



READ ME Version 2.0

August 17, 2000

(**Macintosh PPC only**)

Welcome to SoundSaVR®, the wired sprite QTVR editing tool that embeds directional sound into single or multinode panorama movies.

System Requirements

SoundSaVR 2.0 requires a Macintosh PowerPC or compatible system with a base requirement of 5 MB of RAM and 5 MB of hard disk space for installation. The sounds and VR movies used will require additional hard disk space and memory. A recommended system configuration for adding sounds to VR movies is 16 MB RAM and 50 MB of hard disk space. SoundSaVR requires QuickTime 3.0 to be installed (version 4.12 strongly recommended), and requires System 8 or higher. Sound Manager 3.3 should also be installed as some compression codecs require it.

Usage Notes

Adding sounds using SoundSaVR should be the last step in the QTVR authoring process. This is due to a special flattening process that permits QuickTime to loop sounds without storing it multiple times. As QuickTime editing software calls the default QuickTime flattening function, when a SoundSaVR movie is re-flattened it will grow in size. Only SoundSaVR is capable of flattening SoundSaVR movies.

Modifications using other editors such as Movie Player will work as long as the movie is not flattened. To flatten the movie, open it with SoundSaVR and save the movie again.

SoundSaVR 2.0 tries to preserve embedded media such as custom graphics and wired sprites. Some problems may be found with Flash and LiveStage media. **Test your output movies.** Multinode movies with object nodes are now supported, but sounds can not be added to the object nodes.

Developers who are using authoring packages with scripting capabilities such as Director or mTropolis, should take note that each node is set to a length of approximately one hour so that sounds can independently loop.

Quick Start

Launch SoundSaVR

Open a QTVR movie

Add sounds to all nodes (unless a node is an object)

Select a node in the movie (repeat as necessary)

Import required sound files (repeat as necessary)

Click the "Add Sound..." button

Choose a sound file from the dialog

Repeat until all required sounds have been imported

Preview the sound settings (as often as desired during the steps below)

Select the "Preview Mode"

Pan and Listen

Select the "Edit Mode"



Set the correct direction for sounds that should pan

Select a sound from the "Sounds" list box

Pan the movie to the desired angle

Click the "Set Angle" button

Repeat until all directional sounds have been set correctly

Set the volumes for each sound

Select a sound from the "Sounds" list box

Drag the volume slider(s) to the desired level

Repeat until all sound volumes have been set as desired

Save the output movie

Select "Save A Copy As...." menu item from the "File" menu

Choose the file destination from the dialog

The Menu Bar



There are two active menu bar items in SoundSaVR: File and Options.

The **File** menu has five active items:

"Open...", "Close", "Save A Copy As...", and "Quit"



The "**Open...**" menu item will open a dialog to select a movie file. Importing a file that has no panorama track or QTVR track will cancel the process and the user will be notified that the file was not a panorama. When a valid QTVR movie has been selected, a SoundSaVR editing window will open, displaying the selected movie file.

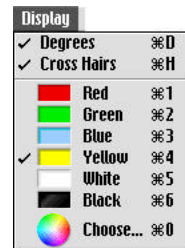
The "**Close**" menu item will close the active editing window. If the movie has been edited, and the changes haven't been saved, a dialog will open prompting the user to save before closing the movie, to close without saving, or to cancel.

The "**Save A Copy As...**" menu item will open a standard put-file dialog allowing the user to save the current movie with edited sounds. It is recommended that users do not try to overwrite already existing files.

The "**Export...**" menu item is only available if a NodeSaVR registration key is installed. See your NodeSaVR documentation for usage.

The "**Quit**" menu item will close all editing windows and Quit the application. As with the Close menu item, the user will be prompted to save any changes.

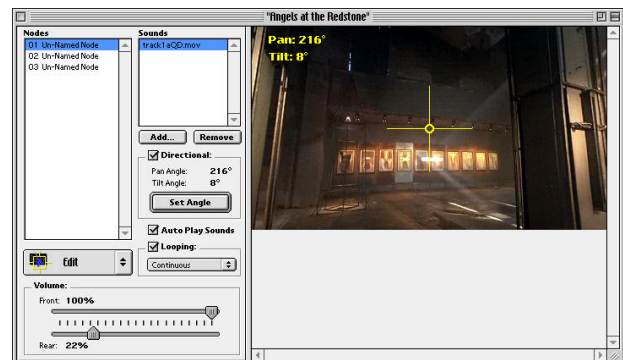
The **Options** menu has nine active items: the first two, "Degrees" and "Cross Hairs", toggle the info displays on and off. The remaining six menu items set the color of the information displays.



The info displays use the dimensions of the panorama track, not the entire movie, and are therefore always placed in their correct positions even if a panorama track has been rotated or if additional media elements have been added to the movie.

The Editing Window

Only one SoundSaVR editing window can be opened at a time. Clicking the windows "zoom box" will reset the window to its original size if it has been changed.



