

Cleo[®] Host Interface for SNA V9.1

Quick Start Guide

SDLC

CONVERSANT[®] V8/R9

Read this section first!

This Quick Start Guide contains information about installing the 6.0.7.14 version of the Cleo SNA for Avaya's CONVERSANT V8/R9 Version 9.1 software using a Digi DataFire SYNC 2000 PCI SDLC adapter, a Cleo Communication's FIFO SIB ISA SDLC adapter, or a DigiBoard PCI SDLC adapter, the Synchronous Host Interface Package, and the CleoSDIP Package on a Unixware 7 Operating System.

Important!

Read this document before installing and using the Cleo software. Refer to your Cleo SNA documentation for additional usage information. If you have questions about installing and using this product, contact Cleo Communications Technical Support between the hours of 8:30 A.M. and 5:00 P.M. (EST/EDT) at: 1.866.444.2536 or supportmi@cleo.com.



Copyright © 2006 Cleo Communications

August 2006

Cleo Communications reserves the right to, without notice, modify or revise all or part of this document and/or change product features or specifications, and shall not be responsible for any loss, cost or damage, including consequential damage, caused by reliance on these materials.

This document may not be reproduced, stored in a retrieval system or transmitted, in whole or in part, in any form or by any means (electronic, mechanical, photocopied or otherwise) without the prior written permission of Cleo Communications.

GOVERNMENT RESTRICTED RIGHTS

Use, duplication or disclosure by the Government is subject to restrictions as set forth in subparagraph (c) (1) (ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.227-7013.

Use, reproduction or disclosure is subject to 52.227-19 (a) through (d) and restrictions set forth in the accompanying end user agreement.

GOVERNMENT LIMITED RIGHTS

Limited rights shall be effective indefinitely and are not subject to expiration as set forth in paragraph (3) of the Rights in Technical Data and Computer Software clause at DFARS 252.227-7013.

Copyright © 2004 Cleo Communications — All rights reserved.

Document No: 6502559

Version: 1.0

Trademark Acknowledgements

Cleo Communications has made every effort to accurately acknowledge all trademarks that appear in this document. Cleo Communications, however, cannot attest to the accuracy of this information.

Cleo™ is a trademark of Cleo Communications

CONVERSANT® System is a registered trademark of Avaya Inc.

IBM® is a registered trademark of International Business Machines Corporation

UNIX® is a registered trademark licensed through X/Open Company Limited.

TABLE OF CONTENTS

TABLE OF CONTENTS	4
Cleo SNA SDLC 6.0.7.14 Installation	6
Mounting the Cleo SNA Software CD	7
Updating Cleo Software	7
UPGRADE ONLY INSTRUCTIONS	8
REMOVE PREVIOUS VERSIONS OF CLEO SOFTWARE INSTRUCTIONS	10
Installing the Cleo SNA Package	10
Installing the Unix Network Driver	11
Installing the Digi DataFire SYNC 2000 PCI SDLC Unix Network Driver from CD (ONLY FOR UCS 1000)	11
Installing the Cleo Communication's FIFO SIB ISA SDLC Unix Network Driver from CD (ONLY FOR MAP 40P)	13
Installing the Cleo Communication's DigiBoard PCI SDLC UNIX Network Driver from CD (ONLY FOR MAP 40P)	13
Installing the Synchronous Host Interface Package from CD	14
Installing the CleoSDIP (Voice System Host DIP Using SNA) Software from CD	14
Instructions for Installing the License	15
Instructions for Displaying/Modifying the Cleo Serial Number	16
Basic Instructions for Configuring the Host Interface for Cleo SNA SDLC	17
System Shutdown	21
Removing SNA Software	21
APPENDIX A.	23
HOST CONFIGURATION PARAMETERS	23
APPENDIX B.	26
DEFAULT VALUES for SNA SDLC CONFIGURATION TEXT FILE	26
APPENDIX C.	27
EXAMPLES	27
APPENDIX D.	29
NEW "H" COMMANDS "hispy" and "cleoispy"	29
APPENDIX E.	32
Host DIP PARAMATERS Configuration File	32
/vs/etc/default/agdip3270	32
SESSIONS_TO_START=32	33
LOGOFF_TIMEOUT=60	33
MAX_NUMBER_OF_LUS=32	33

AUTORESET_LUS=NO.....	33
PAUSE_BETWEEN_SCREEN=5.....	34
RETCOUNT_TODO_POWEROFF=5.....	34
APPENDIX F.	37
NEW CLEO EXTERNAL FUNCTIONS TO RESERVE and RELEASE	
LUs	37
Cleo External Function Cleoresrvlu.....	37
Cleo External Function Cleorelslu.....	38
Copying External Functions Cleoresrvlu and Cleorelslu to IVR Designer	
Desktop	38

Cleo SNA SDLC 6.0.7.14 Installation

Installation of a Cleo Enterprise Networking product requires that you obtain a License file(`license.conf`). The License file is available from Cleo Communication's Sales Department at (866)444-2536.

