Virtual Audio Stream by DDMF
Manual

Thank you for using this product! To get the most out of it, make sure to read this manual carefully. If there are still questions left after reading, don't hesitate to contact support@ddmf.eu for further help.

Installation: the demo version installs both the virtual audio driver and the effect rack. For the full version the user has the choice between the driver only and the full package. If only the driver has been purchased, the setup.exe will simply install it without any user interaction required. If the effect rack is installed as well, you will be asked for an installation directory, which you can choose freely.

Usage: the driver consists of 4 virtual stereo cables that reroute all audio signals from the output back to the input. After installation you should therefore see 4 new playback devices and 4 new recording devices in your audio device manager. One frequent use of these devices is to record the audio output of one application using another application (which would have to be capable of recording audio then). Let's say you want to record a Skype conversation. For this you'd have to set the playback device in Skype to e.g. the first DDMF virtual stream (called “Stream 1” on Vista and Windows 7 and “Wave 1” on XP). Now all Skype audio signals will be sent back to this stream's input channels. Open a recording programme (an excellent free program is Audacity, but there are numerous others) and set the input device to the same DDMF audio stream. Now you are ready to record your skype conversations!

If you want to record sound playback by websites (e.g. Youtube videos) you have to set one of the DDMF audio streams as the default playback device. Use this stream's input then to record the sound with a dedicated recording programme.

Any one DDMF audio stream can be used by more than one application in parallel. All output of all applications using the same audio stream as playback device will be mixed together to that stream's input channels. All applications usign the same stream as recording device will receive the same input signal. The driver uses an internal resolution of 44100 Hz @ 16 bit (CD quality). Other sample formats will be resampled accordingly.

If you can choose between various audio formats in your applications, using “Direct Sound” will usually give the best results. Feel free to try WDM audio as well, but generally, Direct Sound is recommended. You can also wrap the driver to ASIO using ASIO4ALL (if you want very low latencies), but one inherent limitation of ASIO is that you can only use one instance of an ASIO driver (if you use it in one application it will be locked in all other applications).

The effect rack: the VST effect rack can process up to four soundcards in parallel. These don't have to be the DDMF virtual audio streams, any other soundcard will do. However, the purpose of the effect rack in this context is to provide a means to treat the audio going through the virtual streams with VST effects. If you don't know what VST effects are: VST is a very common format introduced by Steinberg for which thousands of effects are available, many of them for free. Have a look at the database at http://www.kvraudio.com for an overview over the possibilities.
The effect rack offers four editable “audio graphs”, each one initially consisting of only an input and an output. First of all, usign the “options” menu, you will have to set the input and output devices for at

least on of the four graphs before you actually hear anything. Let's assume that you have set the system playback device to Stream 1 of the DDMF virtual audio streams. At this point, all sounds from e.g. Youtube videos etc. will go through that stream, but you will not actually hear anything. Let's further assume that you have a "real" soundcard (the one with the speakers attached to it). Now, choose Stream 1 as input for the first graph and your real soundcard as output. Use DirectSound for the audio format. Set the buffer size to a medium value (30-50 ms) to begin with; if you experience latency issues you can decrease it later. Conversely, if you experience crackling or stuttering in the audio signal, you want to increase the buffer size.
Close the dialogue and connect the input and the output module of the first graph in the effect rack. This can be done by simple mouse dragging. Typically, you have a left and a right channel, connect them both for stereo sound. Now you should be able to hear whatever you are sending through Stream 1 coming out of your speakers. You can set up the other three graphs in the same way; if you don't intend to use them, set their input and output to an empty device, as this will save CPU power.

Now you are ready to use some effects on your audio streams. VST effects come as dll files, you can load them into the effect rack by either dragging-and-dropping them onto one of the four graphs or by choosing them from a list of previously defined plugins. You can fill this list of available plugins on your computer by choosing Options → Edit the list of available plugins. Choose the directory where your plugins are installed and do a scan. Now all your plugins are available via right-clicking the mouse in one of the four graphs.
A loaded plugin will, just like the input and the output module, show up with pins for its inputs and outputs. Simply insert them into the audio chain by dragging cables to and from other pins, just like you would in a hardware effect rack. Double-clicking on a green rectangle representing a plugin will open that plugin's editor. Adjust the effect settings to your liking.
Upon closing the effect rack, the last audio settings and audio graph connections (including loaded plugins) will be remembered the next time you open the rack. If you wish to save a particularly useful configuration, you can do so by File → Save , and later open that configuration again by using File → Open.
If a plugin introduces a certain amount of latency (a delay by a fixed number of audio samples which is inherent in the algorithm of the plugin), the effect rack will delay all other plugins in the same graph appropriately (plugin delay compensation). Also, you can choose the "send" amount (the dry/wet ratio) by shift-clicking on a green rectangle and moving the mouse left or right. The amount of green colour corresponds to the percentage of the audio signal actually going through the plugin instead of around it.
The effect rack is resizable: dragging the right or lower border (or the corner in the lower right) lets you adjust the size to the complexity of the audio graphs you have created.