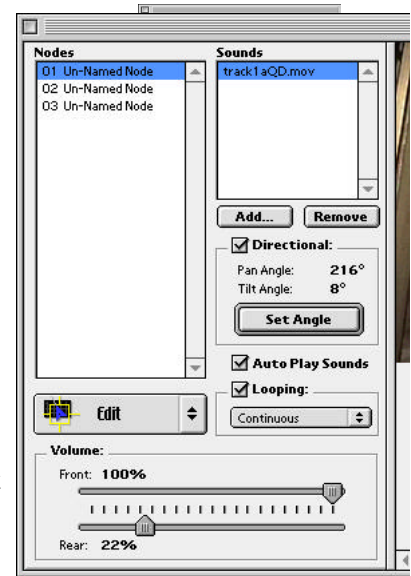
The Editing Panel

Each window contains an editing panel on the left side, that has a "Node List", and "Sound List", as well as buttons to add or delete sounds, and controls that set the volume(s), type (ambient or directional), and looping status of each imported sound.

Add Sound... Button

Clicking on this button will open a dialog box where an appropriate sound file can be selected in the get-file list box. Clicking on this button will open a dialog box where an appropriate sound file can be selected in the get-file list box. Clicking on Open will import the selected sound into the current node and display it in the 'Sounds' list box. Previously grayed out items in the SoundSaVR editing panel will become active. If a sound file (that is not in a QT movie) can be played back in QT3.0, the Open button will change to Convert.

Clicking on the button will convert the file to a QT movie, save the converted movie to a specified file/directory, and then import it into the current node. To add an RTSP track, first save the RTSP movie to your hard-drive. From the plug-in choose "Save As QuickTime Movie..." or from QuickTime Player choose "Save As..." and then "Make movie self-contained". Then just add it like any other sound.



Remove Sound Button

Clicking this button will remove the currently selected sound from the 'Sounds' list. This button will be grayed out if the Clicking this button will remove the currently selected sound from the 'Sounds' list. This button will be grayed out if the currently selected node has no sounds.

Nodes List

There will be only one item in this list if a single node pano is open. If it is a multinode pano, the name of each node contained in the movie will be displayed. Clicking on a node list item will select it as the current editing node and the sounds list box will be updated accordingly to reflect any sounds that may have been embedded.

Sounds List

This list box will be grayed out until at least one sound file is imported into the current editing node. To import a sound file, use the 'Add Sound...' button. Clicking on a "Sounds" list item will select it as the current editing sound, and update the sound setting controls accordingly. If the currently selected sound is set to be directional, then the movie screen will be updated to display the corresponding view. More than one sound can be imported into each node, as long as there is enough available memory. However, keep in mind that too many sounds in a node can confuse the listener.

Auto Play Button

If this check box is selected, the audio for the current node will automatically start playing whenever the end user enters the node. If this option is not selected you will need to include an external mechanism to start the sound.

Ambient Sound

If the "Directional Sound" check box for a particular sound is not checked, the sound is considered to be ambient and its volume will not change based on the pan angle. This is the default state of imported sounds.

Setting Ambient Sound Volume.

Ambient sound volumes are set using a single control slider in the "Volume" section of the editing panel. Drag the slider thumb to the desired sound level to set playback volume. The volume is represented as a range from -50 to 150 with the default being 100. The current volume level is displayed in the upper right of the Volume section.

Directional Sound

An imported sound is considered to be directional (that is, the sound volume changes based on the pan angle) if the "Directional Sound" check box is checked. The current pan angle is used when clicking on this check box. When this box is checked, the Volume section of the editing panel will display a second volume control slider and label the controls "Front" and "Rear" respectively



Setting a Sounds Direction

The direction of a sound can be changed in two ways: by clicking the "Directional Sound" check box (only the first time) or by clicking the "SET ANGLE" button after panning to the desired view.

Setting Directional sound volumes

When the current sound to be edited is a directional sound, the "Volume" section of the editing panel displays two control sliders and corresponding labels "Front" and "Rear".

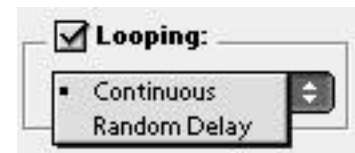


The slider labelled 'Front' indicates the volume that will be used when the pan angle matches the set direction of the sound source. The slider labelled 'Rear' indicates the volume that will be used when the pan angle is 180 degrees away from direction of the sound source.

The volume level can range from -50 to 150. Zero to 100 represents an even fall off all the way around the panorama with 180 degrees away from the set direction being inaudible. Setting the Rear volume lower than 0 produces a narrower volume fall off for a directional sound. Setting the Front volume higher than 100 amplifies sound sources if they were too quiet when originally sampled.

Looping Style Check Box

Selecting this check box will enable the Looping Style Pop Up Menu. When this box is not selected the sound will be played only once.



Looping Style Pop Up Menu

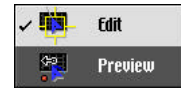
Selecting an item will determine the loop state of the currently selected sound to indicate type of loop generated for playback.

Continuous will play the sound repeatedly for the entire duration of the current node.

Random Delay will play the sound repeatedly with random length silence between plays.

