結合GPS、Google地圖及PHP網頁服務實作的冷藏貨物追蹤系統

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摘 要

貨物追蹤系統是現在物流業中重要的一環，現有系統大多著重在對貨物或運送車輛進行追蹤。然而在如今世界村概念下的食物供應鏈中，許多企業提供了許多來自不同地點的食物，對這些企業來說如何追蹤食物是否在最佳溫度範圍內，並將貨物正確送到客戶的地址，變成是企業物流最優先考慮的方向。因此，我們提出一個冷藏貨物追?系統，對於冷藏或冷凍物品的運送，除了提供貨物或運送車輛的位置資訊外，系統也提供更詳細的運送過程溫度的變化情況以協助企業監督並確保貨物的運送品質。 在本論文中，我們探討冷藏追蹤系統的系統規格、提出的我們的解決方案，並比較與其他現有解決方案的優缺點。我們提出的冷藏追?系統能提供車輛的位置和監控車輛上冷藏貨物的溫度。此系統包括放置於車輛上具有GPS模組及傳送資料APP的Android手機、一個使用谷歌地圖API的網站以顯示追蹤車輛軌跡及物品溫度、一個Web服務用於將Android手機上的APP傳送的資料存入資料庫中、以及一個具有嵌入式溫度感測器的MSP430F4152 微處理器以偵測冷藏物品的溫度。 我們所提出的系統可以即時的將車輛的位置顯示在谷歌地圖上。此外，它也可以在地圖軌跡上的每個位置顯示溫度及其他相關訊息，每當溫度大於一個預定義的門檻值時，系統會利用顏色提醒用戶作進一步的處理。本論文提出的系統架構也可以適用於其他需要監測系統環境資料的應用。

關鍵詞 : 貨物追?系統、冷藏貨物追?系統、谷歌地圖API、PHP Web服務、GPS

目錄

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