1. Introduction

The idea for this project is to create a web app that allows users to video/audio call each other over the internet. The app will run using only JavaScript, which will handle both the client side and the server side.

The improvement to an app like this over other competitors such as Skype is that no other programmes are needed to be installed to call another user. As long as the user’s internet browser uses JavaScript, then the app can be used. There are a number of benefits to using an app that runs purely on JavaScript:

1. No other application needs to be installed, saving memory.
2. Update advantage

More on issues on Updating and Memory issues with Skype

1. Any user without administrator rights can call another user as no programme needs to be installed.

Another sentence to expand…

2. Requirements Analysis

**User requirements**

Use case

**Functional Requirements**…what the system will do

**Technical requirements**

Proficiency in the following technologies will be required:

Socket etc

\_ paragraphs on each

Tools and Extensions \_ paragraphs on each

Describe Gulp and Saas

Git

Jasmine

Node.js

1. System Model

Overall architectural diagram

The system is divided between 3 components. The Database (MongoDB), the Server (Node.JS, Socket.IO), the Client (Angular.JS). The client would take in the user's input (The data stream taken from the user's microphone, the user's login information), and then pass that information through a RESTful API, or over WebSockets.

Restful Api is……

This data is then processed and if relevant, it will either pass information to another client as requested or the data is logged into or checked with validation against the data in the database.

4. Feasibility

There are many problems with implementing a live web audio system. Most of the problems occur with NAT (Network Address Translation). The foremost use case is proxies. The additional work that would be required for this use case may be out of the scope of this project.

The main project management risk that only two people are developing this project. They will be very dependent on one another to make sure the sides of the project work in tandem with each other. If one of the project team is not able to finish the work in time, it would hinder the entire project. This will solved by additional meetings to the supervisor meeting to make sure that the project stays on track.

The project will also be using GitHub to ensure that the code being run is the latest code developed. This solves the problem of the project developers being both located quite a distance from each other. Just manually exchanging files every change over emails and such would be tedious.

5. Tests

Most of the tests will be unit tests. The server side will be using jasmine node. The client side will using Protractor.JS. Some tests will have to be done manually as it is not possible to unit test how audio sounds or whether it is to up to standard. Unit testing can only detect whether the client has received the data. Usability testing would also be required in order to ensure the user is using the system as expected.