Composition: Electronic Media II
Spring 2012
Laptop Orchestras

1. Overview of Laptop Orchestras
   a. Most laptop orchestra pieces are based on group improvisation.
   b. The sounds a laptop orchestra plays are typically pre-composed gestures or short percussive samples.
   c. Some laptop orchestra pieces are written for performance with a conductor or without a conductor.
   d. If a laptop orchestra piece is written without a conductor, it is still performed with some sort of set of instructions that are given to the performer throughout the length of the piece.
   e. Stanford and Princeton offer courses on composing, performing, and programming for laptop orchestra that have led the way to other programs beginning at other schools.
   f. Most laptop orchestras use an individualized speaker system to promote the thought that each computer is an "instrument".

2. Compositional Techniques
   a. Many laptop orchestras use Max/MSP and SuperCollider as the programming environment for individual parts.
   b. Wii-motes, tilt sensors, track pads, and live projection are used in creating or manipulating the sound.
   c. Other methods of manipulation of sound being explored include the use of biological sensors (i.e. heart monitors, brain wave sensors, etc.)
   d. Some live programming is required of the ensemble during performance.
   e. Wi-Fi networks can also be utilized to send signals or messages from one laptop to another.
   f. Laptop orchestra pieces also implement live performers.
   g. Most laptop orchestras have an individualized speaker configuration that allow the performer to control his/her own sound output, making it more like playing a real instrument where the performer is responsible for his/her own sound.
   h. Consideration of spatialization is necessary as each computer is essentially its own instrument. Depending on how many "parts" there are, such as 5 string instruments in an orchestral string section, how will these "instruments be configured on the stage.

3. Notable Laptop Orchestras
   a. PLOrk (Princeton Laptop Orchestra)—They use a combination of Max/MSP and ChucK, a programming language developed at Princeton specifically for the laptop orchestra.
   b. SLOrk (Stanford Laptop Orchestra)-- They use a spherical speaker system per laptop made out of wooden salad bowls from IKEA.
   c. MiLO (Milwaukee Laptop Orchestra)
   d. LOL (Laptop Orchestra of Louisiana)
   e. CMLO (Carnegie Mellon Laptop Orchestra)
   f. CLOrk (Concordia Laptop Orchestra)
   g. BLOrk (Boulder Laptop Orchestra)

4. Notable Composers/Pieces for Laptop Orchestra
   a. Dougles Geers—*Sweep* (2009)
   <http://www.youtube.com/watch?v=lnrQ_J_Nxtc>
   b. Baek Chang—*Clair De Lupe* (2008)
   <http://www.youtube.com/watch?v=3t2O5mvnTAc>
   c. John Gunther—*Fireflies* (2008)
   <http://www.youtube.com/user/BoulderLaptopOrch?blend=9&ob=5#p/u/5/hnhCLiYAqNA>

5. *Patchwork Pants* (2010), Zach Zubow
   a. Scored for multiples of 4 parts using Max/MSP as the processing unit and interface.
   b. Additive process for performers.
   c. Computer eventually takes over the performance, allowing the performer to begin adjusting the individual sounds.

PLOrk
http://www.youtube.com/watch?v=gOsaANAfZcw

Dublin Laptop Orchestra
http://www.youtube.com/watch?v=8Mi7ZSw0pvU