Chapter 12. Meeting 12, Practices: Laptops and Laptop Orchestras

12.1. Announcements

• Due Wednesday, 16 March: Controller/Interface/Instrument Design 1 Report

Will accept as late as midnight Friday, 18 March

Must submit code and report

See syllabus for report details

- Remember to add Pd tests!
- Upcoming readings in Collins book
- Quiz next class: keywords: VIPPD, Tudor, Rainforest, Perkis, OSC, Plork
- · Bring controllers and amps to next class

12.2. Reading: Smallwood, Trueman, Cook, and Wang: Composing for Laptop Orchestra

- Smallwood, S. and D. Trueman, P. R. Cook, G. Wang. 2008. "Composing for Laptop Orchestra." *Computer Music Journal* 32(1): pp. 9-25.
- Does PLork have a specific or singular aesthetic sensibility
- What are some of the practical and technical limitations of this ensemble?
- What performance interfaces are described?
- What are some paradigms of control given to the performers?
- What are some paradigms of control given to the conductors?
- Why do the author's suggest that this ensemble requires more time than a conventional orchestra?
- Does PLork achieve the stated goal of being an open source compositional and technical community?

12.3. Laptop Orchestras

- · PlOrk was not the first, but the most well-funded and promoted in the last ten years
- Similar *Ork imitators elsewhere

12.4. Laptop Orchestras: Works

• Smallwood: a breeze brings...

link (http://plork.cs.princeton.edu/listen/green/breeze.mp3)

• Wang: Clix

link (http://plork.cs.princeton.edu/listen/green/clix.mp3)

- Oliveros and Polzin: Murphy Mixup: Murphy Intends link (http://plork.cs.princeton.edu/listen/green/murphy.mp3)
- Smallwood and Wang: ChucK ChucK Rocket link (http://plork.cs.princeton.edu/listen/green/ccr.mp3)
- Smallwood: The Future of Fun link (http://plork.cs.princeton.edu/listen/green/fof1983.mp3)
- Documentary on PLOrk: 4:22, 6:04
 link (http://www.youtube.com/watch?v=EO1rA3ewgHY)

12.5. Listening: John Zorn

• Listening: John Zorn, "Uluwati," Cobra: John Zorn's Game Pieces Vol. 2, 2002

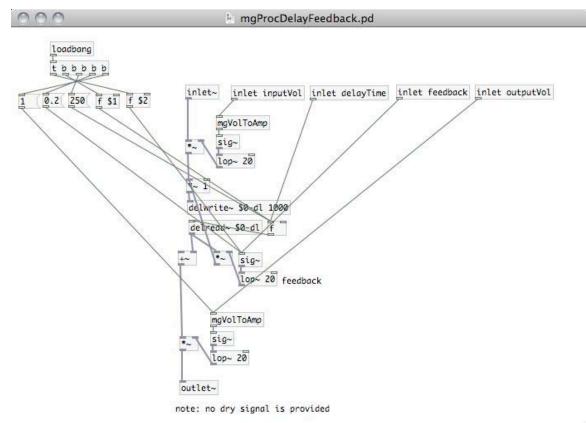
· Listening: John Zorn, "Tamangiri," Cobra: John Zorn's Game Pieces Vol. 2, 2002

12.6. Signal Generators and Transformers

- Two areas of emphasis: signal generation or transformation
- Simple generators can be made powerful with interesting transformers

12.7. General Purpose Signal Processors

- [mgProc...] abstractions analogous to [mgSynth...] abstractions
- Example: [mgProcDelayFeedback]

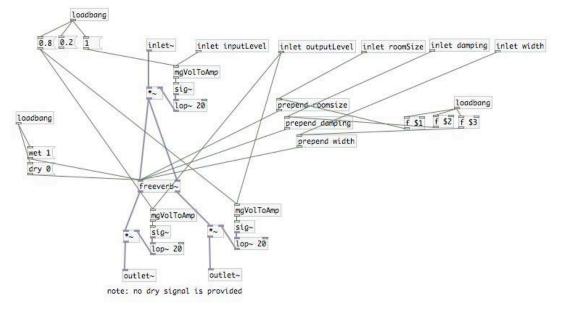


1.