Software Prerequisites

- UnixWare 7.1.1
- CONVERSANT V8/R9
- [Voice@Work](#) or Script Builder

Hardware Prerequisites

- Digi DataFire SYNC 2000 Compact PCI SDLC Adapter(UCS 1000)
- Cleo FIFO SIB ISA SDLC Adapter (MAP 40P)

Cleo DigiBoard PCI SDLC Adapter(MAP 40P)

Mounting the Cleo SNA Software CD

1. Log in as *root*.
2. Create a mount-point for the CD, if one does not already exist. (/mnt is used as the mount-point in these instructions, but any empty directory can be used).

```
# mkdir /mnt
```

3. Insert the Cleo Host Interface V9.1 for CONVERSANT® V8/R9 CD into the CD ROM drive.
4. Mount the CD by entering the following command:

```
# /sbin/mount -F cdfs -r /dev/cdrom/cdrom1 /mnt
```

Updating Cleo Software

If you already have Cleo SNA software installed, including the **synchost** and **either vssnadip, Csnahdip, Cleosndip, Cleosdip** packages, and only want to upgrade to the new V 9.1 package, you can follow the **UPGRADE ONLY INSTRUCTIONS**, that follow, to finish the update, without removing the previous version.

If you already have Cleo SNA software installed, and want to re-install all of the Cleo SNA software, you will need to remove the existing packages by following the **REMOVE PREVIOUS VERSIONS OF CLEO SOFTWARE INSTRUCTIONS**, below, before proceeding on to the **Installing Cleo SNA Package section** to re-install the Cleo SNA software.

In order to determine if you only need to upgrade to the new **CleoSDIP** Version 9.1 package, instead of doing a complete install, run the following command

```
pkginfo | grep cleosna
```

If no output results from the command, you need to do a full installation by proceeding to the **Installing the Cleo SNA Package section**.

If the command resulted in information showing that the **cleosna** package is already installed, you may be able to do an upgrade only. However, run the following command

```
pkginfo | grep synchost
```

If no output results from the command, you need to do a full installation by proceeding to the **Installing Cleo SNA Package section**.

If the command resulted in information showing that the **synchost** package is already installed, you only need to upgrade to the new **CleoSDIP** by following the **UPDATE ONLY INSTRUCTIONS** below.

UPGRADE ONLY INSTRUCTIONS

```
stop_vs
```

```
stop_hi
```

```
REBOOT...to determine if reboot is necessary see NOTE:  
below...
```

```
start_hi (if no re-boot was performed)
```

```
start_vs (if no re-boot was performed)
```

NOTE: A re-boot will be necessary if tuning is done when installing CleoSDIP. If no tuning is performed, then NO re-boot is necessary

The criteria for CleoSDIP performing tuning and requiring a reboot is:

- if there was no old **vssnadip, Csnahdip, Cleosndip, Cleosdip** found already installed. In that case CleoSDIP will do tuning, so a reboot will be necessary.
 - If **vssnadip** (v8.4 or older) is found, then tuning will be performed
-

REMOVE PREVIOUS VERSIONS OF CLEO SOFTWARE INSTRUCTIONS

```
stop_vs
```

```
stop_hi
```

```
pkgrm Cleosdip
```

```
pkgrm Cleosndip
```

```
pkgrm Csnahdip
```

```
pkgrm vssnadip
```

```
pkgrm synchost
```

```
pkgrm cleosna
```

The Removal of previous versions of Cleo Software is now complete.
Proceed on to the **Installing the Cleo SNA Package section**.

Installing the Cleo SNA Package

Start the installation of the SNA Package

```
# pkgadd -d /mnt/cleosna
```

```
# pkgadd -d /mnt/cleodocs (optional documentation)
```

Installing the Unix Network Driver

NOTE: The SDLC Hardware Adapter must already be installed in the system. Follow the Manufacturer's instructions for the particular type of SDLC Hardware Adapter, you have installed:

- Digi DataFire SYNC 2000 PCI SDLC Adapter(UCS 1000)
- Cleo FIFO SIB ISA SDLC Adapter(MAP 40P)
- Cleo DigiBoard PCI SDLC Adapter(MAP 40P)

Installing the Digi DataFire SYNC 2000 PCI SDLC Unix Network Driver from CD (ONLY FOR UCS 1000)

1. Make sure the Cleo Host Interface V9.1 for CONVERSANT® V8/R9 CD is inserted in the CD ROM drive and mounted in /mnt
2. Install the Digi DataFire SYNC 2000 PCI SDLC Network Driver by entering the following command:

```
# pkgadd -d /mnt/sync2000E
```

Note: Several informational screens will appear. Use the **ENTER** key to continue past them. Wait for the installation to complete and then when back to the root prompt, continue with step 3.

