Computer Music Practice Examples

ISJS

Step-by-step process

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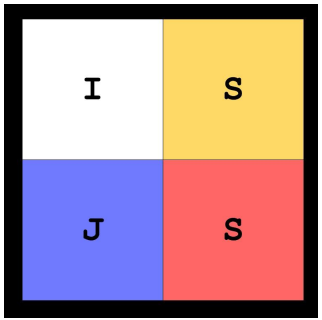

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Step 1. Make S(iPlayBack)

Step 2. Duplicate S(iPlayBack)

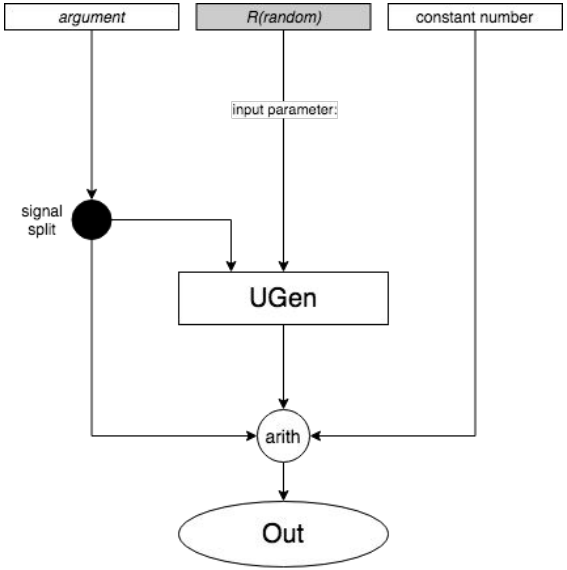
Step 3. Make a Score

Step 4. Make a GUI

Link to Music and App

Link to .scd files

Block Diagram Legends



S(synthdef)

L(loop)

F(function)

UGen:
- Unite Generator.
- Processes audio or data

arrow:
- Shows the direction of signal
- The text in the line (input parameter:) shows the name of the input parameter of an input in the connected UGen

argument:
- Controllerable arguments
- Written in italics
- Can be a list in [arg,arg,arg] format

constant number:
- Discrete numeric value

signal splitter:
- Used when one signal is connected to multiple inputs

Arith:
- Arithmetics.
- Incoming signals are added(+), subtracted(-), multiplied(x), or divided(/).

Out:
- Audible audio output

S(synthdef) : SynthDef. Includes OSCFunc

L(loop): loops including do{} and Routine

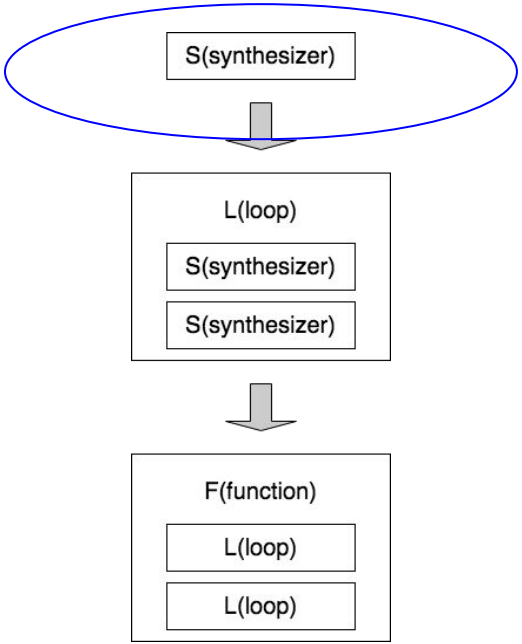
F(function): custom function.

CMPE - Introduction

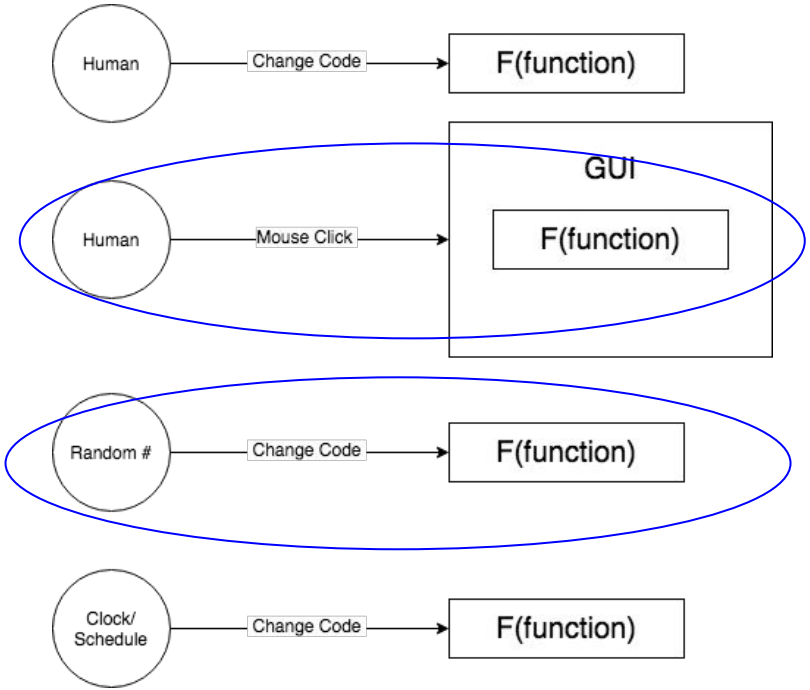
Main

Design and Creative Process Overview

Instrument Design Process



Presentation/Performance Methods

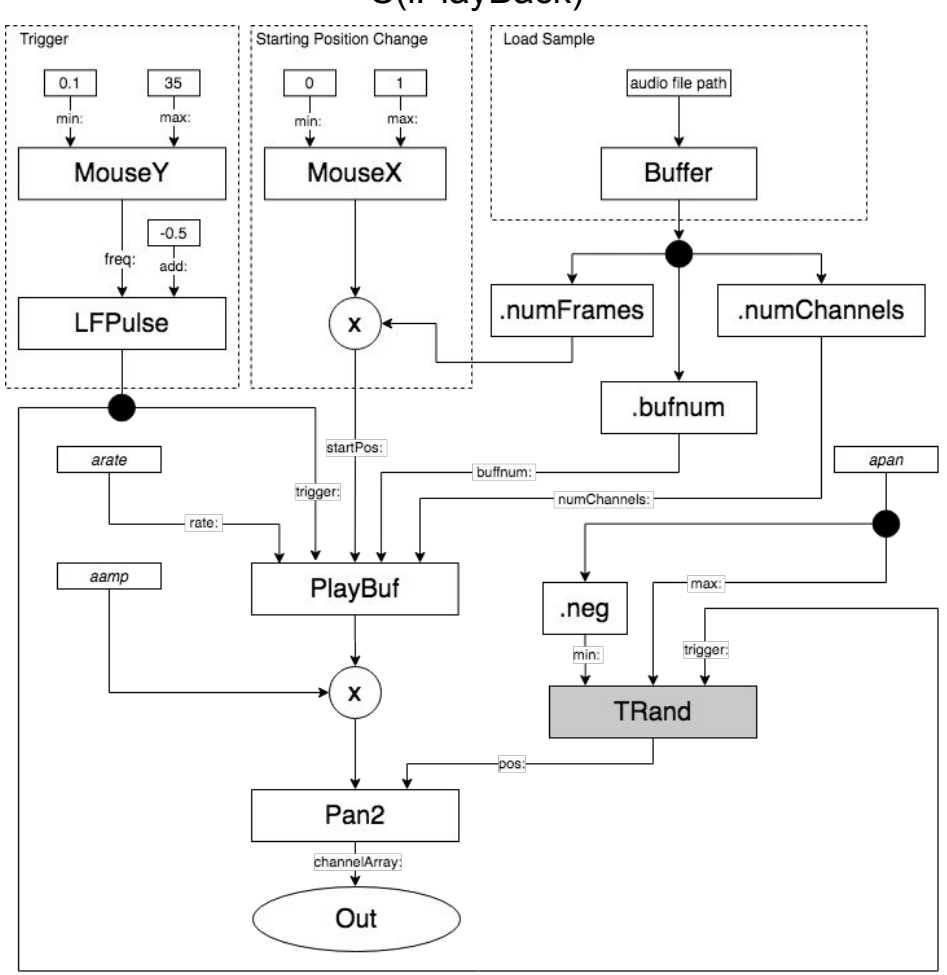


Main

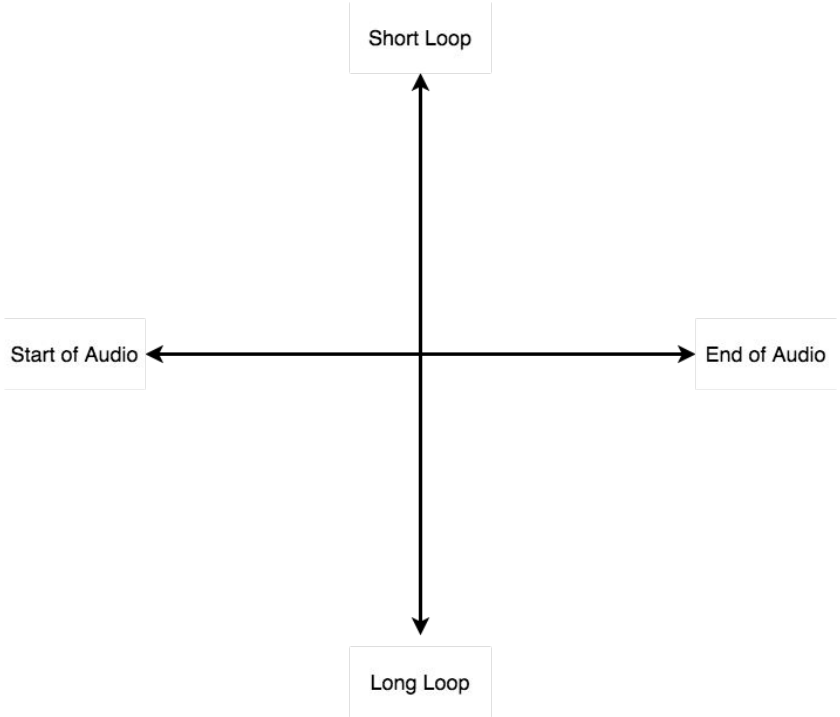
Step 1. Make S(iPlayBack)

A. Load a sample into a buffer
B. Make a SynthDef that plays back a specific buffer.
C. Map the mouse position to sample playback position and looping frequency

Step 1 Audio Example (scd file)



Step 1. Make S(iPlayBack)

