Ben Porter
Ludovico Corsini

AR Mapping

Security

There will be privacy concerns with our project since we will be using the user's location to get them from point A to point B in augmented reality. We will also be sending this data to google or another map provider since we will be using an api. The user will need to login using their google account so that all of their places they already have saved in google can be translated over to our app so we can provide directions to those places. Another issue with privacy that could arise is the feature of using location and compass data along with the camera to display information about a building or place that the user is looking at. This can create privacy concerns for building owners or tenants. We will be working to figure out ways to protect people's privacy in this respect.

Economic

For our project there will be financial limitations to the solution. We will be using freeware on everything we can to reduce costs. If we decide to go with Google Maps API after 2,500 map requests per day they charge $0.50 / 1,000 up to a max of 100,000 a day. This will only become an issue if the application becomes big and we have many users. Another potential expense would be a server. We are currently researching if we will need to implement a server for the application. If we do we will most likely use Amazon web services to host it. The final cost will be the apple developer membership to get our app approved and onto the App Store for consumers to use. All of these costs will be supplied personally by our group. To offset costs of the service we are offering we could either serve advertisements in the application or allow users to donate to us using in app purchases. We will not be restricted to UC or other facilities. Since we will be funding this ourselves.

Social

Our project will contribute to help society from a computer-mediated reality point of view by improving people’s everyday wellness. A mapping system working with mediated reality, remove the masking of maps data, giving to the people the perception of the environment that is mediated. This will result in reduced stress levels and consequently, it will benefit society due to a more efficient and social environment. "ARMaps" has to be considered a “shortcut”, giving a quick access to such technology and resources affects the human behavior, helping people pursuing their goals.

Legal

Mapping using an Augmented Reality platform, analyzes the environment in real time and can result in privacy issues. Despite the recording of public places is allowed by the First Amendment to the United States Constitution, concerns appear when the elements in the AR recording are Individuals or copyrighted entities. Even if facial recognition technology is not a feature in our project, the simple targeting of the elements cited above by the app can be a privacy violation if the user shares the content. Assuming that “ARmaps” will gather information from a search engine that has already content of public domain, to avoid user’s illegal sharing of information a simple Policy Agreement between Users and Developers will be set, with legal action in case of violation.

Patents can be considered another Legal issue. AR is still an unexplored field but the presence of companies such as Nokia or Apple that recently bought Metaio (developer of a proprietary algorithm that works with GPS, Continuous Visual Search (CVS) and Simultaneous Localization and Mapping (SLAM) to "snap" AR layers into place with impressive accuracy) makes our project vulnerable to legal action due to unintended plagiarism. Our solution could be simply the use of Open Source tools and eventually proprietary material.