3. At this point you will need to use an X windows environment (ALT + SYSREQ F1). Start a "dtterm" windows session. At the command prompt, type:

```
# netcfg
```

4. From the **Network Configuration Manager** select **VIEW** then

select **WAN**

5. Select **Hardware** then select **Add new WAN device** and again select **Add new WAN device**
6. Select the Digi Adapter to be added "DataFire SYNC 2000/4P cPCI(1.0) - PCI..." and select **CONTINUE**.
7. After a while, the "Digi International Adapter Setup" screen will appear.
8. Select the **SYNC 2000** tab
9. Select **Line 1** to configure and then Specify **SDLC** as the **Connection Type**
10. Select **Network** and choose **Enable on reboot**

Note: You may see an Informational screen, at this point, "The network is currently started on reboot." If so, select **OK**

11. Select **File** and choose **Save Changes and Exit**
12. After a while, you will be returned to the **Network Configuration Manager** and an informational screen will be shown "The following products were successfully configured...". Select **OK**
13. Select **Hardware** and choose **Exit**
14. At the command prompt, type

```
# wancfg
```
15. Select the **SYNC 2000** tab
16. Select **Line 1**
17. Select **Network** and choose **Stop SNA on exit**
18. Select **Network** , again, and choose **Start SYNC 2000 on exit** and choose **Adapter 0**

19. Select **OK** to the informational screen "SYNC 2000 adapter 0 will be started upon exiting this configuration utility"
20. Select **File** and choose **Save Changes and Exit**
21. When Exit completes, you will need to return to the Console (ALT + SYSREQ H).

Installing the Cleo Communication's FIFO SIB ISA SDLC Unix Network Driver from CD (ONLY FOR MAP 40P)

1. Make sure the Cleo Host Interface V9.1 for CONVERSANT® V8/R9 CD is inserted in the CD ROM drive and mounted in /mnt
2. Install the Cleo Communication's FIFO SIB ISA SDLC Network Driver by entering the following command:

```
# pkgadd -d /mnt/cleofifo
```

NOTE: You will be prompted to provide an IRQ and an I/O Address during the installation process.

Installing the Cleo Communication's DigiBoard PCI SDLC UNIX Network Driver from CD (ONLY FOR MAP 40P)

1. Make sure the Cleo Host Interface V9.1 for CONVERSANT V8/R9 CD is inserted in the CD ROM drive and mounted in /mnt.
2. Install the Cleo Communication's DigiBoard PCI SDLC Network Driver by entering the following command:

```
# pkgadd -d /mnt/cleo570i
```

Installing the Synchronous Host Interface Package from CD

1. If the voice system is currently running, then stop the voice system by entering the following command:

```
# stop_vs
```

NOTE: Ignore any SNA license errors, at this time.

2. Make sure the Cleo Host Interface V9.1 for CONVERSANT® V8/R9 CD is inserted in the CD ROM drive and mounted in /mnt
3. Install the Synchronous Host Interface by entering the following command:

```
# pkgadd -d /mnt/synchost
```

Installing the CleoSDIP (Voice System Host DIP Using SNA) Software from CD

1. If the voice system is currently running, then stop the voice system by entering the following commands:

```
# stop_vs
```

```
# stop_hi
```

2. Make sure the Cleo Host Interface V9.1 for CONVERSANT® V8/R9 CD is inserted in the CD ROM drive and mounted in /mnt
3. Install **CleoSDIP** by entering the following command:

```
# pkgadd -d /mnt/CleoSDIP
```

Note: When vssnadip is installed, kernel tuning will take place and the kernel will be re-built.

Note: DO NOT reboot the UNIX operating system at this time. You must first complete *Instructions for Installing the License and complete the Basic Instructions for Configuring the Host Interface for SNA SDLC* before you perform a System Shutdown and reboot the system.

