

OmniView

Google Glass tracking application developed for the US Army



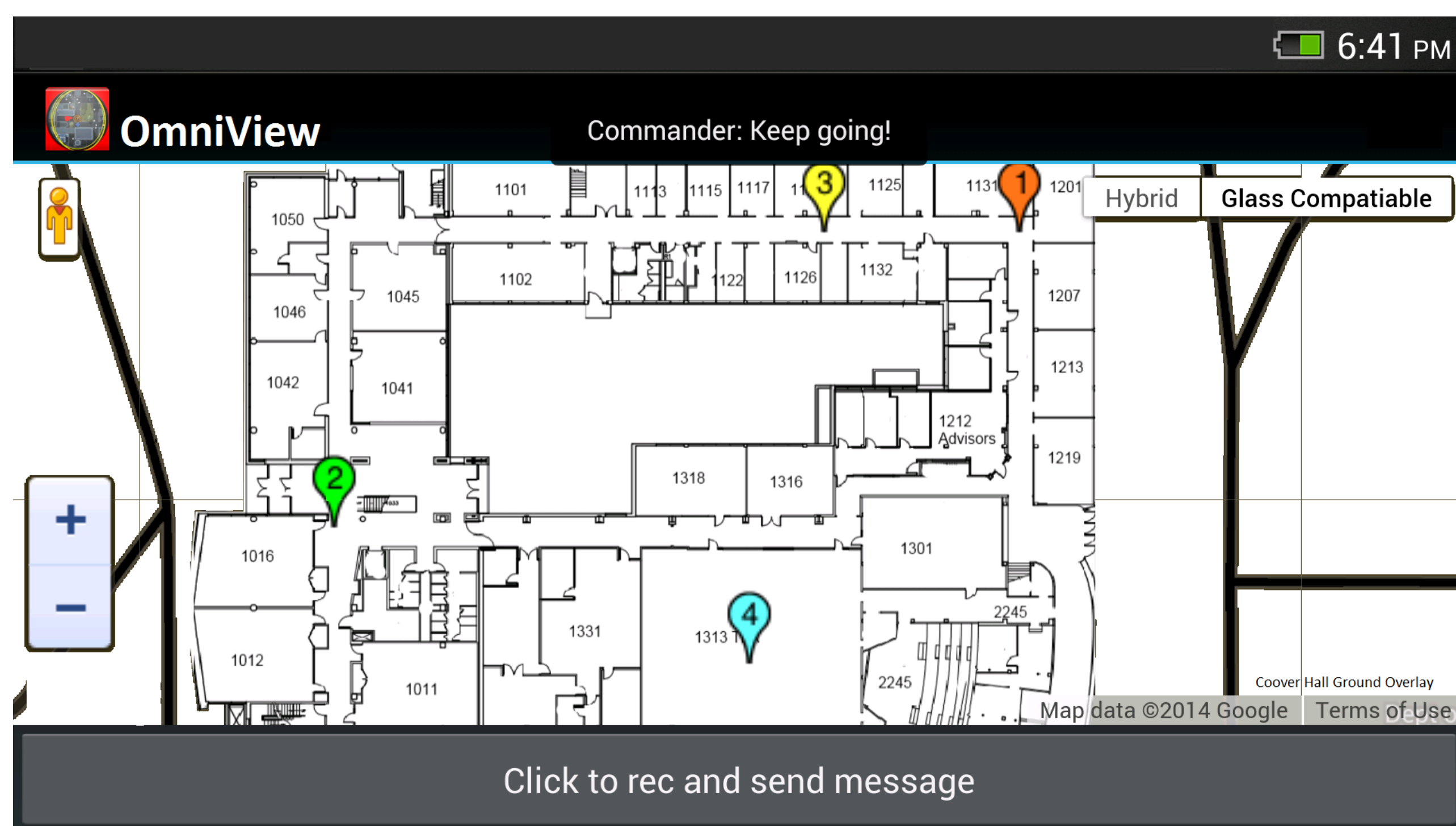
Abstract

OmniView is a system to display real time tracking data using Google Glass's prism projector display. The experience is inspired by the 'mini-map' featured in many first person shooter video games. Our design process emphasized modularity, platform-independence, and extensibility.

Google Glass is an exciting new technology that offers a promising approach to commercially available optical head-mounted displays.



