



## **Topic : INTELLIGENT TRANSPORT SYSTEMS**

Number 24, 2010

- 1 Compliance and enforcement: intelligent freight compliance technologies**  
McBride, C, Chadwick, D  
Austroads research report AP-R348/10  
Austroads, Sydney, NSW

This report identifies existing, new and emerging technologies, and identifies factors that determine if and how these new technologies might be integrated or implemented in Australia to meet the needs of road transport productivity, efficiency, compliance and enforcement.

- 2 Design and management of flexible transportation networks through the use of intelligent transportation systems**  
McConnell, J, Sussman, JM  
World Congress on Intelligent Transport Systems, 15th, 2008, New York  
8 pages

In this paper intelligent transport system capabilities were used to create a flexible transportation system capable of coping with many uncertainties. High occupancy toll, bus rapid transit and truck only toll managed lanes were examined in a case study in Houston, Texas. A qualitative analysis procedure using regional traffic demand modelling and real options analysis are used to assess the benefits.

- 3 Dynamic work zone traffic management**  
Jackson, J  
ITE Journal, 2010  
Volume 80, Number 5, pages 26-33

This paper examines the uses of traffic data gathered using smart work zone technology. It considers its application to design and construction, including construction work zone traffic operations that require real-time and near real-time decision making to increase safety and minimise delays.

- 4 An effective tool for advanced traveller's information systems development**  
Zhang, K, Woolley, J, Stazic, B  
State of Australian Cities National Conference, 2007, Adelaide, South Australia  
Online [accessed 12 August 2010]. [Click here](#) to view

A microsimulation model of the Central Business District in Adelaide, South Australia, is used in this paper to test a portable program to implement a variable message sign (VMS)-based route guidance system in a simulated urban city environment. Preliminary results indicate program capability to mimic traveller response to VMS, and thus its potential as a tool for advanced traveller's information systems (ATIS) development and testing.

- 5 Framework for a national intelligent transport systems architecture**  
James, RJ, Date, J, McBride, C  
New Zealand Transport Agency, 2010  
Research report 397  
Online [accessed 12 August 2010]. [Click here](#) to view

This report is a framework for a national ITS (intelligent transport systems) architecture in New Zealand. It compares international examples of ITS architecture and describes ITS components such as data capture and ITS services currently in use or that may be in use in the future.

- 6 Integrating multimodal travel information at major transport interchanges: the prospective of intelligent public transport information system**  
Bachok, S, Yue, WL, Zito, R  
Road Engineering Association of Asia and Australasia (REAAA) Conference, 13th, 2009  
14 pages

This paper presents the conclusions of a hypothetical rail-bus information integration project. In the event of service disruptions, users' perceptions of and travel decisions relating to feeder bus services were assessed. Messages regarding the availability of supplementary services were provided to assist users. The findings regarding mode and route selections were reported and discussed. The modal split changes are highlighted and the potentials of integrating rail-bus information are outlined.

- 7 Intelligent transport systems**  
Goodyear, T  
International Road Federation Bulletin Special Edition, 2008  
Online [accessed 12 August 2010]. [Click here](#) to view

This special edition concludes that a small investment in intelligent transport systems can result in significant savings to the costs of transportation systems as a whole.

- 8 Intelligent transportation systems benefits, costs, deployment, and lessons learned**  
Maccubbin, RP and others  
United States. Department of Transport. Intelligent Transport Systems, 2008  
Report number FHWA-JPO-08-032

This report has been developed by the U.S. Department of Transport ITS Joint Program Office to support informed decision making regarding intelligent transport system use. The report discusses seventeen different areas of ITS application. Lessons learned during ITS implementation and deployment are highlighted throughout the report and in a chapter following the review of ITS applications.

- 9 **iTransport: transport technology in Victoria**  
VicRoads, 2009  
Online [accessed 12 August 2010]. [Click here](#) to view

This discussion paper explores how ITS can assist in achieving six priority areas set out in the Victorian Transport Plan, including to safe systems and freight and logistics.

