**Composition: Electronic Media I**
Fall 2004
Microsound Composition in Pro Tools

1. In this class, we will consider musical composition in the macrosonic sense and the microsonic sense:
   a) A macrosonic composition is an arrangement of sounds over a large time-span, say, 4-10 minutes.
   b) A microsonic composition is an arrangement of sounds over a very short time-span, say, 1 second.

2. As discussed in class, soundfiles can be imported into **Pro Tools** and arranged in the **edit window** to create an arrangement of sounds. In class, we had imported a variety of "p" sounds and arranged them on 32 tracks over 8 seconds to create the beginnings of a macrosonic composition. This technique of importing, copy, and paste can be extended over a large time-span to create a macrosonic composition.

3. The electroacoustic medium, and **Pro Tools** in particular, allow the techniques and aesthetics of macrosonic composition to be applied to the creation of microsounds. To create a microsound composition of 1 second, do the following:
   a) Create one or several AIFF soundfiles by microphone recording or by importing a CD track, as discussed in class.
   b) Launch **Peak**, open a soundfile, copy a short excerpt (less than 2 seconds), and paste it into a new mono soundfile, saved as "A" in the folder "Larry/Microsounds".
   c) Normalize "A", then use fade in and fade out commands to remove the sharp edges of the beginning and ending of the sound.
   d) Steps b and c will be discussed in class.
   e) Repeat this procedure to create soundfiles "B", "C", "D," "E", etc.
   f) "A", "B",… will be referred to as *microsounds*.

4. Launch **Pro Tools**, then do the following:
   a) Save the session as "Larry.1".
   b) Copy or move the soundfiles from "Larry/Microsounds" into "Larry.1/Audio Files."
   c) Create 6 new mono tracks.
   d) Import the microsounds "A", "B",… into the Audio Regions List.

5. Arrange the microsounds in the **edit window** in a manner similar to that shown below:
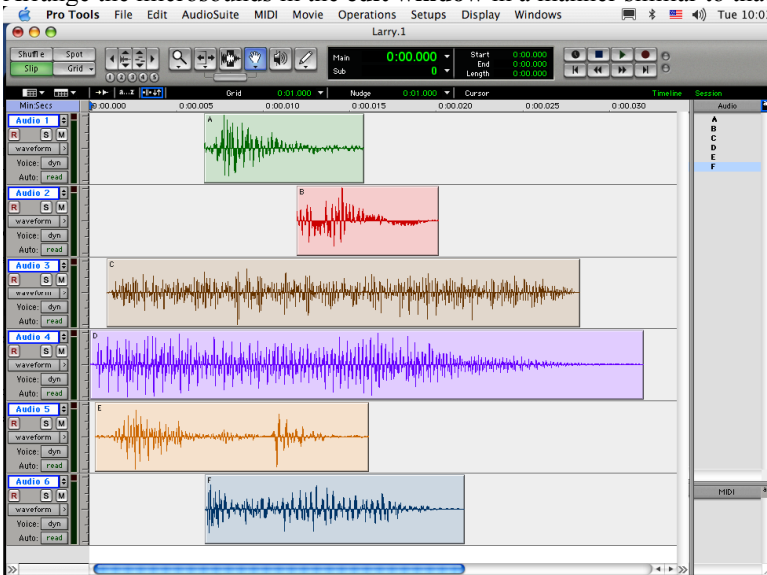
   a) Note the zoom out function.
   b) Note that the duration of the composition is 0.03 seconds.
   c) Play the sound and note that each sound is played from beginning to end at 0 dB in mono.

6. Adjust the volume automation for each track in a manner similar to that shown below.
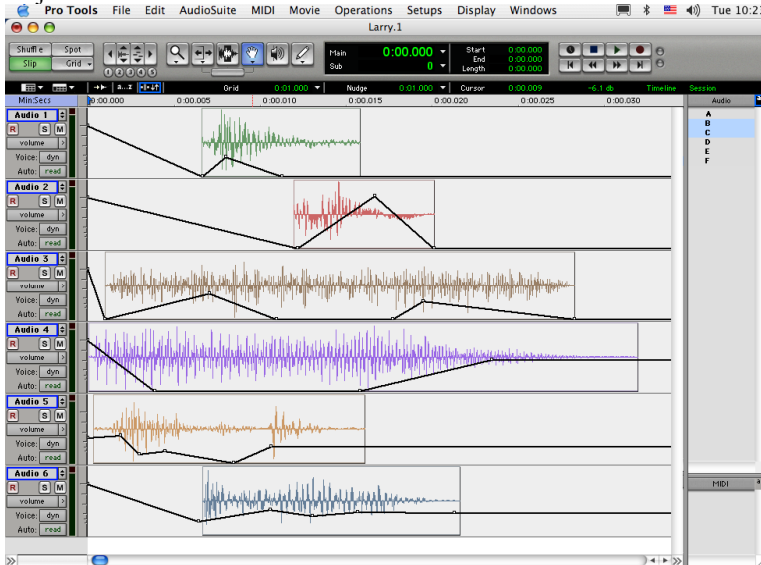
   b) Note that the subtle control of volume gives the composite sound a less heavy, lighter, more transparent character.

