ECS512 Sound Design - Lab 1: Introduction to Pure Data

The basics of Pure Data will be introduced from the ground up in the first half of this lab and then for the second half we will look at a model of a telephone dial pad that will tie together everything we have learned.

The topics covered in the first half of the lab will be as follows

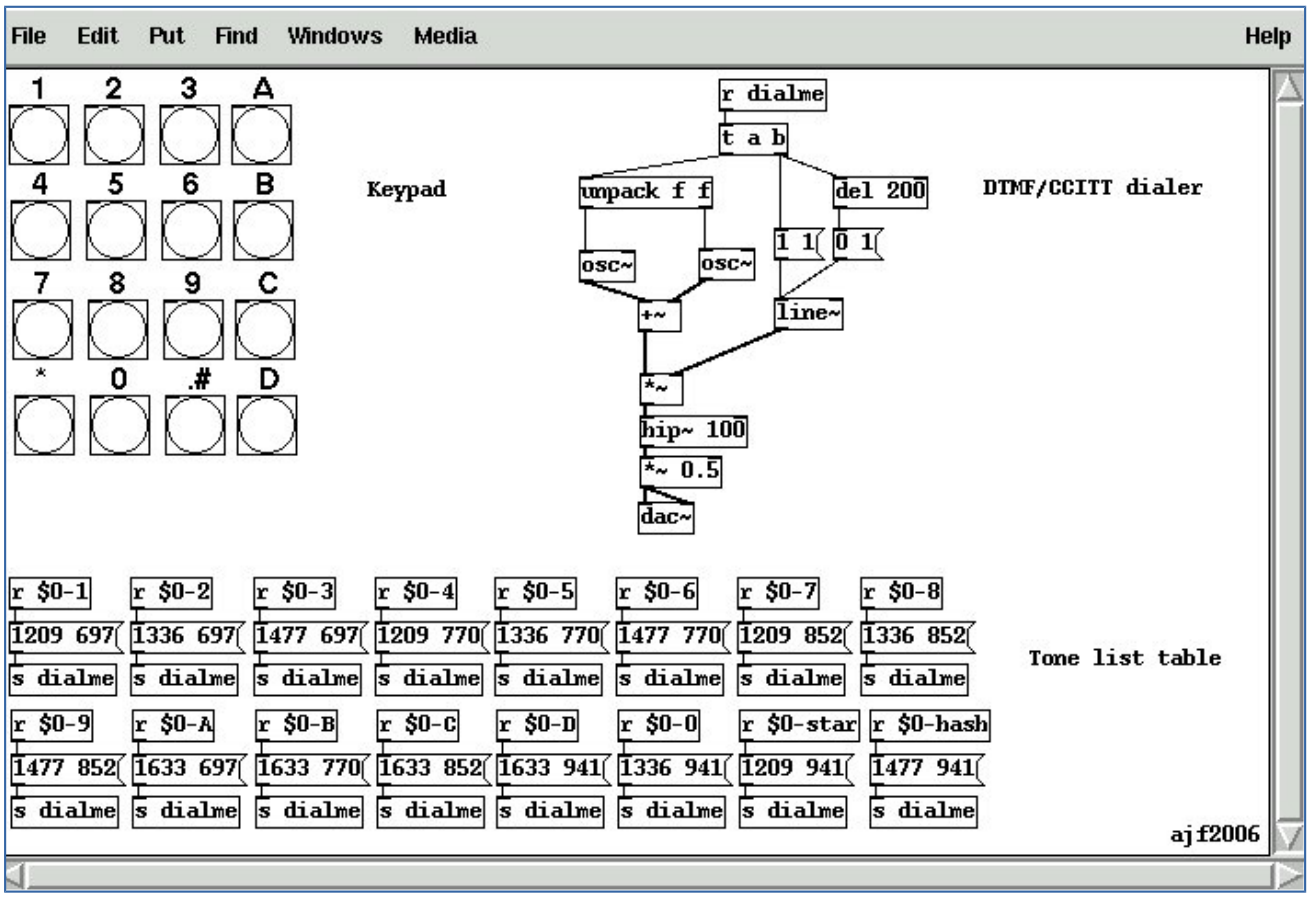
- Creating objects, message boxes and number boxes
- Inlets and outlets
- Connecting and disconnecting things
- Edit mode
- The different types of connections(signal/control data)
- How objects are used
- Shortcuts
- Comments
- Arithmetic
- Hot/Cold Inlets
- Bang/Trigger
- Print
- Mathematical Expressions using '*expr*'
- '*moses*', '*sel*', '*==*' and '*random*'
- Float and Counters
- List – Pack/Unpack
- Message – '*set*'
- '*spigot*'
- '*metro*' and '*delay*'
- '*line*'
- Send/Receive

We will then try and build a DTMF tone dialling pad from scratch utilising some of the previously

learned topics.

The topics mentioned above are explained in detail at http://www.pd-tutorial.com/english/ch02.html#chapt2.1.1 and http://www.pd-tutorial.com/english/ch02s02.html. Please read through these before attempting the assignment.

Once you have read through the links. Try and build a dialling pad patch that looks like this.



Step 1. Create the number '1' dial pad and the corresponding frequency component. Then demonstrate that you have correctly set up each object successfully.

Step 2. Set up the rest of the dial pads and frequency components.

Step 3. Re-create the section of the PD patch that generates the tones. Once you are finished I want you to demonstrate the patch working correctly and explain how it works.

More info on the DTMF tone phone dialler can be found here http://obiwannabe.co.uk/tutorials/html/tutorial_phones.html and in Andy Farnell's book '*Designing Sound*'