Abstraction

TRAIN REPORTING AND INFORMATION SYSTEM BASED ON GLOBAL POSITIONING SYSTEM (GPS) ON THE ANDROID BASED DEVICE

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Abstract

Train is one of public transportation system which has many passangers. The cheapness of ticket price and the ability to carry people in large number, have made train to be a favourite public transport system. However, the growing number of passanger is not equal with the improvement of the service quality. This lack of service quality arises a number of problems. For example, train schedule delays or even severe accidents. The problem of train coming delays are often complained by the passangers. Passangers have to wait for a long time in train station because of the delays. On the other hand, information about the train is not provided well. Therefore, people have to ask to the train station officer in order to know the current train position. For the train accident cases, there are about 117 cases on 2008 and most of them caused by human errors and the train system equipment problem.

This system was built in order to provide information about the position of each train accurately. This data can be used to predict when the train arrive at the station based on the calculation of the distance between train and the station. This system also has an ability to give a notification to the railroad crossing guard if there is a train which is coming to the crossing. This is done by
setting a threshold for notifying the railroad crossing guard. When
the train enters the threshold, the system will give a notification by
short message system (sms).

From the implementation and testing, the system which was
built in the Android mobile technology with GPS built-in
functionality have ability to fulfill the requirement to update train
position information from the mobile device to the data store server.
This system also have ability to fulfill user requirement to access
train map and position through mobile and web application. Beside
that, this system was integrated to the notification based on short
message system technology. The testing also proved that this system
have good accuracy and reliability to provide information about
the position of each train.

Keyword : train, longitude, latitude, mobile, Android, GPS