- 10 **ITS and transportation safety: EMS system data integration to improve traffic crash emergency response and treatment**  
Schooley, B and others  
University of Minnesota. Center for Transportation Studies, 2009  
Online [accessed 12 August 2010]. [Click here](#) to view

The use of information systems and intelligent transportation systems in the emergency response process is evaluated in this study. It proposes an Integrated Crash Trauma Information Network (ICTN) to allow for integrated information exchange. The benefits of an ICTN are examined and the study posits a normative architecture to guide the design of systems that will better use and analyse crash data.

- 11 **National Intelligent Transport Systems Strategy 2010-2015**  
Intelligent Transport Systems Australia, 2010  
Online [accessed 12 August 2010]. [Click here](#) to view

This national peak body strategy document aims to promote the contribution of intelligent transport systems in improving safety, mobility and environment outcomes across differing modes of transport.

- 12 **Parking guidance system utilizing wireless sensor network and ultrasonic sensor**  
Idris, M and others  
Information Technology Journal, 2009  
Volume 8, Number 2, pages 138-146  
Online [accessed 12 August 2010]. [Click here](#) to view

This paper outlines a parking system that uses wireless sensor network technology and ultrasonic sensors to monitor available parking spaces in a car parking station, and then convey this information to patrons and car park operators.

- 13 **Real-time traffic information and navigation: an operational system**  
Cohn, N  
Transportation Research Record, 2009  
Number 2129, pages 129-135  
Online (via subscription) [accessed 12 August 2010]. [Click here](#) to view

Paper describing a new system for using multiple traffic information sources and integrating them with in-car navigation developed by TomTom. This system has been introduced in European countries and its goal is to provide drivers with accurate A to B travel times, delay times, estimated arrival times and cross-border information services. This allows drivers to make informed decisions about departure times and routes.

**14 Real-time traveler information systems**

Deeter, D

National Cooperative Highway Research Program, Synthesis of Highway Practice, 2009

Number 399

Online [accessed 12 August 2010]. [Click here](#) to view

This publication reports on current and emerging real-time traveler information systems in the United States. It provides information on travellers' needs and expectations, available and emerging data sources, and business models for delivering travel information systems.

**15 Reviewing ITS technologies and road safety opportunities**

Cairney, P and others

Austrroads, 2010

Report number AP-T157/10

This report reviews intelligent transport systems technologies which may provide significant safety benefits in Australia and New Zealand. Both in-vehicle and roadside technologies were reviewed in detail.

**16 Surface transportation: efforts to address highway congestion through real-time traffic information systems are expanding but face implementation challenges**

United States. Government Accountability Office, 2009

Online [accessed 11 August 2010]. [Click here](#) to view

Growing congestion on American roads results in wasted time and fuel and creates adverse results for the economy and environment. This report from the US government Accountability Office describes how public and private sectors currently disseminate real-time traffic information to the public, what actions the U.S. Department of Transportation has taken to establish its Real-Time System Management Information Program and what experts view as the potential characteristics of a nationwide real time traffic information system.

**17 Towards new generation urban traffic control systems**

Taylor, MAP

ARRB Conference, 23rd, 2008, Adelaide, South Australia, Australia

This paper discusses the steps involved in designing and developing a new intelligent urban traffic management and control system called iOT (intelligent Organic Transportation). It is hoped this system will enhance traffic network efficiency using real-time strategy and policy monitoring.

**18 The Traffic Management Interface System TMIS**

Mehaffey, A , Jarjees, G

World Congress on Intelligent Transport Systems, 15th, 2008

This paper describes how the Traffic Management Interface System (TMIS) developed by the Traffic Systems Branch of the Roads and Traffic Authority (RTA) of New South Wales is intended to provide a platform that provides a uniform, spatially oriented view of the traffic network by combining real time monitoring and control of adaptive traffic control systems, variable message signs, incident management and closed circuit television systems.

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