

DESN 275 Week Four (due week five) Assignment – Designed Sound Effects and Foley

Part 1 Bringing together Recordings + Noise + Editing Tools – pick any 4

Using *recordings that you make*, and the inspiration of Ben Burtt's clever work in *Starwars*, edit and combine sound recordings to create any four of the Foley-type sounds listed below. It is suggested you consider the following effects in Audacity: change pitch, speed and tempo, reverse, PaulStretch, chorus, phaser, echo, wah wah. You can also use Audacity to *generate* one constituent sound in each category. And possibly consider using automation in Studio One.

Final sounds should be robust, reaching 60% of the headroom on the peaks.

- A. An explosion in a tunnel - exactly 5 seconds – This would include reverberant sounds.
- B. An air driven elevator starting & traveling & coming to a stop - exactly 10 seconds – This would be dry.
- C. A 16-rocket circular shuttle engine that is misfiring - exactly 10 sec. – This would be dry.
- D. California's high-speed bullet train leaving the tracks and landing in water - exactly 10 seconds – This can include reverberant sounds.
- E. A huge three-legged walking machine dragging a bus - exactly 10 seconds – This would be dry.
- F. An underwater submarine cleaner accidentally sucking up some large rocks - exactly 10 seconds – This would include some underwater reverberance.
- G. A solar wind generator that would work, suspended in the atmosphere, on a planet with a thin atmosphere - exactly 10 seconds – This would be dry.
- H. An oil pipeline cleaner that crawls along the inside of a pipe, cleaning it as it goes. This would include the sound bouncing off the inside of the pipe - exactly 12 seconds
- I. A cockroach catcher, a very small robot that tracks down and subdues moderate to large size insects – include exactly 12 seconds of it searching about. – This would be dry.

Part 2 Additional Space Sounds – these can be built of entirely generated noises – do both

J. The star drive basic propulsion system, which usually hums along with a gentle low-frequency throbbing sound. However, in this instance it will begin to have some sort of “problem” (a 22nd century version of gears breaking or electrical sparking, for instance) followed by a subtle change from the gently throbbing hum to a *similar* sound that is *almost* OK, but a little more sinister, and will make the audience worry. If you were on board the ship, you would begin to worry too when you hear this sound. Produce 7 seconds of the good drive sound, leading into 30 seconds of the sound turning into the troubling drive sound. Keep it interesting. – This would be dry.

K. We need a sound for a new sound wave weapon that knocks down would-be assailants with a toroidal burst of methane, much like a very strong smoke ring. We need the initial sound of the weapon building up pressure briefly and then firing in the left channel, plus the sound of the pressure wave moving across to the right channel. It should take it about one second to move from left to right. How do you get a sound to travel from left to right? In Audacity, duplicate the track so you have a left and right copy. Then fade one track out while you fade the other one in. The sound will pan. How to do it in Studio One? Use automation to pan. – This would be dry.

Criteria for all of your effect sounds:

- No clipping – but normalize all sounds at about 60% amplitude.
- Each of the first four Foley sounds must include at least one sound that you have recorded.
- Each of the first four sounds must be made up of at least two separate sound samples, one of which can be a tone or noise sample.
- The constituent sound used in each Foley sound should be edited so that it is no longer recognizable.
- Each Foley sound should have smooth starts/ends and transitions.
- Save each sound as an MP3
- Name the file, substituting your name and the sound number from the list of 6, as the elevator sound in this example: *w4foley1Ajbraukmann.mp3*

Also turn in a one-page sketched document illustrating what **sounds** you used in **each** of your six designed sounds, and the specific editing **tools** you used. Use an illustration of the sound **envelope** with notations. This can be done neatly with pen or pencil. *Your grade will depend greatly on this document.*

Assignment 3: Install Studio One on your computer. We will start using it very soon, and you have several choices. *Studio One Prime* is a forever free version that will serve for the remainder of the course and beyond. *Studio One Professional Demo* is a full-functioned free one that will work for only 30 days. And, as a student, you can purchase *Studio One Artist* for \$50 at many retailers such as Sweetwater. **Important: with any of these versions, your download is followed by an offer to download additional files, including instruments and loops. You will need them to complete your assignments.**

Questions on Sound Design

Who is Ben Burt?

What are *Foley* sounds? What are *effects* sounds?

What is Diegetic sound in film?

Sounds that exist in the scene space.

The characters would hear these sounds.

What are examples of non-diegetic sounds in film?

Film score music, and a narrator.

What is *ambience*?

What are the three general subcategories for a complete sound track?

Dialog, music & sound effects

What does a *production recordist* do?

Records while filming – dialog +

What does a *sound editor* do?

Gathers and creates sound effects.

What does a *sound mixer* do?

Puts together the dialog, music, and effects to form a soundtrack.

Describe a *sound designer's* job?

Get in on the planning for a project

Design sound to enhance all the dir goals

What is done in *preproduction*?

Planning with director

What is done in *production*?

Record, invent, write the music

What is done in *post-production*?

Editing the sound, compress, EQ, etc

Mixing and mastering

What are the guiding principles of sound designers?

#1 Support the images

#2 Suggest emotions

#3 Same goals as in mixing

do not mask, separate freq bands, etc

make key sounds easy to notice

#4 Support the "beats" of the production

What is the difference between a *story board* and a *sound map*?

SB: director's summary, often illustrations

SM: sound plan, includes communication goals and adjectives, cues, scene transitions lists of object sounds, moments of drama

How did the Starwars sound designer set up the missile explosion in the asteroid chase scene so that the audience anticipated it?

Questions on Sound Design Technical Issues

What is the Academy Curve EQ?

+2 dB at 2.5K Hz

+2 dB shelf at 6K

What are several ways to EQ for easier-to-understand dialog?

High pass at 200 Hz

Low pass at 8K Hz

Boost the whole octave around 1750 Hz

+2 dB at 250 Hz for warmth

What is Masking?

Masking is one sound hiding another, usually because the frequency ranges of the two sounds overlap. And worse if they come at the same pan.

How much compression should you use in film?

Compression is a popular effect that makes quieter passages seem louder. Use less in film than in pop music.

How many audio tracks should you expect could be perceived any one moment?

3-4 is enough.

What can you do if the effect clip is not the correct length?

Change speed but not pitch with tools.

How can you, as a sound recordist, make certain you have consistency from take to take?

Make notes. Use same mics, levels, locations