Computer Music II

Computer Music Center, Columbia University

Spring, 2008 – G6611

Your class meets on:

Tuesdays, 5:30-8 PM

In

Room 313 Prentis Hall

And your instructor is:

R. Luke DuBois

e-mail: luke@music.columbia.edu

phone: 212-854-9266 (Computer Music Center, Columbia University)

Introduction

The focus of this semester's class is going to be developing techniques and applications for *transcoding* audio into and out of the visual and physical realms. The idea being that, through these techniques, we can find interesting ways to look at sound, work with sound, and create new ways of synthesizing and processing audio.

Prerequisites / Software

Most of the technical aspects of this class will be taught using Max/MSP/Jitter. In addition, we'll be using a few other programs along the way that deal with specific techniques and technologies best done elsewhere.

Texts

Throughout the class we'll be looking at a repertoire of artworks that I consider relevant to the class. Other than that, the only real text for the class is the documentation available for Max, MSP, and Jitter. All three manuals (as well as additional reference documentation) are available on the web site of Cycling'74 (the company that makes the software):

http://www.cycling74.com

If anyone is interested in more technical reading on anything we discuss, I'll be happy to dig up a bibliography, though a carefully worded web search will often suffice.

Resources

I strongly encourage all of you to subscribe to the Max users group mailing list (you can find it under the community page of the Cycling'74 web site). There are a lot of great resources out there for learning Max, and you can get a lot of information from the web. We'll look at some of these sites as we go through the class. In addition, all of the work I do in class will be available for you to download and play with from the class web site, as soon as I get it up and running.

The web site for the class will have all the patches and documents associated with the class available to you, as well as links to additional resources:

http://music.columbia.edu/cmc/courses/

Assignments and Grades

Everyone needs to envision and create a final project for the course. This can be a performance, installation, a software tool, or a piece of music/video that riffs of the ideas covered in class.

Class Schedule

This schedule is subject to change depending on the interests and pace of the class, etc.

Class 1: Introduction

Class 2-4: Working with the FFT.

Classes 5-7: Using audio data to control image, and vice versa.

Classes 6-8: Designing synaesthetic synthesizers.

Classes 9-11: Computer vision.

Classes 12-14: Final project presentations and other fun things.

Enjoy the class!