

## 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?

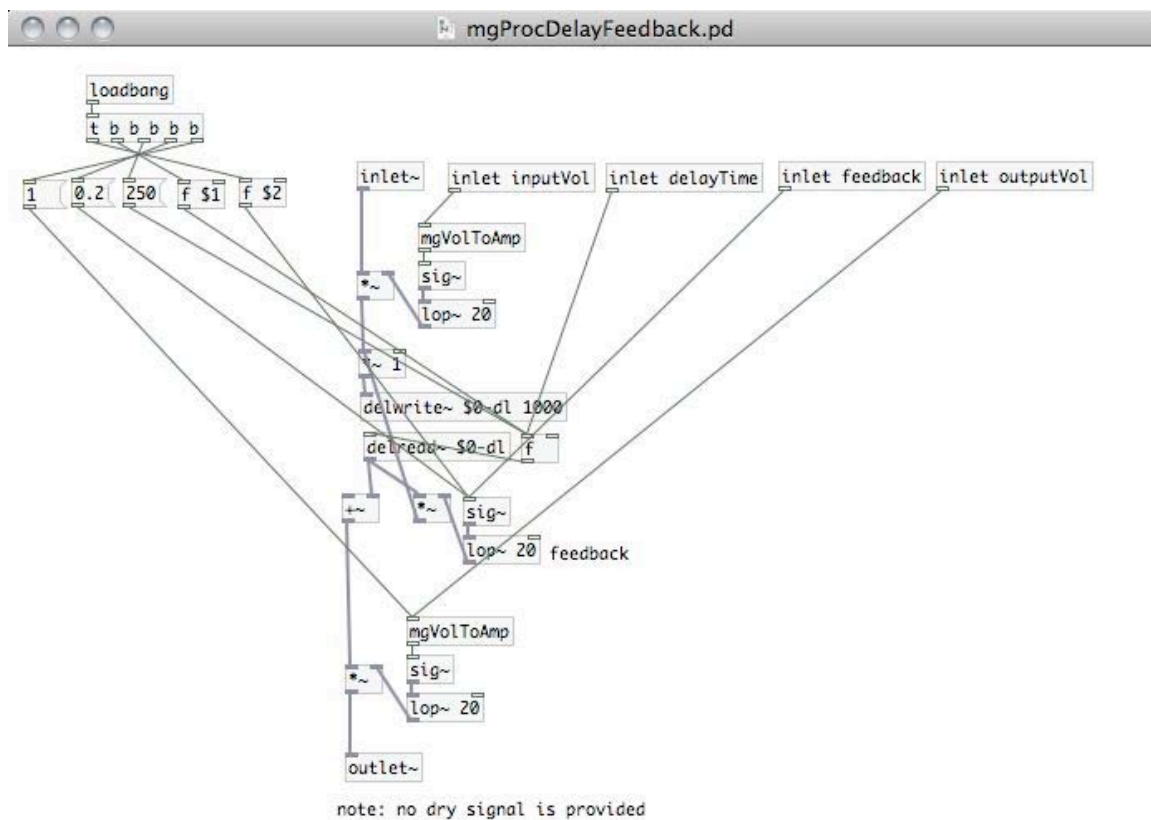


## 12.6. Signal Generators and Transformers

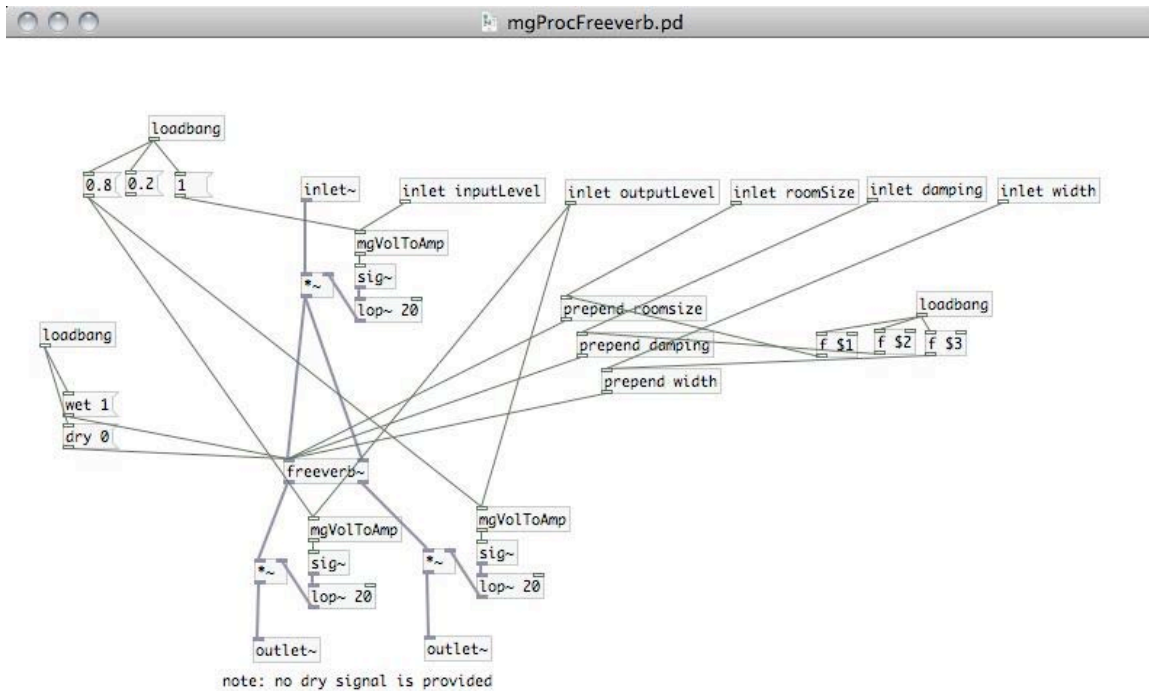
- Two areas of emphasis: signal generation or transformation
- Simple generators can be made powerful with interesting transformers

## 12.7. General Purpose Signal Processors

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



- Example: [mgProcDelayFeedback]