Instructions for Installing the License

1. Cleo Communications will email you a license file, "license.conf". Place the license file on the CONVERSANT V8/R9 system(eg. /tmp/license.conf). Cleo Communications will also assign a Serial Number for your system. The Serial number will be included with your software CD, or can be obtained by calling Cleo Technical Support. You will be asked to enter your Cleo Serial Number when running the *snaaddlic* command.
2. Install the license file by entering the following command:

```
# /opt/sna/bin/snaaddlic
```

```
Please enter the Cleo SNA Serial Number
```

```
nnnnnn
```

```
Enter the full path name of the license file to install:
```

```
/tmp/license.conf      (use own path if other than /tmp)
```

```
NOTE: You will see the contents of your license  
displayed at this point.
```

```
Do you wish to continue?(y/n): y
```

3. Enter the following command:

```
# /sbin/umount /mnt
```

4. Remove the CD from the drive. Store the CD and the Software License file in a safe place. They are needed should you ever re-install the software.

Instructions for Displaying/Modifying the Cleo Serial Number

1. If you have already entered the Cleo Serial Number while installing the License, you can move on to the next Section *“Basic Instructions for Configuring the Host Interface for Cleo SNA SDLC”*
2. In order to display the current Cleo Serial Number, please enter the following command:

```
# /opt/sna/bin/cleoserial -r
```

```
The Cleo SNA Serial Number has a value of
```

```
==> 123456 <==
```

3. In order to modify the current Cleo Serial Number or store it on the system for the first time, please enter the following command:

```
# /opt/sna/bin/cleoserial -w 123456
```

```
Please confirm that you want to change the Cleo  
SNA Serial Number to the value
```

```
==> 123456 <==
```

```
?[y/n]
```

```
y
```

Basic Instructions for Configuring the Host Interface for Cleo SNA SDLC

Installation of the Cleo SNA SDLC software and Unix Driver is now complete. To configure the Cleo SNA SDLC software for 3270 sessions, please use the "*snaconfig*" program.

The "*snaconfig*" program can be run in 2 different ways to update the Cleo SNA Software's configuration:

OPTION #1 consists of editing the **SNA SDLC CONFIGURATION TEXT** file(/etc/opt/sna/snasdcl.txt) and then running the "*snaconfig*" program to update the Cleo SNA Software's configuration.

OPTION #2 consists of running the "*snaconfig*" program, specifying command line parameters to update the Cleo SNA Software's configuration.

OPTION #1

Running "*snaconfig*" after editing the SNA SDLC CONFIGURATION TEXT file

1. If the SNA Software is running, then Stop the SNA Software by entering the following commands:

```
# stop_vs
```

```
# stop_hi
```

2. Edit the default SNA SDLC CONFIGURATION TEXT(/etc/opt/sna/snasdcl.txt) file supplying your Host system's specific parameters. Note: See Appendix A. for a definition of the Host Configuration Parameters in the **SNA SDLC CONFIGURATION TEXT** file. See Appendix B. for the file's default values.

NOTE: If you are using a FIFO/SIB ISA Board on a MAP40P, modify the line that currently reads "CARD_TYPE = SDLC" on the /etc/opt/sna/snasdcl.txt file to be:

```
CARD_TYPE = ISI_SDLC_FIFO
```

NOTE: If you are using a DigiBoard 2 Port PCI Board on a MAP40P modify the line that currently reads "CARD_TYPE=SDLC" on the /etc/opt/sna/snasdcl.txt file to be:

```
CARD_TYPE=ISI_SDLC_A570I_PCI2
```

NOTE: If you are using a DigiBoard 4 Port PCI Board on a MAP40P modify the line that currently reads "CARD_TYPE=SDLC" on the /etc/opt/sna/snasdcl.txt file to be:

```
CARD_TYPE=ISI_SDLC_A570I_PCI4
```

3. Update the Cleo SNA Software's configuration using the following command:

```
# snaconfig -S
```

where -S specifies SDLC configuration

4. If this is a new installation, then go to the "**System Shutdown**" section.
5. If you are modifying an existing System configuration and need to restart the SNA Software, then enter the following commands:

```
# start_hi
```

```
# start_vs
```

OPTION #2**Running "snaconfig" using parameters from the COMMAND LINE**

1. If the SNA Software is running, then Stop the SNA Software by entering the following commands:

```
# stop_vs
```

```
# stop_hi
```

2. Run the "snaconfig" command specifying the appropriate Host Parameters to create or modify current settings:

```
snaconfig -S [-P 1 / 2 / 3 / 4] [-MX dddd]  
[-XS0xnnnnnnnn] [-XR 0xnnnnnnnn] [-L L / S]  
[-D H / F] [-ENC Z / I] [-C Y / N] [-Ann]  
[-CT SDLC / ISI_SDLC_FIFO] [-SESS d]
```

