Topic

Blind Assistance Application

Describe an invention

In the past, we did not have the right technology and inventions to help people who are blind or visually-disabled to get to new places or to do their business. Visually-disabled people can only go to the places that they are familiar with or the places that they have been to before because new places may make them feel insecure and unfamiliar. From these problems mentioned our company and a Government organization has decided to collaborate to help solve these problems and assist them in their daily life.

The Blind Assistance application can help navigate the user from the starting destination and using voice-assistant to guide users and to recommend the best way including shortcuts which helps users find the shortest distance and fastest time to reach their destination. The system also informs the user of their surroundings and the obstacles in the way that can hinder the user from getting to their place.

This application also can be useful for tourists. For example, if they visit a tourist attraction for the first time and they do not know the exact location of the attraction. They will also benefit from this application.

Ask and tell how does it works

1. What are the differences between google map and blind assistance?

- Our application is a real time system, we are connected to satellite and collects new data every 10 seconds. It can also provide the user with shortcuts and hidden paths . Although, both Google map and the blind assistant application are difference but we made use of the API codes from Google.

2. What's API?

- An **application programming interface** (**API**) is a set of routines, protocols, and tools for building software applications.

3. How can the application know which way is the fastest way to destination?

- The system will calculate the shortest path and scan for any obstacles in the user's path, if there are a lot of obstacles then the system will calculate a new path for the user.

4. How can the application know if things are blocking or obstructing the way?

- Well.. the application will scan the building and also everything that is pretty close to the path if the result is flat, it means nothing is obstructing the way.

5. How much does application cost?

- 450 baht

Describe about process (production)

In the production process, we started with eliciting requirement process by gathering requirements from stakeholders. After analysed requirements into functional requirement and non-functional requirement, then the design phase began. In this process, the system analyst needs to define what are the components, internal interfaces and external interfaces we will use in implementing the application. Next is the responsibility of programers to their work which is coding. After finishing implementing process, we tested out the system by tester team and then it became to be a perfect application. All of developing processes are controlled by software quality assurance to ensure that the blind assurance will reach the ISO standard.

Tell future intentions

Although this application is the best blind helping application ever, there are a few constraints in this project, which are losing the signal when user stay under the bridge or they are staying among huge buildings. The weather is also one of our constraints. During the rainy season, user may not be able to reach the maximum potential of the application's performance. So, we are trying to improve the efficiency of our application in the next version to provide the user the best quality. And we also planned for selling it very cheap like a free app for charity. However, it depends on you. You guys can help us to make this idea a reality by recommending new shortcuts or paths to us and any comments or suggestions about this application.