

VOICE IMPROVEMENT PROCESSOR (VIP) BACKUP AND RECOVERY PROCEDURES - Draft Version 1.0

This document contains the backup and recovery procedures for the NWR CRS VIP. These procedures shall be used by all CRS sites to ensure adequate backup of critical VIP system software, application software, and other critical files. Procedures for the recovery of these same data are also included herein as Attachments.

There are three critical pieces of software contained in the VIP:

1. **Red Hat Linux version 7.1** - This is the operating system, without which you will not be able to boot the VIP.
2. **Speechify version 1.2 developed by Speechworks** - This is the text-to-speech engine that generates the improved voice.
3. **VIP version 1.1** - This is “wrapper” software that serves as the interface between CRS and Speechify and also contains the user interface.

The documentation package each site will receive from NWSHQ will receive the following media:

1. **4 operating system CDs** - These contain the VIP disk image including the operating system and the Speechify software. These are labeled *VIP OS Restore #1 - #4* CDs.
2. **2 Power Quest disk image software diskettes** - These contain the software necessary to load the disk image on the CDs to the VIP disk. These are labeled *VIP OS Restore #1 - #2* Diskettes.
3. **1 bootable diskette** - This is used to boot the VIP in case the VIP cannot be booted from the disk. This is labeled *VIP OS Restore #3* Diskette.
4. **1 VIP application software CD** - In the initial delivery this contains the VIP application software only. In future deliveries, this CD also will contain the Speechify software. This is labeled *NWSVIPv1.1* CD.

The recovery philosophy of VIP is that if your disk becomes corrupted, you simply recover the operating system by loading the disk image CDs.

The VIP contains two critical files that need to be backed up to diskette:

1. **Substitution Dictionary** - This contains the site specific substitution entries used by the

pre-preprocessor to modify the input text.

2. **Local Dictionary** - This contains the site specific pronunciations necessary to properly voice text information.

These dictionaries should be saved to diskette whenever they are altered.

The following scenarios describe typical operational occurrences and the appropriate backup or recovery procedure(s) that need to be performed:

Scenario 1 - Operating System Failure

In this scenario, the VIP cannot be booted, and you suspect that the operating system has become corrupted. You need to re-load the operating system and Speechify software from the disk image CDs, re-load the VIP software from the VIP CD, and restore both the Substitution and User Dictionaries from their respective diskettes. Perform Attachments 1, 2, 4, and 6.

Scenario 2 - VIP Software Failure

In this scenario, the VIP software will not execute, and you suspect that the VIP software has become corrupted. You need to re-load the VIP software from the VIP CD and restore both the Substitution and Local Dictionaries from their respective diskettes. Perform Attachments 2, 4, and 6.

Scenario 3 - Substitution Dictionary Modification

In this scenario, changes have been made to the Substitution Dictionary. You need to save the new dictionary to a diskette. Perform Attachment 3.

Scenario 4 - Local Dictionary Modification

In this scenario, changes have been made to the Local Dictionary. You need to save the new dictionary to a diskette. Perform Attachment 4.

Scenario 5 - Substitution Dictionary Destruction or Corruption

In this scenario, the Substitution Dictionary has been destroyed or corrupted. You need to recover the backup dictionary from diskette. Perform Attachment 5.

Scenario 6 - Local Dictionary Destruction or Corruption

In this scenario, the Local Dictionary has been destroyed or corrupted. You need to recover the

backup dictionary from diskette. Perform Attachment 6.

Attachment 1 - Procedure to Recover Operating System and Speechify Application

Note: This procedure will take 30 - 45 minutes to complete.

1. Insert the *VIP OS Restore #1* Diskette into the diskette drive.
2. Ensure that all VIP hardware connections are in place and turn on the power.
3. After the **A: />** prompt appears, insert the *VIP OS Restore #1* CD in the CD drive. Remove *VIP OS Restore #1* Diskette and insert *VIP OS Restore #2* Diskette. Type **PQDI** and press the enter key.
4. The **PowerQuest Drive Image Pro** screen is displayed. Click on the **RESTORE IMAGE** button.
5. **Restoring An Image** is displayed. Click on **Browse** and then click on **Drives** and change from **A:Floppy Disk** to **C:Compact Disk**.
6. Click on the **VIPV#.PQI** line and then click on **OK**. Click on the **Next** button.
7. The **Image File Partitions** window is displayed. Click on the **Select All** button. Then click on the **Next** button.
8. The **Select Destination Partition or Unallocated Space** window is displayed. Click on **Delete Disk Partitions**.
9. The **Delete Partitions** window is displayed. Click on the **Delete All** button. Then confirm by clicking **Yes**. Finally click on **close** in the **Delete Partitions** window.
10. Click on **Next** on the **Select Destination Partition or Unallocated Space** window.
11. The **Ready To Restore Image File** window is displayed. Click on **Finish**.
12. The restore begins with the following progress windows displayed:
 - a. Click on **Yes** when prompted by any **Moving past Cylinder 1023** messages.
 - b. When prompted for **media#2**, insert the *VIP OS Restore #2* CD into the CD drive. Repeat when prompted for *#3 and #4*.
 - c. Click **Yes** when prompted by any **Moving past Cylinder #####** messages.