Where

-S	specifies SNA over SDLC
-P 1 / 2 / 3 / 4	specifies PORT # 1, 2, 3, or 4
-MX dddd	specifies MAXDATA decimal
-XS 0xnnnnnnnn	specifies 8 digit hexadecimal IDBLK/NUM 0xnnnnnnnn to send
-XR 0xnnnnnnnn	specifies 8 digit hexadecimal IDBLK/NUM 0xnnnnnnnn to recv
-L L / S	specifies LEASED or SWITCHED as line type

-D H / F	specifies HALF or FULL duplex line
-ENC Z / I	specifies NRZ or NRZI encoding
-A nn	specifies 2 digit hexadecimal POLL ADDRESS
-C Y N	specifies CONSTANT RTS or NOT
-CT SDLC ISI_SDLC_FIFO 	
	ISI_SDLC_A570I_PCI2
	ISI_SDLC_A570I_PCI4
	specifies SDLC board type
-SESS d	specifies the NUMBER of LUs
# stop_vs	
# stop_hi	

NOTE:

APPENDIX A. has parameter descriptions for configuring the SNA Software for SDLC using the "*snaconfig*" command. **APPENDIX B.** has the default values for the Configuration file. **APPENDIX C.** has examples of configuring the SNA Software for SDLC.

EXAMPLE:

snaconfig -S -A C6

(to specify 128 LUs using all of the default Host system parameters, except use POLL ADDRESS C6 instead of C1)

3. If this is a new installation , then go to the "**System Shutdown**" section.
4. If you are modifying an existing System's configuration, and need to restart the SNA Software, then enter the following commands:

```
# start_hi
```

```
# start_vs
```

System Shutdown

1. Use the UNIX shutdown command to shut down the system.

```
# cd /
```

```
# shutdown
```

2. When the shutdown is complete, reboot the system.

Removing SNA Software

1. Login in as *root*.
2. Terminate any running instances of the 3270 product by entering the following command:

```
# /opt/sna/bin/stop_hi
```

3. Remove the Cleo software packages by entering the following commands:

```
# pkgrm Cleosdip
# pkgrm Cleosndip
# pkgrm Csnahdip
# pkgrm vssnadip
# pkgrm synchost
# pkgrm sync2000E
# pkgrm cleosna
      # pkgrm cleodocs (optional package that may not
                        have been installed.)
```

4. Perform an orderly shutdown(eg. **/etc/shutdown**) and reboot the system.

APPENDIX A.

HOST CONFIGURATION PARAMETERS

The PARAMETERS defined in the "/etc/opt/sna/snasdcl.txt, /etc/opt/sna/snatkrrn.txt, and /etc/opt/sna/snaeth.txt" file are:

NOTE: There should be NO spaces around the equal "=" signs in the /etc/opt/snaxxxx.txt files.

SNA_TYPE=S | T | E

Where **S**=SNA over SDLC

T=SNA over TOKEN RING

E=SNA over ETHERNET

PORT_NUM=1 | 2 | 3 | 4

Where **1** corresponds to

SDLCP0 for SDLC (note the Link Station will be **SDLCL0**)

TRSAP0 for Token Ring (note the Link Station will be **TRL0**)

ETSAP0 for Ethernet (note the Link Station will be **ETHL0**)

2 corresponds to

SDLCP1 for SDLC (note the Link Station will be **SDLCL1**)

TRSAP1 for Token Ring (note the Link Station will be **TRL1**)

ETSAP1 for Ethernet (note the Link Station will be **ETHL1**)

3 corresponds to

SDLCP2 for SDLC (note the Link Station will be **SDLCL2**)

TRSAP2 for Token Ring (note the Link Station will be **TRL2**)

ETSAP2 for Ethernet (note the Link Station will be **ETHL2**)

4 corresponds to

SDLCP3 for SDLC (note the Link Station will be **SDLCL3**)

TRSAP3 for Token Ring (note the Link Station will be **TRL3**)

ETSAP3 for Ethernet (note the Link Station will be **ETHL3**)

MAXDATA=dddd

Where **dddd** is the decimal value for MAXDATA

XIDS=0xnntnnnnnn

Where **0xnntnnnnnn** is the 8 digit Hexadecimal **IDBLK/NUM** to send to Host

XIDR=0xnntnnnnnn

Where **0xnntnnnnnn** is the 8 digit Hexadecimal **IDBLK/NUM** to receive from Host

LINE_TYPE=LEASED | SWITCHED (SDLC ONLY)

