INTENSITY BASED (DIP) TRAFFIC MANAGEMENT

ABSTRACT

Traffic engineers require various types of road traffic data to manage the traffic. The current sensors (inductive loops and axle sensors etc.) cannot collect all the data that are of interest to traffic engineers. Most important of all, if the data is to be collected at a different location, the installation of these equipments, which needs to be buried beneath the road, creates serious traffic disturbances. In order to overcome the above problems, many researchers have used vision-based system for collecting and analyzing road traffic data. However, these techniques have not yielded good results due to various problems such as inefficiency of background updating, selection of a threshold value, change in ambient lighting etc.

In this proposed project we describe a window-based image processing technique for road traffic applications. We use morphological edge detection techniques to detect vehicles. This novel method has been implemented on a Pentium-based microcomputer system and the results are verified with actual hardware. We also have compared our system with other traditional traffic control methods. The results indicate that our proposed system provides better results than the traditional methods.

How our project is different: unlike fixed time based traffic light control for entire day we propose to design traffic light control based on dynamically changing traffic at junctions using our own algorithm. This is a research project.

BLOCK DIAGRAM