• Example: [mgProcDelayFeedback]

000

k mgProcFreeverb.pd



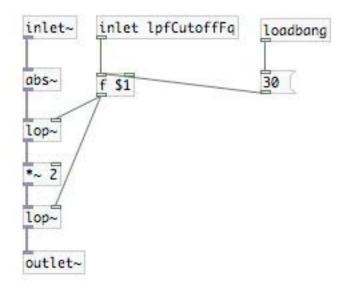
11.

12.8. Using Analog Inputs as a Control Value

- Use [adc~] to get analog input
- · Rectify, smooth, and scale into a control signal

[mgEnvlFollow], mgEnvlFollow.test

k mgEnvlFollow.pd



11.

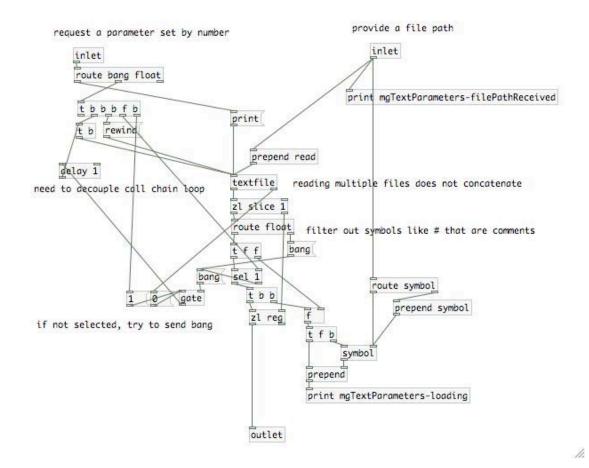
- Combining with a performance instrument
- pd/demos/envelopeFollowingAdc.pd

12.9. Reading Parameter Data from Text Files

- · Can use [textfile]: will take in a text file, and will return a line of text for each bang
- Need to identify lines by key numbers, as well as store comments
- [mgTextParameters]

0.00

MgTextParameters.pd



• Sample data file from mgSynthSawParameters.txt

```
# basic ;
```

```
# introductory scale;
```

1 pitch1 60 pitch2 62 pitch3 64 pitch4 65 pitch5 67 pitch6 69 pitch7 70 pitch8 72 attack 20 decay 100 sustain .8 release 1000 fmRate 4 fmDepth .25 lpfMin 70 lpfMax 120 octaveShift 0;

e phrygian starting below middle c;

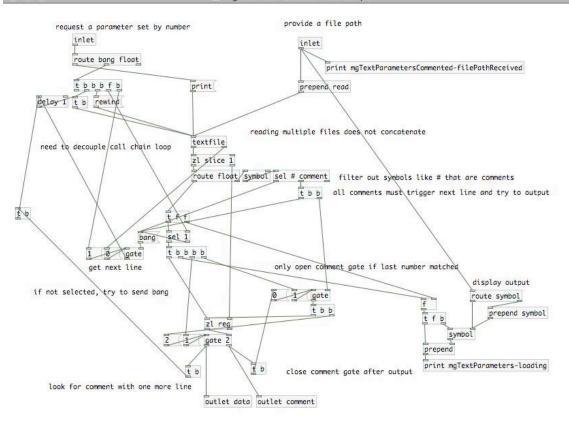
2 pitch1 52 pitch2 53 pitch3 55 pitch4 57 pitch5 59 pitch6 60 pitch7 62 pitch8 64 attack 10 decay 40 sustain .8 release 500 fmRate 4 fmDepth .25 lpfMin 70 lpfMax 120 octaveShift 0 ;

• [mgTextParametersCommented]

Adds support for associating a comment line of text with each parameter

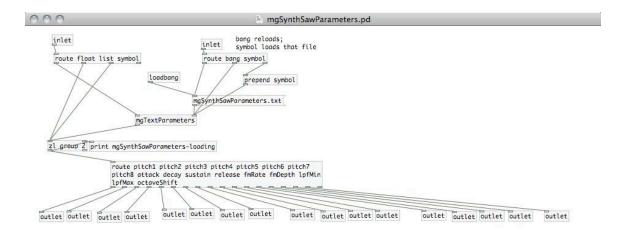


h mgTextParametersCommented.pd



• Parameter abstractions can embed [mgTextParameters]

