AUD420 - Interactive Sound Systems

Evaluation of KeyBoi

David Tucker

Professor Ioannis Zannos

Evaluation of Keyboi

Concept:

KeyBoi is a synthesiser that takes keyboard input and allows for the control of synthesis parameters. The original idea for this synth was to create a large array of inputs which were reactive alone and together. By creating this, I would hope to produce an environment in which users begin to explore and perform within the reactive behaviour of the synth.

Process of Creation:

The creation process began with learning how to use the KeyState command. This allowed me to access the particular keys and address values for Up/Down state of the key. Originally I used this to control the frequency of a synth, however this meant the synth would play continuously and the pitch would alter when the key was pressed. Instead KeyState was used to control the envelope of the oscillator, this allowed for me to control the amplitude. Another button was added for pitch shifting later.

In my SynthDef, I wanted to add a Stutter function. To learn how to do this I searched up this effect on SC Codes. Here I found a great patch which demonstrated some different ways of approaching this problem, this patch was created by Snappizz. Whilst I tried to implement one of their methods, I ended up experimenting and finding a different sound which I enjoyed. DelayC functions were used to collect samples from the oscillators and play these at fast and slow rates based on KeyState inputs which were saved as StutterVal's.

Improvements:

Some ideas that I wanted to implement did not make it into the final code. For example, I wanted my code to include every key on the keyboard. However, my coding technique is rather primitive and I do not code in the most efficient way. Creating the amount of instances for each key used too much processing and Supercollider was unable to work.

Using the Spacebar, I had wanted to add a responsive deep bass sound. This could be used as a rhythmic tool when played correctly, however I was unable to get KeyState to work with the Spacebar.

Conclusion:

Whilst I did not fulfil my complete imagining of the synth. I am pleased to have produced a simple system which uses simplistic inputs to create complex synthesis. In the future, I hope to add more KeyState's to change the max Delay Time on the DelayC units, hopefully adding further complexity. During this module, I am extremely pleased to see my progress on SuperCollider develop. The software is satisfying to use and the Help Browser is a very useful tool.