Wired for Sound Editor

The Wired for Sound editor lets you edit waveform sounds.   You can convert sounds between various formats, apply various transformations to them, and use the clipboard to copy, cut, and paste together new sounds.

Overview

WFS Edit allows waveform sounds to be loaded, recorded, played back, edited, and saved in a variety of formats.

The currently sound is displayed graphically as a waveform, which indicates visually the volume of the sound.   For stereo sounds, two wave forms are displayed--one for the right channel and one for the left.

The insertion point can be placed anywhere in the waveform by clicking on the waveform.   The insertion point is similar to that used with other Windows text editors.   Sound that is pasted or recorded into the waveform will be inserted where the insertion point is.   Also, the play button begins playing the sound from the insertion point's location.

Portions of the sound can be selected by clicking the mouse on the waveform and dragging it, much as text is selected in other Windows applications.   Certain commands operate only on the selected portion of the waveform, such as the clipboard and sound effects commands.

Sound Controls

The five WFS Edit sound controls can be used to control playing and recording sounds.

Control	Effect
▶	The sound will be played from the current location. If a portion of the sound is selected, only that portion will be played.
●	Records a new sound. You must have a microphone on your sound board to use this command. The recorded sound will be inserted at the current location. It a portion of sound is selected, it will be replaced by the newly recorded sound.
■	Stops playing or recording the sound, if either operation s in progress.
▶▶	Moves the insertion point to the right.
◀◀	Moves the insertion point to the left.

There is a limit to how much sound can be recorded.   It depends on how much free memory you have and what format the currently loaded sound is in.   The Sound Settings command can be used to determine which format a sound will be recorded in.

Sound Effects

You can apply several effects to sounds using WFS Edit.   Effects let you change the way a sound sounds.

Sound Effect	Result
Amplify	Increase or decrease the volume of the selected portion of the sound.
Echo	Create an echo effect
Fade In	Fade in the selection, from silence to full volume
Fade Out	Fade out the selection, from full volume to silence
Expand	Double the length of the sound. The sound will sound slower.
Contract	Halve the length of the sound. The sound will sound twice as fast.

Expand and Contract are applied to the entire sound.   Amplify, Echo, Fade In, and Fade Out affect the selected portion of the sound, and are not available when no part of the sound is selected.

Amplify

The Amplify effect lets you change the volume, or loudness, of the sound currently being edited.   Amplify effects the selected portion of sound.   Amplify can either increase or decrease the volume of the selected sound.   This is useful if part of the sound is too soft or too loud.

The amount that the sound is amplified depends on the Amplify setting, available through the Amplify command under the Settings menu.   100% will leave the sound unchanged.   50% will reduce the volume to half its previous level.   200% will double the volume.

Note that there is a limit to how much you can amplify a segment of sound.   The sound will become distorted if you amplify it too much.   The sound's waveform will appear "clipped" or flattened by the top and bottom of the waveform window when this happens.

Expand

The Expand effect lets you double the length, or duration, of the sound currently being edited.   This effect affects the entire sound sample, not just the selected portion.   Expanding a sound will cause it to sound slow when played.

If you accidentally expand a sound, you can <u>Contract</u> it to return it to its normal size.

Contract

The Contract effect lets you reduce the size of the sound currently being edited to half its normal length. This effect affects the entire sound sample, not just the selected portion.   Contracting a sound will cause it to sound fast when played.

If you accidentally contract a sound, you can <u>Expand</u> it to return it to its normal size.

Fade In

The Fade In effect lets you gradually increase the volume of a portion of the sound currently being edited. Fade In affects the selected portion of the sound.   After Fade In is applied to the selection, its volume will increase from zero, or silence, at the beginning of the selection to its normal volume at the end.

Fade Out

The Fade Out effect lets you gradually decrease the volume of a portion of the sound currently being edited. Fade Out affects the selected portion of the sound. After Fade Out is applied to the selection, its volume will decrease from its normal volume at the beginning of the sample to zero, or silence, at the end.

Echo

The Echo effect can be used to echo the selected portion of sound one or more times.

Before applying the Echo effect, the Echo... command under the Settings menu can be used to set both the echo delay and the number of echoes.   The longer the delay, the more time there will be between echoes.   The more echoes there are, the more times the sound will be repeated.

Each echo will have decreased volume.   The length of the sound being edited may be increased to accommodate all echoes.

Converting Sounds

The Convert command lets you change the format of the sound currently loaded.   Convert will convert the entire sound to a different format.   Converting a sound changes the way it is stored by the computer, but does not generally affect the way it sounds.   There is little reason to convert a sound to "better" settings (i.e. higher sampling rate, larger sample size)--the quality of the sound will not be improved.   On the other hand, you may want to convert a sound to "worse" settings (i.e. lower sampling rate, smaller sample size) so that it can be played on low-end sound equipment, or to save disk space.