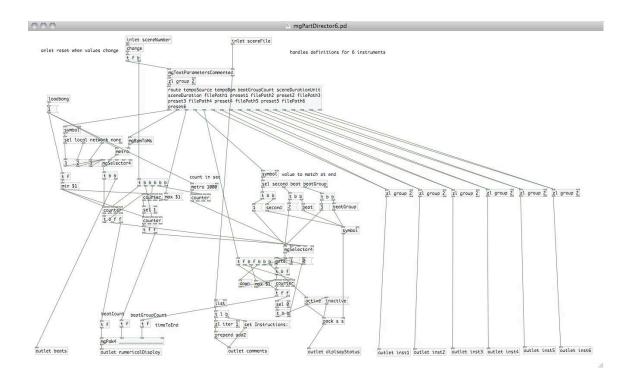
[mgSynthSawParameters]



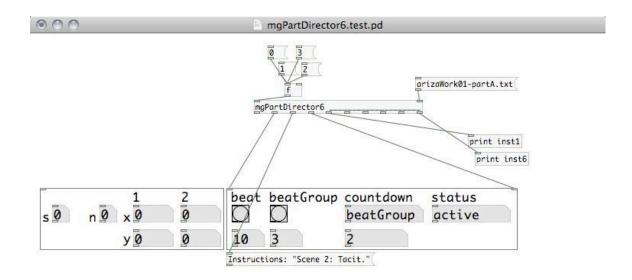
1.

12.10. Controlling VIPP Pattern with a Director

- Director: combination of conductor and director
- Each part (sub-group of ensemble) has its own script
- Each performance embeds a [mgPartDirector6] or similar absraction
- For a given Performance, each scene defines presets (and file source of presets) for each (of fixed number) of instruments
- Each scene defines a beat-source in BPM: local, network, or none
- Each scene defines a scene duration measure in beat, beat groups, or seconds
- Each scene provides extended text instructions to the performer about what to do
- [mgPartDirector6]



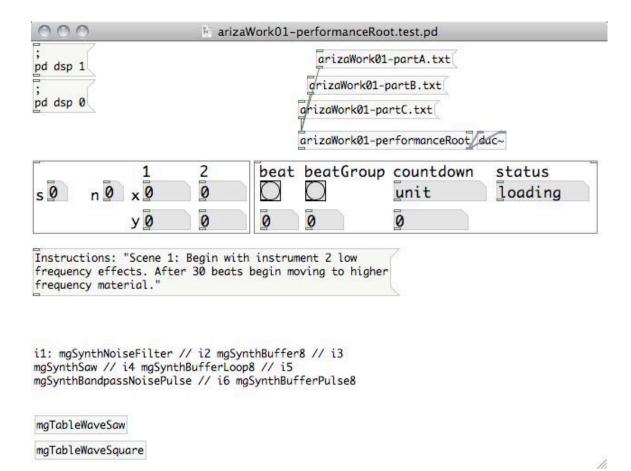
· Countdown refers to how much time is left in scene



12.11. The Work Performance Interface: a Performance with a Director

11.

- Must load script for assigned Part
- · Must manually advance scenes when countdown timer has reached zero
- Must then realize instructions
- Performance interface



12.12. The Score Interface: Simultaneously Viewing all Parts

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• For testing and composing, can view all Parts in parallel

00	arizaWork01-score.pd							
0 1 2 3 mgListLoop								
f arizawor	k01-partA.txt							
mgPartDirector6	mgPartDirector6			mgPartDirector6				
peat beatGroup countdown		beat beatGroup		status	beat	beatGroup	countdown	status
) () unit 1 0	loading		unit Ø	loading	1	1	unit 0	loading
nstructions: "Scene 1: Begin with requency effects. After 30 beats be		Instructions: "Scene frequency effects. Af frequency material."			frequence			nstrument 2 low gin moving to high

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