Incident Management in Intelligent Transportation Systems

Kaan Ozbay, Rutgers University - New Brunswick/Piscataway
Pushkin Kachroo, University of Nevada, Las Vegas

Abstract
Since the conception of Intelligent Transportation Systems (ITS) in the 1980s, many transportation researchers have also worked on the development of incident management models and integrated systems for real-time operations. ITS created the required infrastructure for collecting, processing, and managing real-time traffic data that can be used to develop on-line incident management strategies. This book provides the reader with a broad picture of the overall incident management process in the context of ITS along with a quick review of the models and systems developed by numerous researchers worldwide. This book is a direct result of the long-term incident management research efforts at the Virginia Tech Center for Transportation Research. The initial work was performed under work order #DTFH71-DP86-VA-20 given to VDOT by FHWA. In addition to this initial contract, the FHWA Intelligent Transportation Systems Research Center of Excellence (RCE) program and VDOT sponsored different parts of the research described here.

Keywords
Electronic traffic controls; Intelligent transportation systems; Intelligent vehicle highway systems; Traffic congestion; Traffic flow; Traffic engineering

Disciplines
Civil Engineering | Controls and Control Theory | Systems and Communications | Transportation | Urban Studies and Planning

Language
English

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A set of broad and diverse technologies known collectively as intelligent transportation systems. It comprises of a number of technologies, including information processing, communications, control, and electronics. Combining these technologies to transportation systems provides a wide range of benefits such as saving time and money, bringing environmental and economic efficiency. Wireless Traffic Signal Controller (Wi-TraC). Real time streaming video from junctions and strategic locations enables effective traffic & incident management from remote Traffic Command Control Centre. Allows operators to directly observe the traffic conditions at all junctions, verify incidents and congestion conditions. The publication “Intelligent Transport Systems for sustainable mobility”, funded by SINA - Società Iniziative Nazionali Autostradali - in Italy, was produced, initiated and prepared by the UNECE Transport Division in cooperation with the secretaries of the Division. The Transport Division wishes to express its sincere thanks to all those who contributed to this publication, either with articles or administrative services. An intelligent transportation system (ITS) is an advanced application which, without embodying intelligence as such, aims to provide innovative services relating to different modes of transport and traffic management and enable users to be better informed and make safer, more coordinated, and 'smarter' use of transport networks. Although ITS may refer to all modes of transport, the directive of the European Union 2010/40/EU, made on the 7 July 2010, defined ITS as systems in which information and