

# DETECTION OF ABNORMAL TRAFFIC CONDITIONS ON HIGHWAYS

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## Abstract

Vehicle detection has been studied for a long time. Most sensors for vehicle detection are installed outdoor, especially beside roads or above roads. There are other handheld electronic productions that can be easily equipped in cars, like Global Positioning System (GPS) navigation systems. The current applications of GPS navigation systems, however, do not help much in vehicle detection. In this paper, a new application of the GPS is designed to help in vehicle detection with abnormal traffic conditions on highways, including traffic jam, road construction/maintenance, and congestions at off-ramps. A user interface has been developed in the Android development system to demonstrate the proposed application of alerting drivers to the above abnormal traffic conditions. A prototype with a simple management interface for organizations like National Freeway Bureau has also been developed to help broadcast the abnormal traffic conditions to drivers by radio.

Keyword : Vehicle Detection, Global Positioning System, Telematics