6. Set the pan in each track in a manner similar to that shown below:
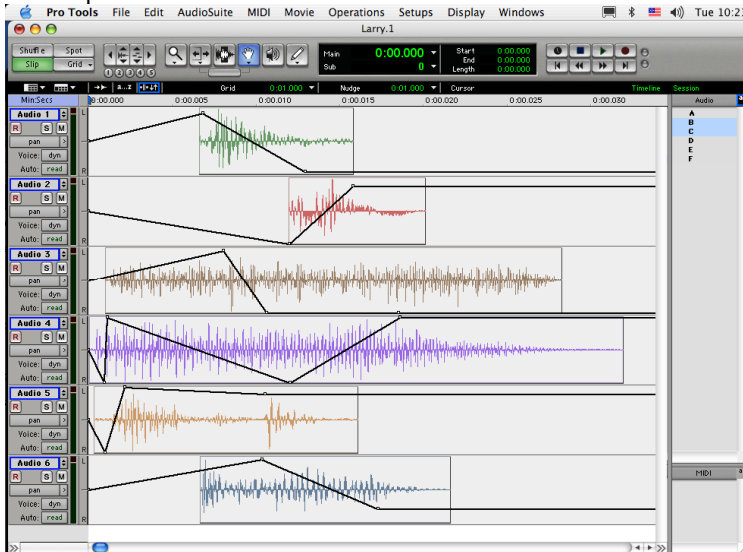
   c)   Note that the composite sound now has a stereo image.

7. To create a 2nd variation of this composite sound, do the following:
   a)   Zoom out to create morre work space.
   b)   Set each track to "waveform."
   c)   Copy all waveforms (Shift,click, on each track to select all)
   d)   With the vertical cursor, shift click on each track at the desired insertion point, then paste. The window should now rresemble the one below:
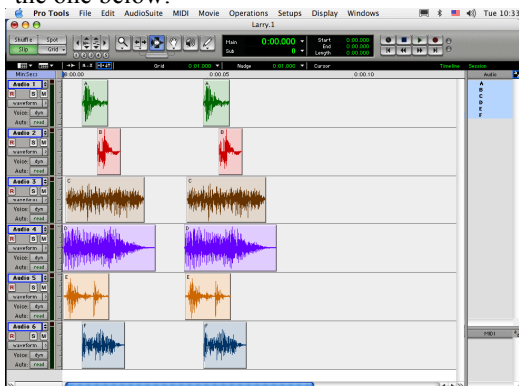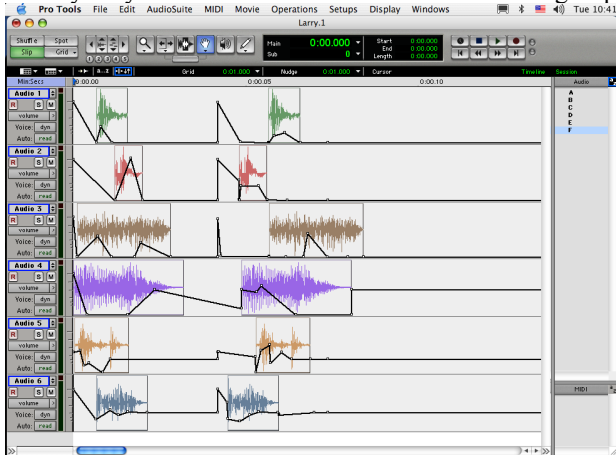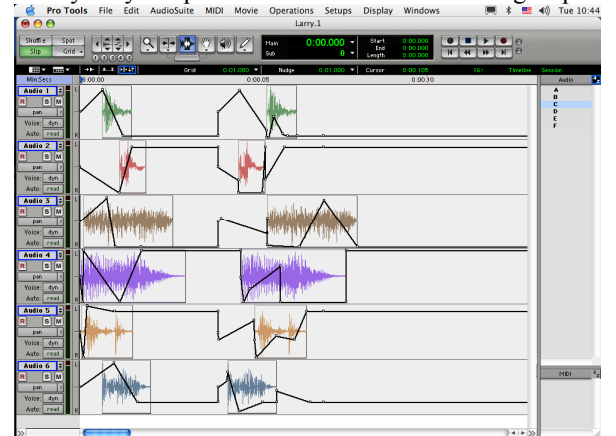
7. Vary the second version as follows:
   a) Subtly vary the arrangement of the second group of microsounds, as shown below:
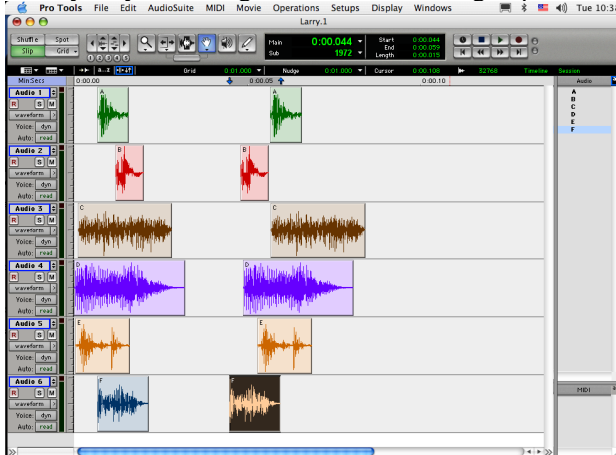
   b) Subtly vary the volume automation for the second group of microsounds, as shown below:

   c) Subtly vary the pan automation for the second group of microsounds, as shown below:

8. Experiment with other possibilities:
   a) Remove, add, or replace microsounds.
   b) Try to create subtle variations of the same microsonic composition, analagous to the subtle timbral variations that occur with repeated notes of the same instrument. This will give your electroacoustic composition the timbral richness associated with acoustic music.
   c) Try to blur the single note model developed here so that the microsounds flow into one another, creating the effect described below in a blurb for the book *Microsound* by Curtis Roads, published in 2002 by MIT Press:
      "Below the level of the musical note lies the realm of microsound, of sound particles lasting less than one-tenth of a second. Recent technological advances allow us to probe and manipulate these pinpoints of sound, dissolving the traditional building blocks of music -- notes and their intervals -- into a more fluid and supple medium. The sensations of point, pulse (series of points), line (tone), and surface (texture) emerge as particle density increases. Sounds coalesce, evaporate, and mutate into other sounds."