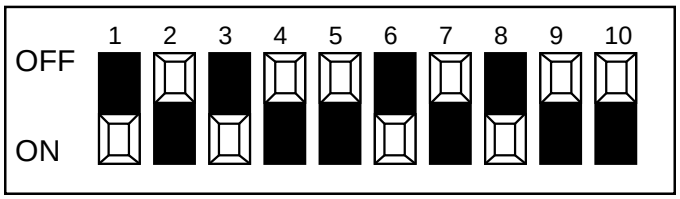

Figure 1. ARU Switch Settings for DSW1 and DSW2

- Installation of SCCS/CompuLert package does not automatically recognize the ARU port.

  Run **assign_tty**, then remove and reinstall the ARU port.

- The ARU is not listed in the Configuration Program. When running the Configuration Program with an ARU unit, choose "modem" as a substitute.

In Chapter 2 of *CONVERSANT VIS Primary Rate Interface*, 585-350-805, the figure depicting the switch setting is incorrect. Use the figure below instead of the figure in the book:

Primary Rate Interface Issues

- The Primary Rate Interface documentation is missing a return code for the tic Instruction. The tic('O') command is used to originate a call. This instruction can return a value of 'E' for the Call Disposition Value (r.0). This value means an internal protocol error. For more information, check the cause value (r.1). The possible cause values are:

cause value (r.1)	Meaning
CV_NULL (0)	No cause value present
CV_FR (29)	Facility rejected
CV_TFAIL (41)	Temporary resource failure on remote end
CV_IDVFN (85)	Invalid digit value for number
CV_TNDNE (91)	Transit network does not exist
CV_INVMSG(95)	Invalid Message
CV_NEIE (99)	Nonexistent IE
CV_PEU (111)	Protocol Error Unspecified

- Some clarifications about the Primary Rate Interface documentation:
  - Figure 3-1 depicts the Define Billing Number screen rather than the intended Assign Functions to SP cards screen. To see a depiction of this screen, see Chapter 3 of the *CONVERSANT VIS Version 4.0 Operations*, 585-350-703, book.
  - Ivol/Ovol parameters can be set on a per card basis rather than a system wide basis (a change related to support for Line Side T1).
  - AYC11 and Definity G3i are now supported with PRI.

To keep related information together with an existing CONVERSANT book, place the following pages with *CONVERSANT VIS WholeWord Speech Recognition* , 585-350-813.

Speech Recognition Issues

- There is a command called **SR_Allocate**. This allows a script to reserve a recognition resource until it either deallocates the resource or terminates. This is necessary in systems where more than the maximum supported number of Speech Recognition scripts are vying for recognition resources (ie. 24 channels are vying for 12 recognition resources). In this scenario, scripts should reserve a recognition resource before entering a prompt and collect that uses speech recognition. This insures that the caller will be handled properly.

  It is recommended that if the script uses speech recognition and the caller talkoff feature, that a single SR_allocate and SP_Prompt be done at the beginning of the script, and the resources not be released until the transaction performs its last prompt and collect.

  NOTE:
  If a script performs an *exec*, these resources are automatically deallocated.

- A rare condition exists that could cause SP speaker talk-off resources to be mis-allocated. To prevent this from occurring, in each script that reserves the talk-off feature using SP_Prompt, the talk-off feature should be explicitly de-allocated with the same command prior to script termination. This is especially important before the use of the *exec* command.

To keep related information together with an existing CONVERSANT book, place the following pages with *CONVERSANT VIS Version 4.0 Application Development*, 585-350-208.

Advanced Script Development Issues

- In order to modify *agent.t*, perform the following UNIX Operating System Commands:
  a. Enter **mv /vs/trans/agent.t /att/trans/agent.t**
  b. Enter **chmod +w /att/trans/agent.t**
- If the "spin-off" option is used for the script *tflush* instruction and the first playback completes at approximately the same time the second phrase starts, there is the potential for the second phrase to be terminated prematurely. If this can occur in your script, make the first phrase longer (even with trailing silence) to avoid the situation.

Getting Help for Version 4.0

When your 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 **Message Log Report** window under Reports Administration.

Refer to Chapter 3, "System Messages Listing" in *CONVERSANT VIS Version 4.0 Maintenance*, 585-350-112 to determine the action you must take regarding these system-reported troubles. If the action requires you to contact a "field service representative," this means one of the following:

- If you are field technician supporting a customer per a maintenance agreement or a time and material charge basis, you are the field service representative. If the problem is more serious than you can handle, contact the next level of support or AT&T for assistance.
- If you are a VCP software hardware support person assisting an end customer, you are the field service representative. If you cannot solve the problem, contact the Technical Support Center (TSC) at 1-800-344-9670 for assistance.