A Refrigerated Cargo Tracking System Using GPS, Google Map API and PHP Web Service

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ABSTRACT

With the expectation to implement the cargo tracking system and after surveying many existing systems; we found that there are not many systems focusing on refrigerated cargo tracking systems. Therefore, we would like to propose a refrigerated cargo tracking system and to show what functions we can provide for companies. Nowadays, it is essential for many firms to supervise their food delivery. To keep the food in an optimal temperature range and deliver goods to clients? addresses correctly are the most priorities. Environment sensing systems and positioning systems such as GPS (Global Positioning System) are requirements for this kind of systems that require environment sensing data. In this thesis, we state our system requirements and compare our proposed solution with other existing solutions. Our proposed system focuses on the cold chain tracking system to provide locations of vehicles and monitor the temperature of refrigerated cargo carried by the vehicles. The proposed system includes Android phones with GPS module on the vehicles, a website for the visual control by using Google Map API, a web service acts as a bridge between Android phones and database, and an MSP430 F4152 MCU with embedded temperature sensor. Our proposed system can provide the vehicles? positions on Google Map with live data. Also, it can show the temperature and other information of each position on the map. Whenever temperature is greater than a predefined threshold, the system will let the user know for further control.

Keywords : Cargo tracking system、food cold chain tracking system、refrigerated cargo、Google Map API、PHP Web Service 、GPS

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