DUPLEX=HALF | FULL **(SDLC ONLY)**

ENCODING=NRZ | NRZI **(SDLC ONLY)**

CONSTANT_RTS=Y | N **(SDLC ONLY)**

POLL_ADDR=hh **(SDLC ONLY)**

Where **hh** is the 2 digit Hexadecimal Polling
Address(eg. C1)

LOCAL_SAP=hh **(Token Ring &
Ethernet ONLY)**

REMOTE_SAP=hh **(Token Ring & -
Ethernet ONLY)**

Where **hh** is the 2 digit Hexadecimal Remote **SAP**

MAC_ADDR=xxxxxxxxxxxx **(Token Ring &
Ethernet ONLY)**

Where **xxxxxxxxxxxx** is the 12 digit Hexadecimal
Remote Mac Address

CT=SDLC specifies the SDLC Card Type(ISI_SDLC_FIFO)

SESS=d

Where **d** is the total number of LUs to use.

APPENDIX B.

DEFAULT VALUES for SNA SDLC CONFIGURATION TEXT FILE

SNA_TYPE=S
PORT_NUM=1
MAXDATA=265
XIDS=0x05DFFFFFFF
XIDR=
LINE_TYPE=LEASED
DUPLEX=HALF
ENCODING=NRZ
CONSTANT_RTS=N
POLL_ADD=C1
CT=SDLC
SESSIONS=128

APPENDIX C.

EXAMPLES

snaconfig -S

This results in the Cleo SNA Software being configured for the default **SNA over SDLC** connection for 128 LUs.

snaconfig -S -SESS 32

This results in the Cleo SNA Software being configured for the default **SNA over SDLC** connection for 32 LUs.

Use "vi" to edit the /etc/opt/sna/snasdcl.txt file to change the

"PU ADDRESS=C1" to "PU ADDRESS=C2"

snaconfig -S

This results in the Cleo SNA Software being configured for the default **SNA over SDLC** connection, using a PU ADDRESS of "C2" instead of "C1" for 128 LUs.

OR

The same result could be done by doing the following to modify the current SNA SDLC CONFIGURATION text file:

snaconfig -S -A C2

OR

The same result could be done by doing the following to completely recreate the SNA SDLC CONFIGURATION text file:

***snaconfig -S -P 1 -MX 265 -XS 0x05DFFFFFF -L L -D H
-N Z -C N -A C2 -SESS 128***

APPENDIX D.

NEW “H” COMMANDS “hispy” and “cleoispys”

The “hispy” command allows a developer to interactively “spy” and “interact” with an assigned Host Session. As well as “capture” new Host Screens.

The “cleoispys” command is identical to “hispy”, except that FUNCTION KEYS are not needed to execute the PF1-PF24, and PA1-PA3, 3270 commands. This should help developers dialing into the Avaya IR R1 system using emulators that do not support Function Keys.

The “hispy” or “cleoispys” command can be executed from the Solaris Sparc 8 command line as follows:

hispy n

cleoispys n

(Where: “n” is a single Host Session ID or Host Session ID range (eg. 0-10)

The “**hispy**” and “**cleoispys**” command will do the following for each Host Session ID specified:

1. Display the following message and then launch “sb_te” with the appropriate arguments to allow the user to **CAPTURE** any screen displayed by simply entering an “**ESC B**” key sequence.
2. The **CAPTURED** screen is **APPENDED** to the Screen Capture file of the [Voice@Work](#) or Script Builder application’s screen capture file(s)

/vs/data/host/appl.sc & appl.nam for V@W

/att/trans/sb/appl/appl.sc for Script Builder

of the Application currently assigned to the specified Host

Session ID.

NOTE: If **NO** screen capture file(s) exist, for the Application, any Screen Captures will be placed in new screen file(s)

/vs/trans/appl.sc

/vs/trans/appl.nam (for [Voice@Work](#) only)

3. The **CAPTURED** screen can then be used later, by the Application Developer, to define Screen Identifiers and Fields of the screen and call flow **recovery, login, logout, or transaction** processing.
4. When the user is placed into the **sb_te** program by the **”hispy/cleispy”** program, all the features of **“sb_te”** are available to **NAVIGATE** through the Host Application screens, **AND CAPTURE SCREENS** along the way.
5. When finished **INTERACTING/CAPTURING** screens in **sb_te**, use the **CTRL-X** key sequence to exit from the currently specified Host Session ID.
6. The **hispy/cleispy** command will exit after the Last/Only Host Session ID is exited with the **CTRL-X** key sequence.
7. The **hispy/cleispy** command can be entered **NO MATTER WHAT STATE** an **ASSIGNED** Host Session ID is in.
8. When the **hispy/cleispy** command is processing an **ASSIGNED** Host Session ID, the **HOST DIP(/vs/bin/vrs/agdip3270)** is not able to access that Host Session ID.
9. The **hispy/cleispy** command is mainly intended to help Application Developers debug problems with the Host Interface portion of Voice Applications.

