

BTECH 451 Project Summary

Project objective.

To create a mobile application on different mobile platforms that can sense force impact accidents and send emergency SOS message to the assigned emergency contact.

The Company

For this project, I have been working with the company The BLACKHAWK, a New Zealand owned company. The BLACKHAWK specializes in GPS tracking. They provide anti-theft and tracking system for both personal user and business owners.

What I have done.

I have written the "Emergency SOS system" for both iPhone (IOS) and Android mobile platforms.

Before creating the application, during the first half of the first semester, researches were firstly conducted on different mobile operation system and ways that can make this application possible. Two popular mobile operating system were chosen (Android and iPhone) over other operating systems like Symbian that can be outdate really soon in the near future.

Android Application

Android platform system is created before iPhone platform application. This is mostly done in the second half of the first semester through out into the very beginning of the second semester. The mobile system uses three different but not complex algorithms to find out if the users can were in force impact accidents and have operation that can reach to it accordingly.

During the process, I learn knowledge on how the Android SDK, GPS and accelerometer in a mobile phone work. Than with the combine of the knowledge gain, created the first Android application. It was tested by friend and updated according to their feedbacks.

Problems find in the Android application was the accuracy of detecting force from just using accelerometers. Additional methods, research, algorithms and codes were conducted during the process of creating the next mobile application with the iPhone platform.

IOS

For the rest of the second semester, I have been concentrate on solving the problems that I have encounter on the process of creating the Android application. Many algorithms and ideas were used for calculating the impact force. However, none of the ways seem to be able to provide a better result than the simple algorithm that was used in Android. Alternative concluded with out external sensor that can be added onto the user or his/her vehicle, with the limited functions that the mobile provides no other solution can be created.

Other problems encounter in creating iPhone is the restriction made by the Apple Company's policy. Which restricts the user from sending in application SMS. The ending solution is done by social network's SDK (in this case I choose to use Facebook, as it is the most popular SDK at the moment), learnt it and see if it can do in application posting. Which was possible, therefore it is used in the iPhone application instead of sending SMS.

Conclusion

It has been both very exciting and rewarding making this happen. Not only to prove that mobile application are not only fun games for the young but they can also serve an important function in our world. My Android