The **MIRAGE** (Mixed Reality Adaptive Generalizable Environment) is a room that supports integration of physical and virtual objects via high precision tracking within a 40'x 40' area.



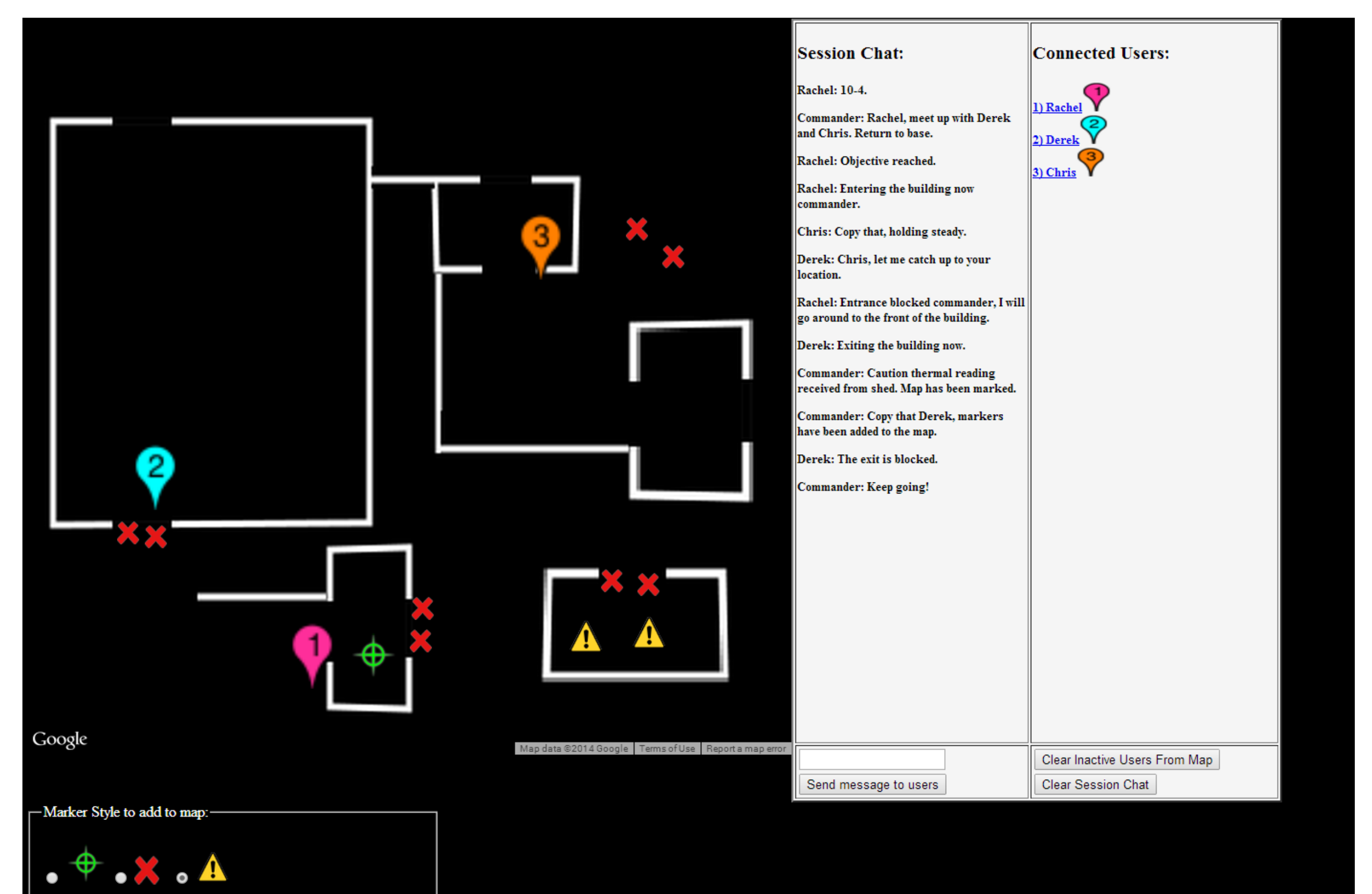
Google Glass View (Client), GPS Environment

