025:251 COMPOSITION: ELECTRONIC MEDIA II
Assignment 2
Due Wednesday, Feb. 5

Purpose: To become familiar with basic functioning of Kyma.

Part 1

1) Create a Kyma Sound using at least one of each of the following prototypes:

   a) TwoFormantElement filter
   b) HarmonicResonator filter
   c) DelayWithFeedback
   d) Granulation
   e) ReverbSection

2) You may need to use other prototypes such as:

   a) Attenuator
   b) CenteringMixer
   c) Gain
   d) StereoMix2
   e) StereoMix4

3) Your sound source should be any soundfile of your own, played through either DiskPlayer or Samples.

4) Whenever possible, use hot parameters assigned to the Peavey controller to control as many aspects of your sound in realtime.

Part 2

1) Create a Kyma modulated oscillator according to the criteria below:

   a) one oscillator, called the carrier, goes directly to output
   b) use any waveform from the Kyma wavetable for the carrier
   c) use a mixer as an input to the carrier
   d) use at least two oscillators, called the modulators, as inputs to the mixer
   e) use any waveform from the Kyma wavetable for the modulators
   f) use another oscillator as to modulate one of the modulators (use any waveform for this)
   g) use only one hot parameter to control the frequencies of all of the oscillators
   h) set the frequency ratio of modulators to carrier so that inharmonic sounds are produced
      (the ratios should not be simple like 1:1, 3:1, or even 3:2; ratios such as 17:45 will be more interesting)
   i) set the amplitudes of the modulators to a fixed value (no hot parameters)
   j) set the amplitude of the carrier to a hot parameter
   k) place a TwoFormantElement filter between each modulator and the input to which it is connected

l) set the frequency, bandwidth, and amplitude of each filter to a fixed value (no hot parameters)
m) play your Sound and change the pitch of the carrier (and modulators along with it)
n) notice that the timbre changes as the amplitude of each modulator is amplified or attenuated depending on its frequency and the frequency/bandwidth of its filter
o) tweak all of your fixed parameters to produce the most interesting timbral effect when changing the pitch of the carrier.

Part 3

1) Use the composite Sound of Part 2 as an input to the Sound in Part 1, replacing the DiskPlayer or Samples. Make any changes to fixed values and reassign any hot parameters as needed.

Part 4

1) Make screen snapshots of each flow chart (do not bother with the parameter fields) and print these out (with copies for the class) along with a technical description of your sound, including values for fixed parameters and ranges for hot parameters.

Also:

Select a topic below and prepare a concise and well-organized 5-10 minute presentation.

Mon. _____ Importing Digital Audio Files in Studio Vision

Mon. _____ Synchronizing Digital Audio and MIDI in Studio Vision

Mon. _____ Mixing Digital Audio in Studio Vision

Mon. _____ Basic Overview of Peak

Wed. _____ Basic Overview of HyperPrism

Wed. _____ Using Graphic Windows in HyperPrism

Wed. _____ Using Graphic Windows in HyperPrism

Wed. _____ Recording CyberSynth to DAT to Sound Designer