With Convert, you can change the following format parameters:

Parameter	Description
Samples/second	The sampling rate of a sound determines how many samples per second are used to represent it. For CD-quality sound, use 44,100. Lower sampling rates will reduce the amount of disk space a sound requires, but may reduce its quality. Converting a sound to a higher sampling rate will *not* in general improve its quality. You may want to reduce the sampling rate if your sound card does not support playing sounds at higher sampling rates.
Bits/sample	Sounds can be stored using either 8 or 16 bits per sample. CD-quality sounds use 16-bits per sample. 8-bit sounds require half the disk space of 16-bit sounds, but may sound inferior. Some older sound cards cannot play 16-bit sounds, so you may want to convert 16-bit sounds to 8-bit in order to play them. Converting an 8-bit sound to 16-bits will *not* improve its quality.
Channels	Sounds can be stored using either one channel (mono) or two channels (stereo). CD-quality sounds are stored in stereo. Stereo sounds require twice the disk space as mono sounds. You may want to convert a stereo sound to mono to save space, or if the left and right channels are not drastically different. Converting a mono sound to stereo simply causes the same sound to be duplicated in the left and right channels.

Larger sounds may take a few seconds to convert.   It is best to change all sound format parameters at once, instead of using Convert several times, since each time a sound is converted, some quality is lost. If you have to convert a sound to several formats, it is best to start with the original sound for each conversion.

Sound Settings

The Sound Settings command lets you change the format settings for the currently loaded sound.   Any sound that you record or paste into the loaded sound will be in this format.

The Settings command is most useful when editing sound files which don't include formatting information, such as .SOU (raw data) files.

Most sounds store the appropriate settings for them, and WFS Edit automatically sets the format settings when they are loaded, so there should be little need to change the settings.   Some sound formats, such as the Raw Data format, do not contain any settings, so you may need to determine which settings work best with the sound.

The various format settings are described under the <u>Convert</u> command.   Note that the Settings command will *not* change the sound data itself--it only changes what WFS Edit thinks its format is.   The Convert command will change the format settings--but will also change the format of the sound to match these settings.

Editing Sounds

WFS Edit lets you copy, cut, paste, and delete portions of sound, both within the same sound and between different sounds.   You can load multiple copies of WFS Edit, open a different sound in each one, and copy portions of sounds between them.

Edit Command	Effect
Copy	The Copy command will copy the selected portion of the sound to the clipboard. It will be available to all loaded copies of WFS Edit.
Cut	The Cut command will copy the selected portion of the sound to the clipboard *and* delete it from the sound. The copy will be available to all loaded copies of WFS Edit.
Paste	Paste will replace the selected portion of the sound with whatever sound is on the clipboard. If no portion is selected, the sound on the clipboard will be inserted into the sound in the editor at the insertion point. The sound on the clipboard will be converted to the same format as the sound you're pasting it into.
Paste Mix	Paste Mix is similar to Paste, except that the sound on the clipboard is mixed with the selected sound. The effect will be as if both sounds were playing at the same time.
Delete	Delete will delete the selected portion of sound. The clipboard is not affected by this command.

Opening Sounds

WFS Edit can load sounds stored in a variety of formats.

If the sound currently loaded has been edited, you'll be asked to save it first before a new sound is loaded to replace it.

The following sound formats are supported:

File Format	Description
Wave (*.WAV)	The Wave format is the standard format for multimedia Windows waveform sounds. The wave format supports a variety of formats. WFS Edit can load standard wave files (PCM wave files) and those compressed using Microsoft's ADPCM format (MSADPCM wave files). WFS Edit will automatically decompress a compressed file when loading it.
SoundTool (*.SND)	The SoundTool format was a popular sound format before Multimedia Windows was released. (SoundTool is the name of the sound editor which first used the format.)
Sounder (*.SND)	The Sounder format is a limited version of the SoundTool format used by Sounder. Since SoundTool and Sounder files both use the .SND extension, WFS Edit will automatically determine the appropriate type if a .SND file is opened.
SoundBlaster (*.VOC)	The VOC format is used for many SoundBlaster sounds. WFS Edit can open any uncompressed VOC file.
Raw Data (*.SOU)	Raw data files contain only the sound samples--there is no format information in the sounds. You will want to use the Settings command to set the sound format settings appropriately for Raw Data sounds.

WFS Edit will automatically determine the type of a sound based on its file extension, so there generally is no need to specify the file type explicitly.

For some sound formats, such as Raw Data, you may need to manually set the sound's format settings. See Sound Settings for more information.

Saving Sounds

The Save command will save a sound using its original file name and sound file type.

The Save As command allows you to change the file name, location, and file type of the sound.   You can save sounds in any of the formats described below:

File Format	Description
Wave (*.WAV)	The Wave format is the standard format for multimedia Windows waveform sounds. Wave sounds can be used by many Windows applications.
Compressed Wave (*.WAV)	Compressed wave sounds require one-half to one-quarter their uncompressed size to store. Some sound quality may be lost when saving a sound as a compressed wave file. Also, not all applications can handle compressed wave sounds.
SoundTool (*.SND)	The SoundTool format was used in previous versions of Wired for Sound. You may want to save sounds in this format to use with Wired for Sound 1.0.
Sounder (*.SND)	The Sounder format is a limited version of the SoundTool format used by Sounder. Few applications use the Sounder format.
Soundblaster (*.VOC)	The VOC format is used for many SoundBlaster sounds. WFS Edit will save the sound as an uncompressed VOC file.
Raw Data (*.SOU)	Raw data files contain only the sound samples--the sound's format settings will not be saved with it. In general Raw Data sounds should be 8-bit, mono, and either 11025 of 22050 samples per second.