

## DESN 275 Weeks 3-4 Winter 2010

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For the following recording assignments, you are encouraged to work with a partner if you wish. And please avoid the temptation to produce something silly. Your recordings should be strong, clear, and as much as possible, without any background noises or room echoes. We have a small studio in CEB 125 that can be used if you make arrangements with Dr.B

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### Recording and Production Assignment 1: Demo Scene (Due 2 wks)

We need an MP3 example sound track (like a radio drama) for this demo. You can get the effects sounds anywhere you wish. Or you can create them.

Our hero/ine, Captain Strong, is in danger of being abandoned on a dry planet, and doesn't know it yet.

S/he is communicating with the mother ship that is supposed to be orbiting the planet. But the mother ship is actually being pulled away by a tractor beam from an enemy spaceship, cleverly disguised as an asteroid. The captain is talking to Undercommander Marty Pants (or Misty Meaner if you are using female voice talent), busy making arrangements to be picked up, when the communication system starts to malfunction. The malfunction is due to the mother ship being pulled farther and farther away from the planet. After 20 seconds of deteriorating communications, they figure it out, but too late, and the captain is left alone musing on what to do next. The scene fades out with the sound of the wind.

Necessary Details:

1. The captain is always panned toward the left channel and we always hear him/her clearly, as if we are standing right there.
2. The planet is so dry that it almost sounds as if Captain Strong is walking on corn flakes as he shuffles around. There is a slight wind blowing.
3. Undercommander Pants is heard at first fairly clearly, although with about the quality of a cell phone. Pants is heard toward the right.
4. However, when the communications starts to deteriorate, we hear background noise rising behind Pants, frequency bandwidth narrowing, and occasional short dropouts. These are little gaps in the voice and noise, as if the equipment quits for a few 1/100s of a second. The gaps need to be cleverly fit in, however, so that we don't miss any of the dialogue.

5. Also, in the undercommander's communication track, we can just hear the tractor beam building up power in the background. Pants (or Meaner) should probably eventually notice it him/her self.

You write the script and record the voices and procure/create the sound effects. Each character speaks about three or four times. This will probably result in a 40 second sound file.

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### Recording and Production Assignment 2: Foley Sounds (Due 2 wks)

Record real sounds and edit them to produce the following dry Foley sounds. You might use edits such as combining tracks, reversing, pitch shift, tempo change, flanging, and so on. Sounds should be robust, reaching 60% level on the peaks.

Try to keep any room echoes or reverberations from getting into your recordings. Placing the mic fairly close to the sound source helps to maximize the ratio of direct to reflected sound that is picked up. Also, isolate the mic and sound source by surrounding them with available soft surfaces, like near the carpet in front of a couch, or in a closet with lots of clothes hanging, or with blankets draped over chairs. Foley sounds need to be "dry" so that the mixer can add reverb and echo if necessary to match other sounds in the production.

When you are satisfied with the Foley sound, create a demo MP3 file for each with your voice introducing the clip for 10 seconds. An example might be, "This is a sound created for a jet-propelled skateboard. It is made up of a recording of a vacuum cleaner played backwards, along with the sound of a door slam slowed down to 10% of the original tempo." Then the Foley sound follows.

Sounds for scene taking place deep in a mine:

1. Mobile rock crusher having a hard time with some really hard rocks. 15 sec MP3
2. A machine that digs in soft earth that pulls itself ahead every 8 seconds. 15 sec MP3
3. The sound of a 5 lb chunk of coal landing on a steel reinforced boot.
4. The sound of a 5 lb chunk of coal landing on a bare foot.
5. The sound of hundreds of water splatters hitting a wet rock floor, some close, some far away.
6. We also need the sound of alphanano chips popping out of an overheated neuron computer. Try to make it sound happy. Produce 20 seconds.

**Reading 1: Sound Design Ch 6 Principles of Sound Design** pp.155-164 Introductory pages

Describe a *sound designer's* job?

Get in on the planning for a project  
Design sound to enhance all the dir goals

What is *ambience*?                      *Foley*?

What is an example of a *designed sound effect* that you created?

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

What is Masking?  
*Masking* is one sound hiding another, usually because the frequency ranges of the two sounds overlap.

What is Cancellation?  
*Cancellation* happens when two sounds are fundamentally out of phase, that is when one represents a positive air pressure wave, the other represents a negative pressure (rarefaction) and the two add up to zero!

How did the Starwars sound designer set up the missile explosion in the asteroid chase scene so that the audience anticipated it?  
Preceded it with a moment of pure silence!

What is an *acousmatic* sound?  
*One for which the source is not revealed and is hard to imagine. Like the sounds of the great OZ before the curtain was pulled back by Toto.*

What would be in a sound sculpture of your dog waking up in the morning?  
Not just the concrete boring sounds, but  
What the dog is thinking, a cat sound and a racing heartbeat?

**Reading 2: Mixing Engineer's Handbook Ch6 Key topics:**

EQing reverbs  
How to make it stick out, or blend in  
  
How to make it fit, to fill in a space  
  
Reverb on hard panned sources

Know the layering tips

How to time delays to the track tempo

How to calculate the delay time

**Reading 3: Mixing Engineer's Handbook Ch7**

What is dynamic range?

Be able to explain what a compressor does.

What is a threshold?

Be able to explain what a limiter does.

Be able to explain what a de-esser does.

Do pop music bass guitar tracks have much dynamic range, typically? Why?

What is gating? What are a couple examples of situations in which it would be needed?

What is the goal when adding compression to a bass guitar, a lead vocal, or a snare drum? p57

Then skip ahead to Setting the compressor p62

(Note: In the Mixing Engineer's Handbook, some of the quotes by engineers use quite a bit of jargon that will become more understandable as the course progresses. Therefore some of the quotes might not make sense to you yet. Don't worry, you are not expected to understand everything in the quotes. However, they can be the best part of the book!)