

Development Plan,Iteration,Forks

During the course of the project the requirements changed quite significantly. This is reflected in the evolution of our development plan. Initially we started of with the following plan:

- \* Before the end of January build a prototype of the hardware with the following capabilities:
  - connect to mobile devices using BlueTooth
  - act as a headset using a built in microphone and bone conduction speakers
- \* After the initial prototype integrate Arduino Pro in the device and start exploring binaural sound processing

We have successfully built the prototype but afterwards we run into complications with the electronics that required expertise beyond what our team could provide. We then decided to change our plan significantly and keep the existing prototype while moving the communication and sound processing layer to the device to which the scarf is connected. This resulted in the following list of packages:

- \* Build a Node.js server that supports at least 3 clients connected and exchanging sound packets over a TCP connection
- \* Experiment with interfaces and pick the most suitable cross platform technology to use for the client
  - this resulted in picking Unity since it also helps with the 3D sound processing
- \* Implement an interface that can play and move prerecorded sounds in a virtual 3D space
- \* Implement the sound capture and networking layer - capture sound from a built in microphone and send it over a TCP connection to another client
- \* Combine the networking layer and interface to produce a final version of the client app
- \* Combine the client app with the scarf prototype to produce a demo-able product

Those packages are represented by the following Gantt chart:

