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Subject: Papers for SVSEG Meeting - 8 December [SEC=UNCLASSIFIED]
Date: Tuesday, 30 November 2010 6:43:47 PM
Attachments: SVSEG 2-03 IVART Progress Report.doc
SVSEG 2-03 ITS project.doc
SVSEG 2-05 - ADR Dev Spreadsheet Dec 2010 V1 0 CONSULT - Responses.xlsx
SVSEG 2-05 - ADR Prioritisation Cover Paper.docx
SVSEG 1 Action List - Update Final.doc
SVSEG 2-04 - Research Compendium version 2.docx
SVSEG 1 FINAL DRAFT MINUTES 23 July 2010.docx
SVSEG 2 Agenda .doc
SVSEG 2-01 - KPIs.docx
SVSEG 2-02 - Lane Dep Warning.docx

Dear Colleagues

Please find attached the agenda papers for the meeting.

I apologise for the delay in providing these to you.

Jon Real will not be able to attend this meeting, but I am pleased to say that Michael Sutton, who is General Manager of the Department's Land Transport Reform Branch, will join us for part of the day and brief the group on environmental issues.

I look forward to seeing you at the meeting.

Regards

Robert

Strategic Vehicle Safety and Environment Group (SVSEG) – Version

In-Vehicle and At-Roadside Technologies (IVART) Project

National ITS Projects
Vehicle Safety Technologies

November 2010

1 Purpose

The purpose of this document is to provide a current update on the In-Vehicle and At-Roadside Technologies (IVART) Project, ITS-Vehicle Safety Technologies Projects, Current and Proposed Projects 2008 – 2010, developed in November 2009.

2 Background

The IVART Project was established in May 2008 to manage, develop and regulate the evolving Information and Communication Technology (ICT), transport safety and security applications to facilitate appropriate adoption in Australia within a planned policy and technology framework and a high level business and system architecture.

As part of the IVART program of work, an ITS projects document was compiled summarising existing and proposed in-vehicle and at-roadside technology related projects/trials in Australia.

The original document was developed to be updated on a bi-annual basis and disseminated to jurisdictions through the National Road Safety Group Executive Group (NRSEG).

3 Proposed outcomes

The intended outcomes for this document are to:

- provide jurisdictions with information on existing and proposed in-vehicle and at-roadside technology projects;
- encourage cross jurisdictional collaboration in developing projects to further advance evolving safety applications in alignment with the proposed policy and technologies framework;
- investigate partnership approaches to research projects with a view of reducing duplication of funding and resources;
- promote greater efficacy and quality results, which inform government policy of technology based solutions to reduce the road toll and improve safety outcomes; and
- actively facilitate integration across related in-vehicle and at-roadside technology projects.

4 Report structure

The report is divided by jurisdiction, agencies and specific areas such rail safety. Projects that have been completed within the last period are included at the back of the report for your information.

5 ITS - Vehicle Safety Technologies Projects

NO.	PROJECT INFORMATION		AGENCY
1.	Title	**Intelligent transport system architecture for in-vehicle and at-roadside safety technologies**	IVART, Department of Transport and Main Roads Qld (TMR)
	Project type	Strategic Research	
	Technology	ITS architecture for in-vehicle and at-roadside technologies.	
	Purpose	To define what a national high level Intelligent Transport System (ITS) and business architecture for in-vehicle and at-roadside safety technologies is and how it would support and align with the national policy and technology framework. It is expected that this project will inform government policy through defining the framework for development of future projects and proposed solutions utilising in-vehicle and at-roadside safety technologies in Australia.	
	Scope	IVART Project, Department of Transport and Main Road (TMR)	
	Source		
2.	Title	**Integrating driver and traffic simulation to assess in-vehicle and road-based level crossing safety interventions (contribution to Rail CRC project)**	Network Task Force Austroads, DTMR
	Project type	Strategic Research.	
	Technology	Communication.	
	Purpose	The project will examine the potential for vehicle mounted and road side technologies to alert road users to the presence of trains.	
	Scope	Report on risk management activities and disseminating the demonstration achievements and potential roll out strategy. Reports will be published by Rail CRC. Inaugural Steering Committee Meeting May 2010. http://www.railcrc.net.au/research/downloads/R2111-Integrating-Driver-and-Traffic-Simulation-to-Assess-In-Vehicle-and-Road-Based-Level-Crossing-Safety-Interventions.pdf	
	Source		

NO.	PROJECT INFORMATION		AGENCY
3.	**Title**	**Trial of ANPR camera technology for heavy vehicle (fatigue related) offences and light vehicle registration offences.**	TMR
	Project type	Operational trials in accordance with Travel Safe Committee recommendations.	
	Technology	ANPR camera and tough book laptop computer.	
	Purpose	On road evaluation to determine suitability and procedures for application of technology.	
	Scope	ANPR used as a screening device to indicate possible offences using time over distance (fatigue) and identify registration (light vehicles).	
		We continue to trial the technology in a roadside situation. Three operations have been conducted in the past 12 months using the ANPR set up on the approach to a static intercept site. Vehicles are screened by ANPR linked to a registration 'blacklist'. Further trials will be conducted in the next financial year using the technology for time over distance to monitor fatigue within the heavy vehicle industry.	
	Source	TMR	
4.	**Title**	**Driving simulator to test human behaviour in different driving situations**	DTMR, RACQ,UQ,MAIC
	Project type	Infrastructure to support strategic research	
	Technology	Driving simulator 6DOF	
	Purpose	Assess driving performance	
	Scope	This advanced driving simulator offers the capability to study drivers in safety critical situations with a high degree of realism. It assists government and university specialists in high quality human factors and road safety research focusing on driver-vehicle-road interactions including driver impairment (fatigue, alcohol, drugs), driver workload (distraction), and adaptation to emerging Intelligent Transportation Systems. This world leading advanced driving simulator is for experimental studies to reduce the carnage and loss on Australian roads.	
	Source	QUT	
5.	**Title**	**On-road safety benefits evaluation of V2V**	INRETS -INRIA
	Project type	Strategic research	
	Technology	V2V (802.11p)	
	Purpose	On-road evaluation	
	Scope	Use of 10 fully equipped research vehicles with V2V and location devices to assess real safety benefits of V2V. The driving scenario to be tested is platooning. It is held in France.	
	Source	QUT	

NO.	PROJECT INFORMATION		AGENCY
6.	**Title** **Project type** **Technology** **Purpose** **Scope** **Source**	**NSW Intelligent Speed Adaptation Trial** Research. ISA. To assess the road safety, economic, environmental and acceptability benefits of ISA in NSW. This project will analyse speed compliance data, fuel records and driver attitudes for over 100 vehicles in the Illawarra Region of NSW with advisory device and GPS speed data recorder installed. RTA	Roads and Traffic Authority (RTA)
7.	**Title** **Project type** **Technology** **Purpose** **Scope** **Source**	**Roadside pedestrian detection system pilot** Research. Video camera and object recognition system. To examine the potential of using automatic detection of pedestrians through intelligent object recognition systems. A demonstration unit is in the process of being installed on the roof of a building in the suburb of Wollongong, NSW, at an intersection with high pedestrian activity. The demonstration unit will be used as a test of concept for this new smart camera system. RTA	RTA
8.	**Title** **Project type** **Technology** **Purpose** **Scope** **Source**	**Wireless Vehicle Communications demonstration project** Research. Communications technology. To assess the feasibility and benefits of transmitting information directly from a Vehicle's CANBUS (Central Area Network BUS) or OBD (On-Board Diagnostic) unit. Initially two RTA fleet vehicles with the potential to roll out into private vehicles participating in the NSW ISA trial in the second half of 2010. RTA	RTA
9.	**Title** **Project type** **Technology** **Purpose** **Scope** **Source**	**Driver Fatigue detection pilot** Research. To assess the feasibility and benefits of detecting driver fatigue through two different systems that measure ocular dynamics. Initially the systems have been fitted to the RTA's Road Safety Technology Research vehicle for evaluation. RTA	RTA

NO.	PROJECT INFORMATION		AGENCY
10.	**Title** **Project type** **Technology** **Purpose** **Scope** **Source**	**Installation of Advisory ISA in RTA Fleet Vehicles** Deployment Advisory ISA To install a connected advisory ISA system into RTA Fleet vehicles The NSW Minister for Roads announced on 25 October 2010 that the RTA would install a connected Advisory ISA device into more than 100 pool vehicles in the RTA's fleet by June 2011. RTA	RTA
11.	**Title** **Project type** **Technology** **Purpose** **Scope** **Source**	**Advisory ISA smart phone application** Development Advisory ISA To develop a smart phone Advisory ISA application for NSW drivers The NSW Minister for Roads announced on 25 October 2010 that the RTA would develop and provide to all NSW drivers free of charge an Advisory ISA smart phone application by the end of 2011. RTA	RTA
12.	**Title** **Project type** **Technology** **Purpose** **Scope** **Source**	**ISA Connect** Development Advanced Driver Assistance System map To lead the development of a national update and distribution system for speed zone maps. To develop a pilot national speed zone update and distribution system for speed zone information using NSW speed zone data RTA	RTA
13.	**Title** **Project type** **Technology** **Purpose** **Scope** **Source**	**Automatic video incident detection (AVID)** Trials and upgrade of existing video systems in tunnels. Video camera and unusual behaviour (AI) recognition system. Early notification of an incident to the operator. Trials of the various systems and performance comparison of various technologies in the tunnels and open road environment. Upgrade of existing video surveillance system. RTA	RTA

NO.	PROJECT INFORMATION		AGENCY
14.	**Title** **Project type** **Technology** **Purpose** **Scope** **Source**	**Electronic Tolling (ETC)and 5.9 DSRC interoperability** Research. Dedicated Short Range Communications (DSRC) in road environment. Identify issues with collocation potential interference of tolling technologies in 5.8 GHz CEN-DSRC and new 5.9 GHz ITS DSRC. Install new 5.9 GHz ITS DSRC transceivers at a sample of free flow toll points in Sydney motorway network and measure radio performance of the links between the OBU (On board unit) and RSU (roadside units). RTA	RTA
15.	Title **Project type** **Technology** **Purpose** **Scope** **Source**	**Speed and Fatigue Management - Development of Performance Based Specification** Strategic research. Digital tachographs, smartcards, electronic work diary. To establish an Austroads project to manage a dual-stage operational implementation of digital tachographs, as part of the national suite of reforms to manage the regulation of driver fatigue. Part A – Operational pilot of digital tachographs: The project will seek to deliver seven key outcomes across two parallel parts. Part B – Assessment of deploying a wide-scale tachograph-based reform. Accessed 09/06/10 http://www.onlinepublications.austroads.com.au/projects/Project/Details.aspx?ProjectID=833	RTA
16.	**Title** **Project type** **Technology** **Purpose** **Scope** **Status** **Source**	**TruckOn – Overhead Collision Prevention** **[was known as IProtect – Infrastructure Protection]** Proof of Concept demonstrator. DSRC wireless communication and road side Over Height Detectors. This is a proof of concept demonstrator to explore DSRC wireless techniques as a means to prevent over height vehicles colliding with over head infrastructure such as tunnels, overpasses and enclosed steel truss bridges. The project: • Brought warning and advisory messages into the cabin of the over height vehicle, e.g. "take diversion or pull over safely". • Explored intervention with the speed controls (simulated): o As haptic feedback. o As a means to prevent a collision for a vehicle that ignores warnings and advisories. Seeking funding for Phase 2 follow-on project. See www.embeddedsystemsaustralia.com.au/truckon Embedded Systems Australia www.embeddedsystemsaustralia.com.au, RTA & NICTA.	RTA NICTA Embedded Systems Australia (industry cluster)

NO.	PROJECT INFORMATION		AGENCY
17.	**Title**	**Radio break-in project (Railway Level crossing safety protection systems).**	VicRoads
	Project type	Demonstration of feasibility and Proof of Concept.	
	Technology	Communications technology.	
	Purpose	The purpose of this project is to develop and demonstrate an innovative railway level crossing safety system that can be cost effectively and potentially deployed across the State of Victoria. This project aims to improve level crossing safety to decrease crashes between road vehicles and trains at level crossings. The technology solution must be cost effective, demonstrate driver behaviour change and be robust to meet an acceptable fail safe level.	
	Scope	The scope involves a feasibility study report and a proof of concept. 'Two' different technology suppliers were selected to undertake extensive 3 month feasibility studies each which have now been completed. NFA Innovations Pty Ltd was selected as the preferred technology vendor/supplier to solely undertake the next phase of the project – Proof of Concept work. The Proof of Concept commenced in August 2010 and is expected to be completed in May 2011. This will require the construction of prototypes with tests, trials and human factors studies. Testing will occur over disused/closed lines, passive and active railway level crossings. Findings and technology recommendations will be reported. VicRoads post-Proof of Concept plan is to proceed to implementation, subject to funding. Options are being considered for an initial fitment of the technology to heavy vehicles together with a possible second phase fitment to light vehicles. Funding for implementation has not been approved at this stage and a business case is currently being prepared. It is yet to be determined whether the technology implementation will be mandated and what aspects would be funded by Government and industry. No decision has been made in relation to implementation in heavy vehicles, or the entire vehicle fleet.	
	Source		
18.	**Title**	**Intelligent Transport Systems (ITS) – to improve safety**	VicRoads
	Project type	Trials/implementation.	
	Technology	Communication technology and roadside devices	
	Purpose	Manage the Victorian road network and its use as an integral part of the overall transport system.	
	Scope	The scope principally relates to intelligent infrastructure, but with an architecture and design to simplify future communications with smart vehicles. There is significant work underway to improve our ITS foundations and build upon the new ITS platform (control systems and communications) initially implemented as part of the M1 Upgrade. Current projects include traffic responsive variable speed limits for high-speed rural intersections (based on high risk times and/or traffic volumes). Other projects under consideration include tram to vehicle (V2V) and tram to roadside (V2I) communications for pedestrian safety.	
	Source	VicRoads	

NO.	PROJECT INFORMATION		AGENCY
19.	**Title** **Project type** **Technology** **Purpose** **Scope** **Source**	AutoCRC C3-23 Project - ITS to Improve Road/Rail Safety Rail safety Communication technology The aim of this project is to develop ITS to improve safety at rail-road crossings based on DSRC technology. The project will address the new technology level crossing safety management recommendations of Federal and State Governments. This project will deliver on the following specific aims: • To develop an Intelligent Transport System (ITS) simulation platform for road level crossings based on 5.9GHz DSRC technology; • To develop a demonstrator system for lab-based tests; and • To carry-out field trials at a few road level crossing interfaces. It is important to note that the development of the project scope is not limited by the initial (cash and/or in-kind) budget, as there remains significant potential to obtain additional cash and/or in-kind partners. The current partners will endeavour to invite other research organisations (AutoCRC partners) to participate in the project as additional funds are obtained. $4m Project. Cash 1M AutoCRC/QUT/LaTrobe, $0.5M DOT Vic, $2.5M 'In-Kind' LaTrobe/QUT/DOT/ARRB/IRSE/VPAC/Others. DOT	AutoCRC – La Trobe University, QUT, DOT Vic, ARRB, IRSE, VPAC.
20.	**Title** **Project type** **Technology** **Purpose** **Scope** **Source**	**Intelligent Speed Assist – Speed Zone Mapping Project** Road authority asset and data management. Intelligent Speed Assist. To provide an accurate and updateable speed zone data set to the ISA industry. The Speed Zone Mapping Project is made up of the following high level scope areas: • Development of a digital mapping database detailing the locations of fixed, permanent speed zones for arterial and local roads in Victoria; • Development of processes to ensure the timely, complete, and accurate maintenance of the digital mapping database based on changes to speed zones in the field; and • Development of systems to support the storage, maintenance, and communication of speed zones and ongoing changes. VicRoads	VicRoads

NO.	PROJECT INFORMATION		AGENCY
21.	**Title** **Project type** **Technology** **Purpose** **Scope** **Source**	**Lane departure warning systems** Supporting and promoting safety technology. Identifying technology solutions to reduce vehicle crashes. TBA Parliamentary inquiry into Vehicle Safety 2008 action items.	VicRoads
22.	**Title** **Project type** **Technology** **Purpose** **Scope** **Source**	**Evaluating Forward Collision warning technologies** Supporting and promoting safety technology. Identifying technology solutions to reduce vehicle crashes. TBA Parliamentary inquiry into Vehicle Safety 2008 action items.	VicRoads
23.	**Title** **Project type** **Technology** **Purpose** **Scope** **Source**	**Promotion of Daytime Running Lights** Supporting and promoting safety technology. Improved technology for conspicuity, LED based environment set light level.. Improve the vehicle visibility to other road users and pedestrians, in particular older persons. Studies have shown that the fitment of active LED DRLs is reducing the number of pedestrian impacts especially with older aged persons and the geographical location, ie far north/south compared to the equator has little if any affect on the percentage reduction of the number of impacts. Evaluate the research produced and update any papers as required to current data. Begin with Michael Paine as a guide to the direction of the technology. Perform a lit search and collate the results with geographic focus. Provide specific pro and cons with solutions to address those issues. Provide a report and position on the issue. Parliamentary inquiry into Vehicle Safety 2008 action items.	VicRoads

NO.	PROJECT INFORMATION		AGENCY
24.	**Title** **Project type** **Technology** **Purpose** **Scope** **Source**	**Integrated single system safety product evaluation** Promoting safety systems. Weather impervious multi beam, multi echo scanner. Identifying technology solutions to support for the reduction of truck crashes as a single cost effective after market product. Includes a single product which has collision avoidance, lane departure, blind spot, acc, brake assist, turn assist, reverse assist. IBEO, SICK, and Japanese Automotive Research Institute adopted standards. Identify integrated systems and trial in vehicles which can be used to log the data. In depth analysis of the results comparing to the current discrete subsystems including cost benefit. Parliamentary inquiry into Vehicle Safety 2008 action items.	VicRoads
25.	**Title** **Project type** **Technology** **Purpose** **Scope** **Source**	**Picking the winners in future technology** Promoting safety technology. A large amount of technology for safety has varying amounts of supporting information. The project aims to provide a level of information for each identified technology so that the cost benefit can be compared between them and picking the best options to support in the future. Analysing and evaluating the supporting information for safety technology. Build a database/spreadsheet report with key elements to compare. Elements include cost, saving (lives, money, etc), impact, supporting research, availability (now, near, future) and on what, who is supporting it. TAC, Arrive alive.	VicRoads
26.	**Title** **Project type** **Technology** **Purpose** **Scope** **Source**	**Review of crash data to determine a profile of safety technology impact** Promoting and supporting safety technology. To identify trends of technology, both existing and emerging, to identify cost effective trends. These trends will then be supported in a range of programs in discrete and combined government departments. Obtain a range of crash data to analyse the outcomes. Identify the crash types and causes, possible causes, resultant trauma and if the trauma is a result of the crash, a result of lack of technology, or reduced severity because of the safety technology. Identify if the data is inconsistent, identify assumptions and bases for those assumptions, identify if the data can be used to predict safety technology in all or part of a trend. Provide a report on the outcomes, and highlight if or where there is a need to improve data collection, granularity and consistency. Parliamentary inquiry into Vehicle Safety 2008 action items.	VicRoads

NO.	PROJECT INFORMATION		AGENCY
27.	**Title** **Project type** **Technology** **Purpose** **Scope** **Source**	**Fit and trial alcohol interlocks** Promoting and supporting safety technology. Alcohol interlock. VicRoads and TAC trial interlocks in vehicles to ascertain the suitability of fitting and engagement as fit for purpose. VicRoads has fitted and is currently trialling a number of developmental interlocks in vehicles. Parliamentary inquiry into Vehicle Safety 2008 action items.	VicRoads
28.	**Title** **Project type** **Technology** **Purpose** **Scope** **Source**	**Repeat Speeders Trial** Testing of two behavioural interventions: one technological and one program-based Intelligent Speed Assist (ISA) (*otherwise known as Intelligent Speed Adaptation*) to test two interventions aimed at reducing the speeding behaviour of motorists 500 drivers will complete the program. One-hundred drivers will drive with ISA technology for about five months. Participants will also complete a series of paper-based and phone surveys. Arrive Alive Action Plan 2008-10 under Speed & Speeding.	VicRoads
29.	**Title** **Project type** **Technology** **Purpose** **Scope**	**WA Intelligent Speed Adaptation Demonstration Project** Demonstration of feasibility. In-vehicle technology - ISA (Phase I);At Roadside wireless transmitters (Phase II) The project aims both to stimulate interest in ISA from key opinion leaders and to establish and evaluate the system architecture that is required to support widespread rollout of ISA technology, for example state-wide speed limit data within the Main Roads WA road management system. In recognition of the importance of up to date speed limit information to users, the WA project is also trialling as a second phase, technology that wirelessly transmits speed limit map updates from roadside beacons to ISA-equipped vehicles. The main focus of the WA project is on advisory ISA technology, rather than intervening systems. The WA project is not a Field Operational Test of ISA and will not be generating data on mean speeds etc; it is a demonstration project only where user experiences with the technology are being gathered. MRWA	WA Office of Road Safety and Main Roads WA

NO.	PROJECT INFORMATION		AGENCY
30.	**Title** **Project type** **Technology** **Purpose** **Scope** **Source**	**National vision for freight telematics (ATC Decision 08/72)** Strategy. Freight telematics. To provide advice to Ministers to shape the medium term strategic direction encouraging uptake of and innovation around freight telematics. Draft discussion paper released in June 2010. National Transport Commission	National Transport Commission (NTC)
31.	**Title** **Project type** **Technology** **Purpose** **Scope** **Source**	**Electronic Systems For Heavy Vehicle Driver Fatigue And Speed Compliance/ Speed and Fatigue Monitoring specification** Policy development. On-Board Units, Human machine interface devices, and associated record keeping systems. To enable the approval of electronic diaries as contemplated by the National Heavy vehicle driver Fatigue Act and provide guidance on the use of voluntary speed management systems. Position paper being drafted to be released July 2010. To be advised. NTC/ Austroads/ TCA	NTC
32.	**Title** **Project type** **Technology** **Purpose** **Scope** **Source**	**A policy framework for mass compliance - On-board mass measurement discussion paper** Policy development. On-Board Scales, GPS and so on. Improving heavy vehicle productivity and compliance. Niche applications for mass constrained heavy vehicles Commonwealth/ NSW / Qld Bilateral Auslink arrangements. To be advised. NTC	NTC

NO.	PROJECT INFORMATION		AGENCY
33.	**Title** **Project type** **Technology** **Purpose** **Scope** **Source**	**ST1430 Improving Safety of Heavy Vehicles in Urban Areas (Stage 1)** Technical research. The project seeks to gain a comprehensive understanding of urban truck safety issues and to recommend a strategy to improve the safety of urban truck operations. A report on Stage 1 that: identifies the characteristics associated with heavy vehicle crashes in urban areas; assesses current knowledge regarding 'road based' causes of heavy crashes in urban areas; quantifies the magnitude, severity and current trend of heavy vehicle crashes in urban areas across Australia and New Zealand; identifies effective interventions to improve heavy vehicle safety with emphasis on ITS and other new technologies; is based on consultation with key 'heavy vehicle' stakeholders to ascertain their views related to heavy vehicle safety in urban environments; reviews the current National Heavy Vehicle Safety Strategy 2003 - 2010 and its supporting Action Plans and suggests changes, if necessary. Accessed 09/06/10 http://www.onlinepublications.austroads.com.au/projects/Project/Details.aspx?ProjectID=924	Austroads
34.	**Title** **Project type** **Technology** **Purpose** **Scope** **Source**	**Pilot/Trials – Regulatory on-board mass monitoring based on TCA OBM spec Operational pilot** In-vehicle technology. IAP and on-board mass monitoring by axle group. The purpose of this national project is to conduct field evaluation of the draft OBM specification developed by TCA in the context of actual applications currently utilising the IAP. QLD, NSW and VIC. Transport Certification Australia	TCA, TMR, RTA, VicRoads
35.	**Title** **Project type** **Technology** **Purpose** **Scope** **Source**	**Safety Management System for Heavy Vehicle Transport** Research Grant from Australian Research Council (ARC) $700,000. In-vehicle technology – 60 IAP units will be used to collect data for this research. The aim of this research is to develop a Safety Management System (SMS) collaboratively with regulators and industry (NSW RTA, NSW MAA, Zurich and TCA) for heavy vehicle transport operations to reduce Australia's rising heavy vehicle road trauma. The SMS is a holistic approach that moves beyond the compartmentalised and static epidemiological Haddon model of identifying separately road, vehicle and human risk factors that has underpinned road safety since the 1970's. The research will utilise in-vehicle monitoring of safety indicators, to complement other safety outcome measures in the SMS implementation phase. National University of NSW, Injury Risk Management Research Centre.	UNSW, RTA, MAA, Zurich, TCA

NO.	PROJECT INFORMATION		AGENCY
36.	**Title** **Project type** **Technology** **Purpose** **Scope** **Source**	**Axle Counter Technology Level Crossing Detection Device** Technical Research. In-vehicle technology. The axle counter technology is being researched as a new level crossing detection advice, which will be implemented in Victoria. The axle counter trial will be part of the AAWS upgrade at Midland Highway, Bagshot. The location was chosen because of the wheel to rail interface issues, which the axle counter will address. Three different types of axle counters need to be compared and a recommendation provided. Victoria. Victorian Railway Crossing Technical Group (VRCTG).	VicTrack
37.	**Title** **Project type** **Technology** **Purpose** **Scope** **Source**	**Hi-Lux Low Cost Level Crossing Warning Device (LCLCWD)** Technical Research. In-vehicle technology. The purpose of this project is to research Hi-Lux LCLCWD technology as one of the low cost level crossing detection devices which could be rolled out across Victoria. VicTrak is trying to understand the risk exposure to ensure that LCLCWD is developed to the required level of safety. Victoria. Victorian Railway Crossing Technical Group (VRCTG).	VicTrack

NO.	PROJECT INFORMATION		AGENCY
1.	Title Project type Technology Jurisdiction	**Cost Benefit Analysis of Intelligent Speed Assist (ISA)** Research. ISA. QLD	IVART, Department of Transport and Main Roads Qld (TMR)
2.	Title Project type Technology Purpose Scope Source	**NS1415 - Development of management arrangements and identification of pilot applications for secured DSRC bandwidth.** Strategic research. Communication - Dedicated Short Range Communication (DSRC) 5.9 GHz ITS. To develop the policy, business, legal and technical models (including outlining an appropriate regulatory framework and entity) to manage the deployment of 5.9 ITS priority applications. A proposal for Standing Committee on Transport (SCOT) recommending an appropriate road transport industry entity responsible for managing the radio spectrum. The NS1415 project finishes 30 June 2010, NS 1632 project is the next stage with deliverables including: • Spectrum study available second half of 2010 from Austroads; • Safety benefits available second half of 2010 from Austroads; and • Policy roadmap. Austroads submission to ACMA ITS proposal available from ACMA. Austroads Projects Website Accessed 09/06/2010. http://www.onlinepublications.austroads.com.au/projects/Project/Details.aspx?ProjectID=960	Network Task Force Austroads, TMR
3.	Title Project type Technology Jurisdiction	**Analysis of crash data to determine benefits associated with emerging vehicle technology** Research. Various in-vehicle and at-roadside technologies. QLD	IVART, TMR
4.	Title Project type Technology Jurisdiction	**Capability of Radio Frequency Identification (RFID) for vehicle identification and speed detection** Research. Compliance - RFID. QLD	TMR
5.	Title Project type Technology Jurisdiction	**RS1461 - Feasibility of implementing a smart registration/smart plate and future parameters of Automatic Number Plate Recognition (ANPR) usage.** Strategic research. Compliance – ANPR, RFID. NSW	RTA, Austroads

6.	Title Project type Technology Jurisdiction	**TruckOn – Overhead Collision Prevention** **[was known as IProtect – Infrastructure Protection]** Proof of Concept demonstrator. DSRC wireless communication and road side Over Height Detectors. RTA/NICTA	RTA NICTA Embedded Systems Australia (industry cluster)
7.	Title Project type Technology Purpose Scope Source	**NS1587 Measures for managing safety of heavy vehicles at passive and active railway level crossings** Strategic Research. To develop measures to manage the risks associated with the passage of Restricted Access Vehicles and Multi-Combination Vehicles (referred to as heavy vehicles below) across active and passive railway level crossings. This project will identify the risks associated with the movement of heavy vehicles across both passive and active railway level crossings and establish measures and tools that will assist Road (and Rail) Authorities manage those risks. Recommendations will be made to the Network Task Force and Guide to Traffic Management on the research outcomes. Accessed 11 June 2010 http://www.onlinepublications.austroads.com.au/projects/Project/Details.aspx?ProjectID=1020	Department of Transport, Energy and Infrastructure South Australia
8.	Title Project type Technology Purpose Scope Source	**Reviewing ITS Technologies and Safety Opportunities** ST 1432 - Austroads Research Project. Various vehicle safety technologies. To assess the road safety benefits of vehicle and infrastructure based ITS. The document includes a literature review which focuses on the crash reduction effects of different types of ITS. The literature review is followed by an analysis of the crash reduction benefits which can be expected from these systems using the crash database collated for Austroads. RTA	RTA, Austroads, ARRB

Queensland Government

In-Vehicle and At-Roadside Technologies (IVART) Project

Progress Report

November 2010

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Document control sheet

Contact for enquiries and proposed changes

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Version history

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1.0			Initial draft.
1.1			Draft
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Contents

1 Purpose

The purpose of this document is to provide a progress report on the work that has been undertaken by the In-Vehicle and At-Roadside Technologies (IVART) Project as of November 2010.

This document also shows what further work is required to complete the actions contained in the In-Vehicle and At-Roadside Technologies (IVART) Project Plan 2009.

2 Background

In February 2008, Australian Transport Commission (ATC) Ministers received a briefing from the Chairperson of the National Transport Commission (NTC) on the development of a national transport policy framework.

On 2 May 2008, ATC agreed that a National Transport Policy (NTP) would be guided by the agreed national vision, objectives and principles. Former Transport Ministers agreed on 25 July 2008 to pursue priority national reforms including the National Road Safety Strategy and Action Plan.

The former Queensland Minister for Transport and the former Queensland Minister for Main Roads agreed to take responsibility for developing the Safety and Security aspects of the NTP. Subsequently the Safety Standing Sub Committee (SSSC) was established and given the responsibility to progress the NTP work program, including the Key Reform Priority, 'In-Vehicle and At-Roadside Technologies'.

The IVART Project was established in May 2008 to manage, develop and regulate the evolving Information and Communication Technology (ICT), transport safety and security applications to facilitate appropriate adoption in Australia within a planned policy and technology framework and a high level business and system architecture.

The projects governance structure included a Reference Group (RG), which has an advisory role providing oversight and direction to the project in fulfilling the core deliverables as discussed below.

3 Future directions

- The IVART project produced a national policy and technology framework document with the aim of aligning approaches for utilising in-vehicle and at-roadside technologies for road safety outcomes in Australia, through this process fifteen recommendations were identified that require due consideration. Some of these recommendations align with actions identified in the National Road Safety Strategy 2011 – 2020. The remaining recommendations are important and need to be progressed either through IVART establishing an additional program of work or through other government and agency avenues.
- IVART has identified the need for the development of a high level business and system architecture for in-vehicle and at-roadside safety technologies, which will inform broader intelligent transport system (ITS) architectures.

  The architecture project will include the following objectives:

- It is expected that this project will inform government policy through defining the framework for development of future projects and proposed solutions utilising in-vehicle and at-roadside safety technologies in Australia.
- There is an expectation that the project will inform government policy through defining the architecture and its composition in direct relation to the national policy and technology framework, which aligns approaches for utilising vehicle technologies for safety outcomes in Australia.
- The geographic area covered by the national project comprises six states and two mainland territories and will include urban, interurban and rural locations.
- The project will define 'vehicle' to include light or heavy, public, private and commercial vehicles.
- It is expected that the project will map and highlight the existing priority areas, identify relevant trends and discuss possible roles and responsibilities of stakeholders

A tender document has been prepared to commission consultancy firms to define a national ITS and business architecture for in-vehicle and at-roadside technologies. Project costs are in the vicinity of $250,000.

- Through the commissioning and completion of research projects in April and June 2010 respectively, IVART established an early identification and prioritisation of promising vehicle safety technologies. These vehicle safety technologies require consideration as future possibilities in the race to greatly decrease road trauma.
- It is highlighted that there is a need for government to work in partnership with stakeholders such as academia and the private and public sectors to make research and development funding and resources available to conduct Australian specific research and enable the subsequent assessment and deployment of technologies. As well, it identifies the need for governments and vehicle manufacturers to work in partnership to promote community education/awareness of the benefits of leading edge safety technologies to increase new vehicle model fitment.

4 IVART Project Plan - Core deliverables

The following information includes the project core deliverables as outlined in the NTP Key Reform Paper[1]:

- Development of a high level business and system architecture which provides the framework for development of all projects and proposed solutions.
- Development of a policy framework that will build on existing work evaluating the efficacy of various road safety concerns, to produce a prioritised strategy for utilization of suitable technologies.
- Specific projects which are consistent with the agreed architecture and policy framework will be sponsored by this group.
- The coordination of national and State partnership projects, which requires engaging internal and external key stakeholders including other jurisdictions, industry, existing initiatives and subject experts;

[1] National Transport Policy, Key Reform Priority: In-Vehicle and At-Roadside Technologies 230608.

- Establish links with international standards work and development programs in Europe, United States of America (USA) and Asia.
- Establish links with auto Original Equipment Manufacturer (OEM) and industry.

5 Progress against original core deliverables

5.1 High level business and system architecture

An Invitation to Offer (ITO) document has been prepared to invite consultancy firms to provide research services to inform government policy of the potential to reduce the road toll and improve safety outcomes through technology based solutions. Specifically, the consultant would define a national high level Intelligent Transport System (ITS) and business architecture for in-vehicle and at-roadside technologies.

Indications are this consultancy would cost in the vicinity of $250,000. Although the RG is yet to consider options for funding of this project, it is proposed that a business case be submitted to the Standing Committee on Transport (SCOT) to source national funding for the project. At this stage a paper is being developed to submit to the next National Road Safety Executive Group (NRSEG) for approval with a view to progress the paper to SSSC.

Appendix 1 - Intelligent Transport System (ITS) Architecture research / Deliverables

4.2 Principles to support a national approach to maximise road safety potential of vehicle technology

In September 2009, the Standing Committee on Transport/Transport Agency Chief Executives (SCOT/TACE) agreed to the "Principles to support a national approach to maximise road safety potential of vehicle technology" document as a guide; and the subsequent development of a National Policy and Technology Framework document.

Appendix 2 - Principles to support a national approach to maximise road safety potential of vehicle technology

5.2 National Policy and Technology Framework

The national framework document has been developed by the Vehicle and Safety Technology (VST) team. The IVART RG at their last meeting in November 2010 endorsed the document. A paper was written and tabled with the NRSEG for approval with a view to progress the paper to SSSC. Suggestions were made to cross reference the framework recommendations with the National Road Safety Strategy 2011-2020 and where necessary develop a case to incorporate the framework recommendations that were not addressed in the National Road Safety Strategy 2011-2020 document. Alternatively, IVART will be tasked with developing a process to action the remaining recommendations.

Appendix 3 - Policy and Technologies Framework May 2010 / Recommendations

5.3 Intelligent Speed Assist (ISA) - technology

In September 2009, SCOT/TACE agreed to principle recommendations about Intelligent Speed Assist (ISA) technology, which shows significant potential in addressing speed related crashes. Further agreement included:

- To collaborate to ensure consistency of ISA map data format across Australia.

- To consider development of accurate and updateable speed maps for their road networks in accordance with an agreed format noting that costs and benefits to relevant relevant agencies will vary and report on findings.

Victoria and Western Australia have mapped their network. About 30% of New South Wales is mapped. If the Victorian experience is used as a model, a total of $15.6 million may be spent completing speed maps for all of Australia with a further $2.4 million per year keeping the maps up to date.