## 12.8. Using Analog Inputs as a Control Value

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

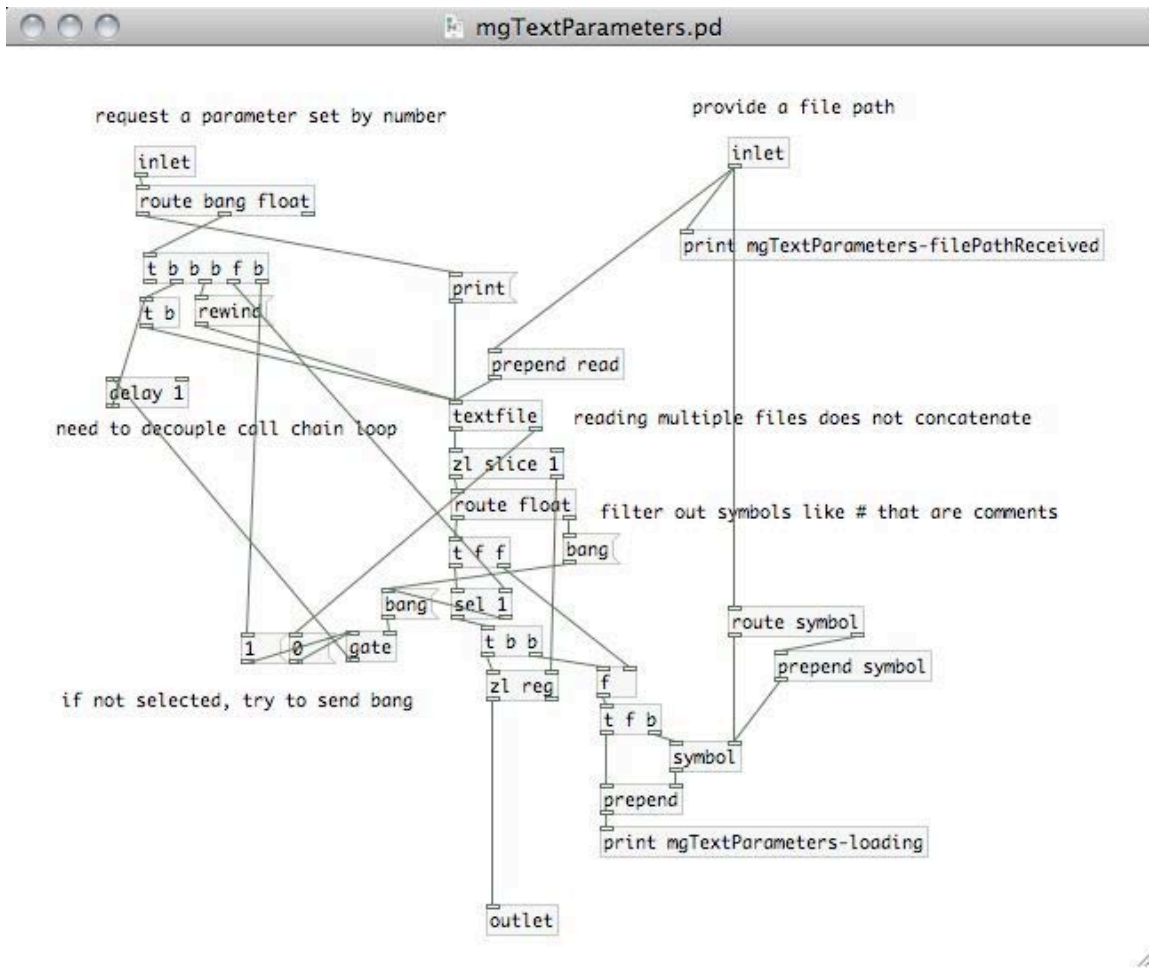
[mgEnvlFollow], mgEnvlFollow.test



- 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]



- Sample data file from mgSynthSawParameters.txt

```
# basic ;
```

```
# introductory scale;
```

