

Remotely Accessed Vehicle Traffic Management System

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IAENG Transactions on Engineering Technologies, Vol. 4, p. 115-121

Abstract

The ever increasing number of vehicles in most metropolitan cities around the world and the limitation in altering the transportation infrastructure, led to serious traffic congestion and an increase in the travelling time. In this work we exploit the emergence of novel technologies such as the internet, to design an intelligent Traffic Management System (TMS) that can remotely monitor and control a network of traffic light controllers located at different sites. The system is based on utilizing Embedded Web Servers (EWS) technology to design a web-based TMS. The EWS located at each intersection uses IP technology for communicating remotely with a Central Traffic Management Unit (CTMU) located at the traffic department authority. Friendly GUI software installed at the CTMU will be able to monitor the sequence of operation of the traffic lights and the presence of traffic at each intersection as well as remotely controlling the operation of the signals. The system has been validated by constructing a prototype that resembles the real application.