The IVART RG at their last meeting in November 2010 endorsed an update progress paper which was subsequently tabled for noting at the NRSEG teleconference on 25 November 2010.

Appendix 4 - Strategic Direction for ISA in Australia - Paper for SCOT/ATC

5.4 Specific projects - Sponsorship

IVART has commissioned two research reports on the costs and benefits of vehicle technologies. The University of Adelaide won both tenders. VST has managed these projects worth approximately $100,000 plus GST. Contributions of $10,000 were obtained from four RG members with the rest of the costs paid by TMR. Details related to the research projects are provided as follows:

5.4.1 Cost benefit analysis of Intelligent Speed Assist (ISA)

This report examined the potential cost and benefits of ISA in Australia. Various implementation scenarios were considered including new vehicles, existing vehicles, all drivers, young drivers, recidivist speeders and so on. ISA devices vary in effectiveness from simple speed warning options on navaid devices to limiting devices which prevent a vehicle exceeding the speed limit of the road on which it is travelling. Costs associated with mapping speed zones Australia wide were included.

The report was completed in April 2010. The results indicate benefit cost ratios from 0.24 to 2.74 depending on the type of device and the type of driver or vehicle. However, CASR recently advised about an error in their method of calculation and the benefits are now even higher. The benefit cost ratios now range from 0.29 to 4.03. An amended report has been received and distributed to the RG for consideration. As stated in 4.3 of this document, the IVART RG at their last meeting in November 2010 endorsed an update progress paper which was subsequently tabled for noting at the NRSEG teleconference on 25 November 2010.

5.4.2 Analysis of crash data to estimate the benefits of emerging vehicle technology

This report will be completed at the end of June 2010. Indications are that there will be certain promising technologies worth pursuing. A major difficulty with justifying new technologies is they are generally expensive when first available. However, increased production and refinement over time tend to lower costs, sometimes significantly. It is expected there will also be technologies that are considered important but not recommended until cost have been reduced.

The IVART RG at their last meeting in November 2010 endorsed a progress paper which was subsequently tabled at the NRSEG teleconference on 25 November 2010 for progression.

5.5 International standards / programs - Links

To develop firm links and attain correct and up to date information related to international standards and programs, the RG co-opted RG members directly from the federal Vehicles Standards Branch, Department of Infrastructure and Transport (DIT) (formerly Department of Infrastructure, Transport, Regional Development and Local Government (DTRDALD).

IVART has also developed links with the Austroads Cooperative ITS project with a view to develop and advance ITS in-vehicle and at-roadside technologies opportunities that will require cooperative involvement in the planning, design and operational aspects of the system.

In addition, it is foreseen that significant benefits may be obtained through sharing information and the development and implementation of joint policies, practices and procedures. These links will provide the best possible outcomes for all stakeholders including the community.

5.6 Auto Original Equipment Manufacturer (OEM) and industry - Links

Outcomes of the vehicle safety technologies studies will give direction about which technologies will be worth pursuing. It is anticipated that more direct involvement with suppliers and manufacturers to promote specific technologies.

Also, IVART is able to access the government and industry consortium to support cooperative safety systems for vehicles through formal relationship with the Cooperative ITS Project Steering Committee (PSC).

The CSC is made up of senior representatives across broader government with a mandate to guide and steer the development and introduction of cooperative ITS in Australia. The PSC exists as the peak body responsible for:

- Coordinating and steering broader government activity at the national level with respect to the introduction of cooperative ITS applications across Australia;
  - Coordinating the transport sectors response on spectrum matters with ACMA
  - Endorsement of specific applications and projects within the cooperative ITS domain.
  - Championing "pilot applications" heading to arrangements for full deployment.
- Liaising with peak industry bodies to inform government and coordinate where appropriate;
- Represent Australia at appropriate international forums, ascertaining learning's and best practice for possible adopt and adapt implementation nationally.[2]

5.7 National ITS Projects Vehicle Safety Technologies

As part of the IVART program of work, a national ITS projects document was compiled summarising existing and proposed in-vehicle and at-roadside technology related projects/trials in Australia.

The original document was developed to be updated on a bi-annual basis and disseminated to jurisdictions through the National Road Safety Group Executive Group (NRSEG).

2 Cooperative ITS Austroads Steering Committee Terms of Reference Version 0.3 (September 2009) Page 4.

The intended outcomes for this document are to:

- provide jurisdictions with information on existing and proposed in-vehicle and at-roadside technology projects;
- encourage cross jurisdictional collaboration in developing projects to further advance evolving safety applications in alignment with the proposed policy and technologies framework;
- investigate partnership approaches to research projects with a view of reducing duplication of funding and resources;
- promote greater efficacy and quality results, which inform government policy of technology based solutions to reduce the road toll and improve safety outcomes; and
- actively facilitate integration across related in-vehicle and at-roadside technology projects.

To date the National ITS Projects Vehicle Safety Technologies document was compiled and disseminated through the RG on three occasions including the latest version which was finalised in November 2010. The latest version of the document contained details of 45 different projects. The dissemination of this document will require discussion as it has grown in popularity with many requests for copies or requests to incorporate projects in to the document.

Appendix 1 - Intelligent Transport System Architecture for In-Vehicle and At-Roadside Technologies

Project Specifications

1. Purpose

The purpose of this document is to invite consultancy firms to provide research services to inform government policy of the potential to reduce the road toll and improve safety outcomes through technology based solutions. This project has a specific focus on engaging a consultant to define what a national high level Intelligent Transport System (ITS) and business architecture for in-vehicle and at-roadside safety technologies is and how it would support and align with the national policy and technology framework.

For the purposes of this document the 'high level ITS and business architecture for in-vehicle and at-roadside safety technologies', will be referred to as the 'architecture'.

2. Objective / Scope

2.1 It is expected that this project will inform government policy through defining the framework for development of future projects and proposed solutions utilising in-vehicle and at-roadside safety technologies in Australia.

2.2 It is expected that this project will inform government policy through defining the architecture and its composition in direct relation to the national policy and technology framework, which aligns approaches for utilising vehicle technologies for safety outcomes in Australia.

2.3 The geographic area covered by the project is Australia, comprising six states and two mainland territories.

2.4 The project will include urban, interurban and rural locations.

2.5 The project will define 'vehicle' to include light or heavy, public, private and commercial vehicles.

2.6 It is expected that the project will map and highlight the existing priority areas, identify relevant trends and discuss possible roles and responsibilities of stakeholders.

3. Background / History

3.1 In February 2008, Australian Transport Council (ATC) Ministers received a briefing from the National Transport Commission (NTC) on the development of a National Transport Policy Framework of which, Queensland agreed to take responsibility for developing the Safety and Security aspects. This action resulted in the establishment of the Safety Standing Sub Committee (SSSC).

3.2 As part of the SSSC work program, Queensland agreed to lead the development of technology based solutions that facilitate safety outcomes. To progress elements of this work the In-Vehicle and At-Roadside Technologies (IVART) project was established to manage, develop and regulate the evolving information and communication technology transport safety and security applications to facilitate appropriate adoption in Australia within a planned policy and technology framework and a high level ITS business and system architecture for in-vehicle and at-roadside technologies.

3.3 To advance this work, IVART's program of work was developed and encompasses five core components. The core component that this project will focus on is defining what an ITS high level business and system architecture for in-vehicle and at-roadside safety technologies will comprise.

3.4 It is envisioned that a Project Plan will be developed at a later stage to provide the framework to develop and progress future projects and proposed solutions utilising in-vehicle and at-roadside safety technologies.

4. Overview

4.1 Interest in the development of ITS architectures is beginning to strongly feature on government transport department agenda's. International and national conferences and forums have already highlighted progressive development in this area. Some countries have already gone 'live' with the deployment of high level systems, whilst others are in still in the early stages of consideration and planning.[3]

4.2 Jurisdictions within Australia have already developed or are in the process of developing ITS frameworks and strategies for their related areas. Furthermore, as an outcome of the Australian ITS Summit (November 2009), ITS Australia gave an undertaking to develop a national ITS vision for the next 10 years and a national ITS strategy and action plan.

4.3 In addition, in November 2009, the Australian federal government announced a parliamentary committee inquiry into ways to embed "smart infrastructure" into the transport system and other key public sectors to improve productivity, reduce carbon emissions, improve safety and reduce congestion. The federal government stated that Australia needed to formulate a plan to integrate smart technology into infrastructure in the design phases if it was to remain competitive[4].

4.4 Presently, Australia has a number of ITS in-vehicle and at-roadside related projects including: the development of management arrangements and identification of pilot applications for secured Dedicated Short Range Communications (DSRC) bandwidth; wireless vehicle and rail communications; demonstration and comparative study projects; cost benefit and data analysis projects; safety management systems for heavy vehicle transport including mass compliance; and freight telematics.

5. Research Deliverables

5.1 It is expected the project will define what a national high level ITS business and system architecture for in-vehicle and at-roadside safety technologies is, and how it would support and align with the national Policy and Technology Framework.

5.2 The project will identify jurisdictional and national needs and service priorities through existing transportation ITS business/ strategic plans. It is also expected that this information will include the development of strategies and processes that will assist in addressing the following:

- specific issues, needs, common needs/synergies of individual jurisdictions;
- key challenges and limitations on a national level; and
- existing and emerging opportunities and key success factors.

5.3 The project will outline existing business structure strategies, functions and processes and identify clear linkages to governance processes.

3 Draft National Policy and Technology Framework, In-Vehicle and At-Roadside Technologies (IVART) Project. April 2010

4 http://www.goauto.com.au/mellor/mellor.nsf/story2/60785D7460FAD567CA257674000E002E. Accessed 17/02/2010.

5.4 The project will identify stakeholders and their respective responsibilities according to their required involvement in the various stages of the proposed architecture.

5.5 It is expected that the project will conduct an analysis of existing technologies, applications, and business to develop a baseline of known activities and how these support the identified business domains.

5.6 The project will outline the relevant integrated system functions, physical entities, subsystems, information and data that connect functions and physical subsystems together.

Appendix 2 - Principles to support a national approach to maximise road safety potential of vehicle technology

Contents

6 Introduction

This report is intended to form the basis for discussion about the principles that should be applied when assessing the road safety benefits of new vehicle technology. There is a need for decisions to be made at national and international levels by government and industry as to whether existing technologies need to be promoted, funded or regulated and whether emerging technologies should be supported, encouraged, directed and so on.

Without guidance by and adherence to agreed principles, there is the likelihood that: resources could be wasted on duplicating efforts; related technologies may not be able to communicate or share common resources; and technologies that have the best outcome may not get the support required.

Over the past 40 years or so since Automatic Braking Systems (ABS) were introduced, vehicle and aftermarket manufacturers have been increasingly developing electronic based systems to reduce vehicle crashes. Referred to as Advanced Driver Assistance Systems (ADAS), they improve safety in three ways by:

- Providing drivers with information to support their driving task such as providing visual displays of speed limits and warnings of over speed or recording of driving hours for fatigue regulation compliance;
- Assisting the driver in taking over some aspect of the driving task such as Intelligent Speed Adaptation which can control the speed of the vehicle to the local speed limit; or
- Intervening in the driving task to avoid crashes like Electronic Stability Control (ESC) which provides greater driver control under extreme manoeuvres or collision avoidance through radar sensors or vehicle to vehicle communications.

More often than not, common standards are only developed after many manufacturers have developed their own versions of certain technologies. Governments also tend to regulate mandatory fitting well after these technologies are commonplace. This usually takes a long time and road safety opportunities are lost in the delays. Earlier identification of worthwhile road safety technologies has the potential to give industry guidance and certainty, thereby reducing costs and faster penetration in the fleet.

6.1 Summary of principles

To achieve the most beneficial and timely road safety outcome from the introduction of vehicle technology in Australia, the following principles should be applied by state and federal governments.

- Benefits and costs in the Australian environment should be clearly identified. Associated transport related benefits and unintended negative effects need to be considered.
- Technology under development may need to be supported in a manner appropriate to its level of maturity.
- Technology should be able to be updated at low cost to the user.
- Standards should be performance based, maximise interface interaction and allow continued innovation.

- Utilisation of and/or creation of industry markets needs to be maximised. Opportunities to improve other user benefits such as profits and convenience need to be considered to improve voluntary take up of safety technology.

7 Who is leading?

Given that there is agreement that some form of leadership is required to direct, support and encourage new vehicle safety technology, the question is who should take the lead and to what extent.

Australia is a very small player in international vehicle and aftermarket design and manufacturing. It is inevitable that most technologies will be developed overseas to overseas conditions and standards. The challenge is to determine whether those technologies are suited to Australia and what needs to be done to maximise road safety benefits.

The Australian Design Rules (ADRs) which regulate the minimum safety standards for new Australian vehicles are being and have been harmonised with European (ECE) regulations for some years now through decisions made at national level by the Australian Transport Council. Under present Federal legislation (*Motor Vehicle Standards Act*) mandatory design features are determined through this established process.

Stand alone vehicle technology can also be supplied voluntarily by industry (Original Equipment Manufacturer and aftermarket) without restriction apart from conflicting with an existing ADR or causing a safety hazard. Federal vehicle recall procedures provide a safety net to ensure components that are faulty or could harm are repaired, replaced or removed. However, supporting infrastructure may also be required (e.g. radio transmission equipment, vehicle detectors) that may be provided by government (State or Federal) or industry or an alliance of both.

Technology also may require enabling systems for it to work such as allocated communication frequencies and mapping data that require government assistance and funding to be established. Exemption from ADRs may also be required to allow new technology to operate where prescriptive (non performance based) requirements are currently specified.

Individual States and Territories may also play a role, particularly in encouraging uptake of technology through road safety marketing campaigns, fleet purchasing preferences and so on.

Consequently there are many players involved in this domain with varying levels of influence and resources. Guidance is therefore required on who is responsible for making the required decisions and who will provide the resources. In addition, there needs to be decisions made on whether this needs to be formalised, to what extent, how those decisions are communicated to all affected parties and whether regulation is required to ensure those decisions are followed.

Given the pace of developments in this arena there is the real possibility the ad-hoc decisions or complacency could result in less than optimum outcomes. There has been a recent Council of Australian Governments decision to formalise a national heavy vehicle regulator and rail regulator. Consideration should be given as to whether Australia needs a formal regulator for Intelligent Transport Systems and by when.

8 Application of technology must be beneficial

8.1 Identifying benefits and costs

As this paper is focussed on road safety outcomes, the main criteria in assessing the application of a new technology is to determine, as far as possible at the time, what will be the road safety benefits expected in the Australian road environment. Often research has been conducted overseas through trials or in-service data. It is important that the results of any existing overseas research are compared to local crash data statistics as technologies often address specific crash types. For example, lane departure warning devices may not show useful benefits in an urban environment but may have good effectiveness on rural high speed roads. Road crash statistics from Australia will be different to other counties due to the proportion and usage of these types of roads

In the early stages there may just be insufficient evidence to indicate what will be the true benefit from the use of a technology on the road. A valid option is sometimes to wait, possibly years, until enough data is available. A case in point was ABS. Intuitively, the ability to maintain steering control under emergency braking is a clear road safety benefit and should provide a significant breakthrough in preventing crashes. Only through monitoring road crash data over the years, however, was it clear that this does not have a significant effect in reducing the types of crashes that cause injury and fatality.

Technologies may not have developed solely for a road safety outcome, or indeed road safety benefits may only be an additional outcome. For example, heavy vehicle monitoring systems may be used by operators to improve the efficiency of deliveries. However, the same technology may be used to monitor speed, restricted route compliance or driving hours. Where the cost of the technology outweighs the road safety benefits, it could still be supported where the associated transport benefits it also provides makes it worthwhile.

Identifying long term costs can be difficult for new technologies as development costs are often very high and individual component costs are also high without economies of scale. In the initial stages it may appear that the costs outweigh the benefits unless production costs can be reduced. Support from governments through research funding, promotion, fleet buying policies and so on can be needed to get technologies "up and running".

8.2 Evaluation of benefits

A full and detailed analysis of benefits based on proven research data and genuine production costs is obviously desirable to support confident decision making. This is the usual requirement for determining whether an ADR is to be supported and is traditionally what has been done in Australia. At the other end of the scale, new technologies are often promoted by suppliers who have yet to get their products into the market place and who make unsupported claims about the potential for road safety improvements.

It is possible to make "educated guesses" about benefits at any point between these extremes. The level of confidence that one can place in those guesses can determine the action to be taken. If possible, comparing "like with like" can assist in determining whether a new technology is an improvement over an existing one that addresses a similar problem.

As discussed above, there are many options apart from regulation that the government can provide. To ensure that potentially beneficial technology is given the best opportunity to be introduced as quickly as possible, more flexibility needs to be applied in the assessment of benefits at the early stage rather than historical wait until years of in-service data has been gathered.

8.3 BCA – consideration in light of complimentary outcomes

Technologies that do not achieve a positive road safety benefit cost analysis should also be considered for other benefits. Many technologies may achieve benefits of importance to government such as traffic management, road use pricing, asset protection and so on that may make them worthwhile.

8.4 Behavioural influence rigour

It is important to establish that any new technology will actually achieve the road safety benefit it claims to address. Proven benefits and thorough testing for negative outcomes is desirable for informed decision making.

It needs to be clear exactly what driver behaviour the technology is trying to change and the tests have been conducted to ensure the anticipated outcome is actually delivered before government intervention in the form of regulation is considered. Often there just hasn't been sufficient time to firmly establish benefits. The level of government intervention needs to be appropriate to the level of maturity of the technology.

In the assessment of new technologies it is important to consider all possible negative effects that are unintended or unforseen. For example, navigation aids are considered to have positive road safety benefits in that the driver can concentrate on driving without having the distraction of reading maps or taking wrong turns. However, it may be found that with poorly designed devices, drivers tend to enter destination data while driving, thereby increasing distraction. Warning devices that confuse drivers or make them take their eyes off the road at critical moments could even increase the likelihood of a crash.

9 Maximise interoperability opportunities

9.1 Uses common standards

Where developed by vehicle manufacturers, technology may be dedicated to that particular manufacturer's models. If the technology does not require interfaces with outside communications, mapping data etc, performance based standards should be developed so that can be applied across all manufacturers. This will ensure that the technology will provide the desired outcome regardless of manufacturer. For example, Electronic Stability Control (ESC) now has an agreed performance standard that can be regulated and will give confidence to the buying public.

External "plug in" devices should be built to common interface standards so they will work in a multitude of vehicles. Many technologies use similar components such as display screens. Sharing of componentry across different applications will reduce costs.

Technology reliant on communications with other vehicles and/or infrastructure needs to be to a common standard. There is now agreement in Europe and the US that this communication should use frequency bands at 5.9 GHz. Other frequencies have been trialled but it now seems clear that if Australia is to take advantage of the benefits it will need to be consistent with the international standards of our imported vehicles.

Devices that use data for navigation, speed zones etc obviously have to be able to be updated regularly and at low cost. It is desirable that this data is to a common format so costs associated with collecting the data is reduced. What works in one device but not in others either between like devices such as ISA or between similar devices, say ISA and toll collection will lead to duplication of effort, additional cost, greater user effort and frustration.

9.2 Ability to update technology

Where applicable, technology that can be updated simply and at a low cost will improve user acceptance. It is likely that standards and protocols will change over time as improvements are made. Devices that cannot be updated to the latest standard will either continue to perform to a lower level or become redundant.

9.3 Open interface

It must be recognised that technology will continue to evolve. In assessing the potential for any new technology, evaluations need to be made knowing there are other technologies currently available and there will be more in the future. Standards, where needed, should be sufficiently open to maximise interface interaction and allow for continuing innovation.

9.4 Industry and government relationships

There is a need to be cognisant of industry practices and industry and government interfaces. Collaborative partnerships among all level of government, industry and the private sector (such as operators of services and systems, supplies of the various technologies, educational institutions, research facility organisations and the general public who will directly benefit from using the emerging technologies) are essential for building knowledge and experience to advance evaluation and adoption of improved road safety technology applications.

The establishment of these partnerships will play an essential role in successfully progressing strategies that evaluate the effectiveness of existing and emerging safety technologies and their role in the broader technology development environment. The benefits of collaborative partnerships include, but are not limited to the following:

Government

- The provision of leadership and co-ordination in strategic and joint planning processes.
- The exploration of national interest initiatives.
- Information dissemination.
- Acquired knowledge base.
- The development of regulatory standards.

Consumer groups and the general community

- Improving individual's road use safety, travel experience and quality of life.

Research and development

- Joint research and development activity opportunities which ensure future technological capacity, including fostering international partnerships to advance smart technology research for state of the art technology initiatives.

Broader ITS / multi modal planning

- Development of structures and processes which enhance collaborative partnership opportunities in technologies advancement across air, maritime, rail and road transportation where appropriate.

Private sector

- The exploration of partnership opportunities with owners, operators and suppliers.
- Technology marketing.
- Technology products and associated service systems including electronic hardware, software, system integration and communications.

Industry

- Strengthening and promoting the Australian industry.
- Promote government-industry co-operation.

Membership / corporation and institutions

- Promote a dynamic and robust ITS industry to take advantage of the growing domestic and global market opportunities.

10 Business model

10.1 Minimises costs

To encourage innovation from industry and to maximise penetration in the fleet, costs need to be minimised at all times. Principles outlined above such as setting standards where necessary, keeping standards performance based where possible and keeping regulation to a minimum must consider development and user costs at all times. Duplication of effort such as individual navigation aid suppliers each collecting their own mapping data needs to be recognised and better solutions developed.

10.2 Developing open market opportunities

Utilisation of and/or creation of industry markets needs to be maximised. For example, the Intelligent Access Program (IAP) linked to higher mass limits (HML). Compliance rigour has forced high costs. Marketability is an important consideration in establishing new technologies both in increasing fleet take up and in encouraging other suppliers to compete.

Investing in enabling technologies such as communications capability using 5.9 GHz for vehicle safety may provide additional business opportunities and user benefits currently not possible. An ideal scenario would see that government gets a road safety outcome, industry gets profits and the user gets benefits.

10.3 User benefits maximised

For the user to take up technology voluntarily, they must see benefits such as reduced costs, increased profits, improved safety or convenience.

Transport operators continually seek to reduce costs associated with labour, fuel usage, compliance, administration etc. Additionally, technology can increase market share through better utilisation of resources, better scheduling etc. Government needs to be aware of industries needs when supporting new technologies.

Private users are also willing to pay for convenience as can be see in the high take up of navigation devices. Government needs to consider opportunities to enable road safety outcomes to be gained from integrating popular technologies with others that have road safety potential where possible. For example ISA technology requires the use of GPS location and stored map data. Devises such as electronic work diaries and navigation devices share these needs. Government is in a position to encourage; coordinate and possible regulate the development of say a single device that provides navigation, speed alerts, work hour scheduling, vehicle route and speed compliance.

It is important to recognise that without direction and support from government that the individual development of technology will lead to higher end costs for users and lost potential for road safety outcomes.

Appendix 3 - Draft policy and framework / summary of recommendations

1. That a future governance model be established to progress the policy and technology framework recommendations and direct the proposed, national high level ITS system and business architecture for in-vehicle and at-roadside technologies.
2. Establish processes to ensure governments become readily aware of the benefits and costs of promising new technologies that have the potential to significantly reduce road trauma.
3. Develop a process that actively informs and promotes the availability of beneficial technologies to the general public to increase fitment rates.
4. Government to collaborate with stakeholders to progress the development of 'one box' system and a standardised technology interface.
5. That the IVART Project and Cooperative ITS continue to work in collaboration in the planning, design and operational aspects of ITS in-vehicle and at-roadside technology opportunities.
6. Develop research projects that analyse and compare international crash data statistical results to determine the road safety benefits and costs that can be expected from different safety technologies in the Australian environment.
7. ISA to be used as a case study/example of how this policy and technology framework could be optimally utilised to accomplish its purpose.
8. That an ITS research and development strategic plan be developed for emerging vehicle safety technologies. The plan is to be developed in partnership with stakeholders which include academia and the private and public sectors.
9. That the IVART project actively align with and support the safety pillar in the draft National ITS Strategy by progressing the core components of the project deliverables.
10. That IVART develop a high level business and system architecture for in-vehicle and at-roadside safety technologies, which will have capacity to align with and inform broader architectures as they systematically evolve.
11. That governments become proactive in decreasing the marketing practice of 'packaging' or 'bundling' vehicle safety technologies along with luxury items in vehicles where it is shown to hinder the voluntary take up of the safety technologies.
12. That government leads by example and encourages stakeholders such as the AFMA and fleet operators to select safer vehicles in their purchasing decisions.
13. Governments to work in partnership with insurance companies to investigate incentive opportunities that reward customers who consider safety in their vehicle purchasing decisions.
14. Governments, in partnership with stakeholders such as vehicle manufacturers and consumer groups, develop an education and awareness strategy to raise the public's awareness of the various safety technologies to encourage voluntary take-up of the technology.
15. That community awareness/education campaigns about available vehicle safety technologies and their safety benefits be actively promoted through media, websites, advocacy and safety groups on an ongoing basis.

Appendix 4 - Strategic Direction for ISA in Australia

Strategic Direction for ISA in Australia

Background

Road trauma continues to impose a significant burden on Australian society, with the annual economic cost of road crashes conservatively estimated at $18 billion per annum. The *National Road Safety Strategy 2001–2010* was established with the aim of dramatically reducing death and serious injury on Australian roads, identifying a target of 40 per cent reduction by 2010.

While there have been periods of significant road safety improvement over the last eight years, the average rate of reduction in national road deaths is below the rate required to meet the national target. In the final 18 months of this decade, it is important to remain focused on the primary objective of the National Road Safety Strategy. That is, to bring about continuing reductions in the number of people killed and injured on the nation's roads, and to increase effort in areas that are likely to see rapid gains.

Australian transport and road safety Ministers have committed, through the National Transport Policy Framework, to the implementation of best practice in the area of speed management, in order to reduce the operating speeds of vehicles on the road network and deter errant users from speeding. Research evidence from around the world shows that this will provide a quick and substantial improvement in safety outcomes, as well as provide benefits in other related policy areas such as the environment.

Intelligent Speed Adaptation or Assist (ISA) technology has the potential to reduce speeding and to positively impact on fuel usage and emissions. A coordinated approach is required to ensure that ISA is implemented in a consistent and appropriate way.

The Australian Intelligent Speed Assist Initiative (AISAI) is a collaboration of State and Territory road and road safety agencies seeking to stimulate, support and facilitate the uptake, and improvement of ISA in Australia. Since 2007, the group's efforts have been focussed on:

- facilitation and guidance for the development of speed limit data sets by jurisdictions, principally static and calendar based speed limits that are the cornerstone of ISA;
- development and definition of the minimum performance criteria for ISA units that would meet road safety objectives;
- increasing the awareness of Ministers, road and transport authorities, motor vehicle manufacturers and road users of the benefits of ISA technology; and
- identifying and resolving any legal or legislative issues that may hinder the uptake of ISA in Australia.

This paper provides a strategic direction for the implementation of ISA in Australia and highlights the challenges and opportunities.

Brief Overview of ISA

ISA is a generic term for a class of Advanced Driver Assistance System (ADAS) in which the driver is warned and/or vehicle speed is automatically limited when the driver is, intentionally or inadvertently, travelling over the posted speed limit for a given location. ISA systems establish the position of the vehicle, compare its current speed with the local posted speed limit, and respond if the vehicle exceeds this posted limit.

ISA systems obtain information regarding the current position of the vehicle and the speed limit that applies to that location via a range of technical solutions. The most widely used approach utilises global positioning system (GPS) technology. Information regarding the road network and the posted speed limits within it are stored in an on-board digital map database. The location of the vehicle on the road network is determined by a GPS receiver fitted to the vehicle. Based on data derived from the GPS, an on-board computer continuously analyses the location of the vehicle and compares the posted speed limit for that location with the current (speedometer or GPS-derived) speed of the vehicle. A warning is triggered when the GPS/digital map system recognises that the vehicle is travelling faster than the maximum speed limit for the current location.

Some ISA systems can receive electronic signals transmitted to the vehicle from beacons attached to speed signs or other roadside infrastructure surrounding speed signs. These beacons transmit information regarding the posted speed limit to the vehicle's on-board computer, which triggers the warning and/or limiting mechanism if the vehicle exceeds this limit.

A less tested method, and one that is being explored in some sectors, is to use optical character recognition of speed signs, thereby negating the need for on-board speed limit maps. Optical character recognition has the advantage of always being up to date, provided the speed sign is legible. Speed zones that are defaults (not sign-posted) remain an issue, however.

The terminology used to classify and describe the different forms of ISA that exist vary widely across countries and ISA trials. AISAI has adopted the following classification of ISA variants, which will be used throughout this review:

- *Advisory ISA* – systems that remind drivers of the prevailing speed limit and exert no control over the vehicle.
- *Supportive ISA* – systems that provide some degree of vehicle-initiated limiting of speed, but allows the driver to override the system.
- *Limiting ISA* – systems that include vehicle-initiated speed limiting that cannot be overridden (usually accompanied by an emergency failure function).

These three variants can be further broken down into systems that are mandatory or voluntary. With mandatory systems, ISA could be made compulsory for particular individuals or groups of drivers/riders by, either as a punitive action or regulation/condition. Such systems could be accompanied by "black box" logging type devices which would automatically report speeding breaches to the relevant authorities.

Voluntary ISA, whether it be advisory or supporting/limiting, would, as the name suggests, be at the discretion of the individual driver.

Costs and Benefits of ISA

An extensive body of research has examined the potential safety benefits of ISA technologies and their influence, both positive and negative, on driving performance. Much of this research has been conducted in Europe, although more recently countries such as, Australia, Japan, and Canada have begun conducting research into the road safety benefits of ISA.

A review of field trials and simulator studies undertaken throughout these countries suggest that ISA will have a range of benefits for Australia. The most notable of these is a reduction in the incidence and severity of speed-related crashes. As yet, however, no detailed research has been conducted into applying the results of overseas studies to Australian crash data.

Although the safety benefits of widespread ISA in Australia are expected to be high, there is evidence in trials that drivers can also experience negative effects such as risk compensation, system over-reliance and increased cognitive workload (with limiting systems). Some field trials of ISA have also identified an increase in travel times for vehicles equipped with the technology, however the extent of any increase is dependent on the time of day (peak vs off-peak), location (rural vs urban), the extent of speeding and the type of ISA used.

These negative effects present challenges to the implementation of ISA but can be overcome and are unlikely to significantly reduce the safety benefits afforded by the technology.

ISA is also expected to have environmental benefits including reductions in fuel consumption and vehicle emissions brought about by smoother traffic flow. These benefits are expected to be higher for the more intervening forms of ISA, such as those which limit vehicle speed.

> For both autonomous (GPS/digital map) and infrastructure-based (roadside transmitters) ISA systems, there are financial costs associated with all aspects of the system architecture including information supply, system control, and the system interface. The cost of implementing ISA is expected to differ significantly depending on whether the system is autonomous or infrastructure-based, the type of feedback mechanism used (haptic feedback, fuel restriction), the size of the implementation area, and the level of vehicle penetration. Whatever system is implemented, it is expected that costs would be highest at the start of implementation and would decrease as implementation progressed.

ISA in Australia at present

The use of ISA as part of an overall speed management strategy now has widespread acceptance among road network and safety agencies within Australia. On the back of this acceptance, a number of Australian jurisdictions have commenced projects that aim to demonstrate the benefits and functions of ISA.

In late 2006, Main Roads Western Australia, in conjunction with the Office of Road Safety, collaborated with the Victorian Transport Accident Commission (TAC) to demonstrate the utility of advisory ISA in reducing speeding in these two states. The trials were of an advisory ISA system, developed by Automotion Control Systems (Speedshield), that uses a combination of GPS and dead reckoning to establish vehicle location and local speed limits. Visual and auditory speed warnings are provided via a display mounted on the vehicle's dashboard.

The Victorian and Western Australian demonstration projects aimed to stimulate community interest in ISA through the involvement of key opinion leaders in Government and private industry. The WA project also trialled technology that wirelessly transmits speed limit map updates from roadside beacons to ISA-equipped vehicles.

Preliminary results from the WA trial reveal that feedback on the concept of advisory ISA has been generally positive. However, a number of technical challenges have been identified, including map accuracy and functionality of the display unit.

In NSW, the Centre for Road Safety has recently commenced a trial where 100 vehicles from private fleets in the Illawarra Region will be equipped with GPS/digital map-based advisory (60 vehicles) and supportive (40 vehicles) ISA systems and a speed data recorder. The project will run for 12-18 months and will focus on the reliability, acceptability and benefits of ISA technology to motorists in NSW, as well as the economic benefits of ISA in terms of fuel consumption and travel times. Data will be collected using on-board data recorders, driver surveys and driver licensing and registration records.

In addition to government, interest in and the use of ISA within certain industry sectors has been gaining momentum within Australia, with a small number of private companies already making supporting or intervening ISA available to trucking fleets operating on certain routes or within industrial sites. An advisory ISA product has also been developed and made available for general motorists throughout Australia as an extension of an existing navigation system. Speed limit information for these applications has generally been captured by the companies themselves or in partnership with private industry.

Factors influencing strategic direction for ISA

While ISA has reached a level of technical maturity where it can be implemented in real-world applications, there are still many outstanding issues that need to be resolved before an Australian-wide deployment can be realised, particularly for limiting ISA.

One of the high priority and short-term tasks to be taken up at the Australian level is the availability of accurate and up-to-date speed limit data. As has been noted, speed limit information for highways and main roads has either been gathered by private industry for integration into satellite navigation maps or by road agencies for specific areas (ie capital city). It is recognised, however, that for a higher acceptance and contribution to road safety, speed limits from complete road networks must be procured and maintained, preferably by public authorities.

The accuracy, reliability and currency of the speed limit information in map-based ISA systems is a critical factor in determining what form of ISA should be deployed and to what target markets.

Ultimately, for mandatory/regulatory, limiting ISA to be an acceptable technology for particular driver/rider groups, the ISA system should contain permanent speed limit data for all roads in Australia, be accurate, current and certified. For a regulatory ISA regime, where speeding offences may be detected automatically and reported to relevant authorities, the speed limit information would need to be correct at all times. The system would therefore also need to have the ability to cater for dynamic or variable speed limits which change due to weather or traffic conditions.

The ultimate goal for ISA is therefore for the deployment of a fully cooperative system where full, accurate and current databases of permanent static speed limits are enhanced by real time changes in speed limits, which are communicated straight from the source (eg Transport Operations Centre) to the ISA-equipped vehicle. The Austroads 5.9 GHz project is relevant in this regard in that it will provide a system architecture for these real-time changes to occur.

The requirement for speed limit accuracy, currency and coverage reduces the further down the ISA spectrum you go, with voluntary advisory ISA requiring less attention to coverage, up-to-dateness and accuracy than supporting and limiting versions. For example, the data requirements for widespread voluntary advisory ISA are expected to be similar to that currently required for other road network attributes contained in satellite navigation devices. Drivers with satellite navigation generally tolerate some inaccuracies in the road dataset, due to periodic changes in road layout and the creation of new subdivisions, provided they have the opportunity to update their systems on a regular basis for minimal charge.

It is likely however that voluntary uptake would be hampered if inaccurate mapping data often gave false alarms of excessive speed or there were significant gaps in data (eg in regional areas) Widespread and reliable data is still required if it is expected that motorists will pay for and continue to use voluntary ISA.

Similar to satellite navigation devices, drivers with an advisory ISA system retain control of the vehicle at all times, with compliance to regulatory speed limits that are displayed on road signs or as default limits defined in legislation, remaining the sole responsibility of the driver.

Target markets

A major factor in determining the strategic direction for ISA within Australia is the market envisaged for the technology, which influences the type of ISA deployed, the mapping and communications infrastructure needed to support the system and the expected road safety benefits to be gained.

In their 2008 paper to the Australasian Road Safety Research, Education and Policing Conference, Healy, Cockfield and Truong identified a number of high value target markets for ISA, including

- *Company fleets* - a potentially large market for introduction of ISA devices, with around 30% of driver deaths arising from work-related travel, including travel to and from the workplace. Provisions of the Occupational Health and Safety Act require employers to show a "duty of care" towards employees, ensuring that reasonably practicable safety measures that are introduced. A number of government agencies have developed and are promoting guidelines to assist companies with fleets of light passenger vehicles to adopt measures to best protect their employees, including choice of appropriately safe vehicles. At present, speed assist technology is generally described as "desirable", however, as ISA technology matures and costs are driven down through demand and economies of scale, it is envisaged that ISA technology could become a recommended standard feature.

- *Recidivist speeders* - Like the use of alcohol ignition interlocks as an option for the re-licensing of repeat drink-drivers, the court system could similarly stipulate the fitment of an ISA system as a necessary condition for a repeat speed offender to be re-licensed or as a penalty sanction. For high risk repeat offenders a limiting ISA system is considered to be the most appropriate functionality. In addition to having confidence in the underlying speed limit map accuracy and coverage, the ISA technology itself would need to be, if not tamperproof, at least tamper-evident, and subject to regular inspections during the prescribed period of fitment.

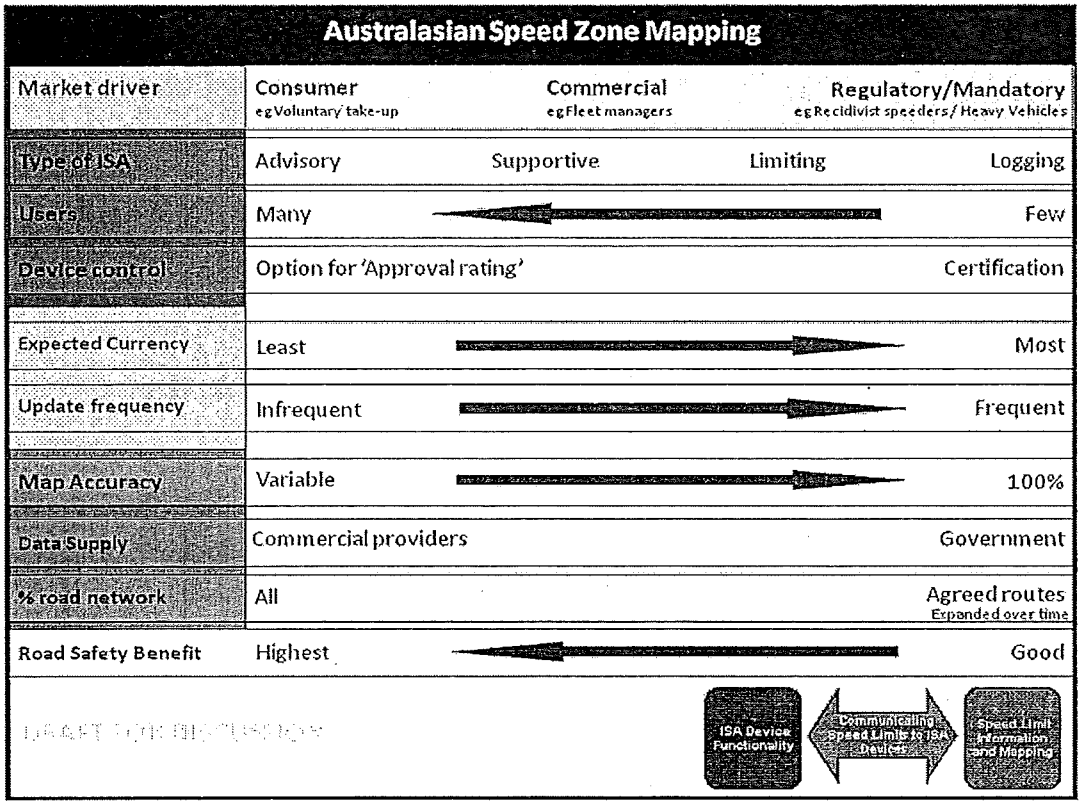
- *Heavy vehicle operators* – with a predicted increase in the freight task and a sharpened focus on both the safety and environmental impact of the transport sector, it is likely that interest in ISA from both regulators and operators will grow.

- *Community* – there is considerable potential in incorporating advisory ISA technology into existing technologies such as GPS navigation systems. Voluntary advisory ISA would assist drivers to know the speed limit of the road they are travelling on and thus avoid fines through inadvertent speeding, particularly in jurisdictions with a strong enforcement regime.

  This is a large target market that would require little additional effort or cost beyond awareness and the provision of incentives for ISA to be included as an additional function of existing satellite navigation systems. However, as discussed before, to achieve significant take up of the technology, it has to provide reliable and correct advice which is directly linked to the quality of the mapping data.

The figure below summaries the spectrum of ISA functionality and associated requirements for speed zone mapping for a range of target markets.

Figure 1. ISA functionality and speed zone mapping requirements for various target markets.



Source: Alistair Colebatch, VicRoads

Way forward for ISA in Australia

To date, much of the work in Australia has been devoted to assessing and promoting advisory technology. As the least intrusive in terms of vehicle control and the type with the least stringent database requirements, focusing on advisory ISA as a starting point has intuitive appeal. Whilst the road safety benefits are the lowest for this type of ISA, there are still considerable gains to be made given the established relationships between lower travel speeds and crash risk and the number of people who speed, even by just small amounts.

ISA and its potential to improve road safety has been under consideration for a number of years in Europe. The consensus reached among the different public authority and industry actors there is that in-vehicle speed information and an associated warning system can significantly contribute to road safety. In 2005, the European SpeedAlert project presented their final results, covering all aspects of the functional architecture and technical building blocks associated with widespread implementation of advisory ISA.

A major outcome of the European SpeedAlert consortium was the development of a deployment 'roadmap', divided into three main phases:

- Phase 1 – autonomous ISA systems, based on digital map data covering static speed limits with limited coverage (motorways and main roads), together with update of speed limit data through new map CD/DVD release. This is similar to how existing satellite navigation devices are managed, both in Europe and here in Australia.

- Phase 2 - enhanced autonomous systems for static speed limits. As for Phase 1 but with a complete road network coverage (including urban and rural roads), and possibility for more frequent incremental map updates of static speed limit data.

- Phase 3 - cooperative systems that cater for both static speed limits contained in on-board maps and temporary and dynamic speed limits communicated to the vehicle from roadside infrastructure or other source (for example, internet?). As for Phase 2, but with European-wide harmonised provision of temporary and dynamic speed limits enabling drivers to adapt their speed according to current traffic conditions.

The three phases of deployment could be considered as three generations of ISA applications, with each generation becoming more advanced as the supporting infrastructure (maps and communications) is developed over time.

A key feature of the European SpeedAlert work is that the architecture is modular and designed to allow for migration over time from first generation autonomous ISA systems to future generations of systems that are fully interactive with the road infrastructure and other relevant actors.

The deployment roadmap identified for advisory ISA in Europe is a sound approach given the technical challenges involved, particularly for the fully cooperative ISA systems envisaged in Phase 3.

It could argued that Australia is currently at Phase 1 with at least one advisory ISA application being offered in the GPS market now. With some incentive it would not be unreasonable to see advisory ISA rolled out as part of satellite navigation systems (which are growing rapidly in sales) quite quickly. In fact there is concern that, with the considerable growth in the satellite navigation market in Australia, the window of opportunity to get advisory ISA established as a functionality of satellite navigation devices may be rapidly closing.

It is therefore recommended that AISAI work with satellite navigation providers as a matter of priority to include ISA with an agreed functionality (based on road safety impacts) as a feature of satellite navigation systems. This would allow advisory ISA to quickly penetrate the general community at marginal development cost.

Incentives for satellite navigation developers/manufacturers to incorporate advisory ISA functionality could include access to regularly updated road agency speed limit data, preferably through a nationally agreed model.

In conjunction with expanding advisory ISA through the satellite navigation market (Phase 1), it is recommended that Australian road agencies continue to work towards the digitisation of their static speed limit information for input into ISA systems. Availability of up-to-date speed limit information for all roads for all jurisdictions in Australia is an important prerequisite for the viability and success of all forms of ISA systems, be they advisory, supporting or limiting. Public authorities are responsible for all speed limits (static, temporary and dynamic) and are therefore considered to be the preferred source of speed limit information for Phase 2 and 3 generation ISAs.

For Australia to move to Phase 2 in ISA deployment, a flow of information concerning changes in static speed limits needs to be established between public authorities, which create the changes, to providers of in-vehicle map databases. This will require consideration of mechanisms for data exchange, which comprise data storage and maintenance by the public authorities and procedures to guarantee the quality of the data. Work in this area has been progressing through the Mapping sub-group of the Australian ISA Initiative. The extent of the issues and costs involved in producing an Australia wide accurate speed data set has yet to be determined. A project to determine this is recommended to gauge the required commitment from road agencies.

As has been identified in Europe, the second and third generations of ISA applications will require the development and maintenance of a suitable communication infrastructure, first to handle incremental in-vehicle updates of static speed limits and then, in the final deployment stage, to manage provision of temporary and variable speed limits as displayed on Variable Message Signs (VMS).

In-vehicle map updates generally require large amounts of data to be handled, and performing a full update via communications could be time consuming and costly. This challenge can be dealt with by either only updating a specific area of interest or using a media that provides high data speed and volume at low cost to the user.

Temporary and variable speed limits are related to road works, crashes, congestion, and special weather and road conditions, and are presented to the driver by temporary signposts or VMS. These speed limits require communication channels with very short delays to be sufficiently accurate. Fully cooperative systems, in which map-based information together with real-time information transmitted by roadside- and/or broadcast-communication, are foreseen to be the choice of the future.

The ISA deployment map for Europe is based on advisory ISA only. European agencies have not contemplated mandatory/regulatory or supportive or limiting versions of ISA as a realistic implementation target. This possibly reflects the acceptability of ISA to the driving public and, more importantly, that these more intrusive forms of ISA require at least Phase 2 and more likely Phase 3 to be in successful operation from the outset if they are to be viable.

Given the interest and potential support for limiting ISA in Australia, particularly in relation to mandatory ISA for specific groups such as recidivist speeders or heavy vehicle compliance, consideration could be given in this country as to how ISA can be incorporated into existing penalty and compliance regimes over time.

Summary Points

- There is broad consensus in Australia and around the world that in-vehicle speed limit information and associated warning/active systems can significantly contribute to road safety targets.
- ISA technology is rapidly maturing, however, the supporting speed limit information and communications infrastructure need to be developed and/or incorporated for widespread deployment to occur.
- There are costs associated with the development of speed limit databases, either by public authorities or private industry. Public road agencies have a key role in the provision of accurate and up-to-date speed limit information that covers all roads in Australia. The costs to jurisdictions to establish reliable, updatable speed limit databases need to be determined.
- Some immediate benefits of advisory ISA can be realised relatively quickly in Australia if satellite navigation developers/providers were encouraged to include advisory ISA as an additional feature, at marginal development cost.
- A minimum set of functionality could be promoted to ensure that any advisory ISA application included in satellite navigation devices has the most potential for road safety gains.
- Australian jurisdictions must continue to work on speed limit data collection and maintenance to ensure deployment of second and third generation ISA. Jurisdictions should work together to establish national protocols for the certification and release of speed limit information to third parties such as map providers.
- To move to the fully cooperative ISA system needed for limiting and/or mandatory ISA for particular target groups, Australia should explore cost efficient mechanisms for communicating temporary and dynamic speed limit information to vehicles. The Austroads 5.9 GHz project has significant potential in this regard.
- Australia should also explore how ISA can be incorporated into existing penalty and compliance regimes, particularly for high value markets such as heavy vehicles and recidivist speeders.

Recommendations

On this basis, the AISAI recommends the following:

- Development and promotion of ISA systems with a view to reducing serious speed-related trauma on Australia's roads;
- Jurisdictions collaborate to ensure consistency of map data format across Australia;
- Jurisdictions develop accurate and updateable speed maps for their road networks in accordance with an agreed format, following identification of costs and benefits to relevant agencies;

- Jurisdictions consider, subject to map development and supporting technology capability, conducting demonstration projects within the various market segments;
- Jurisdictions share findings and research with each other to enable collaborative development of best practice systems for deployment in Australia; and
- Jurisdictions promote the safety value of ISA systems in terms of safety with a view to building community acceptance and commercial support for these systems.

References

Healy, D., Truong, J. and Cockfielfd, S. (2008). *Intelligent Speed Assist and the current market – cracking a tough nut*, paper presented to the 2008 Australasian Road Safety Research, Policing and Education Conference, Adelaide, South Australia.

SpeedAlert Project Consortium (2005). *Newsletter, No 2*, Brussels, Belgium.

SpeedAlert Project Consortium (2005). *Final Report, Version 1.0*, Brussels, Belgium.

Young, K.L., Edquist, J. and Lenné, M.G, (2009). *Recent Developments in Intelligent Speed adaptation Research and Application: Benefits and Costs of ISA for the Australian Fleet*, Monash University Accident Research Centre, Melbourne, Victoria.

Appendix 5 - Progress against the original core deliverables

Tasks and Milestones	Output	Start Date	End Date	Progress Update - November 2010	Outstanding action
A policy framework.	A nationally agreed policy framework.	Work to begin as soon as possible.	Proposal for November 2008 ATC consideration.	The IVART RG endorsed the document in November 2010. A paper was tabled at the NRSEG teleconference in November 2010 with a view to progress the paper to SSSC for approval.	NRSEG suggested the document recommendations be cross referenced with the National Road Safety Strategy 2011-2020. - Where necessary develop a case to incorporate the framework recommendations not addressed in the National Road Safety Strategy 2011-2020 document. - Alternatively, IVART will be tasked with developing a process to action the remaining recommendations.
System architecture that aligns approaches for utilising vehicle technology for safety outcomes.	A nationally agreed system architecture.	Work to begin as soon as possible.	Proposal for November 2008 ATC consideration.	A paper was submitted to the IVART RG for endorsement, which upon approval will be progressed through NRSEG and SSSC. - An ITO document has been prepared to commission consultancy firms to define a national ITS and business architecture for in-vehicle and at-roadside technologies. Project	- The RG requested prior to endorsement, further research to be undertaken to determine what else is happening directly in this environment. - The RG is yet to consider options for funding of this project. However, it is proposed that a business case be submitted to SCOT to source national

				costs are in the vicinity of $250,000.	funding for the project. - A paper will be developed for the next NRSEG meeting for approval and progression to SSSC.
Review of current projects that align with vehicle safety and communication systems, such as IAP, ISA and EVP. Selection of key initiatives for national funding and progression; Cost of initiatives. Establishment of governmental arrangements.	A nationally agreed work program that is planned, integrated and evaluated in the context of the agreed architecture and policy framework.	Work to begin as soon as possible.	Detailed work program and budget to be delivered for November 2008 ATC consideration.	IVART commissioned two research reports on the cost benefit analysis of ISA and the analysis of crash data to estimate the benefits of emerging vehicle technology at a cost of approximately $100,000 plus GST.	Contributions of $10,000 were obtained from four RG members with the rest of the costs paid by TMR. The reports include: - Cost Benefit Analysis of ISA. - Analysis of crash data to estimate the benefits of emerging vehicle technology. The reports were completed in April and June 2010 respectively. The RG endorsed papers for both projects in November 2010, which were subsequently tabled at the NRSEG November 2010 teleconference for noting and progression.
Establish links with international standards work and development programs in Europe, USA and Asia.	Resourced group working actively on international projects and bodies.	Work to begin as soon as possible.	Detailed work program and budget to be delivered for November 2008 ATC	Links have been established through RG members from the federal Vehicles Standards Branch, Department of Infrastructure, Transport (DIT) and through Austroads Cooperative ITS.	Outcomes of the vehicle safety technologies studies will give direction about which technologies will be worth pursuing. It is anticipated that more direct involvement with

			consideration.		suppliers and manufacturers to promote specific technologies. Also, IVART is able to access the government and industry consortium to support cooperative safety systems for vehicles through formal relationship with the Cooperative ITS Project Steering Committee (PSC).
Establish links with auto OEMs and industry.	A government and industry consortium supporting cooperative safety systems for vehicles.			A government and industry consortium to support cooperative safety systems for vehicles will be accessed through the IVART project's relationship with the Cooperative ITS Project Steering Committee (PSC).	Continue to develop a comprehensive working relationship with Cooperative ITS to realise the significant benefits that may be obtained through sharing information, developing joint policies, practices and procedures to provide the best possible outcomes for all stakeholders including the community.

Australian Government

Department of Infrastructure and Transport

Vehicle Safety Research Compendium

A summary of current Australian research in the field of vehicle safety

Seatbelts and Child Restraints

- **Announcement and legislation enactment improve children's seating position in regional areas**

  Johns M.C., Lennon Alexia, Haworth Narelle (Conference Year 2010)

  Australasian Road Safety Research, Policing and Education Conference

  New legislation requires all children 7 years and younger to use child-specific Australian Standards approved restraints suitable to their age and restricts seating young children in the front of cars. Observations of child seating position and restraint use were undertaken in Toowoomba and Rockhampton before the Queensland legislation was announced (T1), after the announcement but before it was enacted (T2) and after it came into force (T3).

  http://www.rsconference.com/RoadSafety/detail/1066

- **Buckle up safely for Indigenous children: Development and evaluation of a preschool based education program to increase correct use of appropriate child restraints.**

  Hunter Kate, Clapham K, Lyford Marilyn, Keay Lisa, Brown Julie, Bilston L., Fegan M, Ivers Rebecca Q (Conference Year 2010)

  Australasian Road Safety Research, Policing and Education Conference

  Road traffic injuries are the leading cause of death and serious injury in Australian children and Indigenous children are at greater risk than non-Indigenous children. This study will develop and evaluate a multifaceted program aimed at increasing the correct use of appropriate child restraints amongst Indigenous families in the Shoalhaven region of NSW. Conclusion: There is no known research in Australia that focuses on interventions to increase the correct use of appropriate child restraints by Indigenous families. The program has the potential for use on a wider scale to increase the use of child restraints and ultimately reduce the burden of child motor vehicle injuries amongst the Australian Indigenous population.

  http://www.rsconference.com/RoadSafety/detail/1108

- **On-road observational survey of adult and child restraint use in South Australia**
  CASR

  Wundersitz, LN, Anderson RWG (2009)

  On-road observational surveys of seat belt and child restraint use procide valuable information on the levels of restraint use in the community and on the characteristics of vehicle occupants who are not using restraints. This project involved conducting a new on-road observational survey to monitor the levels of restraint use by occupants of passenger vehicles in areas previously surveyed in South Australia. Trained field observers recorded the vehicle type, plates, seating position, gender and restraint use of vehicle occupants, including the uses and types of any child restraints.

  http://casr.adelaide.edu.au/publications/list/?id=1091

- **Results from an observational survey of adult and child restraint use 2009**
  CASR

  Wundersitz, LN, Anderson RWG (2009)

  Observed rates of restraint wearing were relatively high, ranging from 98.9% in Murray Bridge (weekend) to 96.8% in Clare (weekday). Rear seat passengers had the lowest observed rates of restraint wearing. Adult males wore seat belts less often than adult females. Child restraint use varied by region but was relatively high. Findings from this survey might assist in the development of restraint use publicity campaigns and the monitoring of their effectiveness.

  http://casr.adelaide.edu.au/publications/list/?id=1115

- **Impediments to the use of child restraints**
  CASR

  Edwards SA, Anderson RWG, Wundersitz LN (2009)

  A focus group was conducted in June 2005 with a small group of five participants recruited at Adelaide metropolitan preschools to explore the social, educational and economic impediments preventing South Australian families from age-appropriate child restraint use. The participants had a total of five children less than seven years of age who were using an adult seatbelt. All participants considered themselves to be low income earners. The participants completed a brief pre-focus group questionnaire, covering the themes to be discussed during the focus group. Children in the booster seat age range had progressed to

an adult seatbelt prematurely, however, participants endorsed the use of a booster seat at times where they perceived a high risk situation. The major reasons for premature progression to the adult seatbelt were safety (adult seatbelt was perceived as safer than the booster seat), knowledge and size of the vehicle. Further catalysts were to foster the child's independence, the perceived maturity of the child, frustration, convenience, height and weight. Generally, the participants felt that information on child restraint use and related legislation is not readily accessible to the public. The findings are in conjunction with the results of our larger driver survey.

http://casr.adelaide.edu.au/publications/list/?id=1042

- **Many children progress from one type of restraint to the next at too small a size: should advice to parents be simple and based on child age, with variation in child size accommodated by overlaps in restraint specifications?**
  CASR

  Anderson RWG, Hutchinson TP (Conference Year 2009)

  Australasian College of Road Safety on Infants, Children and Young People and Road Safety

  Published surveys of child in-vehicle restraint use demonstrate that many children are in an inappropriate type of restraint. In particular, children tend to progress from a forward-facing child restraint to a booster seat at too small a size, and from a booster seat to an adult belt at too small a size. Standards for child restraints are written in terms of their weight, not their age. That leads to advice to parents emphasising the child's weight as the criterion for selecting a type of restraint. This has unfortunately led to advice becoming complicated and confusing. Children tend to want to progress to the next restraint earlier rather than later, and take advantage of lack of clarity. Moreover, many parents do not know the weight of their child. In this paper, we explore what might be the consequences of very simple advice, such as: change the type of restraint at 6 months, 4 years, and 8 years. Obviously, children differ in size. This may be allowed for by writing the Standard so that the restraint is suitable both for a small-for-age child at the youngest age and a large-for-age child at the oldest age. Our method uses the distribution of children's weights at different ages. Given that, and given also the range of weights for which each restraint is appropriate, we work out how many children would be in an inappropriate restraint if progression were at particular ages. This turns out to be much less than the number observed under the current regime of weight-based advice.

  http://casr.adelaide.edu.au/publications/list/?id=610

- **Non-wearing of adult seat belts in Australia: where to next? Austroads (SS1388)**

  Managed by Claire Thompson of the Office of Road Safety, Western Australia

  2009

  This study aimed to provide evidence-based recommendations for the way forward to tackle the problems of adult restraint non-use in light passenger vehicles in the short, medium and longer term in Australia. It is noted that the issue of non-restraint use is broader than that of adult restraint use in passenger vehicles, and encompasses heavy vehicles and child restraint, and each group has a distinct set of characteristics and countermeasures. While there are substantial issues to be addressed for these groups, these are outside the scope of this study.

Crash Data Studies

- **Vehicle safety ratings estimates from Police reported crash data: 2009 update. Australian and New Zealand crashes during 1987-2007**
  Monash University Accident Research Centre, Report No. 287

  Newstead, S. V., Watson, L. M. & Cameron, M. H. (2009)

  This study describes the calculation of updated vehicle safety ratings that measure the relative safety of vehicles in preventing severe injury to people involved in crashes. Three different aspects of secondary safety are examined: crashworthiness which focuses on drivers of the rated vehicle, aggressivity which focuses on drivers of other vehicles and unprotected road users such as pedestrians, cyclists and motorcyclists colliding with the rated vehicle and total secondary safety which examines the combined crashworthiness and aggressivity performance of the rated vehicle.

  http://www.monash.edu.au/muarc/reports/muarc287.html

- **De-identified linkage of Victorian injury data records: A feasibility study**
  Monash University Accident Research Centre, Report No. 296

  D'Elia, A. & Newstead, S. (2010)

  Research utilising the available mass databases relating to real world road crashes compiled by Police, government and insurers in Victoria provides much useful information for injury prevention purposes. Separately, these data sources have been critical for a wide range of important research carried out by the Monash University Accident Research Centre and many other agencies that has led to the development of new countermeasures and evidence-based preventive policies and programmes. The record linkage of these datasets and hospital injury records has the potential to maximise the use of available data by researchers to extend our understanding of the causes, outcomes and costs of road traffic and other injuries.

  http://www.monash.edu.au/muarc/reports/muarc296.html

Crash Risks

- **Estimation of the effect of improved average secondary safety of the passenger vehicle fleet on annual counts of serious injury for Australia and New Zealand: 1991-2006**

  Monash University Accident Research Centre, Report No. 289

  Newstead, S. & Scully, J. (2009)

  The objective of this study was to examine potential crash risk and injury effects of wholesale changes in market preference within the light passenger vehicle fleets of New Zealand, NSW and Victoria Analysis was carried out on the registers of licensed vehicles in these jurisdictions which were linked via licence plate numbers to crash data. This enabled an assessment of the composition of the vehicle fleet to be made as well the estimation of crash involvement rates per licensed vehicle.

  http://www.monash.edu.au/muarc/reports/muarc289.html

- **An evaluation of ICISS methodology for determining the severity of road crash injuries using linked data**

  Chapman A, Rosman DL (Conference Year 2010)

  Australasian Road Safety Research, Policing and Education Conference

  The ability to measure injury severity is important for meaningful comparison of outcomes of road crash casualties. In Western Australia, publicly reported measures of injury severity following a road crash are based on information sourced from Police crash reports. These severity ratings are determined by the attending Police Officer and categorised as: [1] fatal; [2] hospitalised; [3] minor injury; or [4] non-medical. A more robust measure is required in WA to measure the severity of road crash casualties. Other sources for measuring the seriousness of an injury following a road crash have been used in WA. These include the ICD-based ICISS methodology, which has been applied to diagnosis data contained in WA hospital admission records. This approach has shown that serious injuries contribute to approximately 26% of WA hospital admissions by road crash casualties and are growing at a faster rate than non-serious injuries.

  http://www.rsconference.com/RoadSafety/detail/1044?check=1

Crash Testing

- **Dynamic test protocol to assess rollover crashworthiness**

  Grzebieta R.H., McIntosh AS, Bambach M, Young DP (Conference Year 2010)

  Australasian Road Safety Research, Policing and Education Conference

  Recent investigations of Australian Coronial data has indicated that rollover fatalities constitute around 12% of all road deaths and are now higher than fatalities involving frontal (9%) and side impact (10%) crashes. Moreover, in around 24% of vehicle crashes where the occupant has been killed (excluding motorcyclists, pedestrians, cyclists, etc) the vehicle has rolled over. For three Australian states of NSW, NT and Victoria, single vehicle crashes accounted for 35% of all occupant fatalities in a single vehicle transport injury event. Despite this and the advances in understanding how occupants are being injured in rollover crashes, there is no accepted dynamic rollover crash test procedure (nor for that matter any test in Australia) of medium and small size passenger vehicles for the purposes of rollover crashworthiness ratings. This paper discusses the implementation of the Jordan Rollover System (JRS) dynamic rollover test rig being considered to assess the rollover crashworthiness of vehicles.

  http://www.rsconference.com/roadsafety/detail/1061?check=1

- **Influence of head boundary conditions in pedestrian real work head trauma simulations**

  Munsch M, Anderson RWG, Deck C, Ludes B, Willinger R (Conference Year 2009)

  International Research Council on the Biomechanics of Injury Conference on the Biomechanics of Impacts

  The aim of this work is to study the influence of head boundary conditions during real-world pedestrian head trauma simulation. Both Multi-Body System (MBS) and Finite Element (FE) models are used for pedestrian-versus-vehicle accident reconstructions. Four head boundary conditions are studied (from an isolated head to a head attached to the whole body). The effect of each configuration on head mechanical response parameters is computed. The responses include rigid-body kinematics responses as well as the intra-cerebral responses of a head FE model. It appears that head boundary conditions at neck level are significant, especially in terms of intra-cerebral response.

  http://casr.adelaide.edu.au/publications/list/?id=1111

Driver Behaviour and Socio-economic Factors Relating to Vehicle Safety

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- **The relationship between crime and road safety**
  Monash University Accident Research Centre, Report No. 284

  Brace, C., Whelan, M., Clark, B. & Oxley, J. (2009)

  The aim of this project was to review the literature on the relationship between crime and road safety, to identify pertinent Victorian crime and road safety data, and discuss how such data can be utilised to examine the relationship between crime and road safety.

  http://www.monash.edu.au/muarc/reports/muarc284.pdf

- **The interaction between relative vehicle secondary safety and driver demographics**
  Monash University Accident Research Centre, Report No. 290

  Watson, L. M., Newstead, S. V. & Scully, J. (2009)

  Vehicle safety rating programs based on crash tests have been criticised that they use crash test dummies that represented a limited range of body shapes. Therefore, such tests may not be addressing the safety needs of occupants whose body shapes do not correspond to that of the test dummies. Similarly, vehicle safety ratings programs based on real world crash data, such as the Used Car Safety Ratings (UCSR) system (Newstead et al, 2006), may not be applicable to occupants whose body shapes do not do not match the body shape of the profile of drivers to which the ratings are standardised.

  http://www.monash.edu.au/muarc/reports/muarc290.html

- **Vehicle safety and young drivers Stages 2 and 3: Analysis of young driver crash types and vehicle choice optimisation**
  Monash University Accident Research Centre, Report No. 292

  Whelan, M., Scully, J. & Newstead, S. V. (2009)

  The overall aim of this study was to examine the implications of young driver vehicle choice on secondary safety outcomes. This was achieved by identifying patterns in vehicle choice by driver age and sex (Stage 1, see Watson & Newstead, in press), investigating the young driver crash profile (Stage 2), and developing and assessing scenarios for changing young driver vehicle choice to optimise road trauma outcomes (Stage 3). This report documents the outcomes of Stages 2 and 3.

http://www.monash.edu.au/muarc/reports/muarc292.html

- **Design of a roadside observation survey for measuring occupant behaviour and vehicle type characteristics**
  Monash University Accident Research Centre, Report No. 288

  Clark, B. (2009)

  The aim of the present analysis is to develop an index of the average secondary safety of the passenger vehicle fleet in Australia and New Zealand and then quantify what effect improvements in secondary safety have had on the number of people seriously injured or killed due to road crashes. Police-reported crash data from five Australian states and New Zealand were used to define the secondary safety index. The secondary safety index was based on the point estimates of individual ratings from the 2008 update of the Vehicle Safety Ratings (Newstead, Watson & Cameron, 2008a).

  http://www.monash.edu.au/muarc/reports/muarc289.html

- **How can we assess the role of driver distraction in crashes? Feasibility of using the Australian National Crash In-depth Study (ANCIS) for collecting distraction data**

  Young Kristie, Lenne Michael G., Rudin-Brown C.M, Fitzharris Michael (Conference Year 2010)

  Australasian Road Safety Research, Policing and Education Conference

  This study examined the feasibility of collecting distraction-related crash data through the Australian National Crash In-depth Study (ANCIS). Specifically, the amount and type of self-report data that can be collected regarding the role of distraction in crashes was investigated through the ANCIS driver interview process, and conclusions were drawn regarding the feasibility of this method to collect accurate data on the issue. A total of 21 Victorian ANCIS case drivers participated in the pilot study. Of these, seven completed the distraction survey. The remaining participants did not complete the survey due to their stated inability to recall the circumstances leading up to their crash. This paper presents the findings of the study with respect to the type of distractions involved and the immediate circumstances pre-crash. While pilot study data suggest that the completeness and accuracy of the distraction data collected through the ANCIS interviews is likely to be limited for seriously injured vehicle occupants, the method nonetheless represents a highly cost-effective option for collecting distraction-related crash information for a subset of those, more severe, crash types captured through the ANCIS study protocol.

  http://www.rsconference.com/RoadSafety/detail/1047?check=1

- **Mobile phone use and engagement in other distracting activities: an observational survey of Melbourne drivers**

  Young Kristie, Rudin-Brown C.M, Lenne Michael G. (Conference Year 2010)

  Australasian Road Safety Research, Policing and Education Conference

  This study aimed to quantify Melbourne drivers' use of hand-held and hands-free mobile phones, as well as their engagement in a range of other non-driving activities that are associated with increased crash risk. The study also aimed to identify the driver, vehicle and location characteristics that are associated with engagement in these activities. A total of 18 roadside observations were conducted at three sites (two suburban and one central business district; CBD) within metropolitan Melbourne during May 2009.

  http://www.rsconference.com/RoadSafety/detail/1046

- **Driver behaviour and decision making at railway level crossings: an exploratory on-road case study**

  Salmon Paul, Lenne Michael G., Young Kristie, Tomasevic Nebojsa, Williamson Amy, Rudin-Brown C.M (Conference Year 2010)

  Australasian Road Safety Research, Policing and Education Conference

  Crashes at rail level crossings represent a significant problem, both in Australia and worldwide. Advances in driving assessment methods, such as the provision of on-road instrumented test vehicles, now provide researchers with the opportunity to further understand driver behaviour at rail level crossings in ways not previously possible. This paper gives an overview of a recent on-road pilot study of driver behaviour at rail level crossings in which 25 participants drove a pre-determined route, incorporating 4 rail level crossings, using Monash University Accident Research Centre's instrumented On-Road Test Vehicle (ORTeV).

  http://www.rsconference.com/RoadSafety/detail/1033

- **Safe and vulnerable road users by self-reported attitudes, behaviour and accident history**

  Stig H. Jørgensen, Torbjørn Rundmo, Trond Nordfjærn (Conference Year 2010)

  Australasian Road Safety Research, Policing and Education Conference

  Self reports in anonymous questionnaire can be a useful means for studying safe driver attitudes and behaviour. This study aims to explore possibilities and limitations in identifying safe and vulnerable groups and their attitudes and risk-taking behaviour, based on a representative national Norwegian survey 2008 (N=1863). Safety issues are examined by

road user, age, gender, socio-economy, place of residence, safety motivations, attitudes and behaviour. Use of modes of transport relates to exposure and risk. A crucial question is to which extent safety motivation, attitudes and behaviour among drivers are associated with traffic violations, injuries or material damages. Factor analysis, variance and regression analyses are performed to demonstrate results.

http://www.rsconference.com/RoadSafety/detail/1114

- **Annual performance indicators of enforced driver behaviours in South Australia**
  CASR

  Wudersitz LN, Hirandania K, Baldock MRJ (2009)

  This report was produced to quantify performance indicators for selected enforced driver behaviours (drink driving, drug driving, speeding and restraint use) in South Australia for the calendar year 2008. The level of random breath testing (RBT) in South Australia in 2008 decreased slightly but remained at a relatively high level. The proportion of tests conducted using mobile RBT continued to increase. The detection rate, based on evidentiary testing, decreased slightly in 2008 but remained at a relatively high level that was similar to those in other Australian jurisdictions.

  http://casr.adelaide.edu.au/publications/list/?id=1170

Occupant Protection in Specific Crashes

Far-Side Crashes

- **Occupant protection in far-side crashes**
  Monash University Accident Research Centre, Report No. 294

  Fildes, B. & Digges, K. (2010)

  Side-impacts involving the far or non-struck-side occupants account for around 30% of side impact occupant Harm and there are no tests or regulations currently that address these crashes. With this in mind, the Monash University Accident Research Centre, in conjunction with a consortium of international research and automotive experts, initiated a collaborative research program to investigate a range of issues involving these crashes and injuries. The research objectives called for a more detailed understanding of far side crash environment, injuries and injury mechanisms, the development of suitable test procedures, computer models, test devices and injury criteria, evaluating the suitability of existing crash test dummies for use in this crash scenario, and to identify a range of generic far side injury countermeasures and estimate their potential safety benefits. The research program was structured into 7 Work Packages that addressed epidemiological, biomechanical, computer programs and the specification of test procedures and injury criteria.

  http://www.monash.edu.au/muarc/reports/muarc294.html

Rollover Crashes

- **A comparison of neck injuries in fatal rollover crashes to equivalent cadaver tests. Implications for neck injury criteria in rollover testing**

  McIntosh AS, Yong J.M., Grzebieta R.H., Fréchède B (Conference Year 2010)