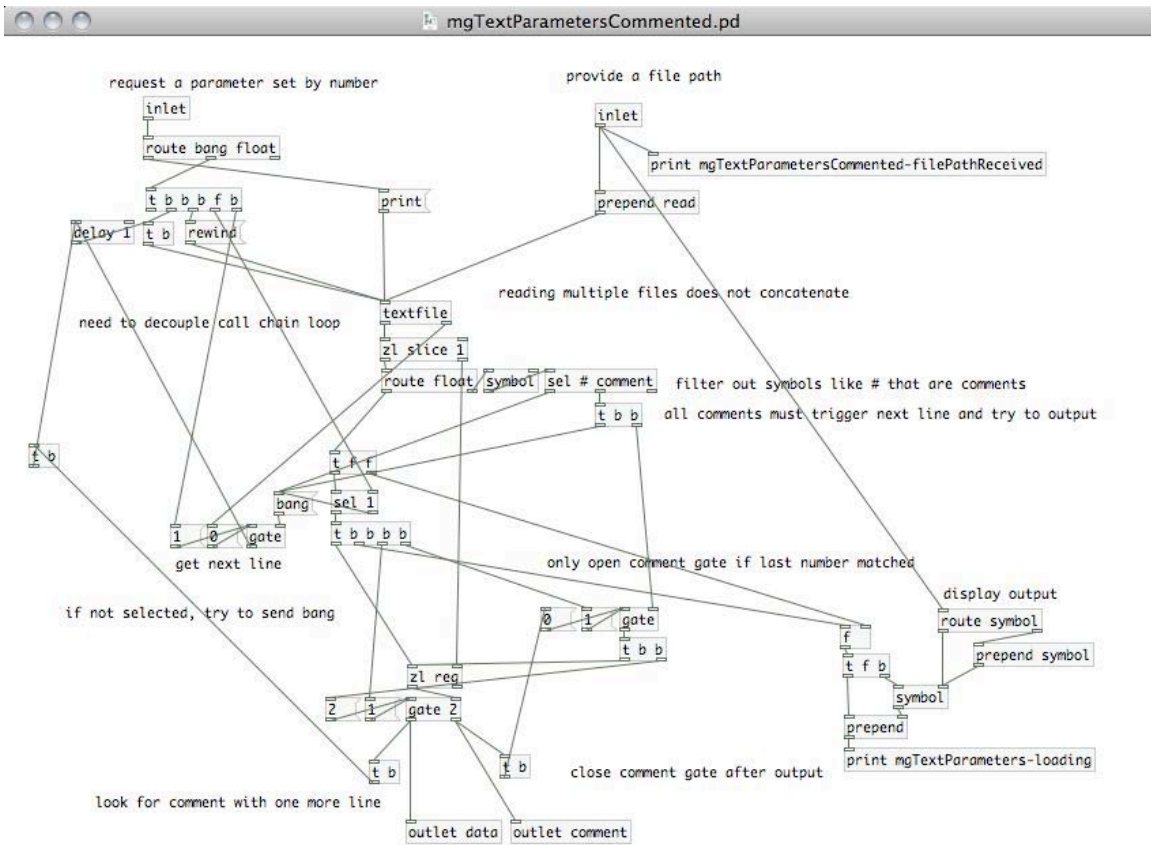
```
1 pitch1 60 pitch2 62 pitch3 64 pitch4 65 pitch5 67 pitch6 69 pitch7 70 pitch8 72
attack 20 decay 100 sustain .8 release 1000 fmRate 4 fmDepth .25 lpfMin 70 lpfMax
120 octaveShift 0;
```

```
# e phrygian starting below middle c;
```

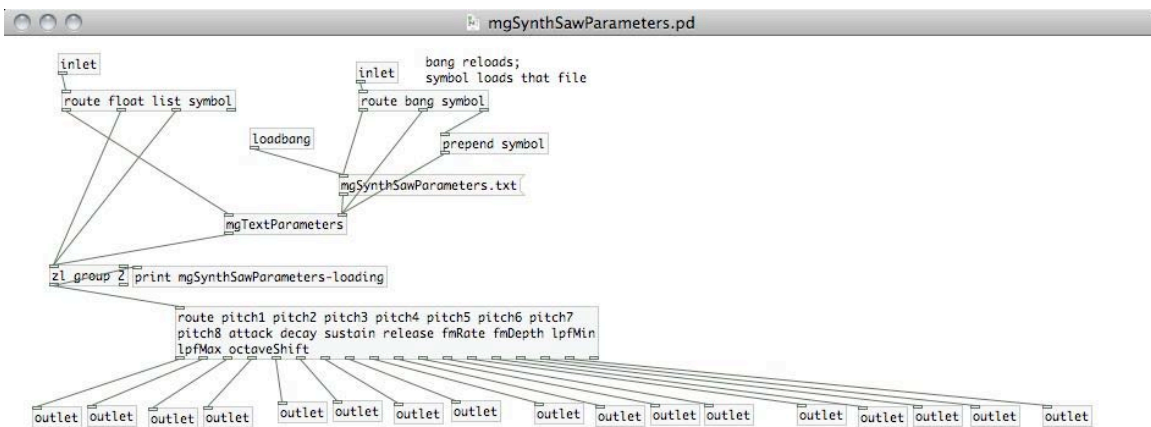
```
2 pitch1 52 pitch2 53 pitch3 55 pitch4 57 pitch5 59 pitch6 60 pitch7 62 pitch8 64
attack 10 decay 40 sustain .8 release 500 fmRate 4 fmDepth .25 lpfMin 70 lpfMax 120
octaveShift 0 ;
```

- [mgTextParametersCommented]

