**HOURS**

**Dave**

* Look into doing visualizations with hardware gear we already have on campus
* Peter Neubaeck / Granuliar synthesis <http://cycling74.com/forums/topic/does-anyone-know-what-timestretching-algorithm-melodyne-uses/>
* Someone else’s capstone proj on guitar pitch shifting <http://guitarpitchshifter.com/#12>
  + Download the code & commit it
* Anything < 50 milliseconds is noticeable
* Analyze the spectrum <http://amath.colorado.edu/pub/matlab/music/>
* Hilbert Transform to approximate to frequency & amplitudes envelopes.
* <http://dsp-book.narod.ru/Pitch_shifting.pdf>
* <http://sigpromu.org/brett/elec2400/matlab3.pdf>
* DO: TSR report 2, looking into algorithm

**Natalie**

* Look into GNU radio for visualizations <http://gnuradio.squarespace.com/> instead of using OpenGL or FLTK/QT
* DO: looking into analogue interface, set current links as PDFs into Git folder, and gnu radio. Make sure to get code from sites like (http://guitarpitchshifter.com/#12)

**Matt**

* Wavelet vs fourier transform
* <http://clam-project.org/>
* DO: SRS, looking into algorithms

**Jon**

* [Open Source PitchShift Library](http://www.surina.net/soundtouch/" \t "_blank) (up)
* [DIRAC PitchShift DSP Library](http://www.dspdimension.com/admin/dirac2-released/" \t "_blank) (up)
* [Some Info + Algorithm](http://virtualdub.org/blog/pivot/entry.php?id=45" \t "_blank) (up)
* [Pitch Shift Explanation](http://www.dspdimension.com/admin/pitch-shifting-using-the-ft/" \t "_blank) (up)
* DO: looking into analogue interface and ADC

**Questions for the silver fox**

* Clarify what he meant by single string retuning, one string or pick out one string