

Composition: Electronic Media I

Sept. 19, 2007

Basic Operations in SoundHack

1. Sound Hack background:
 - a. Tom Erbe, Cal Arts
 - b. Sound file converter
 - c. Sound processor
 - d. Output
 - e. Icon in the dock:



2. Find or create a mono or stereo (interleaved) soundfile. Open the soundfile in **SoundHack** as follows:
 - a) Launch **Soundhack** from the dock.
 - b) Select a select a soundfile from File>Open. Two windows will appear.
 - c) The window below shows soundfile information.

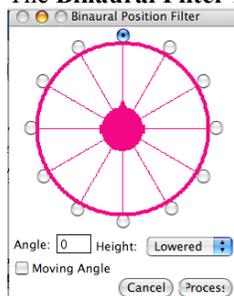


- d) The window below shows playback information. Press **spacebar** to play; press **return** to stop.



3. The **Hack** menu displays the following functions:
 - a) Binaural Filter
 - b) Convolution
 - c) Spectral Dynamics
 - d) Mutation
 - e) Phase Vocoder
 - f) Varispeed
 - g) Spectral Extractor
 - h) Normalize

4. The **Binaural Filter** looks like this:

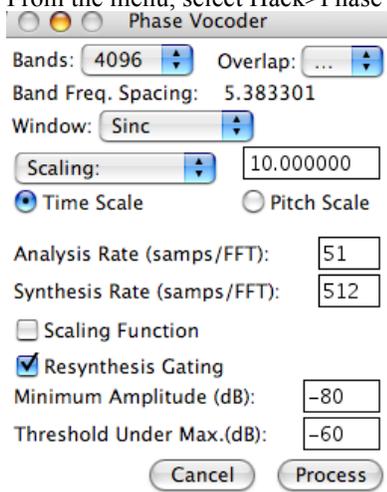


5. To use the **convolution** function, do the following:
 - a) Open any soundfile you wish to convolve.
 - b) Select **Hack>Convolution**
 - c) A dialog like the one below will appear:



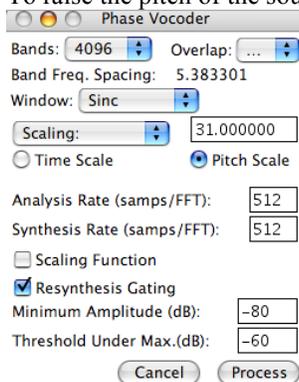
- d) Select the options shown above, then click on "Pick Impulse".
- e) An **open** dialog will appear. Select a very short soundfile to use as an impulse.
- f) Click on "Process". A new file will be created named "file1 * file2".

6. To use the **Phase Vocoder**, do the following:
- From the menu, select Hack>Phase Vocoder. A window like the one below will appear.



- Note that **Bands** = 4096, **Overlap** = .5x, **Window** = Sinc, **Scaling** = 10, **Time Scale** is checked, **Resynthesis Gating** is checked. Click **Process** to create a new processed file.

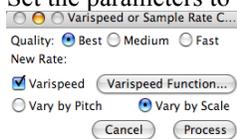
- To raise the pitch of the sound 31 semitones higher, enter the values shown below:



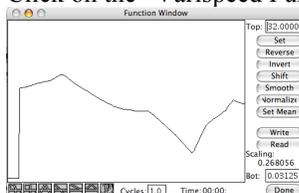
- Note that **Semitone Shift** = 31 and **Pitch Scale** is checked.

7. Use the **Varispeed** function as follows.

- Set the parameters to those shown below:



- Click on the “Varispeed Function”. A window like the one below will appear:



- Click and draw in the edit window. Press “done.”
- Return to the Varispeed window and select process.