Glass Application

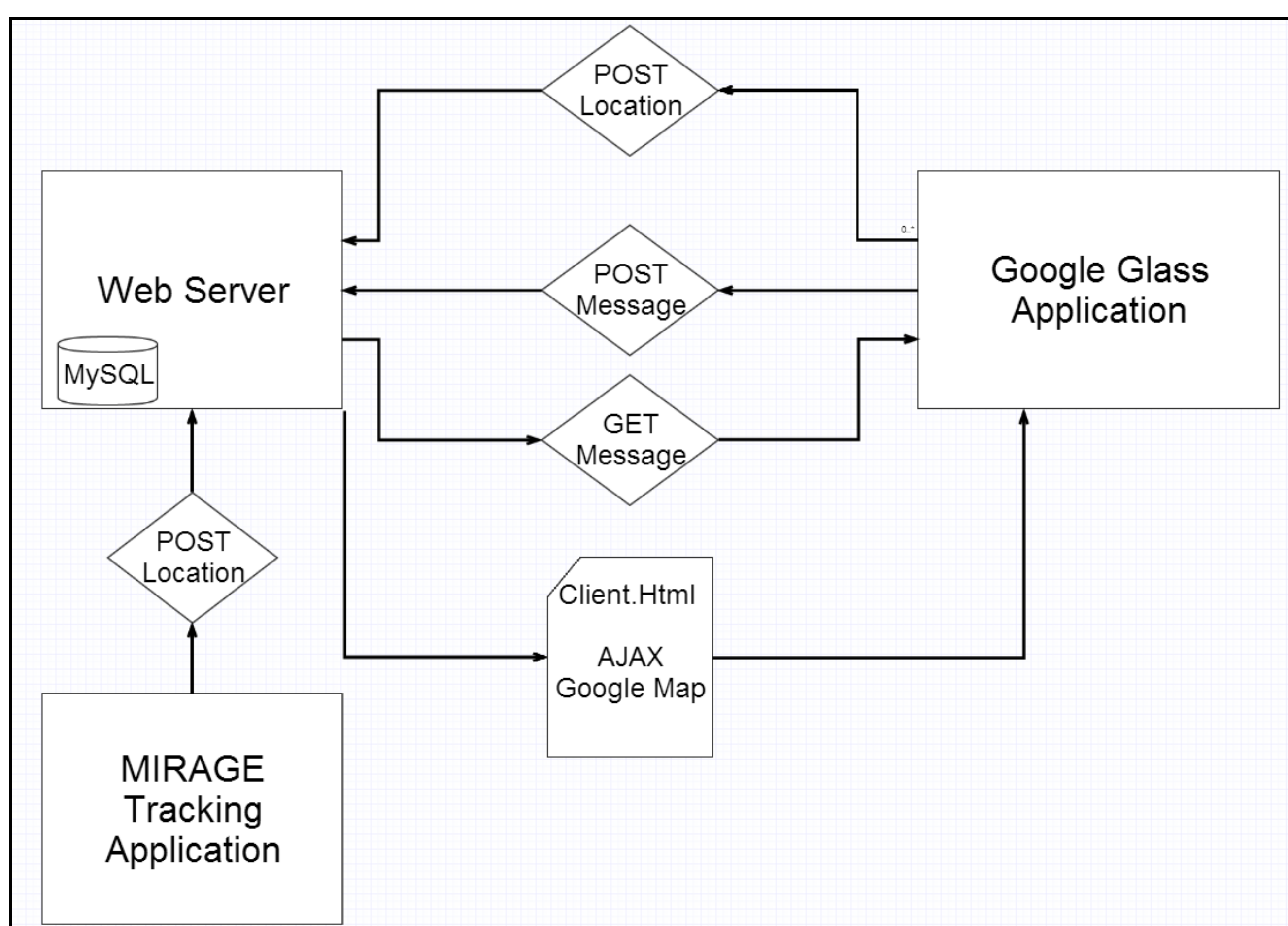
- Receives live location updates from GPS or MIRAGE
- Speech to text messaging with team and 'commander'
- Uses Google Glass touchpad to control interface
- Syncs locations of all users connected to server

Server Application

- Generates live map with connected user's precise locations
- Administrates map settings and features
- Places checkpoints, warnings, and custom markers
- Broadcasts messages to all connected users



Commander's View (Server), MIRAGE Environment



Modular breakdown of OmniView

Design

OmniView features a very modular design. A web framework was used in order to make the application portable across numerous devices and to compensate for Google Play Services not being available for Glass.

OmniView is scalable and can support varying numbers of clients, as long as they are able to display web content and have a GPS provider. It's a simple operation to increase the number of supported devices.