Therefore, **hispy/cleispy** will allow the Developer full freedom to

manipulate a Host Session ID. If such manipulation results in placing a Host Session ID in an “awkward/broken/confused” state, please feel free to use the **hfree/hassign** commands to **FIX** such problems.

10. The **hspy** command is still available to simply display the current screen of an assigned Host Session ID.
11. Typical uses of “**hispy/cleispy**” are :
 - Capture an **UNRECOGNIZED** error screen that was never encountered before.
 - Capture screen(s) that were never encountered before until a non-common call flow was taken by the caller.
 - Navigate through Host Application Screens, capturing screens along the way, to define a “**recovery**” sequence to add to the current Application.
 - Test/develop Host call flows during development.

APPENDIX E.

Host DIP PARAMATERS Configuration File

/vs/etc/default/agdip3270

The Host DIP Parameters Configuration File, contains parameters that can change how the Host DIP operates.

The /vs/etc/default/agdip3270 configuration file is read each time the Host DIP is started/re-started.

The Host DIP is started/restarted whenever:

- The system is rebooted

- “start_vs” is run

- “start_hi” is run

- The agdip3270 process is killed while Voice System is active

Some of the Host DIP Parameters are either turned on or off by specifying “YES” or “NO” as a value for the parameter.

The default version of the Host DIP Parameters Configuration File is shown below:

/vs/etc/default/agdip3270

```
#
# Default values for the "agdip3270" daemon
process.

# SESSIONS_TO_START determines how many sessions
will be sending or
# getting screens at any one time per host3270
board.
# The default is to have the maximum of 32 sessions
concurrently
# interacting with the host.
SESSIONS_TO_START=32

# LOGOFF_TIMEOUT specifies the maximum amount of
time stop_vs will
# wait for any active sessions to be logged out
when the voice system
# is being stopped.
LOGOFF_TIMEOUT=60

# MAX_NUMBER_OF_LUS specifies the maximum number of
LUS that
# can be configured for a system.
MAX_NUMBER_OF_LUS=32

#it allows the host dip to send reset key when the
lu is input inhibited; and
#the host dip to send system request key when the
screen is SSCP or UNOWNED.
# DEFAULT IS NO
AUTORESET_LUS=NO

# The amount of time to pause after getting a
response from the host.
# This parameter is only in effect during the
login, logout, or
```

```
# recover sequences.
# No pausing is done while the LU is handling a
call.
# Setting this parameter to zero, will turn off
pausing completely.
PAUSE_BETWEEN_SCREEN=5

# The number of RECOVERY RETRIES to do before Doing
A POWER OFFON.
# Will do the POWER OFFON every multiple of this
many RECOVERY RETRIES.
RETCOUNT_TODO_POWEROFF=5

# The amount of STAGGER time between RECOVERING LUS
to be RESSTARTED.
#STAGGER_BETWEEN_RETRIES=5

# Whether or NOT to do a POWER OFFON sequence
instead of a SYS REQ AID KEY.
# Default is NO Set to YES To use POWEROFF.
#SYSREQ_IS_POWEROFF=NO

# Do Special UNFORMATTED SCREEN HANDLING. Some
UNFORMATTED screens do not
# allow a CLEAR KEY. To work around this problem
define a SCREEN with a
# FIELD NAME that has as part of the name the
string "unformat_f".
# When a SCREEN with a FIELD NAME CONTAINING
"unformat_f" is encountered,
# the DIP does a ERASE TO END OF FIELD command and
then positions the
# cursor at 1,1.
# Default is NO
#DO_UNFORMAT_SCR_SPECIAL=YES

# Do EOF(Erase to End of Field) from Beginning of
current field. To do
# this must name a field with the string
"EOF_begin" imbedded in the name.
```

```
# Default is NO
#DO_EOF_BEGIN_FIELD=YES

# Do EOF from where cursor is in current field. To
do this must name a
# field with the string "EOF_current" inbedded in
the name.
# Default is NO
#DO_EOF_CURRENT_FIELD=YES

# Do HARDFAIL recovery logic. Default is YES.
#HARD_FAIL_RECOVERY=NO

# HARDFAIL Retry Timer. Default is 300 seconds.

#HARDFAIL_RETRY_TIME=600

# WRONG SCREEN ACTION. If encounter a WRONG
SCREEN, If
# ACTION = 0 Handle as always
# ACTION = 1 Send Screen even if on wrong screen
# ACTION = 2 Force LU into recovery
#WRONG_SCREEN_ACTION=1

# IF Need to do RESERVE of LU across Applications
while processing 1
# transaction, then set
# DO_VXML_MULTIPLE_TRANS=1
# This means exiting an application during a call
won't leave transaction state.
# DEFAULT is DO_VXML_MULTIPLE_TRANS=0
#DO_VXML_MULTIPLE_TRANS=1

#
# IF doing 5250 and need to use AID KEY PAGE UP,
USE SELPEN AID KEY instead
# and set PGUP_IS_SELPEN=1. Default is
PGUP_IS_SELPEN=0
#PGUP_IS_SELPEN=1
```

```
# IF doing 5250 and need to use AID KEY PAGE DOWN,  
USE ATTENTION AID KEY instead  
# and set PGDWN_IS_ATTEN=1 Default is  
PGDWN_IS_ATTEN=0  
#PGDWN_IS_ATTEN=1  
  
# If doing 5250 and need to use TABs. For example  
to TAB out of a field  
# in order to do a Function Key. Then Turn on PA1  
to be N TABs,  
# PA2 to be N TABs, and PA3 to be N TABS. The  
default for all 3 options  
# is OFF, a value of zero(0).  
#PA1_IS_TAB = 1  
#PA2_IS_TAB = 2  
#PA3_IS_TAB = 3  
  
# If doing 5250 and need to filter out all  
attributes, but unprotected fields,  
# set FILTER_ATTR=1. Default is FILTER_ATTR=0  
#FILTER_ATTR=1  
  
# NOTE NOTE NOTE NOTE: IF DOING ANY OF THE  
UNCOMMENTED NEW FEATURES,  
# MUST INCLUDE THEM IN THE  
ORDER SHOWN!!!!
```