  Australasian Road Safety Research, Policing and Education Conference

  A fundamental issue in developing a valid test protocol to assess occupant safety system performance is identifying relevant biomechanical injury criteria. Head, neck, thorax and lower limb injury criteria have evolved over many decades and are mandated in vehicle safety standards and test protocols. Agreement on head and neck injury criteria for rollover crash tests has not been reached. The specific injury presentations of people retained in the vehicle, but fatally injured in rollover crashes were analysed using NCIS and related files. The biomechanical literature on cadaver tests that involved inverted or largely axial loads to the human neck was reviewed. The injury presentations on a case-by-case basis from the literature were collated. Five papers reporting on 49 cadaver tests were selected. The

proportion of in vitro fractures from cervical vertebra 1 to thoracic vertebra 4 was similar, but intervertebral disc, ligament and dislocation injuries were greatest around cervical vertebra 5 (C5). In contrast, the real world injury pattern was bimodal, with injuries occurring both at the occipito-atlantal joint, where the neck articulates with the head, and around C5, in the lordotic region of the cervical spine. This suggests that there may be different injury mechanisms present in the real world than in laboratory impact tests. This needs to be considered in developing a test protocol. Severe traumatic brain injury is another injury that occurs frequently in rollover crashes. Issues around injury mechanisms, taking into account the head and cervical spine, are presented.

http://www.rsconference.com/roadsafety/detail/1051?check=1

Motorcycles

- **Crash characteristics of motorcyclists impacting road side barriers**

  Bambach M, Grzebieta R.H., McIntosh AS (Conference Year 2010)

  Australasian Road Safety Research, Policing and Education Conference

  Motorcyclist serious injuries and fatalities significantly contribute to road trauma in Australasia. The role of road side safety barriers in such trauma is an area of growing concern amongst motorcyclists, road authorities and road safety researchers and advocates. This paper is the second of a series of papers presenting results from a retrospective case study of motorcyclists that were fatally injured following a collision with a road side barrier during the period 2001 to 2006 in Australia and New Zealand. In this paper, characteristics of the crashes such as barrier and motorcycle types, crash modes, motorcyclist kinematics, pre-crash speeds and impact trajectory angles are documented.

  http://www.rsconference.com/RoadSafety/detail/1031

- **Crash characteristics of helmeted motorcyclists**

  McIntosh AS, Pang TY, Thai K.T, Schilter E, Rechnitzer G, Finch C.F., McCrory P (Conference Year 2010)

  Australasian Road Safety Research, Policing and Education Conference

  The preliminary results of a prospective study of motorcycle crashes are reported. Motorcyclists were recruited from three major trauma centres in Sydney and through motorcycle organisations. The main sample criteria were that the cyclist crashed, and that they hit their head while wearing a helmet. Injury and non-injury cases were collected. Case sampling occurred over a period of 18 months. The response rate through hospitals was approximately 14% for those meeting the selection criteria. All motorcyclists were interviewed and the helmets were examined. Characteristics such as environment (road

type), vehicle (vehicle damage and interaction) and human factors were recorded. The location of helmet impacts and patterns of helmet damage were recorded. Injuries were documented and rated according to severity. The relationships between the crash characteristics, helmet use and injury will be presented.

http://www.rsconference.com/RoadSafety/detail/1050

- **Crash characteristics of helmeted pedal cyclists**

  McIntosh AS, Pang TY, Thai K.T, Schilter E, Rechnitzer G, Finch C.F., McCrory P (Conference Year: 2010)

  Australasian Road Safety Research, Policing and Education Conference

  The results of a prospective study of pedal cycle crashes are reported. Cyclists were recruited from three major trauma centres in Sydney and through cycle organisations. The main sample criteria were that the cyclist crashed, and that they hit their head while wearing a helmet. Injury and non-injury cases were collected. Case sampling occurred over a period of 18 months. The response rate through hospitals was approximately 14% for those meeting the selection criteria. All cyclists were interviewed and the helmets were examined. Characteristics such as crash characteristics and injury are reported. The relationships between the crash characteristics, helmet use and injury are presented. The paper reports on 98 cases and excludes fatal cases. Half of the cyclists did not experience a head injury.

  http://www.rsconference.com/RoadSafety/detail/1100

- **In Australia, is injury less in recent cars than in earlier cars? Evidence from comparing the injury severities of two drivers in the same collision**

  Anderson RWG, Hutchinson TP (Conference Year 2010)

  Australasian Road Safety Research, Policing and Education Conference

  Comparison of the severities of injury to the two drivers in the one collision is useful because speed of the impact is the same for the two drivers. Using the dataset of routinely-reported crashes in South Australia, 1991-2008, a multiple logistic regression was carried out, the dependent variable being the ratio of the probabilities of the drivers of car 2 and car 1 being killed, conditional on exactly one of them being killed. The independent variables were the difference between the two cars in their build years, the difference between the drivers' ages, and an allowance for whether the vehicles fell within a narrow definition of car. Statistically significant effects were found for all of these. In a similar regression with the probabilities referring to the drivers being seriously injured, an effect of car year was again found.

http://casr.adelaide.edu.au/publications/list/?id=1182

Speed Specific Studies

- **Changes to speed limits and crash outcome – Great Western Highway case study**

  Bhatnagar Y, Saffron David, de Roos Michael, Graham Andrew (Conference Year 2010)

  Australasian Road Safety Research, Policing and Education Conference

  Numerous studies, across many countries, have evaluated the outcomes of changes in prevailing speed limits. Fatalities and injuries have fallen when speed limits have been lowered and have increased when speed limits have been raised. Models of speed changes allow a prediction of the safety benefits of a speed limit reduction. This paper studies the relationship between changes in the posted speed limits and crash history for a section of the Great Western Highway in rural NSW, where the speed limit was reduced from 110 km/h to 100 km/h. This study showed that travel speeds are reduced following a speed limit reduction, with clear safety benefits (26.7% reduction in casualty crashes) consistent with power model. Use of modelling in crash prediction depends, however, on a reasonably accurate estimate of the speed reduction expected.

  http://www.rsconference.com/RoadSafety/detail/1095?check=1

- **Vehicle speeds in South Australia 2008**
  CASR

  Kloeden CN, Woolley JE (2010)

  A systematic and ongoing method of measuring vehicle speeds was introduced in South Australia in 2007 to assess the effects of speed reduction countermeasures and to monitor the speed behaviour of South Australian motorists over time. Speed data was collected for one week at each of 130 sites in 2007 and 2008. Summary volume and speed statistics and speed distributions are given for each of the road types surveyed in both years (for all vehicles and just free speed vehicles). Changes in speed measurements for each of the road types between 2007 and 2008 were tested for statistical significance. All road types showed reductions in speed measurements from 2007 to 2008 with the exception of 80 km/h Adelaide arterial roads.

  http://casr.adelaide.edu.au/publications/list/?id=1162

Technology for Vehicle Safety

- **Case Study – penetration of Electronic Stability Control and curtain airbags in the Victorian market**

  Truong J, Cockfield Samantha, Thompson John, Gubana J, Mulholland Emma (Conference Year 2010)

  Australasian Road Safety Research, Policing and Education Conference

  Vehicle safety is one of the main pillars of the Safe System approach and its importance in combating the road toll is well recognised. In recent years, a number of vehicle safety features have gradually entered the market, with a few showing great road safety potential, particularly Electronic Stability Control (ESC) and Curtain Airbags (CA). The proven safety benefits of ESC and CA made them worthy candidates for promotion by the Transport Accident Commission (TAC) and its road safety partners in Victoria. Since the commencement of promotional activities and public education campaigns, the number of new vehicles sold in Victoria with ESC and CA has risen from a low of 22% and 24% respectively in 2006 to close to 60% and 50% respectively at the end of 2009. More importantly, public awareness and demand for these safety features encouraged the Victorian Government to ensure they were available on all new passenger vehicles, and in 2008 it was the first jurisdiction in Australia to mandate ESC and CA in new vehicles from 2011 and 2012, respectively. This paper will provide a detailed case study on how public education created critical demand for safety features and paved the way for the Government to mandate these technologies."

  http://www.rsconference.com/index.html

- **Optimizing driver performance monitoring and feedback: An innovative approach utilizing a global mobile interactive e-platform**

  Levick Nadine (Conference Year 2010)

  Australasian Road Safety Research, Policing and Education Conference

  This is a pilot study of a new concept in real time driver behaviour monitoring and feedback. It uses a smartphone e-platform configured to enhance Intelligent Speed Adaptation (ISA), capture real time two way vehicle operations data and to simultaneously remove driver distraction from mobile phone calls and texting. The smartphone is configured with a downloadable software application (app) with telematics, Global Green Drive (GGD), and operates via an e-platform integrated with GPS and GPRS, and capable of immediate auditory driver feedback with analysed driver performance data for fleet management oversight. The smartphone is capable of detecting vehicle motion via both the accelerometer and changes in GPS and GPRS location. It also has the capacity to identify harsh braking. Software configuration can also disable the use of texting and non-emergency

calls whilst the vehicle is in motion. The smartphone devices and e-platform were implemented initially in small fleet settings in 5 countries, UK, USA, Ireland, Switzerland and Australia. Preliminary evaluation data captured as quality assurance (QA) data for a 6 week period identified rectifiable operational and implementation issues - and demonstrated user functionality, device stability and performance on a range of diverse mobile phone handsets and environments."

http://www.rsconference.com/roadsafety/detail/1049?check=1

- **Case Study – penetration of Electronic Stability Control and curtain airbags in the Victorian market**

  Truong J, Cockfield Samantha, Thompson John, Gubana J, Mulholland Emma (Conference Year: 2010)

  Australasian Road Safety Research, Policing and Education Conference

  Vehicle safety is one of the main pillars of the Safe System approach and its importance in combating the road toll is well recognised. In recent years, a number of vehicle safety features have gradually entered the market, with a few showing great road safety potential, particularly Electronic Stability Control (ESC) and Curtain Airbags (CA). The proven safety benefits of ESC and CA made them worthy candidates for promotion by the Transport Accident Commission (TAC) and its road safety partners in Victoria. This paper will provide a detailed case study on how public education created critical demand for safety features and paved the way for the Government to mandate these technologies.

- **Attitudes and opinions towards Intelligent Speed Adaptation**

  Cuenca Vanessa, Wall J. P., Boland Peter, Prendergast Margaret, Creef Kim, Johnson Bettina, Barnes Ben (Conference Year 2010)

  Australasian Road Safety Research, Policing and Education Conference

  This paper presents the results of the attitudinal and behavioural research undertaken as part of the NSW Intelligent Speed Adaptation (ISA) Trial. Over 110 light vehicles from private and company fleets were fitted with an Advisory ISA device. In addition to the collection of speed records to measure compliance, drivers were asked to participate in quantitative and qualitative attitudinal research through focus groups, surveys and in-vehicle observations before, during and after their use of the device. The research examined a range of issues including motivators for using ISA, perceived benefits of the technology, and gathered feedback on the useability of the device. Analysis of pre and post-ISA attitudes towards speeding and self-reported speeding behaviour was also undertaken. Results from the attitudinal research indicated that a majority of participants reported a reduction in the margin by which they exceeded the speed limit. Some drivers reported speeding less frequently either because the ISA device made them more aware of the speed limit, or because they wanted to avoid the audible warnings. There were no widespread concerns

about the technology being distracting. Participants also reported being more aware of exceeding the speed limit, therefore speeding became a conscious choice rather than an inadvertent action. The acceptability of the ISA technology was generally high, but most participants felt that there should be an element of choice for the driver on whether to install the ISA technology.

http://www.rsconference.com/RoadSafety/detail/1088

- **Preliminary analysis of Intelligent Speed Assist and Heavy Vehicles: A trial to assess safety, fuel consumption and driver acceptability**

  Truong J, Fitzharris Michael, Stephan Karen, Healy David, Rowe G, Collins Samantha (Conference Year 2010)

  Australasian Road Safety Research, Policing and Education Conference

  The road safety benefits of intelligent speed assist (ISA) have been demonstrated in a number of projects worldwide. These benefits, however, are yet to be replicated in the heavy vehicle industry. With freight travel by road predicted to double by 2020, fuel costs predicted to rise and environmental issues looming large, the role of speed management in helping companies to reduce crashes, contain costs and remain competitive is likely to play an increasingly important role in the operational plans of many transport operators. In this regard, ISA may have an important role to play. A small-scale trial conducted by the Transport Accident Commission (TAC) in collaboration with the Victorian Transport Association (VTA) and with the cooperation of several heavy vehicle companies sought to assess the relative merits of ISA in terms of speed choice, fuel consumption, and driver acceptability. This paper discusses some preliminary results from Phase One of the data analysis.

- **Cost benefit analysis of Intelligent Speed Adaptation**

  Doecke SD, Anderson RWG, Woolley JE (Conference Year 2010)

  Australasian Road Safety Research, Policing and Education Conference

  This paper details a cost benefit analysis of intelligent speed adaptation (ISA) in Australia. The extent of the problem of speed related crashes in Australia is estimated from mass crash data. An analysis of the benefits of ISA is conducted by describing the effect of the differing levels of ISA (advisory, supportive and limiting) found in the UK-ISA trial on the distribution of speeds of vehicles. These effects are applied to distributions of speeds measured on Australian roads and the resulting distributions are multiplied by Kloeden's risk curve for free travel speed to determine the benefits of ISA. The costs of dedicated in-vehicle ISA devices and digital speed limit map production and maintenance are estimated. Economic analyses are conducted on implementation scenarios, including installing ISA on all vehicles, new vehicles and fleet vehicles. Navaid devices are also considered. ISA was determined to be able to reduce injury crashes by 7.7%, 15.1% and 26.4% for advisory, supportive and

limiting ISA respectively. In monetary terms this equates to $1,226 million per year saved with advisory ISA, $2,240 million per year saved with supportive ISA and $3,725 million per year saved with limiting ISA, if fitted to all vehicles. Limiting ISA produced the highest benefit cost ratio (BCR) and break even price. The new vehicles scenario generally produced the highest BCR.

http://casr.adelaide.edu.au/publications/list/?id=1180

- **The effects of Electronic Stability Control interventions on rural road crashes in Australia: simulation of real world crashes**

  Mackenzie JRR, Anderson RWG (2009)

  Published by the Department of Infrastructure, Transport, Regional Development and Local Government

  About 60 per cent of all fatal road crashes in Australia occur on rural roads. While advances have been made in reducing the number of fatal crashes on metropolitan roads, the number of fatal crashes on rural roads remains relatively steady. Electronic Stability Control (ESC) is an active safety system which has shown potential in preventing crashes on high speed rural roads. The ESC system can detect when a vehicle is about to skid and apply braking interventions to individual wheels to prevent the skid from occurring. Previous studies have shown that vehicles equipped with ESC have a significantly reduced crash rate compared with vehicles not equipped with ESC. However the way that the ESC system intervenes to prevent or lower the severity of crashes on rural roads has not been elucidated. Twenty crash scenarios were developed based on actual rural road crashes obtained from an in-depth crash database. With the assistance of Robert Bosch (Australia) Pty. Ltd., 12 of the scenarios were simulated using a vehicle model with and without ESC fitted. The simulations produced detailed plots that displayed the timing and magnitude of the ESC systems interventions. In two of the scenarios, no simulation was necessary as the driver made no attempt to avoid a collision. In six scenarios, the attempt at simulation was unsuccessful. For the 12 successful simulations, ESC was found to prevent a collision in 10 cases and reduce the severity of a collision in the other two.

  http://casr.adelaide.edu.au/publications/list/?id=1107

- **The potential effects of Electronic Stability Control interventions on rural road crashes in Australia: simulation of real world crashes**

  Mackenzie JRR, Anderson RWG (2009)

Twenty crash scenarios were developed based on actual rural road crashes obtained from an in-depth crash database. With the assistance of Robert Bosch (Australia) Pty. Ltd., the scenarios were simulated using vehicle models with and without Electronic Stability Control (ESC) fitted. In two of the scenarios, no simulation was necessary as the driver made no attempt to avoid a collision. In six scenarios, the attempt at simulation was unsuccessful. For the twelve remaining simulations that were successful, ESC was found to prevent a collision in ten cases and reduce the severity of a collision in the other two. Output plots from the simulations showing the timing and level of interventions enabled an analysis of how ESC was able to prevent or lower the severity of a collision.

http://casr.adelaide.edu.au/publications/list/?id=1114

- **Modeling the improvements in vehicle safety through uptake of safety features in new cars and strategies to increase penetration throughout the fleet**

  C-MUARC Project Number 15

  On behalf of the Western Australia Road Safety Council (Contact: Claire Thompson)

  2009 - current

  The purpose of this project is to quantify safety benefits that may be obtained through the adoption of alternative vehicle purchasing practices in Western Australia. The project will particularly consider the extent to which the adoption of alternative vehicle purchasing practices by fleet managers in Western Australia will benefit the owners of commercial and government fleets as well as the wider community once fleet vehicles pass into private ownership. This project is similar in purpose to the research by Newstead et al. (2007) for Austroads. However the scope of the present project is limited to examining the benefits of alternative fleet purchasing policies for Western Australian government agencies and commercial fleets, while the earlier Austroads project looked at the benefits across all Australian jurisdictions. This work has been delayed due to issues accessing licensing data but will continue ASAP.

Vehicle Design Characteristics

- **In Australia, is injury less in recent cars than in earlier cars? Evidence from comparing the injury severities of two drivers in the same collision.**
  CASR

  Anderson RWG, Hutchinson TP (In progress)

  Comparison of the severities of injury to the two drivers in the one collision is useful because speed of the impact is the same for the two drivers. Using the dataset of routinely-reported crashes in South Australia, 1991-2008, a multiple logistic regression was carried out, the dependent variable being the ratio of the probabilities of the drivers of car 2 and car 1 being killed, conditional on exactly one of them being killed. The independent variables were the difference between the two cars in their build years, the difference between the drivers' ages, and an allowance for whether the vehicles fell within a narrow definition of car. Statistically significant effects were found for all of these. In a similar regression with the probabilities referring to the drivers being seriously injured, an effect of car year was again found.

  http://casr.adelaide.edu.au/publications/list/?id=1182

- **Vehicle age-related crashworthiness of the South Australian passenger fleet**
  CASR

  Anderson RWG, Doecke SD, Searson DJ (2009)

  In this report, the crashworthiness of passenger vehicles in South Australia is characterised. For this purpose crashworthiness is defined as the rate of serious and fatal crashes per crash of any severity. The relationship between this rate and the ages of passenger vehicles is used to characterise and compare the crashworthiness of the South Australian registered passenger vehicle fleet and the fleets of other Australian jurisdictions.

  http://casr.adelaide.edu.au/publications/list/?id=1078

- **Headform impact test performance of vehicles under the GTR on pedestrian safety**
  CASR

  Searson DJ, Anderson RWG, Ponte G, Van Den Berg AL (2009)

  A Global Technical Regulation (GTR) on pedestrian safety is currently in its final draft stages, and may be adopted in Australia as an Australian Design Rule. Currently, selected new

vehicles are tested by the Australasian New Car Assessment Program (ANCAP) for pedestrian protection; the GTR testing procedure is similar, but has different test conditions. The goal of this study was to estimate how many vehicles tested by ANCAP might be expected to pass the headform testing requirements of the GTR based on the vehicles ANCAP performance. Initially, three popular vehicles were tested to the specifications of the GTR. The resulting data was used to validate a theoretical relationship that predicts the change in Head Injury Criterion (HIC) for a given change in headform mass and impact speed. This relationship was used to predict the best-case and worst-case results for 60 vehicles previously tested by ANCAP, 33 of which are current models. The results indicate that a relatively small number of vehicles would be expected to unequivocally pass the GTR requirements, however many more may pass with little to no modifications.

http://casr.adelaide.edu.au/publications/list/?id=1139

- **The relative age related crashworthiness of the registered South Australian passenger vehicle fleet**
  CASR

  Anderson RWG, Doecke SD (2010)

  Journal of the Australasian College of Road Safety

  In this paper, the crashworthiness of passenger vehicles in South Australia is characterised. For this purpose, crashworthiness is defined as the rate of serious and fatal crashes per crash of any severity. The relationship between this rate and the ages of passenger vehicles is used to characterise and compare the crashworthiness of the South Australian registered passenger vehicle fleet and the fleets of other Australian jurisdictions.

  http://casr.adelaide.edu.au/publications/list/?id=1163

- **The effect of bull bars on head impact kinematics in pedestrian crashes**
  CASR

  Anderson RWG, Doecke SD, Van Den Berg AL, Searson DJ, Ponte G (2009)

  Sponsored by the Motor Accident Commission

  This study sought to assess the effect of bull bars on the head kinematics and head impact severity of an adult pedestrian in a collision. Multibody models were created to represent a range of sport-utility vehicles and common bull bar geometries and materials. The contact-impact behaviours of the pedestrian-vehicle interactions were determined from a series of impact tests with the vehicles and the bull bars being modelled. A generalised Hunt-Crossley

damping model was fitted to the test data. The interaction models were implemented in MADYMO models of a vehicle pedestrian collision using the geometry of the vehicles and bull bars and a fiftieth percentile male human model. Head kinematics were extracted and the head impact severity estimated.

http://casr.adelaide.edu.au/publications/list/?id=1058

- **Vehicle mass as a determinant of fuel consumption and secondary safety performance: a comment**

  Hutchinson TP, Anderson RWG (2009)

  Transportation Research Part D: Transport and Environment (Journal)

  Attention is called to evidence that in collisions between vehicles of equal mass, and in single-vehicle collisions, there is unlikely to be a very strong effect of car size on injury severity, and that variation in crashworthiness within the set of car models of a given size has a much larger effect. Consequently, the secondary safety of a national fleet of small cars in the future could be as high as that of a national fleet of large cars today.

  http://casr.adelaide.edu.au/publications/list/?id=1140

- **Improving Safety of Heavy Vehicles in Urban Areas – Stage 1**
  Austroads (SS1430)

  Potter J, National Transport Commission (To be completed mid 2012)

  The project seeks to gain a comprehensive understanding of urban truck safety issues and to recommend a strategy to improve the safety of urban truck operations. More than 80% of crashes involving trucks in Australia occur in urban areas.. Concern about heavy vehicle safety has been heightened with predictions that heavy vehicle activity will increase markedly over the coming years. The proposed research will gain a fundamental understanding of the issues, develop possible options for countermeasures in consultation with the industry, the community and the road authorities, and cost and prioritise the actions to emerge from these processes.

  jpotter@ntc.gov.au – for report details

- **The impact of changed in the Australian vehicle fleet on crashworthiness and crash outcomes**
  Austroads (SS1570)

  Palmer P, Queensland Department of Transport and Main Roads

This project will examine trends in the composition of the Australian vehicle fleet that are relevant to crash incompatibility and that can be ascertained from accessible sources of mass data. The project will estimate the consequences of the composition of the fleet for crashworthiness and for crash outcomes and estimate benefits of altering the composition in certain ways, focussing on the masses of vehicles. The project will include an examination of the effect of vehicle mass on crash outcomes in both single vehicle and multi-vehicle crashes.

pam.z.palmer@tmr.qld.gov.au – for report details

Databases

State Databases:

NSW

- Road Safety, RTA (NSW) - www.rta.nsw.gov.au
    - o contains monthly, annual and daily crash updates
    - o fleet registration statistics
    - o licences

VIC

- Road Safety, VicRoads - http://www.vicroads.vic.gov.au
    - o very little data/statistics
    - o good collection of links
- Transport Accident Commission, Victoria (TAC) - http://www.tac.vic.gov.au/jsp/corporate/homepage/home.jsp
    - o daily toll
    - o annual summaries

WA

- Office of Road Safety - http://www.officeofroadsafety.wa.gov.au/
    - o Crash statistics

SA

- Transport South Australia - http://www.transport.sa.gov.au/index.asp
    - o monthly and annual bulletins

QLD

- Road Safety Queensland (Part of Queensland Transport) - http://www.roadsafety.qld.gov.au/
    - o very limited summary of current year fatality and crash counts

TAS

- Transport Tasmania - http://www.transport.tas.gov.au/safety/crash_statistics
    - Annual road crash statistics

ACT

- Urban Services – statistics - http://www.urbanservices.act.gov.au/transport/roadsafety/crash
    - very limited annual crash statistics

NT

- Department of Primary Industries (DPI) - http://www.dpi.nt.gov.au/whatwedo/roadsafety/researchandstatistics/
    - quarterly and annual road crash statistics

National Coverage of Fatalities:

- **Australian Road Deaths Database** – maintained by BITRE http://www.infrastructure.gov.au/roads/safety/road_fatality_statistics/fatal_road_crash_database.aspx
- **Fatal Road Crash Database** – maintained by Victorian Institute of Forensic Medicine
- **National Coroners Information System** – maintained by Victorian Institute of Forensic Medicine
- **National Hospital Morbidity Database** – maintained by the Australian Institute of Health and Welfare

Product Safety and Design:

- Database of Expertise in Product Safety and Safe Product Design
  Motor vehicles (cars/trucks/vans)
  http://www.monash.edu.au/muarc/cgi-bin/expertise.pl?expertise=27

From: Paule, Rod
To: Hunter, Peter
Subject: one for the Board
Date: Friday, 10 August 2012 7:54:00 AM

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http://www.gizmag.com/autonomous-braking-compulsory-europe/23647/

Rod Paule | Manager Road Transport Regulation |
Phone 02 620 77115 | Fax 02 620 77160 |
Office of Regulatory Services | Justice and Community Safety | **ACT Government**
Level 2 Macarthur House, 12 Wattle Street, LYNEHAM ACT 2602 | GPO Box 158 Canberra ACT 2601 |
www.act.gov.au

Callow, Lauren

From: Davidson, Geoffrey
Sent: Tuesday, 4 September 2012 8:27 AM
To: Hunter, Peter; Paule, Rod; McDonald, Gary; Lazzari, Chris
Subject: FW: ANCAPStar: Vehicle Safety News & Updates (Edition 4, September 2012)

For info only

From: ANCAP [mailto:ancap=ancap.com.au@createsend4.com] **On Behalf Of** ANCAP
Sent: Monday, 3 September 2012 3:17 PM
To: Davidson, Geoffrey
Subject: ANCAPStar: Vehicle Safety News & Updates (Edition 4, September 2012)

View Online

Hi Geoffrey

Welcome to the next edition of the *ANCAPStar* – a round-up of the latest news and updates from the Australasian New Car Assessment Program (ANCAP).

ANCAP provides consumers with independent and transparent advice and information on the level of occupant and pedestrian protection provided by vehicles in the most common types of crashes. Our member organisations include the Australian and New Zealand automobile clubs, Australian Federal, State and Territory Governments, the New Zealand Government, the Victorian Transport Accident Commission, NRMA Insurance and the FIA Foundation (UK).

Meet all of our member organisations.

Latest Media Releases.

30 August 2012

Australasia's Next Electric Car Achieves Top Safety Rating

ANCAP today announced ANCAP safety ratings for a range of small to medium

vehicles including Australasia's next electric-powered car - the Holden Volt.

15 August 2012

Continuous Development in Crash Testing

ANCAP today gave its support for the continuous development of crash testing following the release of findings of a new small overlap frontal crash test by the Insurance Institute of Highway Safety (IIHS) in the United States.

ANCAP Chairman, Mr Lauchlan McIntosh was interviewed on *Weekend Sunrise* (19 August) in relation to the small overlap test. To view the interview, click here.

18 July 2012

Autonomous Emergency Braking Can Slash the Road Toll

ANCAP today welcomed reports from Europe and the United States of America identifying the safety assist technology (SAT) Autonomous Emergency Braking (AEB) as a potential life-saver.

13 July 2012

Stellar Safety for New Colorado, i30 and BRZ

ANCAP today congratulated the stellar achievements of the Holden Colorado, Hyundai i30 and Subaru BRZ - each achieving the maximum 5 star ANCAP safety rating in the most recent round of crash testing.

Chairman's Update.

Some of you will have helped to "expand the reach" at this year's Australasian College of Road Safety (ACRS) National Conference held in Sydney on 9-10 August and I trust you found the topics covered of relevance. In addition to my role as ANCAP Chairman, I too sit at the helm as President of the College and we were honoured to have our College Patron, Her Excellency Ms Quentin Bryce AC CVO, Governor-General of the Commonwealth of Australia officially open the conference and show her interest and support for the UN Decade of Action for Road Safety. You can watch the Governor-General's opening address here.

Parliamentary Secretary for Infrastructure and Transport, The Hon. Catherine King MP was also in attendance, addressing the 200+ delegates on the importance of a common-goal approach to road safety in Australia through the Safe System pillars. Ms King remarked that while improving the safety of vehicles through changes to national standards, the Australian Government had also turned its efforts to complementary safety measures including becoming a member of ANCAP in 2010, and from 1 July last year, requiring all of its fleet passenger vehicles to hold the maximum 5 star ANCAP safety rating. Ms King reiterated ANCAP's position on the significance of this decision saying "in around two years, these fleet vehicles [will] enter the second-hand market. If all fleet operators took up the ANCAP rating we would see a dramatic shift in the number

Holden Volt (2012-on)
Renault Megane (2011-on)
Audi Q3 (2012-on)
Nissan Juke (NZ) (2012-on)
Hyundai i30 (2012-on)
Holden Colorado (2012-on)
Subaru BRZ (2012-on)

Suzuki Splash (NZ) (2011-on)
4 stars
Ford Mondeo (NZ) (2003-2006)
4 stars
How does **your** car rate?

You asked us...

Is there any technical relation between airbags and seat belts - for example, if a person is not wearing a seat belt at the time of a crash, will the airbag still deploy?

Our expert said...

Airbags are supplementary restraint systems (SRS) which means they are designed to work in conjunction with seat belts. The airbag will deploy in a serious crash even if the occupant is not wearing a seat belt. The airbag alone however will not protect nearly as well as the combination of a seat belt and airbag. There is also a much greater risk of occupant ejection when a seat belt is not used.

Got a question for us?
Ask one of our experts.

of 5 star rated cars available to younger drivers."

I provided the conference delegates with an update on the College's progress in the first year of the Decade of Action including requesting a Productivity Commission Inquiry into national impacts of road trauma to demonstrate economy wide affects. You can read my update here.

Road safety is a collaborative effort and I encourage you all to assist with road safety initiatives in your local communities.

Lauchlan McIntosh AM
ANCAP Chairman

ANCAP's Newest Member.

The Northern Territory has reinforced its commitment to reducing the road toll through the promotion of safer vehicles, joining as a Contributing Member of ANCAP from July 2012. The Northern Territory Government, through its Department of Lands and Planning, becomes the 22nd member of ANCAP joining the other Australian state governments, the Australian and New Zealand Governments and automobile clubs, the Victorian Transport Accident Commission, NRMA Insurance and the FIA Foundation.

49 lives were lost on NT roads during the 12 months ending July 2012.

ANCAP welcomes the support of the Northern Territory Government and looks forward to working with its newest member on progressing vehicle safety initiatives across the Territory.

Private Fleet is a privately owned car buying service operating from Sydney which has been servicing the automotive needs of both businesses and private individuals since 1999. Their philosophy is to provide customer service above and beyond the expectations of their clients, and vehicle safety is a top priority.

In helping to spread the word of the importance of ANCAP safety ratings and the purchase of 5 star cars, Private Fleet generously assisted in promoting ANCAP's most recent national online advertising campaign to some 90,000 Australian motorists. Visit privatefleet.com.au/ancap for more. You can also stay in touch with Private Fleet, via Facebook or follow them on Twitter.

Want to stay in the loop on all things ANCAP? Then why not 'Like' us on Facebook (facebook.com/ANCAPCrashTesting) or follow us on Twitter @ancapcrashtests.

The Decade of Cars.

Around 370 car occupants were killed in road crashes in Sweden in 2001. Last year, in 2011, that figure reduced to 170, equating to more than a 50% reduction. The reasons behind this remarkable reduction are well known. The mid-separation of roads, speed cameras, and more random breath tests have all been very effective, but a substantial part of the reduction can be attributed to the gradual replacement of the older car population. The cars sold between 2002 and 2011 are dramatically better than those built in the1980s and early 1990s. In fact, the risk of the driver being killed in one of these newer vehicles - especially those sold after 2005 - is a third of the risk in the cars that are being replaced. It's therefore no surprise that the numbers of fatalities are declining, although it's frustrating that we've had to wait so long for the older fleet to be faded out.

A recently published Swedish study looked at whether or not these fatalities could be reduced by 50% once more over the next decade, up to 2020. Fatal crashes from 2010 were analysed and the cars involved were replaced by models that were 10 years younger - i.e. if the car involved was MY2002, it was replaced with a similar MY2012 car, the technology and crash performance of which is well known. And for those cars involved in 2010 crashes that were made after 2006, the researchers made assumptions about the technologies that could be integrated, as the Euro NCAP road map is well established.

The results are simply astounding. Even based on conservative forecasts, there is no doubt that the number of car occupants killed will more than halve again. And if we factor in more enforcement, it could reduce by two thirds by 2020. And this will continue...

The majority of these reductions will also be down to the ongoing upgrading of the vehicle fleet, hence why I refer to 'the decade of cars' - an era of cars utilising the technologies that we're just starting to see materialise now. It all looks promising, but there are a few things we need to bear in mind. First, the forecast does not look equally bright for vulnerable road users, such as motorcyclists and cyclists. These vehicles do not rely so much on technological development. Second, the positive results will not happen automatically. The forecast in Sweden for 2020 relies heavily on the technology developments and market penetration from the 2000-2010 period. Hence why Euro NCAP, market behaviour and political involvement will all be vital. So far, very few - if any - nations have a vehicle policy that stimulates safe and innovative vehicles.

Something else an advance forecast suggests is that the future appears very different from today - and even more so from the past. All of those people using historical crash data be warned - it no longer reveals the truth about what should be on the planning horizon. On the contrary, with changes occurring so rapidly now, we have very little to learn from the past. While this might seem slightly

sad or even overoptimistic, it is a reality. So if the number of people killed in cars in Sweden does drop from 370 to 50 in 20 years, although some problems will have been solved, others will remain. We can also be certain that the solutions to the final 50 before reaching zero will be completely different to those that helped to save the previous 320.

Claes Tingvall is director of Traffic Safety at the Swedish Transport Administration and adjunct professor at the Department of Applied Mechanics at Chalmers University of Technology in Gothenburg.

Article by Claes Tingvall
Vision Zero International, June 2012

In response to this article, see ANCAP Chief Executive Officer's Letter to the Editor:

To the Editor:

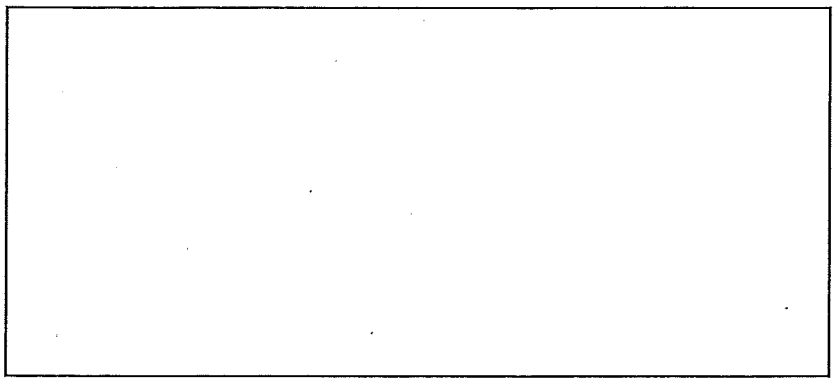
The Australasian New Car Assessment Program (ANCAP) wholeheartedly agrees with the points raised by Mr Claes Tingvall (The decade of cars, page 13, June 2012) that newer, safer cars will be the key drivers in reducing the road toll.

With new safety assist technology being developed at an exponential rate there is no doubt in my mind that many lives can and will be saved over the next decade and beyond. Electronic Stability Control, Emergency Brake Assist, Autonomous Emergency Braking, Collision Avoidance, Lane Departure Warning, Blind Spot Monitoring, Fatigue Monitoring, Vehicle-to-Vehicle Communication - the list is almost endless. The key element that many of these new technologies have is that they remove the driver from the safety equation.

We all seem to think that we are fantastic drivers but in reality we are all at risk and from time to time we all do things that put us in the category of 'bad drivers'. Safety assist technology will save us from ourselves.