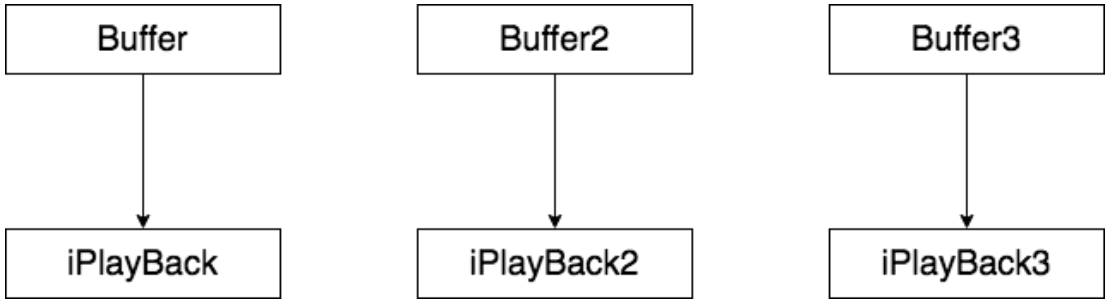


Mouse Position Mapping

S(iPlayBack)

```
//load a sample to a buffer;
~buff=Buffer.read(s,"/Users/muaadmin/Desktop/samples/beatbox.aif");

SynthDef("iPlayBack",{
	arg aamp,arate,apan;
	var source,trigger,startposition,triggerrate,mix;

	//starting position change
	startposition=MouseX.kr(0,1);

	//trigger
	triggerrate=MouseY.kr(0.1,35);
	trigger=LFPulse.kr(triggerrate,add:-0.5);

	//play sample
	source=PlayBuf.ar(~buff.numChannels,~buff.bufnum,arate,trigger,
		~buff.numFrames*startposition,1)*aamp;

	mix=Pan2.ar(source,TRand.kr(apan.neg,apan,trigger));
	Out.ar(0,mix);

}).add;

Synth("iPlayBack",[\aamp,0.8,\arate,1,\apan,0]);
```

Step 2. Duplicate S(iPlayBack)
Make three playback SynthDefs.
Each SynthDef plays a different audio file.




```
Synth("iPlayBack",[\aamp,0.5,\arate,1,\apan,1]);
Synth("iPlayBack2",[\aamp,0.5,\arate,1.5,\apan,0.5]);
Synth("iPlayBack3",[\aamp,0.5,\arate,1,\apan,0.5]);
```