Edit / Preview Pop Up Menu

This menu allows added sounds to be played in preview mode. The sound volume settings can be changed "on the fly" while in preview mode. The direction can also be changed while in preview mode, but to add more sounds or change the looping style the menu must be set to edit mode.



Known Issues

- 1) Multinodes which contain object nodes are now supported but you can not add sounds to the object nodes. This is due to the differences between the format of object movies, and panoramic movies. There are no plans to add sounds to object nodes, as QuickTime currently does not have support for asynchronous track playback in one self-contained movie. As a result, this issue will not be addressed by SoundSaVR.
- 2) Embedded media such as Flash and LiveStage may cause problems.
- 3) Adobe Go-Live requires the "GoLive CyberMovie Module." or your computer may crash during uploads.

SoundSaVR Tips & Tricks

3D Sound Multinode Trick

- 1 Decide on a sound "location" in a given node (i.e.. telephone).
- 2 Select a node that is the farthest away from the sound "location", and where you would like the sound to still be heard.
- 3 Import a sound sample with a relatively short duration, set it to loop, and set the direction to point to the sounds "location".
- 4 Set the "Front" volume to 50% (for example) and the "Rear" volume to something less than the "Front" volume.
- 5 Repeat steps 3 & 4 for any node that is "closer" to the sound "location", adjusting the "Front" and "Rear" volumes up by 10 to 20%.
- 6 Save the movie.

During playback, the telephone sound will seem to get louder as you "move" towards it, and quieter as you "move" away from it.

Sound Range Trick

- 1 Create a sound sample and amplify the sample so that it is louder than usual.
- 2 Import the sample into SoundSaVR and set it to be directional.
- 3 Adjust the "Front" volume slider down to 10 or 20% and make sure the "Rear" is set to zero.
- 4 Save the movie.

During playback, as the movie is panned, the sound will drop off much quicker than usual.

Audio Streaming Trick

In some cases you may wish to add a long silence to the beginning of your audio sample in order to give it more time to download and lower the risk of data underrun or start / stop controller behaviour.

Lengthen Random Loop Delay Tip

Add a short bit of "random" silence to the end of short audio samples you plan to set to "Random Delay". Doing this will increase the maximum length of the random delay. Sounds under three seconds have a max random delay of 5 to 6 seconds arbitrarily.

Offset Random Loop Delay Tip

Add a short bit of silence to the beginning of audio samples you plan to set to "Random Delay", using a different length for each. Doing this will prevent the samples from starting simultaneously.

Looping Midi Tip

Incorrectly authored Midi (no NOTE OFF resets) will not loop correctly in SoundSaVR or in Movie Player.

Use MoviePlayer or SimpleText to preview sounds in output movies after you export them. Open output movies with another viewer after SoundSaVR creates them, without closing the SoundSaVR editing window.

Reporting problems

SoundSaVR 2.0 is a completely redesigned from the ground up application. As a result of the wide variety of different types of sound compressors, VR creation programs and system configurations, it is expected that some conflicts and bugs are going to be found.

Please consult the FAQ for information on current SoundSaVR issues and bugs. If you believe that you have found a different problem, please ensure that you can reproduce it, and check if it still occurs when starting up with only the required standard Apple extensions. Please also make sure that all source movies and sounds play correctly in MoviePlayer before they are brought into SoundSaVR.

If problems persist, please e-mail a detailed description of the problem, how it is triggered, and if possible, an example source movie, as well as what program the movie was authored with, to <dev@smgVR.com>

Fixes and Enhancements

April.22, 2000 - v2.0

- No more tile requirements.
- Preview mode added.
- Compatibility with VRworx multinodes.
- Object nodes can be present in multinodes.
- Directional sounds also use tilt info to determine volume.
- Removed advanced streaming options to prevent "dangerous" movie making.
- Custom themes can now be used in the Finder without problems.
- QT4.1 eliminates the extended play "broken icon" problem on Windows machines.

Sept.14, 1999 - v1.2

- MP3 audio tracks are now supported.
- A progress bar will now give feedback during lengthy saves.
- RTSP tracks can now be added like any other sound. The video (if available) of the RTSP track will be invisible.
- Choosing "Save As QuickTime Movie" from the browser plug-in popup menu will no longer flatten the movie, bloating the movie's size and making it appear that the system has crashed.
- Added a workaround that increases the duration that a movie with directional sound will last in Windows before the movie gets a "broken icon" (See Troubleshooting section of the FAQ).

Oct. 19 1998 - v1.1

- Sprite Bonus Pack
- QTVR Tile Calculator HyperCard Stack
- Supports Fast Start for Internet with four loading options
- Supports looping with random length delays
- Now supports optional auto play / not play. Optional for each node
- Increased compatibility with multinode movies
- Node durations can now be less than one second
- Sound durations can now be less than one second

Sept. 19 1998 - v1.0

- Documentation and dialog messages stated that disabled output movies would play sounds from 0 to 100 degrees. These items were corrected to indicate that disabled output movies will play sounds from 360 to 260 degrees.

Updates & Upgrade Policy

- Version 2.0 release is free to version 1.X registered users

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