APPENDIX F.

NEW CLEO EXTERNAL FUNCTIONS TO RESERVE and RELEASE LUs

Cleo has developed 2 External Functions that can be used by an IVR Designer Host Application to allow an Application Developer the ability to reserve a Host Session and then determine when to release the Host Session(LU).

The 2 External Functions were originally developed for use with VXML applications that have a need to use an IVR Designer Host Application, by invoking CallScript to activate the Host Application. The Host Application uses the External Function Ret2vxml.

When the IVR Designer Host Application is called, the VXML application can pass arguments. One of the arguments could indicate to the Voice Application that it needs to Reserve a Host Session(LU) or Release a Host Session(LU).

If a Reserve Host Session(LU) is not done, then each time the Host Application is invoked, a different Host Session(LU) could be used and the Host Application would have to navigate back to the “transaction” based screen each time it is invoked.

To allow an IVR Designer Host Application to use the same Host Session(LU) when it is called multiple times by a VXML Application, the following 2 External Functions were developed.

Cleo External Function Cleoresrvlu

The *Cleoresrvlu* function instructs the Cleo Host DIP(DIP0) to reserve a Host Session(LU) for the input application name and voice channel, until a *Cleorelsu* function is called.

A successful call to this function results in the Host Session(LU) being exclusively associated with the caller’s input voice channel, and the Host Session(LU) is returned to the caller.

The *Cleoresrvlu* function is called with the following arguments:

Hostapp(In/Str) – Name of IVR Designer Host Application.

Channel (In/Number) = Voice Channel

LUnum (Out/Number) = LU number/Host Session reserved.

Cleo External Function Cleorelslu

The *Cleorelslu* function instructs the Cleo Host DIP(DIP0) to release a Host Session(LU) for the input voice channel. A successful call to this function results in the Host Session(LU) being released.

The *Cleorelslu* function if called with the following arguments:

Channel (In/Number) = Voice Channel

Copying External Functions Cleoresrvlu and Cleorelslu to IVR Designer Desktop

The *Cleoresrvlu* and *Cleorelslu* functions reside on the Cleo Host Interface CD and are also located in the /cleo/install directory on the AIR system.

The following files need to be ftp'd to the IVR Designer Desktop, in order to use these external functions with an IVR Designer Host Application. The files on the AIR system are: into the directory

C:\Program Files\Avaya\Avaya IVR Designer\ExtFuncs

/cleo/install/Cleoresrvlu.bmp

/cleo/install/Cleoresrvlu.ef

/cleo/install/Cleorelsu.bmp

/cleo/install/Cleorelsu.ef

These files need to be placed in the following directory on the IVR Designer Work Station PC:

C:\Program Files\Avaya\Avaya IVR Designer\ExtFuncs