13. At the conclusion of the procedure, a **Restore Image** warning box will display **No active partitions...** Click on **No**.
14. A **Restore Image** information box will display **...would you like to view results**. Click on **No**.
15. Click on **Exit**.
16. At the **A:/>** prompt, remove the diskette and CD from their respective drives. Power down the VIP.
17. Power up the VIP. The Red Hat Linux 7.1 Operating System will boot and the Linux login prompt should appear. If it does, this procedure is completed. Otherwise, proceed to the next step.
18. Insert the *VIP OS Restore #3* diskette into the diskette drive. This will boot the VIP.
19. At the Linux login prompt, login as **root** with the password **nws2002**.
20. From the KDE desktop display, click on a **xterm/shell icon** to display a terminal window.
21. Type **lilo -v** and press the enter key.
22. Type **shutdown -y -i0 -g0** and press the enter key. This will shut down the operating system and power off the VIP.
23. Remove the diskette from the drive and power up the VIP.
24. The Red Hat Linux 7.1 Operating System will boot and the login prompt will appear.

Attachment 2 - Procedure to Recover VIP Application

1. At the Linux login prompt, login as **root** with the password **nws2002**. If the Tip screen appears, click through it.
2. Insert the *NWSVIPv1.1* upgrade CD into the CD drive.
3. From the KDE desktop display, click on a **xterm/shell icon** to display a terminal window. The following steps mount the CD and install the CD files onto the hard drive.
4. At the shell prompt, type the following commands to mount the CD drive:

mount /mnt/cdrom and press the enter key.
cd /mnt/cdrom and press the enter key.

5. Execute the install procedure by typing **./VIPUpgrade** and press the enter key.
6. Fill out the *VIPUpgrade* application. To complete the install process, click **Begin Upgrade**. Note: There will be a short pause. A prompt will appear once the upgrade is complete. (The installation should take 2 -3 minutes.)
7. Click **Close** to complete the installation.
8. After a successful installation, unmount the CD by typing the following commands:

cd and press the enter key.
Umount /mnt/cdrom and press the enter key.

9. Remove the *NWSVIPv1.1* upgrade CD from the CD drive.
10. Type **exit**. This will close the shell window.
11. Right click on the mouse anywhere on the desktop.
12. A menu appears; select **Logout** and then click on it with the left mouse button.
13. The Linux login prompt will appear. Login as **crs** with the password **r0amsmu**.

NOTE: ALWAYS run the VIP application as user crs

14. Start the VIP Graphical User Interface (GUI) by double clicking on the **VIP icon** displayed on the

desktop. Alternatively, you may open an xterm/shell and type `/usr/local/bin/VIP &` at the command prompt. The main **VIP** menu will be displayed.

15. Select the **System Settings** button. The **System Settings** window will be displayed.

16. Click on **Options** and then select **Set Recommended Values**. Click **Yes** on the **Be sure** dialog box. Click **OK** on the **VIP message** window.

17. Fill in the site specific information for the fields marked as **local** by the **Set Recommended Values** function:

Male English...enter the numeric IP address for the VIP machine

Female English...enter the numeric IP address for the VIP machine

0MP address...enter the numeric IP address for the local 0MP machine

5MP address...enter the numeric IP address for the local 5MP machine

password...enter the **crs** password

18. Select **OK** to save the entries.

NOTE: The root and crs passwords on the VIP must be modified to match those on the other CRS passwords. Processing of messages will not occur if the crs passwords on the MPs and the VIP are not identical.

19. At this point VIP is ready for operational use. To run the VIP application, click on the **Start** button on the main **VIP** menu.