The biggest challenge for Governments around the world is to devise incentives to encourage consumers to update their cars quickly so that they can take advantage of the much improved safety of newer vehicles. The average age of a car in Australian & New Zealand is about 10-12 years old. Without some stimulus it will take many years before the entire population can reap the benefits of safer vehicles and sadly this means many unnecessary lives will be lost.

Yours faithfully,
Nicholas Clarke



Pedestrian Testing Explained.

Introduced in 2000, ANCAP pedestrian tests are designed to measure the risk of injury to pedestrians in a collision with the front of the vehicle. Many kinds of crash tests use instrumented dummies to measure injury risk, but for pedestrian safety tests, 'sub-system' impactors (head/legforms) representing different regions of the body are used. The different impactors represent the head of an adult, the head of a child, the upper leg of an adult and the knee/lower leg.

The headform tests are conducted in 12 different positions across the bonnet and at the base of the windscreen at a speed of 40 km/h. The results of the headform tests contribute most heavily to the overall assessment of the vehicle. The headform measures impact deceleration, and this is used to rate the severity of the impact.

The upper legform tests are conducted along the leading edge of the vehicle, around the forward-most area of a vehicle's bonnet. The upper legform measures the severity of the impact and the risk of fracture to an adult pedestrian's femur and pelvis.

The full legform tests are conducted along the front bumper of the vehicle, and measure the risk of ligament damage to the knee and the risk of fracturing the tibia and fibula. Knee injury is assessed by examining the kinematics of the 'knee joint' in the legform and tibia / fibula fracture risk by the impact deceleration of that part of the legform.

Individual test scores are summarised into one of three pedestrian ratings - Acceptable, Marginal or Fail. A vehicle is required to achieve a minimum pedestrian rating of Marginal to obtain the maximum 5 star ANCAP safety rating. This minimum rating requirement will increase to Acceptable in 2014.

All ANCAP pedestrian tests are conducted by the Centre for Automotive Safety Research's (CASR) Vehicle Testing Laboratory in Adelaide.

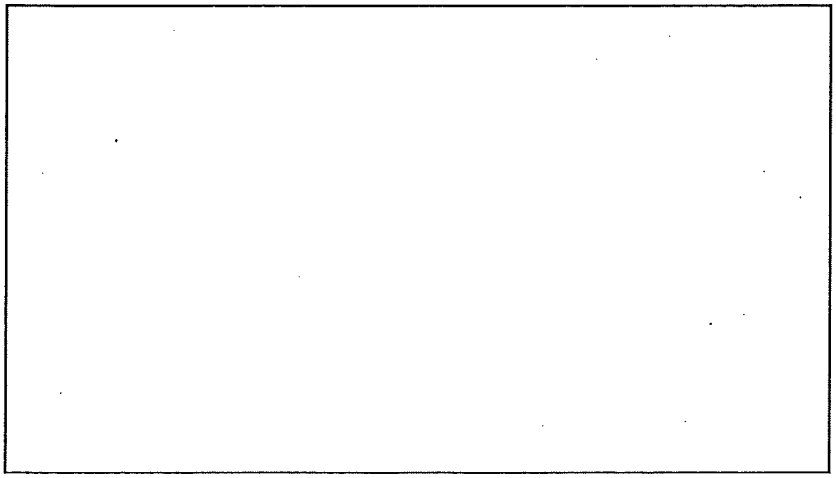
33,900

In 2010, 33,900 people were killed or seriously injured on roads in Australia. As part of the United Nations Decade of Action for Road Safety, the group *33,900: The Australian Road Safety Collaboration* was formed, of which ANCAP is a member within the Safer Vehicles pillar.

The 33,900 collaboration was established to facilitate greater industry collaboration and to further promote improved road safety outcomes across all sectors. The collaboration provides the links to unite and drive action across the Non-Government Organisation sector. The collaboration does not replace any of the roles undertaken by the individual organisation or members that it serves, and the focus is on the following functions:

- Strengthen: the individual members of 33900 and the activities they do to maximise the individual and combined road trauma reductions achieved
- Collaborate: within the Australian, regional and global road safety community, to share and disseminate information and support road safety activities
- Create: greater awareness, public debate and demand for action to reduce road trauma
- Advocate: for greater road safety action and political commitment including funding and legislative initiatives and accountability for targets that are (or should be) set.
- Promote: the views of the collaboration and its members and specific initiatives essential for achieving the desired Decade of Action outcomes
- Enhance: communication and action in the NGO Sector within Australia and as part of Australia's International response to the Decade of Action for Road Safety action
- Advise: lead agencies responsible for road safety action and provide links to 33900 members who can provide independent advice to drive good practice road safety

For more information about 33,900, visit 33900.org.au.

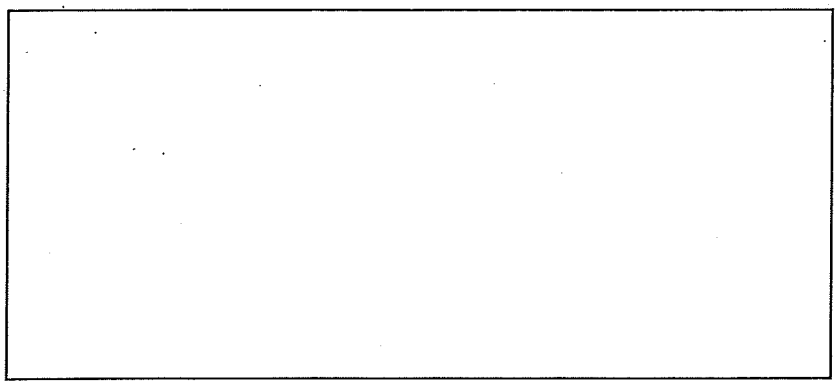


Accept Nothing Less.

Featuring proudly as part of ANCAP's new range of Point of Sale (POS) materials, the new tag line "Accept nothing less" has been developed and will be used in conjunction with the 5 star ANCAP rating logo to reinforce to consumers the importance of choosing a vehicle which holds the maximum 5 star ANCAP safety rating.

The POS materials produced to date include a revision of the existing ANCAP car rating labels for use by dealers. These are to be adhered to the corner of a vehicles' windscreen identifying that model as holding the maximum 5 star ANCAP safety rating. The new car rating labels now feature an interactive QR code which consumers can scan with their Smartphone while on the showroom floor, directing them straight to ANCAP's mobile website where they can view the safety ratings of over 400 vehicles at the click of a button. Large-scale re-usable windscreen stickers have also been produced for the showroom promotion of 5 star rated vehicles.

Dealers from across Australia and New Zealand can request quantities of these POS items by emailing ancap@ancap.com.au.



Crash Laboratory Profile: Crashlab®.

Crashlab is a world class road safety research and test facility owned and operated by the New South Wales State Government through its Roads and

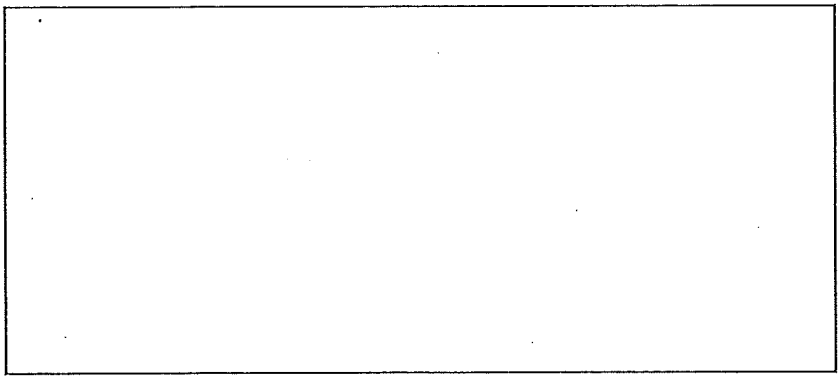
Maritime Services agency. The Crashlab test laboratory was established in 1969 and was the first laboratory of its kind in Australia, providing accurate and impartial technical research for the development and implementation of road safety policy and safety product Standards.

In 1992, a vehicle crash barrier facility was built at the Rosebery site with the express purpose of evaluating the crashworthiness of locally available vehicles through the establishment of the then New Car Assessment Program (NCAP) in late 1992. Coming prior to the introduction of ADR 69/00 and Euro NCAP, the NCAP testing represented a game-changing approach to vehicle safety and was subject to intense vehicle manufacturer and media scrutiny, requiring robust test practices and procedures from the outset.

With ANCAP now in its 20th year of testing, Crashlab has conducted over 370 tests for the program, and over 1000 vehicle crash tests in total. Crashlab's support of ANCAP has included the capability development and implementation of the frontal offset test (world first program in 1993); the side impact test in 1998; and the side pole test in 2004.

In 2005, Crashlab relocated to its current, purpose-built site in Huntingwood, Western Sydney. The 5500m2 undercover site includes a 480m2 central crash hall, 180m of fully enclosed runway, a movable 110 Tonne crash reaction block and a one hectare outdoor area for testing road safety barriers and vehicle rollover protection.

Today, Crashlab maintains a comprehensive third party NATA accreditation over a broad range of more than 50 discrete test services for pedal and motorcycle helmets, infant and child restraints, car/bus/truck/ferry and aircraft seats, fall arrest devices, jockey vests, seat belts, wheelchair restraints, vehicle and roadside infrastructure crash tests. In addition to its world class facilities, Crashlab staff support ANCAP with a wealth of knowledge and experience (over 350 man years) in vehicle and road user safety product research and testing.



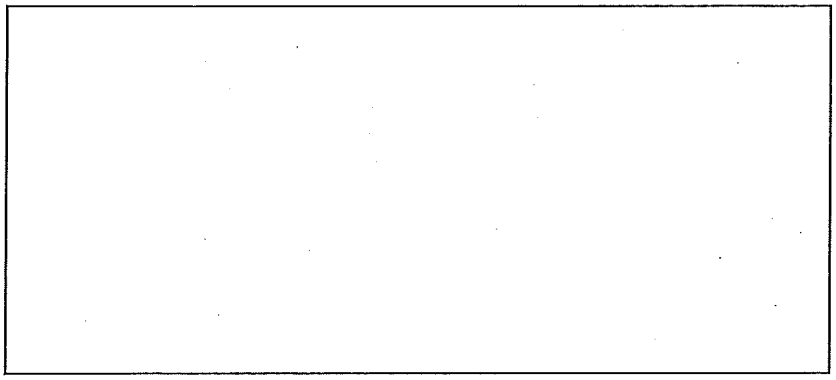
Visit ANCAP at the Sydney Motor Show.

ANCAP will participate for the first time as an exhibitor at the Australian International Motor Show to be held at the Sydney Convention & Exhibition Centre from 18-28 October 2012. Occupying exhibition space within Hall 4, ANCAP will showcase the 5 star Hyundai i45 which underwent a frontal offset crash test in 2010 and provide show-goers and fellow exhibitors with information on the crash testing process, the technologies which make vehicles safer, and

the importance of choosing a vehicle which has the maximum 5 star ANCAP safety rating. ANCAP's motto for the show is "Accept nothing less", and its staff will be encouraging consumers to look for the 5 star ANCAP safety rating when purchasing their next car.

ANCAP's presence at the Motor Show will be an interactive one, with a number of iPads available for the use of patrons to search the ANCAP website for the ANCAP safety rating of either their current or prospective vehicle model, as well as become familiar with the ANCAP website and the vast array of crash test information it features. The ANCAP exhibition will also feature plasma screens displaying actual crash test vision which will include the newly introduced whiplash test, as well as explanatory videos covering Safety Assist Technologies such as autonomous emergency braking, back over avoidance, lane departure warning and blind spot monitoring systems.

ANCAP looks forward to seeing you at the show.



They Don't Build 'em Like They Used To.

And thank goodness for that! We're not sure how the occupants of this early 1900s spec car would have fared after their collision with this tree. Not dissimilar from the ANCAP pole test really...

This is just one of the fascinating photos from the 1920s and 1930s showing the dramatic and most likely tragic side effect of the golden age of American motoring. Motor cars became affordable to the masses for the first time in the 1920s. By the end of the decade a Model T Ford cost around US$300, just a fraction of the US$1,200 it cost in 1909. The introduction of hire purchase also made it much easier for members of the public to buy cars, and by 1929, 20 per cent of Americans were on the road.

Ford, Chrysler and General Motors were all competing for the boom in business and by the time the depression hit in 1929, Ford was producing more than one car every minute. Technology meant these early cars were capable of achieving speeds of up to 80 kilometres per hour - but safety measures were nowhere near as advanced as they are today.

Crash Test Provider Profile.

Tony Forster
Test Operations Manager
APV-T Tech Centre

Instrumental to the success of ANCAP testing, Tony Forster has been involved with crash testing for over 28 years both in Australia and the United Kingdom.

What does your role involve?
I spend most of my day enabling the test team to provide the highest quality service to our customers. This involves managing people, processes and resources to produce the best possible outcomes. I also spend a significant amount of time working with the team to develop all of our systems and processes. Having robust procedures and processes is essential, as any crash test provider can verify 'Getting it right first time' is not optional.

What do you like most about your role?
It is great to see the real application of engineering and physics on a day to day basis, but most of all, it is definitely good for the soul to be involved in a process where your ultimate goal is to save lives.

What is your most memorable crash test? Why?
I will always remember one particular high speed pole side impact crash test, on an older vehicle. This was part of a real life crash scenario reproduction program conducted in collaboration with a local university. The level of intrusion and damage to the vehicle was attributed to vehicle age and impact velocity, it was a stark reminder of how vulnerable we all are.

What is the most important piece of safety advice you would give to motorists?
Even though it's a cliché, I would say that being fully alert at all times, is the most important piece of safety advice I could give. Obviously, if it all goes horribly wrong, then being in an ANCAP 5 star rated car is a good back up plan.

What do you drive?
I drive a Mazda RX8 during the week but prefer my Westfield Clubman for the sunny weekends.

Meet *Shell*by and Gr*egg*.

Meet ANCAP's latest vehicle safety advocates *Shell*by and Gr*egg*. They're looking to buy new car-tons to get around in. Luckily vehicle safety is of great importance to at least *Shell*by who made sure she checked the ANCAP website before she bought her new car-ton.

A series of television commercials and online videos have been produced as part of this new "eggs" campaign promoting the importance of 5 star cars. These videos cover the topics of:

- How to buy a better car
- How side curtain airbags work
- How we rate your car
- Electronic stability control

Check out how *Shell*by and Gr*egg* fared when they took part in ANCAP crash testing at youtube.com/ancapcrashtests.

ANCAP would like to thank its member organisation, the New Zealand Transport Agency, for allowing ANCAP to make use of these campaign materials.

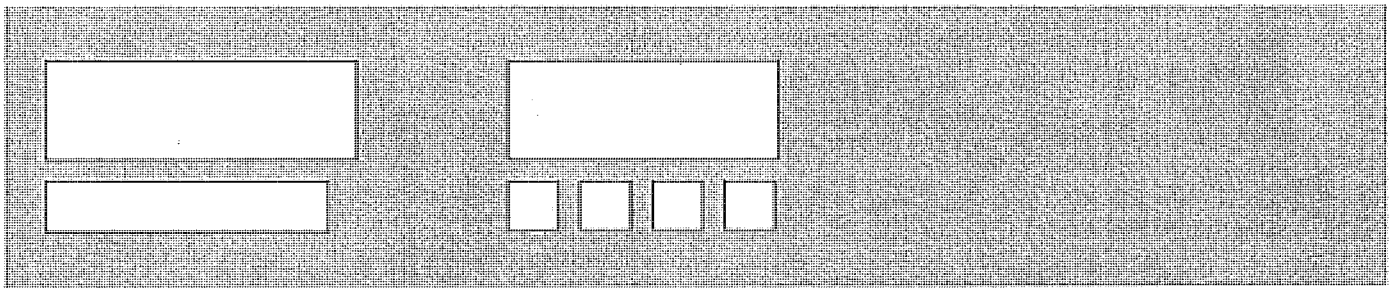
RACQ MotorFest.

The threat of rain didn't stop thousands of people from pouring through the gates at RACQ MotorFest on Sunday 15 July 2012. Around 18,000 people, ranging from families to car buffs and everyone in between, turned out to Eagle Farm Racecourse to soak up the carnival atmosphere. Even the sunshine made

an appearance after a week of gloomy, wet weather that threatened to cancel the event.

MotorFest, RACQ's biggest community event turned 17 in 2012, and it was certainly the biggest Motorfest by far. Not only did the event play host to more than 750 rare, vintage, classic, and collector cars, but it was home to a range of attractions, some of which have never been on display at MotorFest before. This year, drawcards included an ANCAP display complete with two crash tested vehicles - a 3 star Chery J1 and a 5 star Hyundai i45; all 15 of Australia's Best Cars; and $4 million worth of Lamborghinis.

But it wasn't just about the cars. Roving entertainers like MotorFest regulars Peebo and Dagwood put smiles on faces while the Kid's Corner kept the whole family entertained with rides and attractions from Dreamworld, Australia Zoo and Currumbin Wildlife Sanctuary. At just a gold coin donation RACQ MotorFest 2012 was undoubtedly one of Brisbane's cheapest family days out and helped to raise thousands of dollars for RACQ's Helicopter Rescue Network which carries out vital, life saving rescue missions across Queensland.



From: Davidson, Geoffrey
To: Quinlan, David; Shoukrallah, Rifaat; Potapowicz, Pawel; Paule, Rod; Hunter, Peter
Cc: Greenland, Karen; McIntosh, Andrew
Subject: FW: ITS presentation
Date: Monday, 12 November 2012 9:16:07 AM
Attachments: C-ITS presentation to NRSEG - Nov 2012.pptx

All – copy of the ITS presentation from the NRSEG meeting for info.

Geoff

From: Deborah.A.Evans@tmr.qld.gov.au [mailto:Deborah.A.Evans@tmr.qld.gov.au]
Sent: Friday, 9 November 2012 4:02 PM
To: Davidson, Geoffrey
Subject: Re: ITS presentation

Hi Geoff

Please find attached - hope this is helpful. The presentation will probably also go out with the Safety task force minutes and to the NRSEG, so apologies if you get this a few times!

kind regards

Deborah Evans
Senior Advisor (Road Safety) & Austroads Safety Program Executive | Safer Road Users
Road Safety | Transport Safety Branch | Department of Transport & Main Roads

Floor 7 | Transport House | 230 Brunswick Street | Fortitude Valley Qld 4006
PO Box 673 | Fortitude Valley Qld 4006
P: 07 3066 2319 | Internal: 62319 | F: 07 3066 2410
M [redacted]
E: deborah.a.evans@tmr.qld.gov.au
W: www.tmr.qld.gov.au

From: "Davidson, Geoffrey" <Geoffrey.Davidson@act.gov.au>
To: "Deborah.A.Evans@tmr.qld.gov.au" <Deborah.A.Evans@tmr.qld.gov.au>
Date: 05/11/2012 11:13 AM
Subject: ITS presentation

Hi Deb

I thought Stuart's presentation on Cooperative ITS was very interesting. Would you be able to email a copy of it to me for distribution to relevant people in ACTgov?

Geoff

---

along with any attachments immediately. You should not copy or use it for any purpose, nor disclose its contents to any other person.

Austroads

Cooperative ITS Project

National Road Safety Executive Group meeting

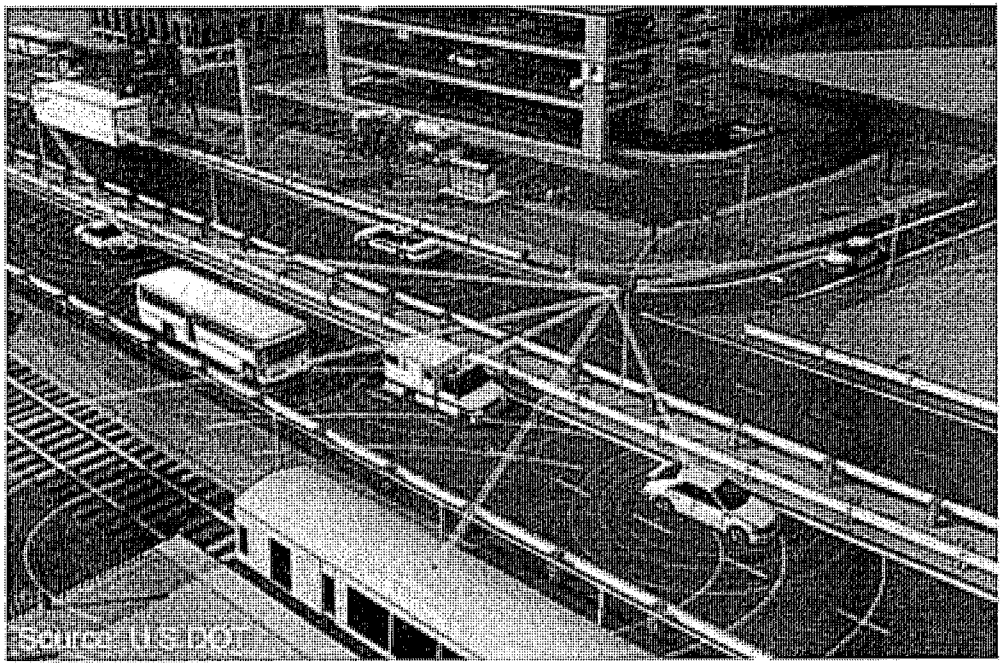
1 November 2012

www.austroads.com.au

Austroads

Cooperative ITS

Cooperative ITS (C-ITS) refers to the use of wireless communications between vehicles and with roadside infrastructure, which enable the next generation of systems that cooperatively work together to deliver safety, efficiency and environmental outcomes



C-ITS Benefits

Safety

- Reduce fatality and serious casualty crashes
  - 80% of all road crashes involving a non-impaired driver could be positively addressed – US DOT
  - Total number of fatal and serious casualty crashes could be reduced by 25-35% - Austroads/MUARC

Mobility

- Improved travel efficiency, reduce congestion
- Improved transport productivity

Environmental

- Reduce vehicle emissions and fuel use

Wireless Communications

Wireless technologies include:

- 5.9 GHz Dedicated Short Range Communications (DSRC)
- Cellular networks (incl. 3G, 4G LTE)
- Wifi, WLAN
- Digital radio
- GNSS (for positioning & timing)

Data messages include:

- Vehicle-to-vehicle - incl. latitude, longitude, altitude, heading, speed, vehicle type, etc
- Infrastructure-to-vehicle - incl. traffic warnings, signage, road closures, dynamic speed zones, rail crossing, etc

C-ITS Applications

A range of C-ITS applications are currently being developed internationally, including:

- Collision warning and collision avoidance
- Intersection movement assistance
- Emergency brake light, autonomous emergency braking
- Lane departure, run-off-road, blind spot warning
- Adaptive cruise control, vehicle platooning
- Emergency vehicle pre-emption and prioritisation
- Road works, road closures, traffic alerts, travel times
- Rail crossing warning, pedestrian warning
- Eco-driving applications

International Status

C-ITS is progressively moving from research to deployment. Key activities in international jurisdictions include:

Europe

- Euro Commission Mandate M/453 for minimum stds
- EC-funded projects and trials, including 'Drive C2X'
- Car2Car Consortium – agreement for 2015 deployment

USA

- US DOT 'Safety Pilot' in Michigan - almost 3,000 vehicles
- NHTSA rule-making planned for late 2013

Japan

- Various deployments have commenced, including 1,600+ ITS Spot (DSRC) stations across Japan expressways

Australian Status

Policy Framework for ITS in Australia

- Endorsed by SCOTI in November 2011, this sets a robust policy framework and foundation actions for guiding ITS deployment

Austroads C-ITS Project

- Establish the regulatory and operational framework to enable C-ITS to be deployed in Australia, harmonised with international standards and best practice

C-ITS Strategic Plan

- Published in August 2012. Key focus areas include Policy & Regulation, Spectrum Management, Technical Standards, Platform Requirements, and Trials/Demos

Regulation & Policy

NTC regulatory policy project

Consultation paper to be published this month, focussing on:

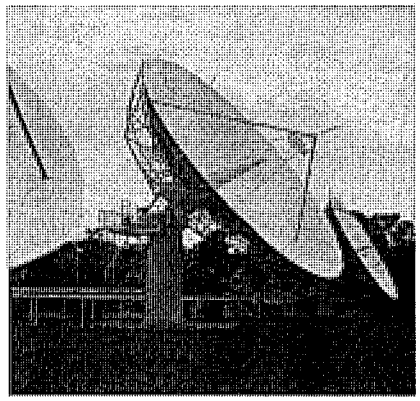
- Privacy
- Liability
- Driver distraction
- Compliance & enforcement

Telecommunications Act

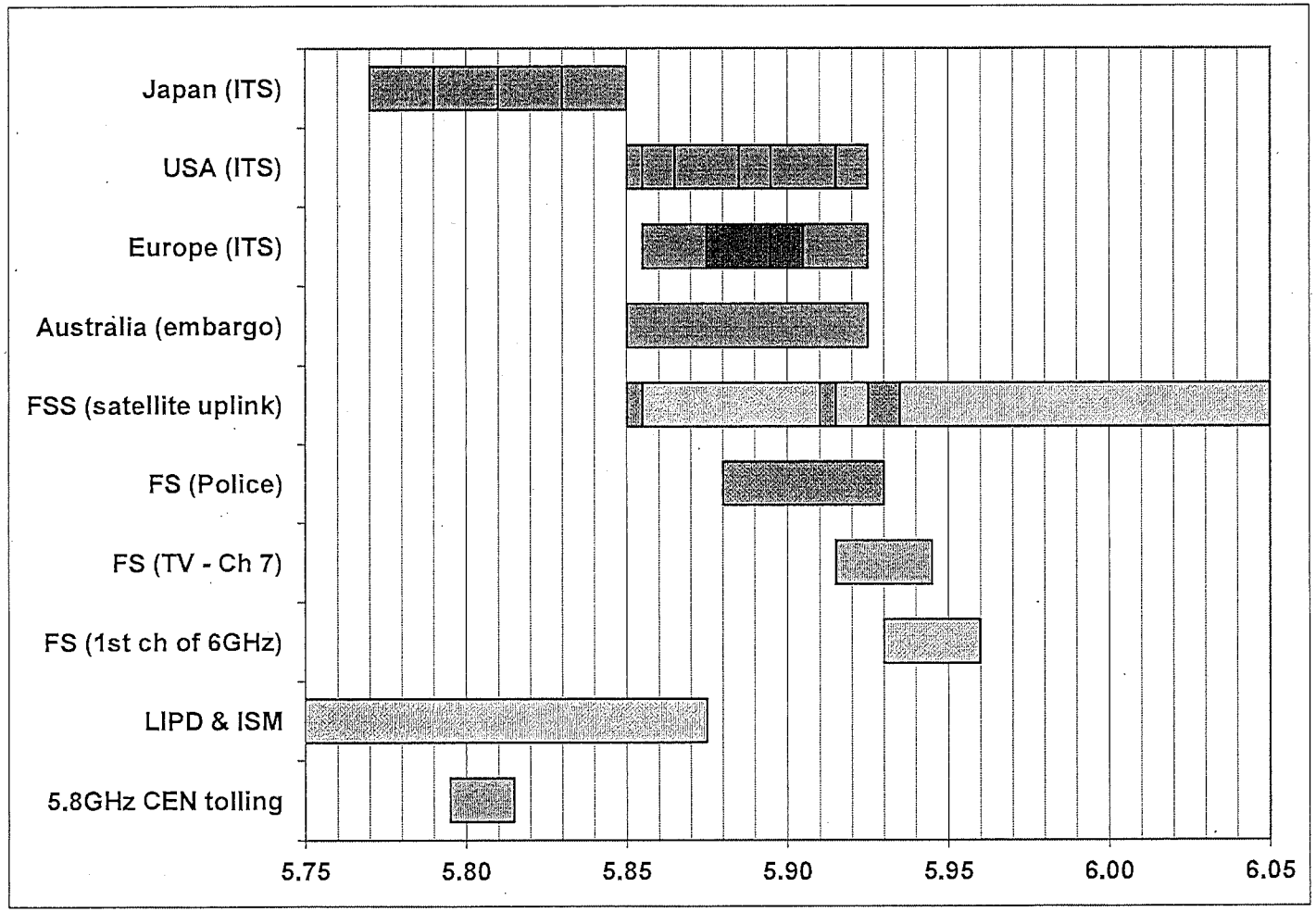
- Possible implications for C-ITS licensing and use
- Working with DoIT, ACMA and DBCDE

Spectrum Management

- ACMA issued Embargo 48 on the 5.9GHz band in 2008
- ACMA advise that it would like to lift the embargo, and use 'interference criteria' to manage co-existence
- Interference issues are being investigated, consultation with affected stakeholders progressing
- Device licensing options are being assessed
- Austroads to be nominated as the interim management entity for C-ITS in the 5.9GHz band



Spectrum Allocation



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Technical Standards

- Policy principle to harmonise with recognised international standards where possible
- Australia has active members on a few international standards bodies, most notably with ISO TC 204
- Australian Design Rules may need to adopt relevant ECE (Euro) or FMVSS (US) vehicle standards

Platform Requirements

Key aspects of the C-ITS platform need to be determined:

- Communications networks
- Security
- Architecture
- Positioning services
- Digital mapping data
- Operational responsibilities and processes
- Business and funding models

Trials and Demonstrations

Local trials and demonstrations will enable:

- Assessment and validation
- Planning for local deployment
- International participation & harmonisation
- Promote benefits & encourage uptake

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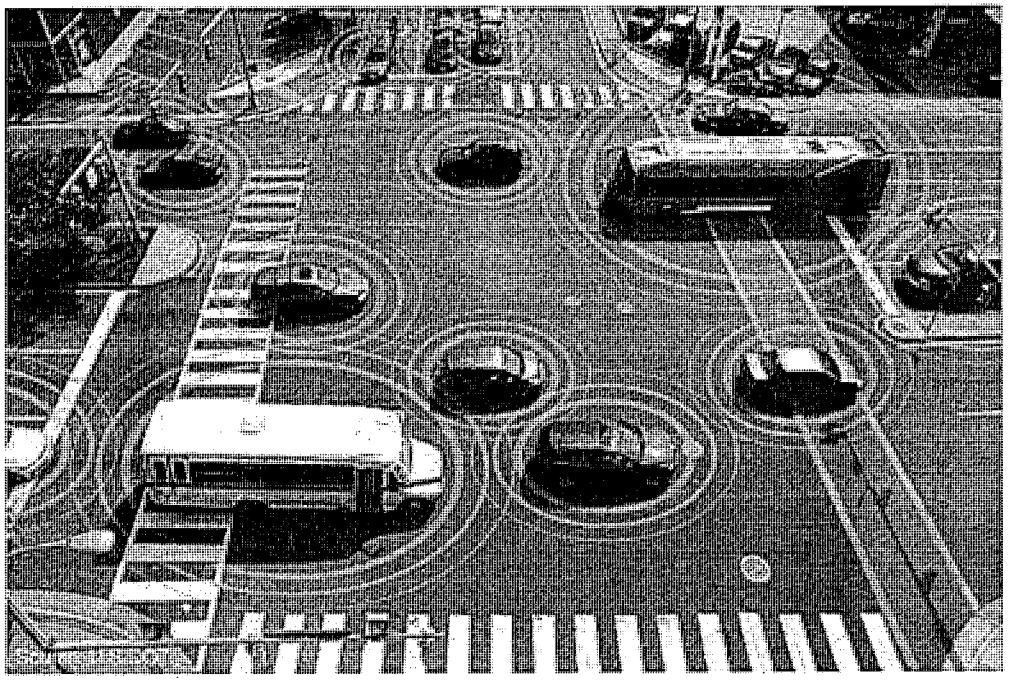
Any Questions?



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Austroads

From: Wilkinson Tracey
To: Hyles Andrew; Angus Draheim; Anita Curnow; Barbara Littler; Charles Karl; Danny Johnson; Jose Arredondo; Kym Foster; Lindsay Oxlad; Marinus Largooij; Martin Hawthorne; Sutton Michael; pascal.felix@mainroads.wa.gov.au; Paule, Rod; Ross Mensforth; Russell Ingham; Trish Grunert
Subject: FW: TRB Transportation Research E-Newsletter - 11-25-2013 [SEC=UNCLASSIFIED]
Date: Wednesday, 27 November 2013 8:10:32 AM

FYI

Regards

Tracey Wilkinson
Austroads Freight Task Force | Program Administrator
Commonwealth Department of Infrastructure and Regional Development
Phone 02 6274 7921 | **Email** tracey.wilkinson@infrastructure.gov.au

View this week's full newsletter on TRB's website.

TRB | Transportation Research Board

MONDAY, NOVEMBER 25, 2013 SUBSCRIBE

2014 TRB 93rd Annual Meeting: Advance Registration Savings End November 30

Register by November 30 to take advantage of lower fees for the TRB 93rd Annual Meeting, January 12-16, 2014, in Washington, D.C. Annual Meeting registration is required to reserve a guest room in the TRB Hotel Block, with rates beginning at $184 (prevailing federal per diem), plus applicable taxes. Many hotels are already sold out;...

2014 TRB 93rd Annual Meeting: Big Data

The TRB 93rd Annual Meeting will include more than 26 sessions and workshops that address the explosion in the types and amount of transportation data available. In addition to exploring the second Strategic Highway Research Program's (SHRP 2's) naturalistic driving study data, sessions and workshops will examine the application of big data to...

2014 TRB 93rd Annual Meeting: Extreme Weather Events: Prepare, Respond, and Recover

To assist transportation agencies and their partners, the TRB 93rd Annual Meeting will include more than 16 sessions and workshops that examine the increased frequency and severity of weather events and explore how transportation agencies can prepare for, respond to, and recover from extreme weather events. Sessions and workshops will consider the ...

2014 TRB 93rd Annual Meeting: Future Prospects and Potential Impacts of Automated Vehicles

The TRB 93rd Annual Meeting will include more than 16 sessions and workshops that examine the future prospects and potential impacts of automated vehicles on all modes of the transportation systems. Sessions and workshops will explore technical, operational, and policy challenges related to the implementation of autonomous vehicles. Areas that...

2014 TRB 93rd Annual Meeting: Performance Management Learning Opportunities

Update Your Interests

Remember you can update your interests at any time to help us deliver only the most relevant information to you each week.

Update my interests

Connect with TRB

- Email Us
- Find us on Facebook
- Follow us on Twitter

- Aviation
- Highway
- Marine Transportation
- Motor Carriers
- Pedestrians and Bicyclists
- Pipelines
- Public Transportation
- Rail

To assist states and their partners develop outcome-based approaches to measure performance as required by the Moving Ahead for Progress in the 21st Century Act, the TRB 93rd Annual Meeting will include 20 sessions and workshops dedicated to performance management. Attendees at these sessions and workshops will learn about federal rules and state...

TRB's SHRP 2 Tuesdays Webinar: SHRP 2 Composite Pavement Systems (R21)

As part of the SHRP2 Tuesdays Webinar Series, TRB will conduct a webinar on December 3, 2013 from 2:00 p.m.-3:30 p.m. ET that explores the SHRP 2 project called Composite Pavement Systems (R21). There is no fee to attend this webinar and other webinars in the SHRP 2 Series; however, participants must register in advance. A certificate for 1.5...

TRB Webinar: Asphalt Healing for Extended Pavement Sustainability

TRB will conduct a webinar on December 4, 2013 from 1:00 p.m.-3:00 p.m. ET that will highlight research on the mechanism underlying asphalt healing and how it can be used in practice. Participants must register in advance of the webinar, and there is a fee for non-TRB Sponsor employees. A certificate for 2 Professional Development Hours (PDHs)...

Innovations in Travel Demand Forecasting–2014

TRB is sponsoring a conference on Innovations in Travel Demand Forecasting–2014 on April 27-30, 2014, in Baltimore, Maryland. The event will allow researchers and practitioners to share knowledge and experiences on the latest developments in travel modeling and identify research and implementation challenges and issues associated with deploying...

