Project Something

This document will keep a track of the overall progress of the project. It will also serve as the design specification document too.

This is a part of Git Hub repository and feel free to update, edit it.

# Environment setup

1. Install msysgit from <https://code.google.com/p/msysgit/downloads/detail?name=Git-1.8.4-preview20130916.exe>
2. Install tortoise git from <https://code.google.com/p/tortoisegit/downloads/detail?name=TortoiseGit-1.8.5.0-32bit.msi>
3. Clone the git hub repository from

[https://github.com/suparngp/telecom.git](https://github.com/suparngp/telecom.git%20)

## Node.js development

1. Install node.js latest version
2. Set the environment variable to node.exe
3. Install webstorm 6 by Jetbrains (trial or from torrent ☺ )

## Android development

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# System Overview



The application server is the brain of the system which controls the overall communication. It acts as the mediator between phone and the browser. It runs on node.js platform for easier integration with browser and web sockets. In the further document, terms application server and server will be used interchangeably.

The current system is supposed to work only on chrome. It might support other browsers but those browsers will not be tested for compatibility. The communication channels between browser, cellphone and server are web sockets.

The software which runs on the phone will be referred as phone client in the rest of the document.

# API Documentation

## General Syntax of Control Messages

All the control messages (Any message other than data) should have the following format:

{

type: message-type,

from: ip address,

to: receiver’s ip address,

timestamp: timestamp in milliseconds,

body: {

…….

}

}

## Setting up communication channels

There are two communication channels in the system. One is between the phone and the application server and the other one is between the browser and the application server. Both of these channels are web sockets for real time communication.

### Setting up channel between phone and server

1. Phone client starts as an always running thread.
2. The IP address/DNS of the server is hard coded in the phone client.
3. It establishes a web socket with the server.
4. Next, it sends a REGISTER message to the server with the following body:

body:{

ipAddress: phone’s ip address,

phoneNumber: the phone number,

location: possible location of phone

}

#### Explanation

Some fields might seems unnecessary at present. However, since we are just starting to build the system, some extra information won’t hurt.

1. ipAddress- for recording the phone’s ip.
2. phoneNumber: unique identifier
3. location: will help in tracking the location of the phone in real time later one. Imagine like a test feature- Where is my phone?

Location should be in a simple readable format like an address or city + state combination.