20. At the **CRS Status** window on the CRS Master Console, verify that the **VIP icon** is a green arrow pointing up.

Attachment 3 - Procedure to Backup Pre-Processor Substitution Dictionary

1. Place the diskette in the drive. From the main **VIP** menu, click on the **Pre-Processor** button. This will display the **Pre-Processor “Substitution Dictionary” Manager**.
2. Click on **Options**, which displays a pull down menu. From the pull down menu, click on **Save LOCAL Substitution Dictionary TO Floppy Disk**.
3. A Dialog Box is displayed that asks: **Save the “SUBSTITUTION” dictionary TO floppy disk?** Click on the **Yes** button.
4. A successful transfer of the dictionary will cause a Dialog Box to display with the following message: **File Transfer Successful! File saved on floppy as: “opsub.dic”**. Click on **OK** button.
5. Remove the *opsub.dic* diskette from the drive, label it as *opsub.dic*, and keep it in a safe place. It will be used if you need to restore the Substitution Dictionary. Please note that the operator has no choice in the name of the backup file; it will always be *opsub.dic*.
6. Click on the red X to exit from the **Pre-Processor “Substitution Dictionary” Manager** window. A Dialog Box is displayed that asks if you want to save the changes before exiting. This procedure assumes that you have made no changes to the dictionary, so you can click on **No**. (If changes were made to the dictionary in to addition saving it, you should click on **Yes**. **NOTE: You must stop and start the VIP for those changes to take place.**)

Attachment 4 - Procedure to Backup Local Dictionary

1. Place the diskette in the drive. From the main **VIP** menu, click on the **Dict Manager** button. This will display the **Local Dictionary Manager**.
2. Click on **Options**, which displays a pull down menu. From the pull down menu, click on **Save LOCAL Dictionary TO Floppy Disk**.
3. A Dialog Box is displayed that asks: **Save the “LOCAL” dictionary TO floppy disk?** Click on the **Yes** button.
4. A successful transfer of the dictionary will cause a Dialog Box to display with the following message: **File Transfer Successful! File saved on floppy as: “cache”**. Click on **OK** button.
5. Remove the *cache* diskette from the drive, label it as *cache*, and keep it in a safe place. It will be used if you need to restore the Local Dictionary. Please note that the operator has no choice in the name of the backup file; it will always be *cache*.
6. Click on the red X to exit from the **Local Dictionary Manager** window. A Dialog Box is displayed that asks if you want to save the changes before exiting. This procedure assumes that you have made no changes to the dictionary, so you can click on **No**. (If changes were made to the dictionary in addition to saving it, you should click on **Yes**. **NOTE: You must stop and start the VIP for those changes to take place.**)

Attachment 5 - Procedure to Recover Pre-Processor Substitution Dictionary

1. Place the diskette labeled *opsub.dic* in the drive. From the main **VIP** menu, click on the **Pre-Processor** button. This will display the **Pre-Processor “Substitution Dictionary” Manager**.
2. Click on **Options**, which displays a pull down menu. From the pull down menu, click on **Restore LOCAL Substitution Dictionary FROM Floppy Disk**.
3. A Dialog Box is displayed that asks: **Retrieve the “opsub.dic dictionary FROM floppy disk?** Click on the **Yes** button.
4. A successful transfer of the dictionary will cause a Dialog Box to display with the following message: **File Transfer from floppy Successful.** Click on **OK** button.
5. Remove the *opsub.dic* diskette from the drive and keep it in a safe place. It will be used again if you need to restore the Substitution Dictionary.
6. Click on the red X to exit from the **Pre-Processor “Substitution Dictionary” Manager** window. A Dialog Box is displayed that asks if you want to save the changes before exiting. This procedure assumes that you have made no changes to the dictionary, so you can click on **No**. (If changes were made to the dictionary in to addition restoring it, you should click on **Yes**. **NOTE: You must stop and start the VIP for those changes to take place.**)

Attachment 6 - Procedure to Recover Local Dictionary

1. Place the diskette labeled *cache* in the drive. From the main **VIP** menu, click on the **Dict Manager** button. This will display the **Local Dictionary Manager**.
2. Click on **Options**, which displays a pull down menu. From the pull down menu, click on **Restore LOCAL Dictionary FROM Floppy Disk**.
3. A Dialog Box is displayed that asks: **Retrieve the “cache dictionary FROM floppy disk?** Click on the **Yes** button.
4. A successful transfer of the dictionary will cause a Dialog Box to display with the following message: **File Transfer from floppy Successful.** Click on **OK** button.
5. Remove the *cache* diskette from the drive and keep it in a safe place. It will be used again if you need to restore the User Dictionary.
6. Click on the red X to exit from the **Local Dictionary” Manager** window. A Dialog Box is displayed that asks if you want to save the changes before exiting. This procedure assumes that you have made no changes to the dictionary, so you can click on **No**. (If changes were made to the dictionary in to addition restoring it, you should click on **Yes**. **NOTE: You must stop and start the VIP for those changes to take place.**)