RFP: Intersection Crash Prediction Methods for the Highway Safety Manual

TRB's National Cooperative Highway Research Program (NCHRP) has issued a request for proposals to develop a set of crash predictive models that address a wide range of intersection configurations and traffic control modes in rural and urban areas. Proposals are due January 9, 2014.

RFP: Defining the Boundary Conditions for Composite Behavior of Geosynthetic Reinforced Soil (GRS) Structures

TRB's National Cooperative Highway Research Program (NCHRP) has issued a request for proposals to determine the boundary conditions for composite behavior of geosynthetic reinforced soil abutments and incorporate results of this research into the American Association of State Highway and Transportation Officials (AASHTO) Load and Resistance Factor ...

RFP: In-Service Performance Evaluation of W-beam End Terminals

TRB's National Cooperative Highway Research Program (NCHRP) has issued a request for proposals to evaluate the in-service crash performance of a select number of common W-beam guardrail end terminals currently installed throughout the United States. Proposals are due January 14, 2014.

RFP: Improving Stakeholder Engagement in Aircraft Accident Planning

TRB's Airport Cooperative Research Program (ACRP) has issued a request for proposals to develop guidance for airports to use in identifying and engaging aircraft accident response stakeholders and educational materials to help stakeholders understand their responsibilities within the larger context of a response to an aircraft accident. Proposals...

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Sustaining the Metropolis: Light Rail Transit and Streetcars for Super Cities

TRB's Transportation Research Circular E-C177: Sustaining the Metropolis: Light Rail Transit and Streetcars for Super Cities summarizes the presentations made at a November 2012 conference that focused on introducing the concept of light rail transit (LRT) in North America.

TCAPP and Integrated Ecological Framework Pilot Projects: Synthesis of Lessons Learned

TRB's second Strategic Highway Research Program (SHRP 2) Report S2-C41-RW-1: TCAPP and Integrated Ecological Framework Pilot Projects: Synthesis of Lessons Learned presents an overview of pilot studies of the Transportation for Communities – Advancing Projects through Partnerships (TCAPP) and the Integrated Ecological Framework (IEF). The...

Evaluating Alternative Operations Strategies to Improve Travel Time Reliability

TRB's second Strategic Highway Research Program (SHRP 2) S2-L11-RR-1: Evaluating Alternative Operations Strategies to Improve Travel Time Reliability identifies and evaluates strategies and tactics intended to satisfy users' travel-time reliability requirements of roadways. To that end, the report presents a set of options regarding...

New IDEAs for Highway Systems: Annual Progress Report - January 2014

TRB's Innovations Deserving Exploratory Analysis (IDEA) program has released the 2014 issue of its New IDEAs for Highway Systems: Annual Progress Report, which summarizes projects active or completed during the 2013 program year. The report also includes descriptions of projects completed before the 2013 program year. A project of the National...

Practices for Unbound Aggregate Pavement Layers

TRB's National Cooperative Highway Research Program (NCHRP) Synthesis 445: Practices for Unbound Aggregate Pavement Layers consolidates information on the state-of-the-art and state-of-the-practice of designing and constructing unbound aggregate pavement layers. The report summarizes effective practices related to material selection, design, and...

Soil Mechanics 2013

TRB's Transportation Research Record: Journal of the Transportation Research Board, No. 2363 consists of 13 papers that evaluate the time rate of settlement for multilayered clays undergoing radial drainage; deflection behavior for 0° and 30° skewed abutments; pullout resistance factors for inextensible mechanically stabilized

earth reinforcements ...

Maintenance and Preservation 2013, Volume 1: Including 2013 Thomas B. Deen Distinguished Lecture

TRB's Transportation Research Record: Journal of the Transportation Research Board, No. 2360 contains 10 papers that study holistic approaches to maintenance and preservation of transportation infrastructure; guidelines for thermographic inspection of concrete bridge components in shaded conditions; bridge preservation by action type; fatigue...

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FHWA and AASHTO Announce Product Webinars for SHRP2 Round 3 Implementation

The Federal Highway Administration (FHWA) and the American Association of State Highway and Transportation Officials (AASHTO) will host a series of webinars in December 2013 that will explain Round 3 implementation activities for five research projects developed by TRB's second Strategic Highway Research Program (SHRP 2). There is no registration...

Review of TSA's Behavior Detection Activities

The U.S. Government Accountability Office has released a report that discusses whether evidence supports the Transportation Security Administration's (TSA) use of behavioral indicators to identify aviation security threats and data can assess the indicators' effectiveness.

Field Study Evaluation of Cepstrum Coefficient Speech Analysis for Fatigue in Aviation Cabin Crew

The Federal Aviation Administration has released a report that evaluates cabin crews' neurobehavioral performance induced by fatigue.

Federal Highway Administration Design Manual: Deep Mixing for Embankment and Foundation Support

The U.S. Federal Highway Administration has released a report that provides user-oriented deep mixing method design and construction guidelines for the support of embankments and typical transportation-oriented foundations.

Designing a New National Household Travel Survey Innovations in Collecting and Analyzing Long-Distance Travel Information

The U.S. Federal Highway Administration has released a research summary that explains the design of the next national long distance travel study that will include advanced methods of capturing and analyzing travel data to support transportation decision making.

Volpe News: Rail Research Helps Improve Safety, Model Assesses Environmental Costs of Truck Crashes, and more

Volpe, The National Transportation Systems Center, has released the latest edition of its newsletter designed to feature events and research produced by the Center. Part of the U.S. DOT's Research and Innovative Technology Administration, Volpe staff partner with public and private organizations to assess the needs of the transportation community, ...

BACK TO TOP

Automated Low-Cost and Real-Time Truck Parking Information System

The Maryland State Highway Administration has released a report that explains an automated real-time parking information system developed to improve truck-parking safety through gathering and disseminating existing parking capacity information.

Heavy Vehicle Effects on Florida Freeways and Multilane Highways

The Florida Department of Transportation has released a report that develops passenger car equivalency values appropriate for commercial truck conditions on freeways and multilane highways in order to determine effects of heavy vehicles.

Opportunities on the State Highway System to Generate Revenue or Offset Expenditures for the State of Florida

The Florida Department of Transportation has released a report that establishes the state-of-the-practice and provides implementation guidance for value extraction projects and initiatives in highway rights-of-way.

Technology Today: Fall 2013

The Louisiana Transportation Research Center has released its quarterly newsletter that summarizes its recent events, reports, and accomplishments.

BACK TO TOP

Has Motorization in the U.S. Peaked? Part 3: Fuel Consumed by Light-Duty Vehicles

The Transportation Research Institute at the University of Michigan has released a report that examines trends in fuel consumption by light-duty vehicles in the U.S. from 1984 to 2011.

Off-Grid MEMS Sensors Configurations for Transportation Applications

The Mountain Plains Consortium, a program of the Upper Great Plains Transportation Institute at North Dakota State University, has released a report that proposes a new micro-electromechanical systems (MEMS) sensor for monitoring and maintaining civil infrastructure.

Kentucky's PRISM-Based Automated Ramp Screening System Evaluation

The Kentucky Transportation Center has released a report that evaluates the performance registration information systems and management (PRISM) ramp screening system, the value of the system in identifying vehicles for inspection, and its potential for widespread deployment.

Toolbox of Countermeasures for Rural Two-Lane Curves

The Institute for Transportation at Iowa State University has released a report that presents a toolkit for improving the effectiveness of rural curve countermeasures.

The NTC Today: Fall 2013

The Center for Transportation Management, Research, and Development at Morgan State University has released the latest issue of its biannual newsletter that highlights the center's activities and projects.

BACK TO TOP

Warm Wetted Sand for Skid Control of Walkways and Bike Paths: Benefits and Drawbacks of the Method Evaluated in Umeå

VTI, the Swedish National Road and Transport Research Institute, has released a report that discusses the benefits and drawbacks of using warm, wetted sand on walkways and bike paths by considering factors such as measurements of friction and road conditions. This report is written in Swedish and contains a summary in English.

Routes/Roads Magazine: Number 360

The World Road Association has released the latest edition of its magazine that present analyses and summaries related to roads and road transport. The magazine is available without a fee after logging on to the site.

Alcohol Ignition Interlock Schemes: Best Practice Review

The Centre for Automotive Safety Research has released a report that examines characteristics of alcohol ignition interlock devices and their effectiveness in reducing drunk driving.

A New Vehicle Loading Standard for Road Bridges in New Zealand

The New Zealand Transportation Agency has released a report that proposes a new vehicle loading standard for the design and evaluation of road bridges and other highway infrastructure in New Zealand.

Development of the VTI Model for Estimating the Amount of Traffic on Swedish Roads

VTI, the Swedish National Road and Transport Research Institute, has released a report that explains revisions in its annual vehicle mileage forecast model, used for annual calculations of traffic emissions. This report is written in Swedish and contains a summary in English.

BACK TO TOP

Hearing on the TSA's Behavioral Screening Program and Lessons From the LAX Shooting

On November 14, 2103, the U.S. House of Representatives' Committee on Homeland Security Subcommittee on Transportation Security held a hearing to explore the Transportation Security Administration's (TSA) behavioral screening program and to review initial lessons from the recent shooting at Los Angeles International Airport. A video of the hearing ...

BACK TO TOP

Disclaimer

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From: Wilkinson Tracey
To: Hyles Andrew; Angus Draheim; Anita Curnow; Barbara Littler; Charles Karl; Danny Johnson; Jose Arredondo; Kym Foster; Lillia Rozaklis; Lindsay Oxlad; Marinus Laroofi; Martin Hawthorne; Sutton Michael; pascal.felix@mainroads.wa.gov.au; Paule, Rod; Ross Mensforth; Russell Ingham; Trish Grunert
Subject: FW: TRB Transportation Research E-Newsletter - 04-22-2014 [SEC=UNCLASSIFIED]
Date: Monday, 28 April 2014 8:28:16 AM
Attachments: image001.jpg
image002.jpg

FYI.

Regards

Tracey Wilkinson
Austroads Freight Task Force | Program Administrator
Commonwealth Department of Infrastructure and Regional Development
GPO Box 594 CANBERRA ACT 2601
Phone 02 6274 7921 | Email tracey.wilkinson@infrastructure.gov.au

---

From: David Francis [mailto:DFrancis@austroads.com.au]
Sent: Wednesday, 23 April 2014 10:26 AM
To: Craig Moran (Craig.moran@rms.nsw.gov.au); 'david.darwin@nzta.govt.nz'; Iain Cameron; john.r.spathonis@tmr.qld.gov.au; Sutton Michael; Peter Welling (peter.welling@roads.vic.gov.au)
Cc: Craig.B.Smith@tmr.qld.gov.au; Jill Hislop; Leonie Pattinson; Natalie Lockwood (natalie.lockwood@mainroads.wa.gov.au); Sarah Mayne (sarah.mayne@nzta.govt.nz); Wilkinson Tracey
Subject: FW: TRB Transportation Research E-Newsletter - 04-22-2014

Forwarded for your information.

Regards

David

David Francis
Manager, Program Support
Austroads
Suite 2, Level 9
287 Elizabeth Street, Sydney NSW 2000
Ph: +61 2 9264 2551
Fax: +61 2 9264 1657
Mobile: [redacted]
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Austroads Logo small

From: TRB E-Newsletter [mailto:trbnews@updates.nas.edu]
Sent: Tuesday, 22 April 2014 8:52 PM
To: David Francis
Subject: TRB Transportation Research E-Newsletter - 04-22-2014

View this week's full newsletter on TRB's website.

TUESDAY, APRIL 22, 2014 SUBSCRIBE

Update Your Interests

TRB's SHRP 2 Tuesdays Webinar: Mapping Defects In or Behind Tunnel Linings (R06G)

As part of the SHRP2 Tuesdays Webinar Series, TRB will conduct a

Remember you can update your interests at any time to help us deliver only the most relevant

webinar on April 22, 2014 from 2:00 pm to 3:30 pm ET that will explore the SHRP 2 project High-Speed Nondestructive Testing Methods for Mapping Voids, Debonding, Delaminations, Moisture, and Other Defects Behind or Within Tunnel Linings. There is no fee to attend this webinar or...

TRB's SHRP 2 Tuesdays Webinar: Worker Fatigue Risk Management (R03)

As part of the SHRP2 Tuesdays Webinar Series, TRB will conduct a webinar on April 29, 2014, from 2:00pm to 3:30pm ET that will summarize SHRP 2 Renewal Project R03: Identifying and Reducing Worker, Inspector, and Manager Fatigue in Rapid Renewal Environments. There is no fee to attend this webinar or other webinars in the SHRP 2 Series; however,...

TRB Webinar: Rockfall – Characterization and Analysis

TRB will conduct a webinar on April 24, 2014, from 1:00pm to 3:00pm ET that will explore current topics on rockfall characterization. Participants must register in advance of the webinar, and there is a fee for non-TRB Sponsor or non-TRB Sustaining Affiliate employees. A certificate for two Professional Development Hours (PDHs) will be provided to ...

Transportation and Energy Sector Developments*: Early Bird Registration Rates End April 25, 2014

TRB is cosponsoring a conference on Transportation and Energy Sector Developments on May 6-7, 2014, in Arlington, Texas. The conference will focus on sharing information among states, local governments, and other agencies on the methods being used in different areas to meet these increasing demands being placed on transportation systems as a...

5th International Conference on Surface Transportation Financing: Innovation, Experimentation, and Exploration: Early Bird Registration Rates Expire May 1, 2014

TRB is sponsoring the 5th International Conference on Surface Transportation Financing: Innovation, Experimentation, and Exploration on July 9-11, 2014, in Irvine, California. The conference will focus on the latest research and practice in transportation finance, with an emphasis on innovative ideas from around the world. The goal is to...

Ninth Annual Strategic Highway Research Program (SHRP 2) Safety Symposium

TRB is sponsoring the Ninth Annual Strategic Highway Research Program (SHRP 2) Safety Symposium on July 10, 2014, in Washington, D.C. The symposium is designed to provide updates on SHRP 2 safety projects and to serve as a forum for the exchange of ideas among researchers and practitioners from the private and public sectors. Topics that...

Automated Vehicles Symposium 2014: Early Bird Registration Rates Expire May 2, 2014

TRB is sponsoring the Automated Vehicles Symposium 2014 on July 15-17, 2014 in San Francisco, California. This symposium will focus on challenges and opportunities related to the increasing automation of motor vehicles as well as the environments in which they operate. The symposium will build on the 2012 and 2013 workshops on the state-of-the-art ...

NURail and Summerail Conference

TRB is cosponsoring the NURail and Summerail Conference on August 18-22, 2014, in Altoona, Pennsylvania. The conference is designed to bring together railroad professionals, government officials, and academics to discuss the past, present, and future of the U.S. railroad industry. Particular emphasis will be placed on university led research on...

RFI: Graduate Research Award Program on Public-Sector Aviation Issues Announcement: 2014/2015

TRB's Airport Cooperative Research Program (ACRP) is accepting applications for its Graduate Research Award Program on Public-Sector Aviation Issues for the 2014/2015 academic year. The program, sponsored by the U.S. Federal Aviation Administration through the ACRP, is designed to encourage applied research on airport and related aviation...

RFI: TCRP FY 2015 Research Problem Statements Sought

TRB's Transit Cooperative Research Program has issued a request for problem statements identifying research needed for TCRP's FY 2015 program. Research problem statements for the TCRP FY 2015 program are due June 15, 2014. These submittals form the basis for selection of the annual TCRP research program. The TCRP undertakes applied research...

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Transportation Investments in Response to Economic Downturns

TRB has released the final print version of TRB Special Report 312: Transportation Investments in Response to Economic Downturns that provides guidance for federal and state officials on the best ways to use stimulus funds for transportation in the future and methods for evaluating such investments. The report examines lessons learned and impacts...

Critical Issues in Aviation and the Environment 2014

TRB Transportation Research Circular E-C184: Critical Issues in Aviation and the Environment 2014 explores issues that address the major environmental components affected by aviation activities, sustainable solutions that have evolved and continue to be developed to minimize aviation's environmental impacts, and key processes that link aviation...

Roadway Safety Data Interoperability Between Local and State Agencies

TRB's National Cooperative Highway Research Program (NCHRP) Synthesis 458, Roadway Safety Data Interoperability Between Local and State Agencies provides an overview of the state of the practice regarding the interoperability between state and local safety data. The report also highlights agency practices that supporta data-driven safety program...

Research Pays Off: Effective Use of Chip Seals in Minnesota

In the early 1990s, chip seal use throughout Minnesota declined to a historic low. State and local agencies were not obtaining a consistent quality of performance from the technique; however, long-term data show that successful application of chip seals extended service life of the state's asphalt pavements by an average of 6 years. To...

Implementation of the AASHTO Mechanistic-Empirical Pavement Design Guide and Software

TRB's National Cooperative Highway Research Program (NCHRP) Synthesis 457: Implementation of the AASHTO Mechanistic-Empirical Pavement Design Guide and Software documents the experience of transportation agencies in the implementation of the 2008 American Association of State Highway and Transportation Officials (AASHTO) Mechanistic-Empirical...

Performance Specifications for Rapid Highway Renewal

TRB's second Strategic Highway Research Program (SHRP 2) Report S2-R07-RR-1: Performance Specifications for Rapid Highway Renewal describes suggested performance specifications for different application areas and delivery methods that users may tailor to address rapid highway renewal project-specific goals and conditions. SHRP 2 Renewal...

E-tool for Business Processes to Improve Travel Time Reliability

TRB's second Strategic Highway Research Program (SHRP 2) Reliability Project L34 has released a prepublication, non-edited version of a report titled E-tool for Business Processes to Improve Travel Time Reliability that explores an e-tool to assist transportation agencies when evaluating their processes to improve travel time reliability. The...

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FHWA Focus Magazine: March 2014

The Federal Highway Administration has released the latest version of its Focus magazine, which highlights efforts designed to accelerate infrastructure innovations in order to build better, safer roads.

Volpe eNews Bulletin: April 15, 2014

Volpe, the National Transportation Systems Center at the U.S. Department of Transportation, has released its eNews Bulletin that features its news briefs, tools for practitioners, and reports.

SHRP2 Round 4 Implementation Assistance Program Webinars Begin April 25, 2014

The SHRP2 Implementation Assistance Program is available to help state departments of transportation, metropolitan planning organizations, and other interested organizations deploy SHRP2 solutions. The official application process for Round 4 of the assistance program will begin May 30, 2014, and will close June 27, 2014. Each of the 12...

Review of FAA's Medical Certification Process for Pilots

The U.S. Government Accountability Office has released a report that assesses the Federal Aviation Administration's (FAA) medical certification standards, process, and forms.

2012 Traffic Safety Facts: Older Population

The National Traffic Safety Administration has released a fact sheet that summarizes trends and 2012 data about people aged 65 and

older who were injured or killed in motor vehicle crashes.

Post-Tensioning Tendon Grout Chloride Thresholds

The U.S. Federal Highway Administration has released a tech brief that explains how two chloride threshold values of 0.4 and 0.8 percent by weight of cement were determined for corrosion initiation and corrosion propagation of bridges.

Fraud Letter Warning

According to the U.S. Department of Transportation's (USDOT's)Office of Inspector General, recently many contractors have received a faxed letter that is part of a recurring identity theft scheme asking recipients to provide bank account information on an "Authorization to Release Financial Information" form. The letter is typically signed by...

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Determination of Brace Forces Caused by Construction Loads and Wind Loads During Bridge Construction

The Florida Department of Transportation has released a report that explores procedures for determining bracing forces during bridge construction and examines wind load coefficients (drag, torque, and lift) for common bridge girder shapes with stay-in-place (SIP) formwork and overhang formwork in place. The report also includes recommended global ...

Montana DOT Solutions Newsletter: Spring 2014

The Montana Department of Transportation has released its quarterly newsletter that discusses transportation research issues in Montana.

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Texas Transportation Researcher: Vol. 50, No.1, 2014

The Texas Transportation Institute (TTI) at Texas A&M University has released the latest version of its periodic magazine that highlights TTI's research, professional, and service activities.

CTS Catalyst: April 2014

The latest issue of the University of Minnesota's Center for Transportation Studies (CTS) Catalyst newsletter is now available. Catalyst provides current information on the latest in transportation-related research and activities from the CTS.

World Transit Research Newsletter: March 2014

Monash University's Institute of Transport Studies has released the latest issue of its quarterly newsletter that is designed to highlight recently added items to the World Transit Research database.

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Future System for Prevention of Drunk Driving: Discussions Within Focus Groups

VTI, the Swedish National Road and Transport Research Institute, has released a report that explores drivers' vision of a future system that might be integrated in a vehicle to detect alcohol as a means to prevent drunk driving.

Nordic Road and Transport Research: No. 1, 2014

VTI, the Swedish National Road and Transport Research Institute, has released its triannual magazine that summarizes road research news from public road and transport research organizations in the Nordic countries.

Better Bus Area Monitoring and Evaluation Framework

The Department for Transport in the United Kingdom as released a report that explains expectations for monitoring and evaluating its projects designed to help improve bus infrastructure.

Reducing Black Carbon Emissions from Diesel Vehicles: Impacts, Control Strategies, and Cost-Benefit Analysis

The International Council for Clean Transportation, part of the World Bank, has released a report that focuses on quantifying the health and climate benefits of transport interventions that reduce black carbon emissions. The report also highlights the challenges of undertaking a comprehensive evaluation of transportation projects.

Institutional Labyrinth: Designing a Way out for Improving Urban Transport Services - Lessons from Current Practice

The World Bank has released a report that highlights the experiences of cities that have set up lead transportation institutions to coordinate improvements in urban transportation services.

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Autonomous Vehicle Technology: A Guide for Policymakers

The RAND Corporation has released a report that provides guidance for maximizing the possible social benefits of autonomous vehicles while minimizing the possible disadvantages.

IIHS Status Report: Vol. 49, No. 3, April 2014

The Insurance Institute for Highway Safety (IIHS) has released the latest issue of its Status Report magazine, a newsletter covering research and topics in the highway safety field.

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From: Wilkinson Tracey
To: Hyles Andrew; Angus Draheim; Anita Curnow; Barbara Littler; Charles Karl; Danny Johnson; Jose Arredondo; Kevin Loftus; Kym Foster; Lillia Rozaklis; Lindsay Oxlad; Marinus Larooij; Martin Hawthorne; Matt Elischer; Sutton Michael; pascal.felix@mainroads.wa.gov.au; Paule, Rod; Ross Mensforth; Russell Ingham; Trish Grunert
Subject: FW: TRB Transportation Research E-Newsletter - 07-22-2014 [SEC=UNCLASSIFIED]
Date: Wednesday, 23 July 2014 8:42:19 AM
Attachments: image001.jpg
image002.jpg

FYI

Thanks

Tracey Wilkinson
Austroads Freight Task Force | Program Administrator
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GPO Box 594 CANBERRA ACT 2601
Phone 02 6274 7921 | Email tracey.wilkinson@infrastructure.gov.au

From: David Francis [mailto:DFrancis@austroads.com.au]
Sent: Wednesday, 23 July 2014 8:41 AM
To: Richey, Cheryl; Craig.B.Smith@tmr.qld.gov.au; Jill Hislop; Leonie Pattinson; Natalie Lockwood (natalie.lockwood@mainroads.wa.gov.au); Sarah Mayne (sarah.mayne@nzta.govt.nz); Wilkinson Tracey
Cc: Craig Moran (Craig.moran@rms.nsw.gov.au); 'david.darwin@nzta.govt.nz'; Iain Cameron; john.r.spathonis@tmr.qld.gov.au; Sutton Michael; Peter Welling (peter.welling@roads.vic.gov.au)
Subject: FW: TRB Transportation Research E-Newsletter - 07-22-2014

Forwarded for your information.

Regards

David

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Austroads Logo small

From: TRB E-Newsletter [mailto:trbnews@updates.nas.edu]
Sent: Tuesday, 22 July 2014 11:01 PM
To: David Francis
Subject: TRB Transportation Research E-Newsletter - 07-22-2014

View this week's full newsletter on TRB's website.

TUESDAY, JULY 22, 2014 SUBSCRIBE

Update Your Interests

2015 TRB 94th Annual Meeting: Daniel Sperling, 2015 Thomas B. Deen Distinguished Lecture

[redacted] "The Emerging Transformation of Mobility, Vehicles, and Fuels" is the title of the lecture that Dr. Daniel Sperling will deliver as the recipient of the 2014 Thomas B. Deen Distinguished Lectureship award. He is the recipient of several prestigious honors and awards, including the Blue Planet Prize from the Asahi Glass Foundation in 2013. The...

Remember you can update your interests at any time to help us deliver only the most relevant information to you each week.

Update my interests

2015 TRB 94th Annual Meeting: Plan Now to Exhibit at Our New Venue

On July 24, 2014, all businesses and organizations will have the opportunity to register for exhibit space to showcase their products and services to nearly 12,000 transportation professionals in attendance at the TRB 94th Annual Meeting, January 11-15, 2015, in Washington, D.C. The meeting, to be held at a new venue, the Walter E. Washington...

Two TRB Volunteers Receive Top French Honor

On July 14, 2014, the President of the French Republic, François Hollande, received two TRB volunteers into the National Order of the Legion of Honour, France's most prestigious designation. Jean-François Corté was elevated as an Officier of Légion d'Honneur, and Jean-Pierre Médevielle entered the légion as Knight of Légion d'Honneur. Mr. Corté ...

TRB Webinar: Climate Change, Extreme Weather Events and the Highway System

TRB will conduct a webinar on July 28, 2014, from 2:00pm to 3:30pm ET that will cover the practitioners' guide portion of NCHRP Report 750: Strategic Issues Facing Transportation, Volume 2: Climate Change, Extreme Weather Events, and the Highway System: Practitioner's Guide and Research Report. Participants must register in advance of the webinar, ...

TRB Webinar: The Tenth National Asset Management Conference Post Conference Webinar: Transit State of Good Repair

TRB will conduct a webinar on July 29, 2014, from 3:00pm to 4:30pm ET that will provide a summary of the "Transit State of Good Repair" track of the TRB Tenth Conference on Asset Management, held in April 2014. In addition to sharing strategies for developing practical solutions for asset management, webinar presenters will demonstrate how an...

TRB Webinar: Performance Measurement for Asset Management - MAP-21 and Beyond

TRB will conduct a webinar on July 30, 2014, from 12:30pm to 2:00pm ET that will summarize how MAP-21 encourages state departments of transportation to develop and report on performance measures as part of their transportation asset management plan. Participants must register in advance of the webinar, and there is a fee for non-TRB Sponsor or...

Symposium Celebrating 50 Years of Traffic Flow Theory*

TRB is cosponsoring the Symposium Celebrating 50 Years of Traffic Flow Theory on August 11-13, 2014, in Portland, Oregon. The symposium will highlight the influence of the "fundamental diagram" on current practice, explore potential future developments, and examine real-time measurements of traffic performance.

TRB Webinar: Concrete Maturity Protocol Development and Application

TRB will conduct a webinar on August 13, 2014, from 2:00pm to 3:30pm ET that will explore two states' experiences with concrete

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Public Transportation
Rail

maturity methods. Webinar presenters will discuss how Iowa Department of Transportation has implemented maturity methods in the field and how Minnesota Department of Transportation has conducted field and laboratory...

TRB Webinar: Wake Recategorization (RECAT)

TRB will conduct a webinar on August 14, 2014, from 1:00pm to 2:30pm ET that will discuss aircraft wake recategorization at airports. The Federal Aviation Administration (FAA) has recently undertaken a significant project at Memphis International Airport to develop an approach and implementation of recategorizing aircraft wake categories and the...

Shaping the New Future of Paratransit: An International Conference on Demand Responsive Transit - Registration is limited. Register today!

TRB is sponsoring the Shaping the New Future of Paratransit: An International Conference on Demand Responsive Transit on October 29-31, 2014, in Monterey, California. The conference will focus on the future of open and integrated paratransit and explore the current state of practice worldwide. The event is designed to provide a forum for the...

RFP: Solicitation for ACRP Legal Research Topics for Fiscal Year 2015

The Airport Cooperative Research Program (ACRP) is seeking potential legal research topics for the Fiscal Year 2015 ACRP Legal Research Program. The closing date for submitting legal research topics is September 5, 2014. The preferred method for submitting an ACRP legal research topic is by using our online proposal form. The ACRP is an...

RFP: Solicitation for ACRP Synthesis Topics for Fiscal Year 2015

The Airport Cooperative Research Program (ACRP) is seeking potential synthesis topics for the Fiscal Year 2015 ACRP Synthesis Program. The closing date for submitting synthesis topics is September 12, 2014. The preferred method for submitting an ACRP synthesis topic is by the online proposal form. Syntheses are state-of-the-practice reports...

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New Space, New Opportunities for Annual Meeting Exhibitors

In a featured article in the May-June 2014 issue of the TR News, TRB Directors highlight the enhancements to the TRB Annual Meeting exhibit hall. Booth sales open on July 24, 2014 for all organizations and companies that plan to exhibit at the meeting.

TR News January-February 2014: ABCs of Bridge Renewal

The full PDF version of the January-February issue is now available. This issue of the TR News focuses on the effects the boom in the domestic energy industry is having on low-volume roadways in Texas; practical findings from a 26-state pooled-fund study on winter maintenance challenges; the mega-project under way to replace the Gerald...

Alternative Delivery Methods for Winter Maintenance Operations

TRB's National Cooperative Highway Research Program (NCHRP) Research Results Digest 387: Alternative Delivery Methods for Winter Maintenance Operations develops a decision-making framework to guide public road agencies' delivery of winter maintenance operations.

Safety Reporting Systems at Airports

TRB's Airport Cooperative Research Program (ACRP) Synthesis 58: Safety Reporting Systems at Airports describes safety reporting methods and systems for airports certificated under Title 14 Code of Federal Regulations Part 139 by assessing current practices, processes, and systems used to collect and analyze safety data and information.

Research Methods for Understanding Aircraft Noise Annoyances and Sleep Disturbance

TRB's Airport Cooperative Research Program (ACRP) Web-Only Document 17: Research Methods for Understanding Aircraft Noise Annoyances and Sleep Disturbance explores the development and validation of a research protocol for a large-scale study of aircraft noise exposure-annoyance response relationships across the U.S. The report also highlights...

Establishing a National Transit Industry Rail Vehicle Technician Qualification Program— Building for Success

TRB's Transit Cooperative Research Program (TCRP) Report 170: Establishing a National Transit Industry Rail Vehicle Technician Qualification Program—Building for Success describes a system of qualification that has been developed for rail vehicle technicians. This qualification system is available for implementation through the Transportation...

Reducing Wheel Climb at Switch Points to Reduce Derailments

TRB's Innovations Deserving Exploratory Analysis (IDEA) Safety Programs Project 23: Reducing Wheel Climb at Switch Points to Reduce Derailments presents survey results and an engineering analysis of international maintenance practices for reducing risk of wheel climb at switch points, and describes the potential application of these practices for...

Bridge Stormwater Runoff Analysis and Treatment Options

TRB's National Cooperative Highway Research Program (NCHRP) Report 778: Bridge Stormwater Runoff Analysis and Treatment Options presents information and an analysis process for identifying cost-effective, pollution-reducing strategies for management of stormwater runoff from highway bridges.

Truck and Bus Safety: Roundabouts 2014

TRB's Transportation Research Record: Journal of the Transportation Research Board, No. 2402 consists of eight papers that examine truck impact hazards for interstate overpasses; experimental microsimulation modeling of road safety impacts of bus priority; fatigue level and driving performance of professional drivers; and, turboroundabouts....

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An Economic Analysis of Transportation Infrastructure Investment

The White House has released a report that details the long-term economic benefits of transportation investment and why conditions in the infrastructure sector can create opportunities for innovation.

Review of Coast Guard Resources for Drug Interdiction Operations

The U.S. Government Accountability Office has released a report that examines trends in the U.S. Coast Guard's deployment of resources for drug interdiction operations and the extent to which the U.S. Coast Guard met its performance targets. The report also assesses actions taken by the U.S. Coast Guard to combat drug smuggling into Puerto Rico...

Volpe News: Carbon Neutral Airport, Aviation Safety System, Healthy Communities, and More

The U.S. Federal Highway Administration has released its eNews bulletin that features its news briefs, tools for practitioners, and reports.

Review of FHWA's Workforce Planning Processes

The U.S. Department of Transportation's Office of Inspector General has released a report that considers the extent to which the U.S. Federal Highway Administration's (FHWA) workforce planning process aligns with best practices and evaluates possible workforce impacts of MAP-21.

The Effect of ESC on Passenger Vehicle Rollover Fatality Trends

The U.S. National Highway Traffic Safety Administration has released a fact sheet that details trends in electronic stability control's (ESC) ability to prevent certain types of crashes, including rollovers that result from loss of vehicle control.

An FHWA Special Study: Post-Tensioning Tendon Grout Chloride Thresholds

The U.S. Federal Highway Administration (FHWA) has released a report that determines chloride threshold values of post-tensioning strands that are exposed to chloride-contaminated grout on bridges.

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Full Closure Strategic Analysis

The Colorado Department of Transportation has released a report that explains a full closure strategic analysis used to create a decision process for full roadway closures for construction and maintenance activities.

Impacts of Using Salt and Salt Brine for Roadway Deicing

The Idaho Department of Transportation has released a report that summarizes literature and state practices related to efforts that ensure safe travel during the winter—including snow plowing, use of sand to improve traction, and use of salt and chemical compounds for deicing.

Investigation of Economic Impacts of Florida's Highway Beautification Program

The Florida Department of Transportation has released a report that estimates the regional economic impacts that may have resulted from its highway beautification expenditures.

Validation of Models for Quantifying Safety Performance of Driveways on State Highways

The Oregon Department of Transportation has released a report that documents the validation of its guidance for urban and rural arterial safety performance functions on state highways.

Evaluation of the MMLS3 for Accelerated Wearing of Asphalt Pavement Mixtures Containing Carbonate Aggregates

The Virginia Department of Transportation has released a report that evaluates different polishing/wear properties of asphalt pavement mixtures containing limestone aggregates. The report also compares friction properties of laboratory-polished specimens with those of pavements, and proposes a test protocol for evaluating polishing of asphalt...

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Autonomous Vehicles in Texas

The Center for Transportation Research at the University of Texas at Austin has released a report that examines autonomous vehicle technology, including possible safety benefits and challenges.

Oregon's Voluntary Road User Charge Program

The Center for Transportation Research at the University of Texas at Austin has released a report that identifies lessons learned by the Oregon Department of Transportation when implementing its road user charge program as an alternative source of funding.

CTS Catalyst: July 2014

The latest issue of the University of Minnesota's Center for Transportation Studies (CTS) Catalyst newsletter is now available. Catalyst provides current information on the latest in transportation-related research and activities from the CTS.

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Strategic Review of the Management of Occupational Road Risk

The Royal Society for the Prevention of Accidents in Great Britain has released a report that considers the extent to which management of occupational road risk has had an impact on work-related road safety.

The Eurasian Connection: Supply-Chain Efficiency Along the Modern Silk Route Through Central Asia

The World Bank has released a report that explains supply chain fragmentation in Central Asia, which may be caused by factors such as weak transportation infrastructure, can be an obstacle to economic development.

Car Passenger Valuations of Quantity and Quality of Time Savings

The New Zealand Transport Agency has released a report that reviews New Zealand market research about car passengers'

valuations of travel time savings in a range of situations.

NZTA Research Newsletter: July 2014, Issue 24

The New Zealand Transport Agency (NZTA) has released the latest version of is quarterly newsletter that reports on the results of research funded through the Transport Agency's Research Program, and is designed to act as a forum for passing on national and international information and help aid in collaboration between all those involved.

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Research Impacts: Better—Faster—Cheaper

The American Association of State Highway and Transportation Officials (AASHTO) has released a report that highlights high-value research from across the United States, including research on bridge construction, wildlife management, and freight management systems.

