

## Google Maps Services

### Purpose

1A. My chosen innovation is the Google Maps services, which ranges from the Google Street View feature to the Google Earth program which runs on the computer. The purpose of creating Google Map Services is it provides directions for the everyday person. It can also be used for educational purposes such as exploring locations that no one has seen before or knows about, and it can also be used for problematic situations such as Earthquakes. For example in Google Earth for the desktop you can use features in it to get up to the minute information on weather, earthquakes, tsunamis and etc. by selecting the layer that you prefer. Google Maps/Earth and Google Street View are unique in that Google Maps/Earth takes a satellite picture of the earth and every city. From this you can see the mountainous regions, valleys and oceans. With Google Street View, you have the street angle. This could be good for places to look at up close to determine the correct building and street. Google's goal is to make the virtual world as similar to the real world and with Google Maps and Street View they have stepped further to reaching their goal.

### Effects and Impacts

1B. The benefit of the Google Map services is that now people have knowledge of the world at their fingertips. The harmful effects of this innovation is the concern of privacy. For example, many countries have stopped Google because of Street View. The countries have told Google not to take photos because of privacy laws intact in those specific regions in countries such as India, Argentina, and etc. Also with Google Maps, Street View and Earth there could be huge amounts of stalking. Another negative impact of Google Maps is a breach of privacy. What this means is that the government wouldn't want citizens to know what's going on or what they are covering up.

1C. The impacts my innovation has had on the society, economy and culture is it is incorporated into people's phones, so now their phones can be used as GPS systems where they look up real time updated directions. The benefit of this is a person can never be lost with the help of Google Map Services. This could also have an impact because people could use Google Maps in emergency situations such as in terms of Earthquakes, the Weather and where airplanes have gone missing. Also this has had an impact on the economy by helping with the planning of construction projects. One could use Google Maps by planning construction by seeing if the location is feasible. They could plan where they want the building to be built and how should it be built.

1D. One field that the innovation has impacted is the field of Social Media. For example with Facebook, one could publicly disclose where they are at, at all times. Their Facebook Friends could find out where they are at all times. This applies to Twitter as well. Also another field which my innovation could apply to is the smartphone industry which relies on Maps for its apps. For example apps such as Yik Yak, AND Instagram. Also most smartphones can be transformed into GPS systems which is less expensive in price than actual GPS systems. Another field which my innovation could go under is self-driving cars which rely on location to see traffic, park and travel places.

## Technical Aspects

1E. The user can interact with technology by creating files and 3D models from a developer's point of view for Google Map Services. From a consumer's point of view the user can search locations and use the mouse and keyboard to this. They can zoom in using their mouse. Also for Google Earth they can explore features such by the layers provided. Users can also interact by uploading photos including panoramas that they take with their cell phone. The user can also look at the history of a place by the photos included on a specific date.

1F. One algorithm that Google Maps has is the algorithm to determine the fastest route to go from point A to point B. In its algorithm it computes the distance, time, traffic of the given route and a speed limit on a road. It also factors in the different highways to its algorithm. This algorithm is called Dijkstra's algorithm. Google Maps has relations to its smartphone industry Android. Google Maps also has relationships with Apple who has the app on the iPhone App Store.

## Relationship to Data

1G. Data is utilized as input when the user uploads a panorama or a picture of a place to Google Maps. Google keeps it in collection for that location. As far as Data as an output, Google can collect the location of an individual's location and record it for future purposes. Data can also be used as an input by inputting Data about the Weather, Traffic and emergency information on Google Maps/Earth.

1H. One privacy concern is that Google has all the access to the location of all its users that use Google Maps. Also another concern is anybody can stalk anybody by determining their address. With the coming of Street View the stalking becomes more intense since users can see a close up picture of the buildings. This privacy concern has dropped with the addition of blurring from Google.

## Sources:

"Shortest Path Problem." Wikipedia. Wikimedia Foundation, n.d. Web. 04 Apr. 2015.  
<[https://en.wikipedia.org/wiki/Shortest\\_path\\_problem](https://en.wikipedia.org/wiki/Shortest_path_problem)>.

"About - Google Maps." Privacy and Security – About – Google Maps. N.p., n.d. Web. 04 Apr. 2015.  
<<http://www.google.com/maps/about/behind-the-scenes/streetview/privacy/#streetview>>.

"Google Street View Privacy Concerns." Wikipedia. Wikimedia Foundation, n.d. Web. 04 Apr. 2015.  
<[https://en.wikipedia.org/wiki/Google\\_Street\\_View\\_privacy\\_concerns](https://en.wikipedia.org/wiki/Google_Street_View_privacy_concerns)>.

"Earth." Google. N.p., n.d. Web. 04 Apr. 2015. <<https://www.google.com/earth/>>.

"About - Google Maps." About Street View – About – Google Maps. N.p., n.d. Web. 04 Apr. 2015.  
<<http://www.google.com/maps/about/behind-the-scenes/streetview/>>.

"See the World Through a Self-Driving Car's Map." Core77. N.p., n.d. Web. 04 Apr. 2015.  
<<http://www.core77.com/posts/33115/See-the-World-Through-a-Self-Driving-Cars-Map>>. MAR 19

Epstein, Zach. "Google Maps Tracks Every Single Step You Take – Here's How to Stop It." N.p., n.d. Web. 04 Apr. 2015. <<http://bgr.com/2014/08/28/google-maps-location-tracking-opt-out/>>.