Universiti Teknologi MARA

UTILIZING SMS TECHNOLOGY TO FACILITATE BUS PASSENGER DETECTION

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ABSTRACT

Most of the parents lack of control for their children who self-travelling to school. This problem make the parents worry about the safety of the children, thus bus passenger detection using SMS technology is proposed. The implementation of estimate time arrival (ETA) using a linear equation represent a mathematical formula that calculate the ETA by using historical data which is a real collected data from the observation. The ETA and information about the student will be blast using SMS alert to the parents. SMS will be sent to the parent by using GSM module that connected to the computer system. The system work when a children enter a school bus and scan a barcode contain of student id which it will check in the student database. Then the system will calculate the ETA by using historical data which is intersection time, travelling time and dwell time at bus stop. The ETA result then embedded into the SMS details which is contain of time of their children scanned and the ETA to school. The result of the project are evaluated using a survey to the user for usability testing and then the accuracy of ETA evaluate by an expert evaluation. The result shows that it is slightly accurate to the system result with the different of 1 minutes. For the future work it will be enhanced by completing the system using real time data that will use a special device to collect the data from the school bus.

TABLE OF CONTENTS