Project Research Document

Community App

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**Section 1 Detailed Discussion -- 1Page Long**

The Community App will be a mobile downloaded, online enabled application that will make use of location based technologies in-order to provide the user with most of its services. The application itself is designed to provide its users with information about activates and locations, that are accessible through the user’s local community, that they currently inhabit. Data collected for the application is intended to be stored on a cloud storage service, as well as the application itself.

The Community App will recommend services, activities or locations to a user based on their past interactions using the application. For instance, if a user regularly reviews information about a certain topic when the applications sends that information to the user, the application will be aware of the user’s regular usage of said content. Then the application will recommend different but like the user’s past content for them to check out.

With location based technologies such as GPS, the application will be able to track the user and provide them with direction to the current location the user is trying to attend, to attend an event, or simply experience the community location. The application will record and store the history of the user’s past locations they have travelled to while having the application enabled. This information is stored in the cloud storage service that the application will support.

The application will be able to provide location based data to the user through the user of GPS. This will be done through the application obtaining the provider information of the user’s mobile phone services. After location based data is recovered from the user using satellite, the information will be sent to the user’s mobile phone provider via transmission to cell tower. After this the mobile phone provider will send the most up-to-date location information it must the closest cell tower to the user, where the users phone will pick up on the frequency transmitted by the cell tower and obtain the most up-to-date location information at that moment. In which case the application will make use of that information to continue providing its services to the user.

The application will provide users both directions and information about public services, landmarks and more. To facilitate community involvement with the application, the application will allow members of community organisations, such as shops, charities, cafes, etc, to register their organisation on the application. In which case the application will then promote the organisation to users who based on the data in their history, may be interested in experiencing the services provided by said organisation.

The application will also allow users to organise participating in activates in their communities, by providing a direct link to the organisation hosting the activity. This will allow users to perform actions such as booking themselves spots at events such as parades, after users are informed of that event taking place.

The application would provide a selection of options for the users to configure in their account settings. One important option could be to allow users to hide the geo-graphic location of their home from other users. To maintain their security for their home.

One feature that the Community application could also provide would be a neighbourhood type watch feature. As the community application allows tracks and stores users information, will be aware of the location of its users while it operates. In this case the application could share the location and travel routes taken of more criminal standing users on the service to other users, so that non-criminal standing users on the service could avoid confrontations that could result in harm being done to them or others.

**Section 2 Existing Applications in this domain -- ½ Page Long**

After many hours of research, the author of this document was only able to locate one application on the market that is similar in parts to the proposed Community App, upon which this document is based. The application however is only related to the Community App in parts of its functionally, not the overall intended service the application was designed to provide. The application in questions is known as Event Base.

Event Base is an online application available for iOS, Android and Desktop. The application is designed to be used by users to both organise and attend events. Event organisers can register their event on the application, and users of the application can book a place at an event, and receive information about that event, having the app act like a flyer for users at events.

Below listed are the similarities and differences between Event Base, and the Community app.

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| **Similarities** | **Differences** |
| Allow organisers to register on app | Event Base is for commercial events. Community app is for community based activities. |
| Allow users to book places at an event | Event base links to your various social media tools. Community app is self-contained. |
| Provide users information about events | Community app use location based technologies. Event Base does not. |
| Both apps recommend content to users based on past interactions. | Community app lets you track the position of criminal users on the app. Event Base does not track individual’s locations. |
|  | Event Base focused on organising a user’s schedule. Community app focused on encouraging users to partake in activities in their community. |

**Section 3 Platform, Technologies and Libraries -- ½ Page Long**

Platforms

The Community app is intended to be available on the three major mobile platforms. These being Android, iOS and Windows. The application will also be intended to have a Desktop terminal for use of administrators of the application, for performing changes to any code if needed, as well as monitoring data that is collect from the application.

Libraries

The application is intended to make use of the .NET opensource libraries. With focus on the ASP.NET subsection. This will ensure that web service functionality can be built into the application, through use of languages such as HTML, JavaScript, and CSS.

Tools

The backend software functionality of the application will be built using the C# programming language. The Windows Location API will be used to provided location based technologies to the development of the application. The application will store data in relation databases, which will be built using Oracle SQL. The data storage of the application will be found in Microsoft Azure, which will not only store data, but allow the application to be scalable for when other users need to make use of the application.

**Section 4 The risks – 1 Page Long**

The application is reliant on the Microsoft Azure servers functioning and scaling without much issue.

If cell towers or satellites are not available in the user’s area, the users won’t be able to receive location data from the application.

The application is reliant on the user being connected to the internet. Should the user not have access to Wi-Fi or 3g, the application will be unusable to that user.

Should there be issues with the Microsoft Azure encryption service, users data will be left vulnerable to attack.