21M.361 Composing with Computers I (Electronic Music Composition)
Spring 2008

21M.361: Composing with Computers I (Electronic Music Composition)
Peter Whincop
Spring 2008 OCW

MODULE FOUR: Synthesis, Algorithm, Interaction (Max/MSP)
(4 weeks)

You should have downloaded Max/MSP by now. If you haven't, check back in the Module 3 syllabus, Class 3.3. You should also have gone through a number of tutorials to get a feel for it. Max/MSP is a fairly basic programming environment. Compared with other computer music languages (such as SuperCollider, which we will look at in 21M.540 very briefly), Max is easy. But that is relative; some of you will find it quite difficult. It's one of those love or hate things, no real in-between. It is visual, which makes a little easier, though in other ways more restrictive. For those of you in the know, it is not object-oriented, and cannot handle any form of recursion, as it compiles every patch (routine) every time it loads. But it is a powerful enough tool; I use it a lot when I have to whip something up very quickly or for algorithmic stuff. You can make music, control instruments, devise GUIs, have it interact with sensors/controllers (21M.540), it has a video extension, Jitter (21M.540). You can use it to create sounds too, for use elsewhere, since it can automate tasks and do all kinds of calculations. It can also generate music algorithmically. Unlike with other modules, you can go pace yourself. A minimum speed is given; that is, a number of objects are introduced each week that must be understood and used. But you can race ahead if you like. Don't race ahead too much, though, because there is a follow-up course that deals largely with Max/MSP (21M.540) (as well as other programs, such as Spear, Spat, SuperCollider, SoundHack, Praat). I'll make myself extra-available for this module. I will also give examples of it during the first lab, so you know what you're in for.

————————————

Lab 4.1 MANDATORY: Basics of the Max/MSP environment; objects, messages, comments; basic Max and MSP objects; demonstration of (i) previous student patches (on class Web site) and (ii) compositions using Max, and (iii) I will quickly make a patch to show that it doesn't take much to get something out of it.

Assignment 4.1 (due next class): **Basic Max/MSP**
1. Using the list of Max/MSP objects given in the lab notes, **build a patch that makes some sounds, perhaps even music**. Try to use as many of those objects as possible. For the ones you can't, at least play around with them.

Listening 4.1 (due next lab):

Compulsory

Pan Sonic—Aines (from Kulma) (1997)

Microstoria—Slap Top (from Init Ding) (1995)

Bernhard Günter—untitled I/92 (from un peu de neige salie) (1983/1993)

Ryoji Ikeda—Headphonics 0/1 (from + / -) (1996)

Christian Fennesz[, Zeitblom, Lillevän]—»17:44« (UA) (2001)

Recommended

Random Inc.—Losing Touch (from Clicks and Cuts Vol. 2) (2001)

Andreas Tilliander—Vibetan (from Clicks and Cuts Vol. 2) (2001)

Thomas Meinecke's Framus Waikiki—Jukebox (from Maschinelle Stratageme) (2000)

Paul Lansky—mild und leise (1973)

Radiohead—Idioteque (from Kid A) (2000)

Student Examples

demonstrated in class

Class 4.1: Listening to and looking at Assignment 4.1, discussing Listening 4.1.

_____

Lab 4.2: Going over Assignment 4.1 and previous Max/MSP stuff; looking at more objects given in the lab notes.

Assignment 4.2 (due next class): **More Basic Max/MSP**

1. **Build on your Max patch from Assignment 4.1**, using the new objects from Lab 4.2, listed in the lab notes.

2. **Start thinking about a final project for this module**.

3. **Choose up to 10 minutes of music, anything, email me mp3s of it/them with a brief write-up**, ready for Listening 4.3. I'll post them on the class website as extra listening. Please eventually listen; it is respectful to others in the class.

Listening 4.2 (due next lab):

Compulsory

Robert Ashley—Automatic Writing (1979)

Laetitia deCompiegne Sonami—What Happened (1987)

Peter Whincop (yet again)—It must be midnight (2002)

Moniek Toebosch—L'Essence des Douleurs Contemporaines (2005)

Helen Lee—...longing... (1999)

Recommended

Radiohead—Everything in Its Right Place (from Kid A) (2000)

Paul Lansky—More Than Idle Chatter (1985)

Karlheinz Stockhausen—Gesang der Jünglinge (1955/56)

Meredith Monk—Hey Rhythm (1997)

Milton Babbitt—Phonemena (1975)

Class 4.2: Listening to and looking at Assignment 4.2, discussing Listening 4.2, and preparation for Listening 4.3, which will be your own choices, to be prepared by yourselves.

_____

Lab 4.3: Going over current Max/MSP work.

Assignment 4.3 (due next class): **More Max/MSP**

1. **Write a definite proposal, and show initial work, for your final Max project**. See Assignment 4.4 for details. I'll look at them in class and suggest revisions. Your initial work should be some serious Max programming, and your proposal should be specific, and feasible.

2. **Look at Assignment 5.1, and write a clear proposal** of what you intend to do. I will approve it, or make suggestions of how to improve it; once the proposal has been approved/revised, it can't be veered from.

Listening 4.3 (no journal!)

Class 4.3: Going over your Max final project proposals, both the written statements and initial work.

_____

Lab 4.4: Going over your drafts, learning what needs to be learnt, with an eye to finishing your final Max projects; introducing a ton of new Max/MSP objects and techniques, given in the lab notes.

Assignment 4.4 (due next class): **Final Max/MSP Project**

Make a Max patch that makes music, and involves some form of interaction (input parameters, live performance, etc.)

Listening 4.4 (due next lab—there is no critique for class 4.4):
Compulsory
Ivan Tcherepnin—Santur Opera II (1977–)
Peter Child—Ensemblance (1982)
Milton Babbitt—Reflections (1975)

Morton Feldman—Triadic Memories (excerpt) (1981)

Terre Thaemlitz—Aunty Eddie's Pussy (from Maschinelle Stratageme) (2000)

Recommended

Mario Davidovsky—Synchronisms No. 6 (for Piano and Tape) (1970)

La Monte Young—The Well-Tuned Piano 81 x 25 (excerpt) (1988)

Karlheinz Stockhausen—Studie II (1954)

Class 4.4: Listening to and looking at Assignment 4.4, discussing Listening 4.4.

_____