DESN 275 Week 6 Assignments – Designing Sounds

Part 1 Recording + Noise + DAW – 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, phaser, echo, wah wah. You can also use Audacity to *generate* one constituent sound in each category. And consider using automation in Studio One.

1A. An explosion in a tunnel - exactly 5 seconds

1B. An air driven elevator starting & traveling & coming to a stop - exactly 10 seconds

1C. A solar wind generator that would work on a planet with a thin atmosphere - exactly 10 seconds

1D. A high-speed train leaving the tracks and landing in water - exactly 10 seconds

1E. A three-legged walking machine with loose parts - exactly 10 seconds

1F. An underwater vacuum cleaner accidentally sucking up some large rocks - exactly 10 seconds

1G. A cockroach catcher, a very small robot that tracks down and subdues moderate to large size insects - exactly 12 seconds

Part 2 Additional Space Sounds – these can be built of entirely generated noises – do two of the three.
2J.The star drive basic propulsion system, which usually hums along with a gentle throbbing sound. However, in this instance it will begin to have some sort of "problem" (22nd century version of gears breaking or electrical arcing, for instance) followed by a subtle change from the gently throbbing hum to a *similar* sound that is almost OK again, but a little more sinister. If you were on board, you would begin to worry when you hear this sound. Produce 40 seconds of the good drive sound turning into the bad drive sound. Keep it interesting, and have no more than 7 seconds of good drive sound before the problems start to appear.

2K. We need a sound for a new sound wave weapon that knocks down would-be assailants with a torroidal burst of air, much like a very strong smoke ring. We need the initial sound of the weapon charging up briefly and 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.

2L. For our spaceship production, we need the sound(s) for a space welding unit. It uses a type of laser, and works outside of the spaceship. What should it sound like if this device is being used to fix the hull on the outside and you are listening in the inside? It needs to be a changing sound that is interesting, with attack, decay, sustain and ending parts. We need 15 seconds.

Criteria for all of your designer sounds:
• No clipping - but all sounds at about 60% amplitude
• Each of the first four Foley sound 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 difficult to recognize.
• 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: *w6foley1Ajbraukmann.mp3*

Part 2B Turn in a one-page sketched document illustrating or explaining what ***sounds*** you used in each of your Foley sounds, and the specific ***tools*** you used. Use an illustration of the sound ***envelope*** with notations. This can be done neatly with pen or pencil.

Questions on *Sound Design*

Who is Ben Burtt?

What are Foley sounds?

What is *diegetic* sound in film?

What are examples of *non-diegetic* sounds in film?

What is *ambience*?

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

What does a *production recordist* do?

What does a *sound editor* do?

What does a *sound mixer* do?

Describe a *sound designer's* job?

What is done in *preproduction*?

What is done in *production*?

What is done in *post-production*?

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

What are the guiding principles of sound designers?

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?

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

What is Masking?

What is Cancellation?

How much compression should you use in film?

How many audio tracks should be heard any one moment?

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

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

Questions on Digital Audio

What does *analog* refer to?

What do A-D and D-A converters do?

What is meant by *sampling rate*?

Why is a higher sampling rate better?

What is bit-rate?

What is CD quality bit-rate and sampling rate?

What is the standard sampling rate for film?