PRIIA Section 305 Next Generation Equipment Committee Report

The States for Passenger Rail Coalition has released a report that examines promising practices in the areas of ownership, maintenance, and management of new intercity passenger rail equipment.

Rural Connections: Challenges and Opportunities in America's Heartland: 2014

TRIP, a national transportation research group, has released a report that explores the condition, use, and safety of the nation's rural transportation system, particularly its roads, highways, and bridges, in order to help identify areas where improvements to America's rural transportation system may be needed.

IIHS Status Report: Vol. 49, No. 5, July 2014

The Insurance Institute for Highway Safety (IIHS) has released the latest issue of its Status Report magazine, a newsletter covering research and topics in the highway safety field.

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From:	Cloos, Karl
To:	Kugathas, Kuga; Paule, Rod; Joseph, Gabriel; Chandramohan, Chandra; Blume, Kristin; Day, Michael; Deschamps, Chris; Jatheendran, Lingam; Dias, Carl; Greenland, Karen; Thompson, Peter; Marshall, Ken; Shoukrallah, Rifaat; Taylor, John; McHugh, Ben; Gill, Tony; Kupke, Max; Edwards, Marc; Potapowicz, Pawel; de Silva, Gunisiri; Peters, Paul; Vikneson, Jayanthy; Yu, Frank; OConnell, Dan; Glassford, Cameron; Dimitrovska, Snezana; Davidson, Geoffrey; Ahmed, Sharfuddin; Meredith, Edward; Zeta, Darwin; Finnigan, Rebecca; Pincombe, Neil; Casimir, Amanda; Wyatt, Timothy; Hocking, Chris; Jollon, Michael
Cc:	Katherine Rawlinson
Subject:	FW: Making News in Transport - Alert 387
Date:	Friday, 19 September 2014 1:36:16 PM
Attachments:	image001.png image002.png

Managers Roads ACT, Road Transport, Road Safety and Asset Acceptance

FYI and circulation

Regards

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From: Katherine Rawlinson [mailto:katherine.rawlinson@arrb.com.au]
Sent: Friday, 19 September 2014 1:10 PM
To: Katherine Rawlinson
Subject: Making News in Transport - Alert 387

Making News in Transport – Alert 387

Selected land transport-related news items from Australia and overseas 19/09/2014, produced by ARRB Group under the National Interest Services (NIS) program

Automotive technology

16 September 2014

Autonomous vehicles (Tranzinfo, Australia)
The Tranzinfo network of Australasian transport libraries has released an infographic alert on issues related to autonomous vehicle operation.

View item

Tuesday 16 September 2014

Smart headlights make driving with high beams safer (IEEE Spectrum, United States)
Researchers at Carnegie Mellon University's Robotics Institute have developed programmable headlights that may be suitable for light passenger vehicles.

View item

Environment

Tuesday 16 September 2014

Economic growth and action on climate change can now be achieved together, finds Global Commission (The Global Commission on the Economy and Climate, United States)
The Global Commission on the Economy and Climate has released a report highlighting the role that innovation and new infrastructure investment play in improving economic performance and addressing climate change impacts.

View item

Tuesday 16 September 2014

Electric vehicles are cleaner, but still not a magic bullet (New York Times, United States)
A scientific alliance organisation in the United States has updated a 2012 study with a new analysis on emissions from electric vehicles which takes into account the origin of the electricity.

View item

Click here for updated analysis

Tuesday 17 September 2014

Low-carbon economy could increase UK GDP says report (Localgov.co.uk, United Kingdom)
A reduction in emissions from road transport could cut healthcare expenditure by £96m to £288m annually by 2030, according to a commissioned report by Cambridge Econometrics.

View item

Click here for full report

Tuesday 17 September 2014

ITDP releases new study on climate change ahead of UN Climate Summit (Institute for Transportation & Development Policy, United States)
A new study by the University of California, Davis, and the Institute for Transportation and Development Policy (ITDP) evaluates the potential economic and environmental effects of

a worldwide increase in investment in public transport, walking and cycling in cities.

View item

Pedestrians and Cyclists

Monday 15 September 2014

Chongqing's 'mobile lane' **(BBC Online, United Kingdom)**
The city of Chongqing in southwestern China has devoted a section of pavement to pedestrian mobile phone users.

View item

Planning and Infrastructure

Friday 12 September 2014

Chairman's speech: infrastructure reform **(Productivity Commission, Australia)**
Peter Harris, Chairman of the Productivity Commission, has delivered a speech on the need for infrastructure reform to the Infrastructure Partnerships Australia 2014 Conference.

View item

Tuesday 16 September 2014

National Remote and Regional Transport Strategy **(Transport and Infrastructure Council, Australia)**
The Northern Territory Department of Transport's website to inform stakeholders and facilitate feedback on the development of the National Remote and Regional Transport Strategy is accepting comment until 2 October.

View item

Click here for website

Wednesday 17 September 2014

Sea level rises due to climate change could cost Australia $200b, Climate Council report finds **(ABC News, Australia)**
A recently released review of the potential impacts of Australian coastal flooding estimates the total value of road and rail infrastructure at risk at $67 billion.

View item

Click here for full report

Public transport

Monday 15 September 2014

Poll: 68 percent want more transit spending (The Hill, United States)
According to a survey by the Mineta Transportation Institute, a majority of respondents support increased federal spending on public transport.

View item

Click here for full report

Thursday 18 September 2014

Taxi Services Commission tables first annual report (Taxi Services Commission, Australia)
Victoria's Taxi Services Commission has tabled its first annual report in Parliament, with details of recent reforms it has implemented.

View item

Rail

Monday 15 September 2014

Capital Metro light rail to transform the national capital (ACT Government Ministerial Media Statement, Australia)
The business case for the first stage of Canberra's light rail network, to be delivered as a public private partnership, has been approved by the ACT Government.

View item

Registration and Licensing

Monday 15 September 2014

Motorcycle deregulation to save millions (Federal Government Ministerial Media Statement, Australia)
The Australian Government has abolished the requirement that new motorcycles be retro-fitted with rear mudguard extensions.

View item

Road safety

Friday 12 September 2014

Banning petrol powered bikes to save young lives (Transport for NSW Media Release, Australia)

The NSW Government has announced a ban on all petrol-powered bicycles from 1 October.

View item

Monday 15 September 2014

40kmh speed limit in CBD to improve pedestrian safety (Transport for NSW Media Release, Australia)

A 40km/h speed limit will be introduced in parts of Sydney's CBD at the end of the month.

View item

Tuesday 16 September 2014

2014 ACRS Submission to the Australian Road Safety Community (Australasian College of Road Safety, Australia)

The Australasian College of Road Safety has released a report outlining opportunities to address road deaths and injuries in Australia and recommendations to improve Australia's standing in the area of road safety.

View item

Transport management

Friday 12 September 2014

New National Transport Commission member appointed (Federal Government Ministerial Media Statement, Australia)

Neil Scales OBE, Director-General of Queensland's Department of Transport and Main Roads, has been appointed a member of the National Transport Commission.

View item

Travel behaviour

Monday 15 September 2014

Walking or cycling to work improves wellbeing, University of East Anglia researchers find (University of East Anglia press release, United Kingdom)

New research by UK health economists claims that walking, cycling or using public transport to get to work results in better mental health.

View item

Friday 19 September 2014

Millennials love transit most, boomers still stuck on cars (The Atlantic CityLab, United States)

Findings have been released from a survey commissioned by US body TransitCenter which sought to investigate the differences in attitudes and behaviours regarding public transport amongst the US population.

View item

National Interest Services *supporting an informed land transport community*

Click here to subscribe to future issues of Making News in Transport, or to change your subscription status if already subscribed.

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Early bird closes Friday 19 September for the **26th ARRB Conference** and the **9th Austroads Bridge Conference**, please click here to view the latest program or visit our websites 26arrbconference.com.au or abc2014sydney.com.au – **early bird closes Monday 15 September so make sure you book in early!**

Both events will be held at ANZ Stadium, Sydney Olympic Park, New South Wales. The **26th Conference: Research driving efficiency** will be held from Sunday 19 October to Wednesday 22 October 2014. The **9th Austroads Bridge Conference: Bridges of the future** will be held from Wednesday 22 October to Friday 24 October 2014

From:	Cloos, Karl
To:	Kugathas, Kuga; Paule, Rod; Joseph, Gabriel; Chandramohan, Chandra; Blume, Kristin; Day, Michael; Deschamps, Chris; Jatheendran, Lingam; Dias, Carl; Greenland, Karen; Thompson, Peter; Marshall, Ken; Shoukrallah, Rifaat; Taylor, John; McHugh, Ben; Gill, Tony; Kupke, Max; Edwards, Marc; Potapowicz, Pawel; de Silva, Gunisiri; Peters, Paul; Vikneson, Jayanthy; Yu, Frank; OConnell, Dan; Glassford, Cameron; Dimitrovska, Snezana; Davidson, Geoffrey; Ahmed, Sharfuddin; Meredith, Edward; Zeta, Darwin; Finnigan, Rebecca; Pincombe, Neil; Casimir, Amanda; Wyatt, Timothy; Hocking, Chris; Jollon, Michael; Davies, Rhys
Cc:	Andrew Meier
Subject:	FW: Making News in Transport - Alert 394
Date:	Friday, 7 November 2014 1:37:32 PM
Attachments:	image001.png image002.png

Managers Roads ACT , Road Transport, Asset Acceptance and Road Safety

FYI and circulation.

Regards

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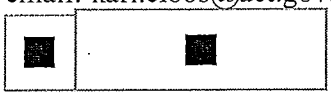

From: Andrew Meier [mailto:andrew.meier@ARRB.COM.AU]
Sent: Friday, 7 November 2014 11:35 AM
To: Andrew Meier
Subject: Making News in Transport - Alert 394

Making News in Transport – Alert 394

Selected land transport-related news items from Australia and overseas 7/11/2014, produced by ARRB Group under the National Interest Services (NIS) program

Automotive technology

Friday 31 October 2014

Self-driving vehicles generate enthusiasm, concerns worldwide (University of Michigan press release, United States)

The University of Michigan Transportation Research Institute has released results from a further survey of public attitudes to autonomous vehicles, this one covering India, China and Japan.

View item

Thursday 6 November 2014

QUT leading the charge for panel-powered car (Queensland University of Technology press release, Australia)

Profile of nanotechnology research published by a collaborative team including Queensland University of Technology researchers.

View item

Thursday 6 November 2014

Vince Cable opens £1billion centre for cleaner greener vehicles (Advanced Propulsion Centre, United Kingdom)

The Advanced Propulsion Centre at the University of Warwick officially opened in the UK this week, aiming to commercialise low carbon propulsion technologies.

View item

Environment

Friday October 31 2014

Evaluation of state-level U.S. electric vehicle incentives (ICCT, United States)

The International Council on Clean Transportation has released a white paper examining the effectiveness of electric vehicle sales incentives.

View item

Heavy vehicles

Monday 3 November 2014

Finding solutions for agriculture transport issues (South Australian Government Ministerial Media Statement, Australia)

The peak primary producing body and the South Australian Government are seeking feedback on agricultural machinery transport issues via an online survey.

View item

Innovation

Monday 3 November 2014

Science, research and innovation: what are our priorities? (CORDIS, Belgium)

The latest European Commission Eurobarometer public opinion survey examines perceptions of research and innovation, including its impact on transport and transport infrastructure.

View item

Click here for summary report

Planning and Infrastructure

Monday 3 November 2014

UK infrastructure crumbling due to Government's short term political concerns (Telegraph.co.uk, United Kingdom)

Two UK business lobby groups have released separate reports on the state of UK infrastructure using findings from member surveys.

View item

Click here for Confederation of British Industry report

Click here for the EEF report

Thursday 6 November 2014

Statement of Expectations issued to Infrastructure Australia (Federal Government Ministerial Media Statement, Australia)

The Federal Government has detailed the deliverables for Infrastructure Australia over the next 12 months.

View item

Public transport

Sunday 2 November 2014

Canberra's light rail infrastructure work worth $120m tipped to take five years (Sydney Morning Herald, Australia)

The ACT Government has released the business case for, and called for expressions of interest to build and operate, the Capital Metro project.

View item

Click here for full report

Rail

Wednesday 29 October 2014

Lessons from major rail infrastructure programmes (National Audit Office, United Kingdom)

The UK National Audit Office has examined five major rail projects, highlighting amongst a range of recommendations the need for clear business cases and the importance of programme management capacity and skills.

View item

Monday 3 November 2014

New CEO for National Rail Safety Regulator (Federal Government Ministerial Media Statement, Australia)

Susan McCarry, presently Deputy Director-General, Policy, Planning and Investment with the WA Department of Transport, has been appointed the new Chief Executive Officer of the Office of the National Rail Safety Regulator.

View item

Road safety

Monday 3 November 2014

Towards zero for road safety: seven pillars for a wise government (Road Safety Foundation, United Kingdom)

The Road Safety Foundation in the United Kingdom has released two reports this week, one recommending road safety strategies and another with their latest analysis of EuroNCAP data.

View item

Click here and here for the reports

Thursday 6 November 2014

The best in the world": celebrating 25 years of IRTAD road safety data (International Transport Forum, France)

The International Transport Forum has released a series of clips and statements to mark a significant milestone for the IRTAD program.

View item

Transport management

Thursday 6 November 2014

Crime and corruption top problems in emerging and developing countries (Pew Research Center, United States)

Traffic issues rated of least concern to general public in emerging and developing economies, according to the results of research released this week by Pew Research.

View item

Andrew Meier
Library Manager
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Thank you to everyone involved in the 26th ARRB Conference and the 9th Austroads Bridge Conference 2014, we have had a successful week and look forward to announcing our next major event!

From: Hunter, Peter
To: Patron, Francois; Paule, Rod
Subject: FW: Driverless Cars [SEC=UNCLASSIFIED]
Date: Friday, 9 January 2015 11:28:44 AM
Attachments: image001.jpg

From: Pitt Geoffrey [mailto:Geoffrey.Pitt@infrastructure.gov.au]
Sent: Thursday, 8 January 2015 2:52 PM
To: Smith, Rickman (DPTI); 'Chris.Jones@roads.vic.gov.au'
Cc: AMVCB Business@qdot; Bellary, Anant (Qld); Pepi, Anthony (NTC); Ioanni, Barry (DPTI); Muirhead, Bill (Transport NT); Leavy, Dan (TfN); Davey Uprichard; Black, David (TfN); Hosie, David (WA); Dikranian, Gregory (TfN); Ratto, Hernan (RMS NSW); Del Beato, Julian (NTC); Gleeson, Jeremy (DIER, Tas); Marcolina, John (DoT-WA); Wilson, John (DIER); Emmett, Lesley (DPTI); Ross. Michael (Qld); Chan, Michael (VicRoads); Hunter, Peter; Hogan Robert; Lilley Simon; Standards; Spencer Stephen; Hoy Steven; Stratos, Kyriakou (VicRoads); Lo, Wayne (NT DPI); Emmett, Lesley (DPTI); Leyson, Matthew (DPTI); Lohmeyer, Matthew (DPTI)
Subject: RE: Driverless Cars [SEC=UNCLASSIFIED]

Hello

Under the Vienna Convention at Article 8, paragraph 5 requires the driver to be able to control his/her vehicle – see website: http://www.unece.org/fileadmin/DAM/trans/conventn/Conv_road_traffic_EN.pdf The signatories to the convention are generally also signatories to the 1958 Agreement, and as such, vehicle regulations developed by the United Nations (WP.29) will meet the convention requirement.

Accordingly, as the ADRs for passenger vehicles are predominantly harmonised with the UN regulations, they will follow the convention requirement.

Where ADR 42/04 clause 7.1 - Steering System has requirements that is aligned to a mechanical system requiring driver input, the alternative standard UN R 79 while it permits non-mechanical systems, it does require that the driver remains at all times primarily in control the vehicle. UN R 79 also permits driver assistance from "Advanced Driver Assistance Steering Systems" that can incorporate a "Corrective Steering Function" such as lane departure avoidance that corrects the steering angle to prevent departure from the chosen lane. See UN R 79 on the website: http://www.unece.org/fileadmin/DAM/trans/main/wp29/wp29regs/r079r2e.pdf

In recent times with the advent of automatic systems to direct the behaviour of various vehicle systems such as lighting, but increasingly towards collision avoidance the principle of the driver being able to control the vehicle is no longer completely in alignment with advanced vehicle technologies. Consequently, WP.29 has engaged in discussion with Working Party 1, which is responsible for the Convention, to address inconsistencies between the Convention and WP.29 regulations.

Furthermore, the WP.29 Informal Group on Intelligent Transport Systems (ITS) is considering Autonomous vehicles and a presentation made to the group may provide insight to the issues. See website: https://www2.unece.org/wiki/download/attachments/23756895/03_Autonomous_Vehicles_and_WP29.pdf?version=1&modificationDate=1403843615683&api=v2 There are other papers on this subject on the ITS website.

Regards

Geoffrey

Geoffrey Pitt
Director – Standards Review & Maintenance
Vehicle Safety Standards Branch
Department of Infrastructure and Regional Development
111 Alinga Street CANBERRA ACT 2600

Tel: 02 6274 7045

From: Smith, Rickman (DPTI) [mailto:Rickman.Smith@sa.gov.au]
Sent: Thursday, 8 January 2015 11:16 AM
To: 'Chris.Jones@roads.vic.gov.au'
Cc: AMVCB Business@qdot; Bellary, Anant (Qld); Pepi, Anthony (NTC); Ioanni, Barry (DPTI); Muirhead, Bill (Transport NT); Leavy, Dan (TfN); Davey Uprichard; Black, David (TfN); Hosie, David (WA); Pitt Geoffrey; Dikranian, Gregory (TfN); Ratto, Hernan (RMS NSW); Del Beato, Julian (NTC); Gleeson, Jeremy (DIER, Tas); Marcolina, John (DoT-WA); Wilson, John (DIER); Emmett, Lesley (DPTI); Ross. Michael (Qld); Chan, Michael (VicRoads); Hunter, Peter (ACT); Hogan Robert; Lilley Simon; Standards; Spencer Stephen; Hoy Steven; Stratos, Kyriakou (VicRoads); Lo, Wayne (NT DPI); Emmett, Lesley (DPTI); Leyson, Matthew (DPTI); Lohmeyer, Matthew (DPTI)
Subject: RE: Driverless Cars

Chris,

That is the only thing I could think of that would prevent an autonomous car from being accepted. However, even that need not be a barrier in the early stages, as we can expect that cars will retain a full set of controls so that the driver has a choice.

It will become more interesting when the totally autonomous car becomes available (https://www.youtube.com/watch?v=CqSDWoAhvLU, http://www.fastcodesign.com/3040442/fast-feed/why-mercedess-self-driving-car-is-so-much-more-tempting-than-googles). Not only will ADR 42/-- 7.1.2 become an issue, but what about the total lack of pedals as well?

From: Chris.Jones@roads.vic.gov.au [mailto:Chris.Jones@roads.vic.gov.au]
Sent: Thursday, 8 January 2015 9:38 AM
To: Smith, Rickman (DPTI)
Cc: AMVCB Business@qdot; Bellary, Anant (Qld); Pepi, Anthony (NTC); Ioanni, Barry (DPTI); Muirhead, Bill (Transport NT); Leavy, Dan (TfN); Uprichard, Davey (NZTA); Black, David (TfN); Hosie, David (WA); Pitt, Geoffrey (VSS); Dikranian, Gregory (TfN); Ratto, Hernan (RMS NSW); Del Beato, Julian (NTC); Gleeson, Jeremy (DIER, Tas); Marcolina, John (DoT-WA); Wilson, John (DIER); Emmett, Lesley (DPTI); Ross. Michael (Qld); Chan, Michael (VicRoads); Hunter, Peter (ACT); Hogan, Robert (VSSB); Lilley, Simon (VSS); VSS; Spencer, Stephen (VSSB); Hoy, Steven (VSSB); Stratos, Kyriakou (VicRoads); Lo, Wayne (NT DPI)
Subject: Re: Driverless Cars

Hi Rickman,

The only ADR that springs to mind is ADR 42 and its extension to by-wire systems. Driverless vehicles will increasingly need by-wire systems to take the driver out of the equation. I'm not entirely clear if steer by wire is prevented in the ADRs/ECEs. This may be something DIRD can comment on, or perhaps you could research further?

Steering System

7.1.1. The centreline of the steering control must not be located to the left of the centreline of the vehicle.

7.1.2. Failure of any non-mechanical component of the steering system must not prevent effective steering of the vehicle.

7.1.3. Vehicles with *'full power steering equipment'* shall be capable of providing steering failure and defect visual warning signals to the driver.

7.1.4. Vehicles complying with the technical requirements of UNECE R 79 shall be deemed to comply with Clauses 7.1.2 and 7.1.3.

Chris Jones
Acting Manager - Vehicle and Motorcyling Policy
VicRoads
Phone: 03 9854 2146

From: "Smith, Rickman (DPTI)" <Rickman.Smith@sa.gov.au>
To: "AMVCB Business@qdot" <amvcbiz@transport.qld.gov.au>, "Ioanni, Barry (DPTI)" <Barry.Ioanni@sa.gov.au>, "Bellary, Anant (Qld)" <anant.z.bellary@tmr.qld.gov.au>, "Black, David (TfN)" <david.black@transport.nsw.gov.au>, "Chan, Michael (VicRoads)" <Michael.X.Chan@roads.vic.gov.au>, "Del Beato, Julian (NTC)" <jdelbeato@ntc.gov.au>, "Dikranian, Gregory (TfN)" <Gregory.DIKRANIAN@rms.nsw.gov.au>, "Emmett, Lesley (DPTI)" <Lesley.Emmett@sa.gov.au>, "Gleeson, Jeremy (DIER, Tas)" <jeremy.gleeson@dier.tas.gov.au>, "Hogan, Robert (VSSB)" <robert.hogan@infrastructure.gov.au>, "Hosie, David (WA)" <David.Hosie@transport.wa.gov.au>, "Hoy, Steven (VSSB)" <steven.hoy@infrastructure.gov.au>, "Hunter, Peter (ACT)" <peter.hunter@act.gov.au>, "Jones, Chris (VicRoads)" <Chris.Jones@roads.vic.gov.au>, "Leavy, Dan (TfN)" <Dan.Leavy@transport.nsw.gov.au>, "Lilley, Simon (VSS)" <simon.lilley@infrastructure.gov.au>, "Lo, Wayne (NT DPI)" <wayne.lo@nt.gov.au>, "Marcolina, John (DoT-WA)" <jmarcolina@transport.wa.gov.au>, "Muirhead, Bill (Transport NT)" <bill.muirhead@nt.gov.au>, "Pepi, Anthony (NTC)" <apepi@ntc.gov.au>, "Pitt, Geoffrey (VSS)" <Geoffrey.Pitt@infrastructure.gov.au>, "Ratto, Hernan (RMS NSW)" <hernan.ratto@rms.nsw.gov.au>, "Ross. Michael (Qld)" <Michael.J.Ross@tmr.qld.gov.au>, "Spencer, Stephen (VSSB)" <Stephen.Spencer@infrastructure.gov.au>, "Stratos, Kyriakou (VicRoads)" <stratos.kyriakou@roads.vic.gov.au>, "Uprichard, Davey (NZTA)" <davey.uprichard@nzta.govt.nz>, VSS <Standards@infrastructure.gov.au>, "Wilson, John (DIER)" <john.wilson@dier.tas.gov.au>,
Date: 07/01/2015 02:45 PM
Subject: Driverless Cars

Ext: Business Area:
Fax: Internet:
File Name: File Description:

People,

I am aware that there are complex legal reasons why autonomous cars are not allowed in Australia but I understand these to be road rules issues as well as questions of liability, insurance etc.

Is there anything in the ADRs, the AVSRs or local vehicle standards that prohibits them?

Rickman Smith B Eng (Mech)
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Vehicle Operations Section
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Department of Planning, Transport and Infrastructure
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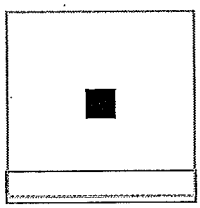
Mob: [redacted]



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From:	Cloos, Karl
To:	Kugathas, Kuga; Paule, Rod; Joseph, Gabriel; Chandramohan, Chandra; Blume, Kristin; Day, Michael; Deschamps, Chris; Jatheendran, Lingam; Dias, Carl; Greenland, Karen; Thompson, Peter; Marshall, Ken; Shoukrallah, Rifaat; Taylor, John; McHugh, Ben; Gill, Tony; Kupke, Max; Edwards, Marc; Potapowicz, Pawel; de Silva, Gunisiri; Peters, Paul; Vikneson, Jayanthy; Yu, Frank; Glassford, Cameron; Dimitrovska, Snezana; Davidson, Geoffrey; Ahmed, Sharfuddin; Meredith, Edward; Zeta, Darwin; Finnigan, Rebecca; Pincombe, Neil; Casimir, Amanda; Wyatt, Timothy; Hocking, Chris; Jollon, Michael; Davies, Rhys; Norton, Timothy
Subject:	FW: Making News in Transport - Alert 401
Date:	Friday, 9 January 2015 3:39:50 PM
Attachments:	image001.png image002.png

Managers Roads ACT, Road Transport, Road Safety and Asset Acceptance

FYI and circulation.

Regards

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From: Katherine Rawlinson [mailto:katherine.rawlinson@arrb.com.au]
Sent: Friday, 9 January 2015 12:59 PM
To: Katherine Rawlinson
Subject: Making News in Transport - Alert 401

Making News in Transport – Alert 401

Selected land transport-related news items from Australia and overseas 9/01/2015, produced by ARRB Group under the National Interest Services (NIS) program

Automotive technology

Tuesday 30 December 2014

An MIT-Singapore partnership is launching a driverless car pilot program (Boston.com, United States)

The Singapore-MIT Alliance for Research and Technology (SMART) is planning to test a driverless vehicle that passengers can hail using a smartphone app.

View item

Wednesday 7 January 2015

CES 2015 is all about the car of the future (Business Insider, United States)
Daimler's luxury self-driving prototype car is amongst the new breed of cars and automotive technologies on display at this week's International Consumer Electronics Show in Las Vegas.

View item

Click here for more information from Daimler website

Environment

Wednesday 17 December 2014

Driverless cars could impact on global emissions strategies, according to report (Imperial College London, United Kingdom)
A major uptake of automated vehicles could have an impact on global pollution levels, according to a new study published in an environmental science journal.

View item

Click here for abstract

Tuesday 23 December 2014

The state of clean transport policy: a 2014 synthesis of vehicle and fuel policy developments (International Council on Clean Transportation, United States)
The International Council on Clean Transportation has published a report that summarises advances in regulations intended to reduce energy use and air pollution from vehicles across eleven major markets including Australia.

View item

Friday 2 January 2015

Scania tests electric bus that recharges wirelessly (Transport News Brief, United Kingdom)
Scania is testing an electric-hybrid bus that recharges wirelessly from the road surface at bus stops.

View item

Monday 5 January 2015

Automated container terminal produces zero emissions (DC Velocity, United States)
The brand-new Maasvlakte II container terminal in Rotterdam, the Netherlands, is highly

automated, produces zero emissions, and sources its electricity needs from wind power.

View item

Innovation

Thursday 8 January 2015

Porsche launches world first interactive billboard (Drive.com.au, Australia)
A new digital billboard in Melbourne is using vehicle recognition software to display an advertisement when a Porsche car approaches.

View item

ITS

Monday 22 December 2014

USDOT unveils new animated video illustrating the benefits of connected vehicle technology (Department of Transportation, United States)
The US Department of Transportation has released a video demonstrating the benefits and uses of connected vehicles with the aim of aiding public understanding of the technology.

View item

Click here to view video

Knowledge management

Thursday 8 January 2015

New content added to ARRB Knowledge Base (ARRB Group, Australia)
The free, full-text ARRB Knowledge Base now contains over 5000 items with the recent addition of 1000 records including over 42 years of ARRB journal papers.

Click here for full list of contents of Knowledge Base

Click here to search Knowledge Base

New on YouTube

December 2014-January 2015

Clips recently released by Australasian road and transport agencies (YouTube, Australia)

Respect our road workers (VicRoads)

Freeway breakdowns – what to do (VicRoads)

2014 Road Toll – a breakdown (TAC Victoria)

Numbers (NZTA)

Planning and Infrastructure

Tuesday 23 December 2014

AASHTO 2015 Bottom Line Report: $US120 billion annual road investment needed to keep up with demand (Better Roads, United States)
A report from AASHTO has identified investment needs for US highways and bridges.

View item

Click here for full report

Public transport

Friday 2 January 2015

Fare evasion on Melbourne public transport at lowest recorded level (The Age, Australia)
Fare evasion on Melbourne public transport in 2014 fell to the lowest level since measurements began in 2005.

View item

Wednesday 7 January 2014

Just 6 out of 444 Victorian taxi drivers pass new accreditation test (ABC News, Australia)
Almost 99 per cent of Victorian taxi drivers required to sit the new knowledge test introduced six months ago have failed the test.

View item

Rail

Tuesday 6 January 2014

Is America falling in love with trains again? (The Telegraph, United Kingdom)
High-speed passenger rail is growing in popularity across the United States.

View item

Road safety

Sunday 21 December 2014

Distracted driving and the risks of ride-hailing services like Uber (New York Times, United States)
Uber drivers have 15 seconds to respond to their smartphones and decide whether to accept a fare, which has raised concerns about driver distraction.

View item

Tuesday 23 December 2014

Reports examine aspects of road safety (Ministry of Transport, New Zealand)
New Zealand's Ministry of Transport has released three new reports on different aspects of road safety: an assessment of the social costs; crash statistics; and public attitudes to road safety.

View item

Monday 5 January 2015

Government launches road toll response (Western Australian Government Ministerial Media Release, Australia)
The Western Australian Government has launched a number of measures in response to the 2014 road toll, including additional fixed speed cameras and the formation of a motorcycle safety review group.

View item

Transport economics

Wednesday 17 December 2014

Perth Freight Link business case complete (Federal Government Ministerial Media Statement, Australia)
The Western Australian Government has released a business case summary for the Perth Freight Link.

View item

Click here for business case summary

Transport management

Wednesday 7 January 2015

Linking Melbourne Authority to be disbanded (Victorian Government Ministerial Media Statement, Australia)
The Linking Melbourne Authority, which was created to manage the East West Link project, is to be disbanded.

View item

Travel behaviour

Monday 5 January 2015

Why are young Australians turning their back on the car? (The Conversation, Australia)
An examination of the decline in the number of young people taking a driver's licence in Australia in recent times.

View item

National Interest Services *supporting an informed land transport community*

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Librarian
National Interest Services

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From: Paule, Rod
To: Davidson, Geoffrey; Horner, David
Cc: Hunter, Peter
Subject: RE: Autonomous vehicles
Date: Monday, 12 January 2015 9:04:00 AM
Attachments: image001.jpg

Geoffrey,

We haven't done anything. There was a question in the last week or so to which the Commonwealth indicated there was a requirement under the Vienna convention that a driver must be able to control his/her car.

For anything intended to be supplied to market, I would expect the running to be taken by the Commonwealth. For anything to be modified in-service, I would expect the proposer to approach the road transport authority/ies long before they got to the point of attempting to use the road network.

Rod

Rod Paule | Manager Road Transport Regulation |
Phone 02 620 77115 | Fax 02 620 77160 |
Office of Regulatory Services | Justice and Community Safety | **ACT Government**
Level 2, 13 - 15 Challis Street, DICKSON ACT 2602 | PO Box 582 Dickson ACT 2602 |
www.act.gov.au

From: Davidson, Geoffrey
Sent: Monday, 12 January 2015 8:58 AM
To: Horner, David; Paule, Rod
Subject: FW: Autonomous vehicles

Nothing I am aware of. Can you guys confirm?

So far, no other jurisdiction has done anything re this.

Geoffrey Davidson | Manager, Road Safety
Legislation, Policy & Programs | Justice and Community Safety Directorate | **ACT Government**
Level 2, 12 Moore Street, CANBERRA CITY ACT 2601 | GPO Box 158, CANBERRA ACT 2608
Telephone (02) 620 77195 | Facsimile (02) 620 50937

cid:image003.jpg@01CF2E1F.6AC457B0

From: Parkinson, Andrew (DPTI) [mailto:Andrew.Parkinson@sa.gov.au]
Sent: Wednesday, 7 January 2015 12:11 PM
To: 'Gavlik, Alysse (StateGrowth)'; Rodney.Blythe@roads.vic.gov.au; Jean Mcdonald; 'geoffrey.davidson@act.gov.au'; John N Burrill; 'CRACKEL Linley (EDOoRS/A)'; 'Reardon, Noelani'
Subject: Autonomous vehicles

Hi all. Happy new year to you!

Has anyone done any work on what the road rules would look like in order to accommodate autonomous vehicles? There would be a zillion other things that would need to change, but I would appreciate any assistance with formulating a broad-brush description of what, if anything, would need to happen to the road rules themselves.

Thanks, and best regards

Andrew Parkinson
Senior Project Officer
Legislation Management
Department of Planning, Transport and Infrastructure
GPO Box 1533 Adelaide 5001
t: (08) 8204 8838
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andrew.parkinson@sa.gov.au
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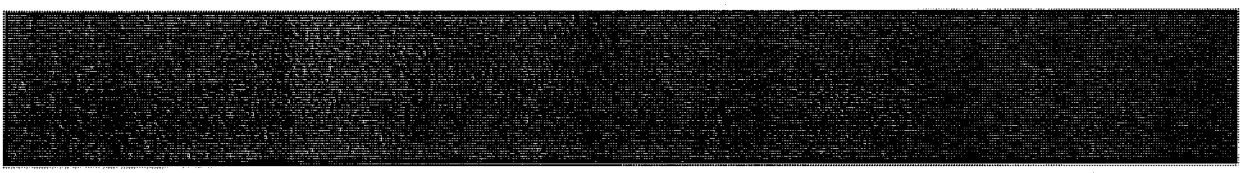
From:	Michelle Hendy
To:	simon.grieve@transport.wa.gov.au; Cahill, Marcus; Amanda Hill; Dimi Rigas; "julie.bullas@onrsr.com.au"; Barbara Littler; Paule, Rod; Evelyn Legare; Angela.Conway@stategrowth.tas.gov.au; "donna.wieland@infrastructure.gov.au"; "Nicholls, Penny (StateGrowth)"; Kristy.Bradley@ecodev.vic.gov.au; Wendy Sladen; JAMES Marcus; mark.elford@sa.gov.au; Peter.Schofield@roads.vic.gov.au; Travis Dawson; ChrisK@tca.gov.au; Gavin Hill; julie.hill@swa.gov.au; Melanie Atlee (melanie.atlee@anzpaa.org.au); Secretariat@anzpaa.org.au; Nkoukoulas@austroads.com.au; David Francis (dfrancis@austroads.com.au); david.mitchell@infrastructure.gov.au
Cc:	Geoff Allan; Jeff Potter; Marcus Burke; Ramon Staheli; Paul Davies; Neil Wong; Brook Hall; John Gordon
Subject:	Draft NTC business cases for your comment by 29 May 2015
Date:	Friday, 17 April 2015 3:41:01 PM
Attachments:	Draft NTC business cases for Nov 2015 - 16April15.docx

Dear colleagues

As you know, the NTC is required to seek Ministerial endorsement of business cases for all new projects entering our work program. Last year we developed business cases focused on improving productivity and safety. Eight of these business cases were approved by Ministers in November 2014 and two projects have started ('Heavy Vehicle Driver Fatigue Data' and the 'Review and Update the Load Restraint Guide') and the other projects will commence in the near future.



I invite your input to help shape these proposals and make sure that the scope for each is tightly focused and is indeed attractive, achievable and affordable.

Please provide us with any comments or feedback on these draft business cases by Friday 29 May 2015.

If you would prefer to arrange a call or meeting to provide verbal rather than written feedback, please let us know.