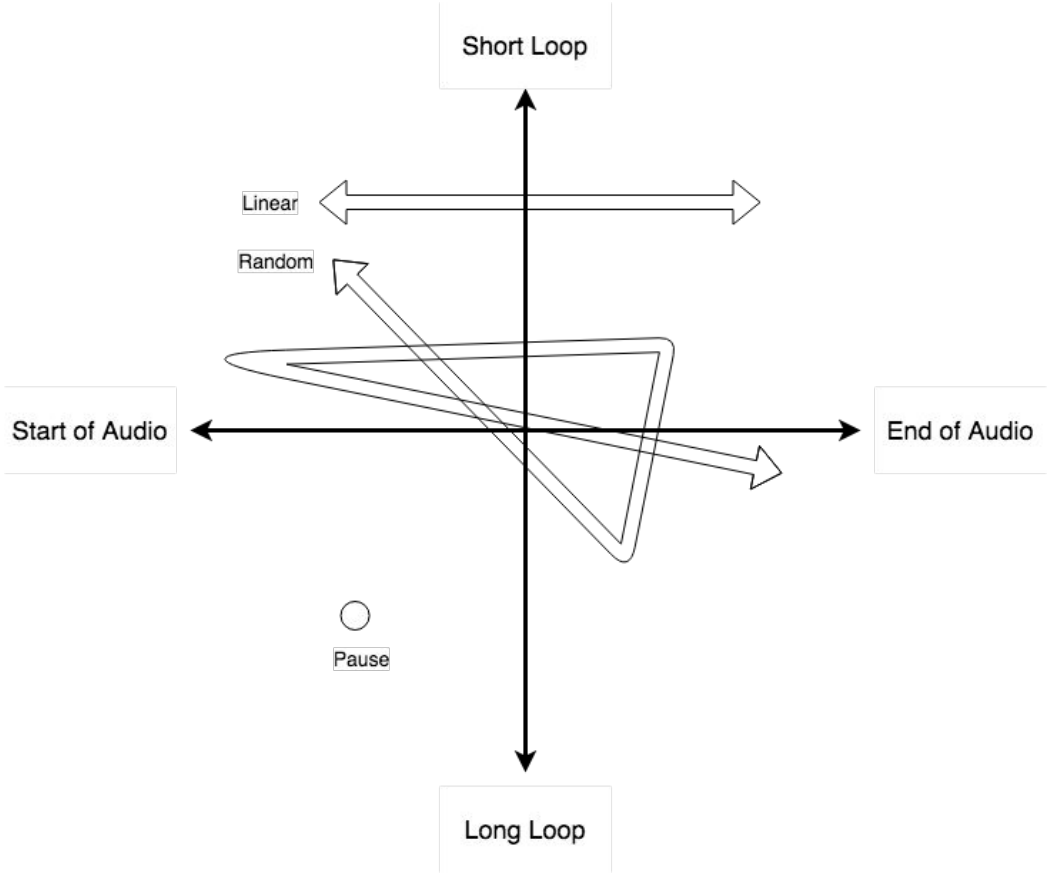
Step 2 Audio Example

Step 3. Make a Score

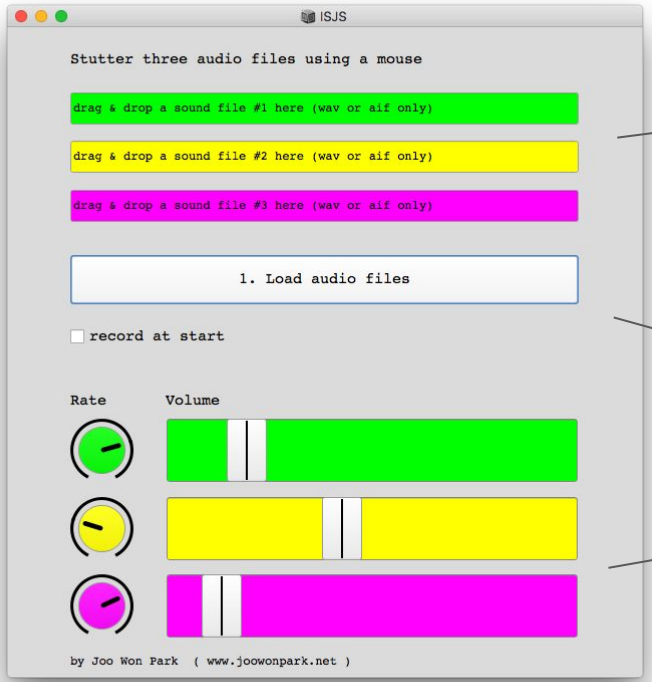
A mouse is a sole instrument for ISJS. Improvise the mouse cursor position in three different types of motions for rehearsal and performance.

1. **Pause**: Stay in one position. Focus on presenting a recognizable rhythmic pattern
2. **Linear**: Move from one point to another in a straight line. Focus on presenting a single predictable change, such as change of timbre or increase in loop duration
3. **Random**: Move randomly. Focus on presenting unpredictable, abrupt gestures

Take freedom in the speed of the movement. Find coordinates of the Pauses that would work well. End in a Pause position



Step 4. Make a GUI



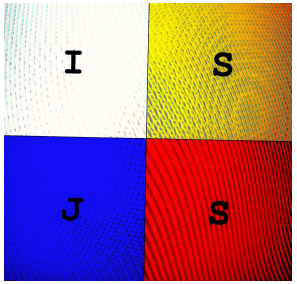

```
~buff=Buffer.read(s,"drag-dropped file path");
~buff2=Buffer.read(s,"drag-dropped file path");
~buff3=Buffer.read(s,"drag-dropped file path");
```

```
Synth("iPlayBack",[\aamp,Volume,\arate,Rate,\apan,R(-1,1)]);
Synth("iPlayBack2",[\aamp,Volume,\arate,Rate,\apan,R(-1,1)]);
Synth("iPlayBack3",[\aamp,Volume,\arate,Rate,\apan,R(-1,1)]);
```

Inspiration & Albums

Modell 5

by Granular Synthesis & Akemi Takeya



What's Before/Next

RMHS : Ambient Sound Generator

SIOE: Sample Supercut Remixer

APG: Audio Palindrome Generator

Contact joowon@joowonpark.net if you have questions or see errors.