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

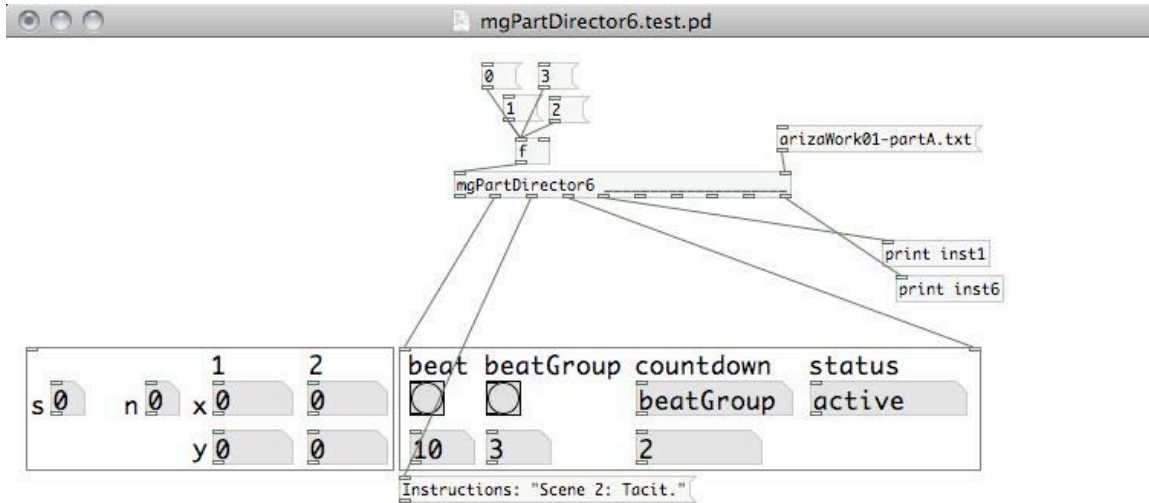


- Parameter abstractions can embed [mgTextParameters] [mgSynthSawParameters]









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

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

arizaWork01-performanceRoot.test.pd

```

;
pd dsp 1
;
pd dsp 0

```

arizaWork01-partA.txt  
arizaWork01-partB.txt  
arizaWork01-partC.txt  
arizaWork01-performanceRoot/duc~

s 0	n 0	x 0	1	2	beat	beatGroup	countdown	status
		y 0	0	0	<input type="checkbox"/>	<input type="checkbox"/>	unit	loading
					0	0	0	

Instructions: "Scene 1: Begin with instrument 2 low frequency effects. After 30 beats begin moving to higher frequency material."

```

i1: mgSynthNoiseFilter // i2 mgSynthBuffer8 // i3
mgSynthSaw // i4 mgSynthBufferLoop8 // i5
mgSynthBandpassNoisePulse // i6 mgSynthBufferPulse8

```

mgTableWaveSaw  
mgTableWaveSquare

## 12.12. The Score Interface: Simultaneously Viewing all Parts

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

arizaWork01-score.pd

0 1 2 3  
mgListLoop  
arizaWork01-partA.txt

mgPartDirector6    unpack f f f    mgPartDirector6    mgPartDirector6

beat	beatGroup	countdown	status
<input type="checkbox"/>	<input type="checkbox"/>	unit	loading
1	1	0	

Instructions: "Scene 1: Begin with instrument 2 low frequency effects. After 30 beats begin moving to higher frequency material."

beat	beatGroup	countdown	status
<input type="checkbox"/>	<input type="checkbox"/>	unit	loading
1	1	0	

Instructions: "Scene 1: Begin with instrument 2 low frequency effects. After 30 beats begin moving to higher frequency material."

beat	beatGroup	countdown	status
<input type="checkbox"/>	<input type="checkbox"/>	unit	loading
1	1	0	

Instructions: "Scene 1: Begin with instrument 2 low frequency effects. After 30 beats begin moving to higher frequency material."

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