Following this round of consultation, we will revise the draft business cases and prepare recommendations on which proposals should proceed. We will then recirculate the draft business cases with recommendations for final comments between June and July 2015. Once final changes are made, we will submit the business cases to TISOC on 18 September 2015 and to Ministers on 6 November 2015.

As always, we also welcome any new ideas for 'candidate projects' at any time. We already have a number we are developing into short form proposals which we will circulate to you in advance of our prioritisation meeting in October 2015 (date to be confirmed). This meeting will help us identify which candidate proposals should be included on the NTC's work program for business case development in the 2016-17 to 2019-20 work program. Ministers will consider this work program in May 2016. It sounds so far off, but as we all know time flies!

Thank you again for your ongoing support, and please don't hesitate to contact Neil Wong (ph. 03 9236 5023 or email nwong@ntc.gov.au) or myself to discuss any ideas and comments you have.

Regards

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Detailed project proposals – DRAFT FOR CONSULTATION

NTC AUSTRALIA
National Transport Commission

Preparation for more automated road and rail vehicles – identifying any regulatory and operational barriers

Executive summary

Many crashes are the result of human error, with various estimations (ranging from 60-90 per cent) for the number of crashes for which human error was the primary causal factor. The automation of driving controls in road and rail vehicles has the potential to significantly improve safety. Vehicle automation is increasingly being adopted to improve safety with emerging applications such as lane keeping, adaptive cruise control, and autonomous emergency braking assisting drivers.

Vehicle manufacturers are progressively introducing higher levels of automation into vehicles for release into the public market, and as this continues, we are getting ever closer to having vehicles on our roads that can drive themselves without human intervention in certain scenarios. Retrofitted equipment such as platooning is also becoming more available for purchase and installation in older vehicles.

The introduction of higher levels of automation into new vehicles by manufacturers is driven primarily by market forces rather than any government direction or regulatory requirement.

This project focuses on whether the current regulatory system in Australia can support the introduction of more automated vehicles.

Project Definition

1.1 Reason for the project

Vehicles with varying degrees of automation and 'intelligent' safety features are already on sale and in use in Australia. This project examines whether our current regulatory regime can support either highly or fully automated vehicles. In rail, fully automated trains are operational on private rail lines in the Pilbara region, and are planned for use in Sydney's metropolitan passenger rail network in the near future.

1.2 What is the problem that needs to be addressed?

The problem that needs to be addressed is the uncertainty around whether Australian's current regulatory regime can support either highly or fully automated vehicles on public roads, or shared railways. This issues include consideration of the interactions between road transport law, rail safety law, consumer protection law, liability and insurance regimes, and common law requirements.

1.3 Project objectives

To develop a discussion paper and report on the regulatory and operational barriers to increased automation of road and rail vehicles. This project should be progressed as part of the NTC's existing broader Technology sub-program, and closely linked with technology programs undertaken by other national bodies (such as Austroads) and jurisdictions.

1.4 Key stakeholders interested in the project

- Road and rail industry members and their representative associations
- Freight and passenger transport representatives
- Government – NHVR, ONRSR, and network managers (local, state, and territory road managers, the ARTC, QR and other rail network managers)
- Other national bodies (Austroads, TCA, RISSB, ARRB)
- Vehicle and locomotive manufacturers and vehicle design innovators
- Insurance providers

- Technology providers
- ITS Australia
- Roads Australia
- Australian and state and territory automobile associations and their members.

Proposal Analysis

2.1 Business options

The options are:

1. Status quo - do not proceed with this project, allowing the market and governments to deal with issues as they arise
2. NTC monitor international developments and keep a 'watching brief', and provide advice to TISOC and the Council should circumstances change significantly
3. NTC develop a report examining whether our current regulatory regime can support either highly or fully automated vehicles, and whether governments need to take any further actions.

2.2 Recommended option

Option 3. It is envisaged that this report would be similar in scope to the report published by the UK Government, entitled *The Pathway to Driverless Cars, February 2015.*

2.3 Proposed project scope and exclusions

Inclusions:

- Identify the potential implications on automated vehicle technology from, and interactions between road transport law, consumer protection law, insurance and liability regimes, and common law
- Engaging partners and stakeholders to identify potential challenges, opportunities and scope the extent of future change
- Examining the regulatory and operational issues for governments of either highly or fully automated vehicles (including transport laws, consumer law, and insurance)
- Identifying any potential regulatory or other barriers to undertaking a pilot or demonstration of automated vehicle technology in Australia
- Developing a report for TISOC and the Council.

Exclusions:

- Undertaking reform of existing regulatory arrangements (if necessary, this will occur through the NTC's maintenance program).

2.4 Proposed project approach

This project will likely include:

- **Detailed project planning** – thoroughly planning and scoping the project
- **Engagement and consultation** – Discussion with stakeholders and experts on the potential issues, barriers, opportunities and phasing of automated vehicle technology
- **Developing final report to the Transport and Infrastructure Council**

2.5 Desired outcomes

1. Improved understanding of the current regulatory system and its ability to continue to support increased vehicle automation (both road and rail)
2. Identification of any likely regulatory / operational barriers to be removed / overcome with an indication of potential timing and options (including advice on desirable settings for trials)
3. Contributing to a national consistent approach for addressing increased vehicle automation.

BACKGROUND

Related projects

Other national bodies are undertaking research and development work into more automated vehicles, and the impact of this technology in Australia. These include:

- Austroads
- ARRB
- Smart Transport Research Centre (STRC) and other university based research bodies
- AutoCRC
- Jurisdictions. Western Australia and South Australia have existing and proposed projects relating to automated vehicles (respectively):
    - https://www.mainroads.wa.gov.au/AboutMainRoads/News/Pages/av.aspx
- Internationally. Sweden and the United Kingdom have produced reports which this project would likely seek to replicate, for example:
    - https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/401565/pathway-driverless-cars-main.pdf

Specific issues that should be considered in developing the scope of this project

- Consideration of factors that may be relevant for technologies that are considered to be more 'drivers aids' than actual automation versus technologies which allow a driver to relinquish control (and vigilance) over the operation of their vehicle.
- The legislative definition of 'control' of a vehicle.
- Australian Road Rules and Australian Design rules that relate to distraction technologies which might also be automated vehicle technologies/applications.
- Specific provisions for safe road behaviour such as following distances for certain kinds of trucks, which might restrict the performance of automated vehicle technology such as platooning.

Definition of vehicle automation

There are several definitions of vehicle Automation in use around the world. The two most common are the USA National Highway Traffic Safety Administration (NHTSA) classification system, and the European Union classification system. Both classification systems are based broadly on the types of sensing and control technologies, with 'break points' based on the level of automation the vehicle is capable of. A short summary of the USA NHTSA model is listed below.

It is worth noting that most classification systems tend to be focused on the engineering characteristics, rather than the operational interaction of vehicles with existing regulatory frameworks.

USA National Highway Traffic Safety Administration vehicle automation classification

The following example of a definition of various levels of automation is used by the NHTSA, and covers the complete range of vehicle automation, from vehicles that do not have any of their control systems automated (level 0) **through to fully automated vehicles (level 4).**

- **Level 0 – No-Automation**: The driver is in complete and sole control of the primary vehicle controls (brake, steering, throttle, and motive power) at all times, and is solely responsible for monitoring the roadway and for safe operation of all vehicle controls.
- **Level 1 – Function-specific Automation**: Automation at this level involves one or more specific control functions; if multiple functions are automated, they operate independently from each other.
- **Level 2 – Combined Function Automation**: This level involves automation of at least two primary control functions designed to work in unison to relieve the driver of control of those functions. Vehicles at this level of automation can utilize shared authority when the driver cedes active primary control in certain limited driving situations. The driver is still responsible for monitoring the roadway and safe operation and is expected to be available for control at all times and on short notice.

- **Level 3 – Limited Self-Driving Automation**: Vehicles at this level of automation enable the driver to cede full control of all safety-critical functions under certain traffic or environmental conditions and in those conditions to rely heavily on the vehicle to monitor for changes in those conditions requiring transition back to driver control. The driver is expected to be available for occasional control, but with sufficiently comfortable transition time.
- **Level 4 – Full Self-Driving Automation (Level 4):** The vehicle is designed to perform all safety-critical driving functions and monitor roadway conditions for an entire trip. Such a design anticipates that the driver will provide destination or navigation input, but is not expected to be available for control at any time during the trip. This includes both occupied and unoccupied vehicles. By design, safe operation rests solely on the automated vehicle system.

From: Paule, Rod
To: Fiedler, Michelle; Balshaw, Greg
Subject: FW: Making News in Transport - Alert 417
Date: Friday, 8 May 2015 2:23:00 PM
Attachments: image001.png
image002.png

Parking article half way down.

Rod

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From: Cloos, Karl
Sent: Friday, 8 May 2015 12:31 PM
To: Kugathas, Kuga; Paule, Rod; Joseph, Gabriel; Chandramohan, Chandra; Blume, Kristin; Day, Michael; Deschamps, Chris; Jatheendran, Lingam; Dias, Carl; Greenland, Karen; Thompson, Peter; Marshall, Ken; Shoukrallah, Rifaat; Taylor, John; McHugh, Ben; Gill, Tony; Edwards, Marc; Potapowicz, Pawel; Peters, Paul; Vikneson, Jayanthy; Yu, Frank; Glassford, Cameron; Dimitrovska, Snezana; Davidson, Geoffrey; Ahmed, Sharfuddin; Meredith, Edward; Zeta, Darwin; Finnigan, Rebecca; Pincombe, Neil; Casimir, Amanda; Wyatt, Tim; Hocking, Chris; Jollon, Michael; Davies, Rhys; Norton, Timothy; Hawkins, Robyn; Horner, David
Cc: Andrew Meier
Subject: FW: Making News in Transport - Alert 417

Managers Roads ACT, Road Transport, Road Safety and Asset Acceptance.

FYI and circulation.

Regards

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From: Andrew Meier [mailto:andrew.meier@ARRB.COM.AU]
Sent: Friday, 8 May 2015 12:07 PM
To: Andrew Meier
Subject: Making News in Transport - Alert 417

Making News in Transport – Alert 417

Selected land transport-related news items from Australia and overseas

8/05/2015, produced by ARRB Group under the National Interest Services (NIS) program

Budget announcements

Monday 4 May 2015

$20m for flashing 40kmh school zone signs (West Australian Government Ministerial Media Statement, Australia)

In a pre-budget announcement, the West Australian Government has released information on funding allocations for LED school zone signage.

View item

Tuesday 5 May 2015

Biggest public transport investment in Victoria's history (Victorian Government Ministerial Media Statement, Australia)

Funding for rail, tram and bus infrastructure projects, and to trial all night public transport on weekends, was included in the 2015 Victorian State Budget handed down this week.

View item

Click here for the Service Delivery paper, containing the outputs and performance indicators for all Departments

And here for all budget papers

Freight transport and Logistics

Tuesday 5 May 2015

Bosch brings freight trains to the internet (Bosch Engineering press release, Germany)

Technology company Bosch is to bring to production a rail freight monitoring system.

View item

Tuesday 5 May 2015

New tool cuts cattle transport costs with maths (CSIRO media release, Australia)

A visual modelling tool developed by CSIRO using over 1.5 million cattle freight vehicle movements, has been designed to inform route planning and infrastructure investment decisions.

View item

Heavy vehicles

Thursday 30 April 2015

NHVR to lead development of national safety and compliance action plan (National Heavy Vehicle Regulator press release, Australia)

The National Compliance and Enforcement Operations Forum convened for the first time late last week.

View item

Wednesday 6 May 2015

World premiere on U.S. highway: Daimler Trucks drives first autonomous truck on public roads (Daimler press release, Germany)

In what is claimed to be a world first, heavy vehicle manufacturer Daimler Trucks has been granted a road licence for an autonomous truck.

View item

Parking

Wednesday 6 May 2015

Will car parks become a thing of the past? (Colliers International, Australia)

Property services firm Colliers International has released a white paper examining trends in Australian commercial car space supply and pricing.

View item

Click here for full report

Pedestrians and Cyclists

Friday 1 May 2015

Cyclists get say on new QUT safety app: CARRS-Q study (Queensland University of Technology press release, Australia)

The Centre for Accident Research & Road Safety - Queensland (CARRS-Q) is inviting bike riders to provide feedback via an online survey into the functionalities of the GoSafeCycle collision risk warning app.

View item

Tuesday 5 May 2015

How Amsterdam became the bicycle capital of the world (The Guardian, United Kingdom)

Activism against a high rate of child road traffic fatalities in the early 1970s contributed to the measures that today mean 38% of travel in Amsterdam is by bicycle.

View item

Planning and Infrastructure

Tuesday 5 May 2015

Building for the future: a new Federal Guide to Infrastructure Planning and Design (White House press release, United States)

The Obama administration this week released a guidelines document on infrastructure predevelopment, and co-convened a roundtable on infrastructure development partnerships and planning for climate change.

View item

Friday 8 May 2015

BQ seeks industry experts to guide Queensland's infrastructure program (Queensland Government Ministerial Media Statement, Australia)

Expressions of interest have opened for board positions on the Queensland Government's infrastructure advisory body Building Queensland.

View item

Public transport

Friday 1 May 2015

Melbourne Bike Share joins PTV (Public Transport Victoria, Australia)

Responsibility for management of the Melbourne Bike Share program is being transferred from VicRoads to Public Transport Victoria.

View item

Wednesday 6 May 2015

Auditor-General finds value for money in bus contracts can be improved (Victorian Auditor

General's Office, Australia)

The Victorian Auditor-General has released the results of a review of the tendering of metropolitan bus contracts.

View item

Thursday 7 May 2015

Sydney Trains sniffing out graffiti thugs (Transport for NSW Media Release, Australia)

A trial of a system that combines an electronic chemical sensor which detects the vapour of both spray paint and marker pens with live CCTV is underway in New South Wales.

View item

Rail

Wednesday 6 May 2015

FAA-industry initiative will expand small UAS horizons (Federal Aviation Administration, United States)

One of three government administration and industry collaborations announced by the US Federal Aviation Administration to further research drone capabilities involves inspection of rail infrastructure.

View item

Road safety

May 2015

Marking Third United Nations Global Road Safety Week

Public landmark illumination and release of images simulating the adult appearance of children who died in road crashes were two of the ways that Global Road Safety Week was marked in Australasia.

Friday 1 May 2015

Four-legged friends put 'paws' on road trauma (Transport Accident Commission media release, Australia)

The Victorian Transport Accident Commission (TAC) has run their first ever exclusively-on-social-media campaign.

View item

National Interest Services *supporting an informed land transport community*

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ARRB Group Inc. is pleased to be participating in the upcoming 9th International Conference on Managing Pavement Assets (ICMPA) in Washington D.C, USA from 18-21 May 2015. Listen to ARRB's staff present papers on 'Addressing Uncertainties of Performance Modelling' and '3D Roughness Measurement', or visit our exhibition booth! For more information on ICMPA visit: http://www.cpe.vt.edu/icmpa9/ICMPA9-Program.pdf

From: Davidson, Geoffrey
To: Georgeson, Matthew
Subject: FW: Adelaide"s International Driverless Vehicle Conference
Date: Thursday, 6 August 2015 11:15:00 AM
Attachments: image001.png
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image003.png
image004.png
21-7-15 - Weatherill Mullighan - Driverless.pdf
image005.jpg

FYI

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Sent: Wednesday, 22 July 2015 7:19 AM
Cc: AJ Mathota; Alex Forrest; Amanda Albert; Anant Bellary; Antonietta Cavallo; Arusha Ziapur; Barbara Littler; Baynes, Kylie (DPTI); Belcher Thomas; Ben Barnes; Bernard Carlon; Beth Niemeier; Bill Muirhead; Casey Mackay; Chris.Jones@roads.vic.gov.au; Craig Hoey; Craig Newland; Leavy, Dan; David Hosie; Deer Kate; Emmett, Lesley (DPTI); Gammon, Mia (DPTI); Davidson, Geoffrey; Geoff Horni; Grantham, Lisa (DPTI); Greg Dikranian; Hernan Ratto; Hogan Robert; Hoy Steven; Ireland, Tim (DPTI); Jack Haley; james.holgate@roads.vic.gov; james.hurnall@fcai.com.au; Jason Smith; Jennifer Malone; Jessica Truong (jessica_truong@tac.vic.gov.au); John Hartley; John Marcolina; John Marcolina; Jon Gibson; Greenland, Karen; Keith Watts; Lacey, Alexandra (DPTI); Leavy, Dan; Leigh Kinsela; Linda Watson; Lisa Lear; Lohmeyer, Matthew (DPTI); Mark Borlace (mborlace@raa.com.au); Mark Terrell; MATHISON Alan; Michael Case; Michael Chan; Michael Paine; Nerida Leal; Nicholas Clarke; Nicole J Ezzy; Pam Palmer; Paul Rajan; Hunter, Peter; Peter Kolesnik; Phillip Baddock; Regina Abraham; Rhianne Robson; Robert McDonald; Paule, Rod; Ross McArthur; Samantha Cockfield; Scott Smith; Simon Saunders; Smith, Rickman (DPTI); Stella Stocks; Steve Spalding; Stuart Millgate; Stuart Newstead; Stuart WORDEN; Trish Webb; Troy Griffith; Vicky Schutz; Wayne Lo; Whitaker, Alan (DPTI)
Subject: Adelaide's International Driverless Vehicle Conference

Good morning all,
You may have noticed some positive media about driverless cars in the last 24 hours?

Our State Government remains excited about the driverless future and we are supporting the research, discussions and partnerships required to make this forward transport change.

Our Premier and Transport Minister launched several South Australian Initiatives yesterday and they have received fantastic National and International attention.

I have attached out Premiers media release and encourage you to head to our website and register your interest for our International Driverless Cars Conference scheduled for 5 & 6 November; http://www.dpti.sa.gov.au/driverlesscars

If you have any specific questions, please feel free to e-mail me directly.

Cheers,

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News Release

SOUTH AUSTRALIA | Government of South Australia

Premier Jay Weatherill

Minister Stephen Mullighan

Minister for Transport and Infrastructure
Minister Assisting the Minister for Planning
Minister Assisting the Minister for Housing and Urban Development

Tuesday, 21 July 2015

SA set to host first on-road driverless car trials in Southern Hemisphere

The first on-road trials of driverless cars in the Southern Hemisphere will be undertaken in Adelaide's southern suburbs in November.

For the trials Volvo will bring the same vehicle from Sweden that is being used in their *Drive Me* project – a program that will put self-driving cars in the hands of real customers by 2017.

Volvo's testing will be undertaken in conjunction with Flinders University, Carnegie Mellon University, the RAA and Cohda Wireless.

Premier Jay Weatherill said the technology promises to not only improve safety, reduce congestion and lower emissions, but also to provide a real opportunity for South Australia to become a key player in the emerging driverless vehicle industry.

"This trial presents a fantastic opportunity for South Australia to take a lead nationally and internationally in the development of this new technology and open up new opportunities for our economy," he said.

"It's predicted that within just 15 years, the international driverless car industry will be worth $90 billion, so we want to encourage other global businesses to come to South Australia to develop and test their technologies.

"Driverless cars have the ability to revolutionise transport in this country and we want to be at the forefront of that paradigm shift.

"It is our ambition to be a test bed for innovation across a whole range of areas such as this."

The driverless car trials will take place on the Southern Expressway on November 7 and 8, with multiple vehicles conducting manoeuvres such as overtaking, lane changing, emergency braking and the use of on and off ramps.

Almost all major car manufacturers are working on driverless cars including General Motors, BMW, Audi, Ford, Mercedes, Renault and tech giant Google.

Transport and Infrastructure Minister Stephen Mullighan said the trials would coincide with an international conference on driverless cars, which would also be held in Adelaide.

"The conference will provide an opportunity for experts from across Australia and the world to discuss new ideas and explore possibilities for partnerships and innovation," he said.

"One of the keynote speakers already confirmed is Volvo's Senior Technical Leader in Crash Avoidance, Dr Trent Victor, an internationally recognised safety expert, who has worked in the field for more than 20 years.

Media contact: Jarrad Pilkington – 0409 060 380 | Rebecca Brice 0427 695 927

"We know that about 90 per cent of all crashes are caused by driver error and driverless cars have the potential to see far fewer deaths and injuries on our roads in the future."

ARRB Managing Director Gerard Walton said the *Australian Driverless Vehicle Initiative* would bring together technology partners Telstra and Bosch and automotive partner Volvo.

"Automated vehicles are far from science fiction, but rather a short-term reality that Australia needs to be prepared for. The South Australian Government has been quick to recognise this," he said.

The International Driverless Cars Conference will be hosted at the Adelaide Convention Centre and Tonsley precinct on November 5 and 6.

For more information go to www.dpti.sa.gov.au/driverlesscars

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To: David.Shelton@roads.vic.gov.au; Faye.Daikos@roads.vic.gov.au; "Holmes, Julie (DPTI) (Julie.Holmes@sa.gov.au)"; ""Fitzgerald, Jane (DPTI)" (Jane.Fitzgerald@sa.gov.au)"; "kelly.miller@transport.nsw.gov.au"; ""Richey, Cheryl" (Cheryl.Richey@transport.nsw.gov.au)"; Squire Matthew; ""Paul Rajan" (Paul.Rajan@nt.gov.au)"; "glenda.thornton@nt.gov.au"; "Martin.crane@stategrowth.tas.gov.au"; karen.dabner@stategrowth.tas.gov.au; ""Lee, Andrew" (Andrew.Lee@transport.wa.gov.au)"; Davers, Christopher; ""Cate Quinn" (Cate.Quinn@nzta.govt.nz)"; Davidson, Geoffrey; Paule, Rod; Paul Davies; "John Wroblewski"; ""Andrew.W.Mahon@tmr.qld.gov.au" (Andrew.W.Mahon@tmr.qld.gov.au)"; Jennifer J Kenny; "Geoff Hughes (ghughes@carsafe.com.au)"
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Subject: Update on Expression of Interest - Car & Motorcycle Hazard Perception Test - Austroads Newsletter August 2015
Date: Thursday, 6 August 2015 2:53:44 PM
Attachments: image001.jpg
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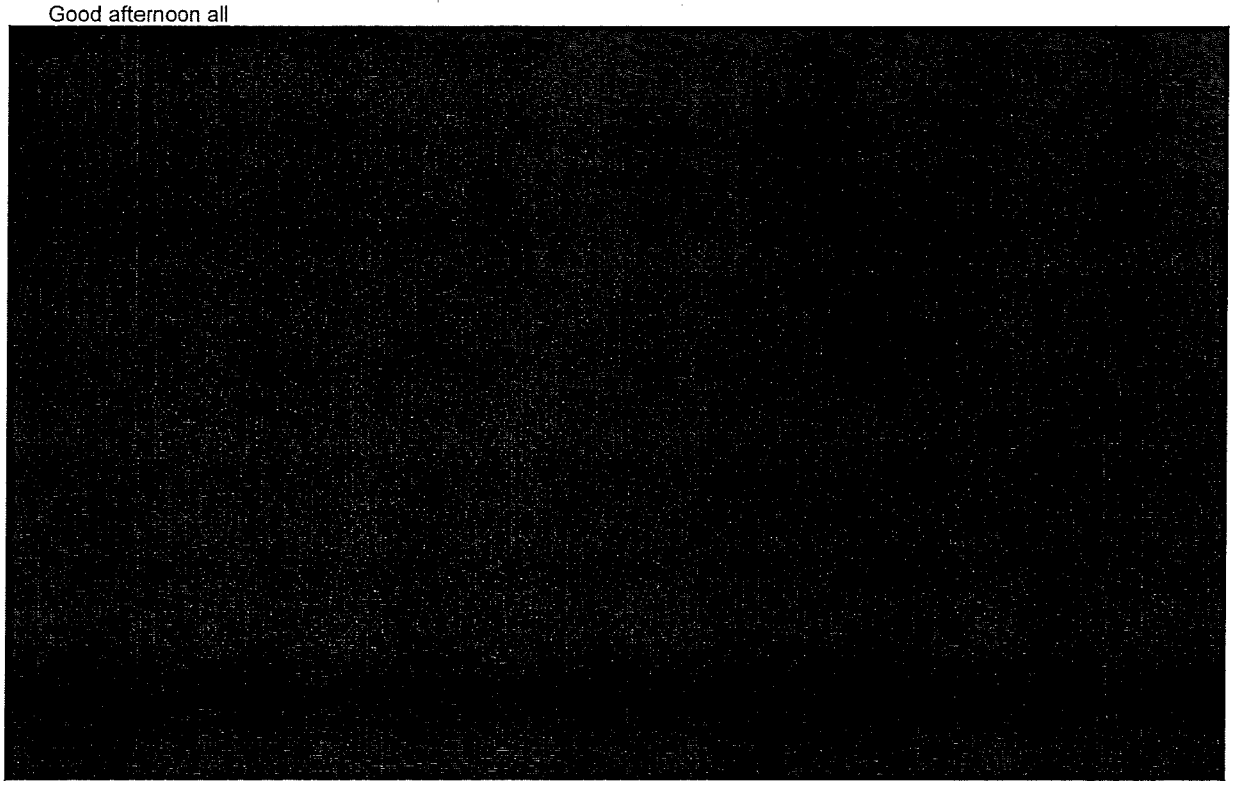
Good afternoon all



Regards
Leonie

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Austroads-Logo-email

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Latest Austroads publications, driverless car trials, Australian cycling participation and upcoming seminars

No Images? Click here

Welcome to the August 2015 issue of AustroadsNews

This edition has information about **an Austroads project to produce new hazard perception test video clips, the South Australian driverless car trials, Western Australia's report on connected vehicles, the results of the last vehicle census,** as well as a **run-down on our latest publications,** and links to upcoming seminars and conferences.

If you have been forwarded this email you can subscribe here to receive future updates.

Call for expressions of interest to produce 150 Australian hazard perception videos

Austroads is calling for expressions of interest to produce a suite of new car and motorcycle hazard perception test videos and supporting material.

The short 15 second video clips will be used in hazard perception tests which are currently part of the licensing process in New South Wales, South Australia, Victoria, Western Australia and Queensland.

The clips currently used in the tests need updating and, in a world first, the new clips will incorporate specific scenarios for motorcycle riders.

In total 150 clips will be required along with supporting and educational materials. Austroads is hoping the content can be delivered by May 2016 but the timeframe could be negotiable.

A briefing session will be held 17 August at the Austroads National Office in Sydney and the closing date for submissions is 28 September 2015.

More information is available on the Austroads website.

Updated Roadside Environment Design Guidelines

Guide to Road Design Part 6B: Roadside Environment provides guidance for road designers on environmental issues including the design of roadside facilities to manage water quality, control noise, manage fauna movement across roads, enhance roadside amenity and provide suitable landscaping of the road environs.

Guidance is also provided on road furniture, road lighting, emergency/help telephones, parking requirements, and on public utility plant location and clearances.

This second edition of the Guide includes editorial and technical updates to sections on:

- road safety including the Safe System principles
- the cost and safety considerations for landscaping
- the safety aspects of roadside

Review of Overseas Tunnels

Austroads has published a report with information about the design, construction and maintenance of 122 road tunnels in Europe, Asia, North and Central America, Australia and New Zealand.

The project was designed to assemble information on the construction and operation of a large number of recently completed road tunnels from across the world. With this information it was proposed that standards applicable to road tunnel construction in Australasia be reviewed to reduce the costs of designing, building and operating Australasian road tunnels.

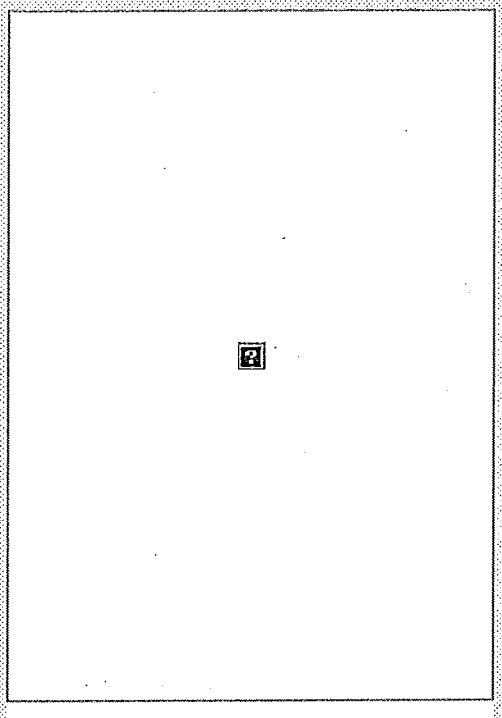
A considerable data searching process was undertaken during this project, with a number of sources of information utilised, including a literature review of printed and on-line media, consultation with industry experts and industry bodies and a survey issued to tunnel operators.

The project was not able to obtain a

furniture and road lighting.

The Austroads *Guide to Road Design* seeks to capture the contemporary road design practice of member organisations. In doing so, it provides valuable guidance to designers in the production of safe, economical and efficient road designs.

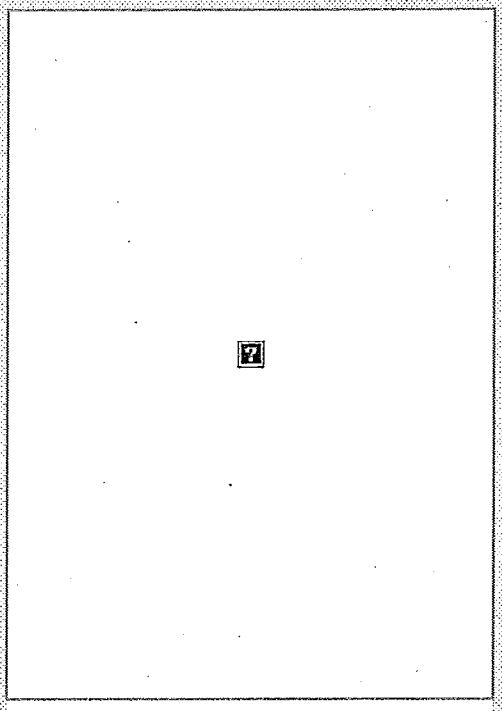
high level of quality tunnel information which could be used to identify best practices, however, a large number of tunnels were identified for which at least partial information was obtained on the targeted attributes to be collected.



Binder Force Ratio Tests Showing Promise

The current Australian polymer modified binder (PMB) specification includes low temperature stiffness tests but does not include a binder test which ranks the resistance of PMBs to low temperature cracking on the road.

This study investigated whether binder force ratio tests, conducted using the ARRB elastometer, could be included as a binder test in the Australian PMB specification to rank the low temperature cracking performance of binders.



Australian Cycling Participation Survey Results

The National Cycling Participation Survey (NCPS) is a standardised survey that has been repeated biennially since March/April 2011, with minor changes to the survey structure between 2011 and 2013.

The NCPS provides data on cycling participation at a national level and allows for estimates of participation for each state and territory, and the capital cities and non-capital areas

The relationship between extensiometer force ratio results and the low temperature cracking performance of the binders in a single 10 mm dense graded asphalt mix was investigated using four bitumen samples and 18 different PMBs.

Each of the binders was subjected to a range of conventional binder tests so that their test properties could be compared with those of specified binder grades. A good correlation was found between force ratio results and the fatigue lives of the binders in asphalt if binders did not break during extensiometer tests when they were tested under a standard set of extensiometer test conditions.

Based on the good correlation between force ratio results and asphalt fatigue life results observed in the current study, and studies by other researchers, extensiometer force ratio tests appear to be suitable for ranking the low temperature cracking performance of nine of the 13 binder grades which have specified test properties listed in the Australian PMB specification.

The results of preliminary studies indicated that further research is required to optimise the extensiometer test conditions to be used to characterise the properties of hard PMBs as they broke during testing when standard extensiometer test conditions were used. Further work has been proposed this financial year to determine whether appropriate extensiometer test conditions can be developed so that force ratio results can be used to rank the low temperature cracking performance of hard PMB grades.

within each state and territory.

Cycling participation rates across Australia are measured over the previous week, month and year. Measured over the previous week the cycling participation rate has changed from 18.2% in 2011 (95% CI: 17.6% – 18.8%), to 16.5% (95% CI: 15.8% - 17.2%) in 2013 and 17.4% (95% CI: 16.6% - 18.4%) in 2015. Nationally there has been no statistically significant change in participation measured over the previous week between 2011 and 2015.

When measured over the previous month and year there appears to have been a decline in Australian cycling participation since 2011:

- Cycling participation over the past month has declined from 27.1% (95% CI: 26.4% - 27.8%) in 2011 to 24.3% (95% CI: 23.5% - 25.4%) in 2015.
- Cycling participation over the past year has declined from 40.2% (95% CI: 39.4% - 40.9%) in 2011 to 36.3% (95% CI: 35.4% - 37.5%) in 2015.

Participation rates are highest in Western Australia, the Northern Territory and Australian Capital Territory.

Separate reports provide an overview of the national results and detail the results from each state and territory. Single page national and jurisdictional summaries are also available.

A driver uses his mobile phone while in a driverless car, which uses Bosch technology.

South Australia to host first on-road driverless car trials in Southern Hemisphere

The first on-road trials of driverless cars in the Southern Hemisphere will be undertaken in Adelaide's southern suburbs in November.

For the trials Volvo will bring the same vehicle from Sweden that is being used in their Drive Me project – a program that will put self-driving cars in the hands of customers by 2017.

Volvo's testing will be undertaken in conjunction with Flinders University, Carnegie Mellon University, the RAA and Cohda Wireless.

The driverless car trials will take place on the Southern Expressway on November 7 and 8, with multiple vehicles conducting manoeuvres such as overtaking, lane changing, emergency braking and the use of on and off ramps.

Almost all major car manufacturers are currently working on driverless cars including General Motors, BMW, Audi, Ford, Mercedes, Renault and Google.

For more information visit dpti.sa.gov.au/driverlesscars

Smart Vehicle Technology - Are We Ready?

Earlier this year, Main Roads WA released a report highlighting the implications of Automated Vehicles on Western Australian roads.

Main Roads has since released a report focussing on a second area of smart vehicle technology known as Connected Vehicles.

Connected Vehicles are smart vehicles with wireless connectivity to the internet, local networks or the cloud, other vehicles, personal communications devices, roadside infrastructure or control centres for real-time communication or data exchange.

This together with the 'Automated Vehicles: Are we Ready' report, discuss the imminent availability of these vehicles and what Main Roads need to do to allow their successful operation on our roads.

Learn more now about these smart vehicle technologies by downloading the reports:

- Automated Vehicles - Are we ready?
- Connected Vehicles: Are we ready?

Motor cycle registrations outpace other vehicles

Motor cycle registrations in Australia continue to grow showing the fastest growth of any type of vehicle over the past five years, according to figures released by the Australian Bureau of Statistics (ABS).

"From 2010 to 2015 motor cycle registrations - including scooters - went up by over 22 per cent. There are now over 800,000 motor cycles on Australia's roads," said Amanda Clark from the ABS.

"New South Wales has the most motor cycle registrations with 222,111, followed by Queensland with 187,167."

Western Australia has the highest proportion of motor cycles per head of population, at 49 per 1,000 people, while the Northern Territory has the lowest at 29 per 1,000 people.

The 2015 Motor Vehicle Census details the number of registered motor vehicles in Australia and provides information such as vehicle type, vehicle characteristics, including year of manufacture and type of fuel used.

"The 2015 Motor Vehicle Census tells us there are over 18 million registered motor vehicles in Australia in 2015, which is an increase of over two per cent since last year. This includes over 16 million cars and light commercial vehicles."

The number of diesel powered vehicles in the Australia has also increased, with 19.7 percent of all registered motor vehicles in

Australia (3,555,227) now powered by a diesel engine, this in comparison to 13.8 per cent in 2010.

World Road Association and Austroads - Fostering international collaboration

The World Road Association provides a unique opportunity for nations to share expertise and experience, showcase innovation, and partner to tackle common challenges.

Austroads financially supports Australian and New Zealand road transport professionals to attend technical committee meetings and provides opportunities to share the outcomes of meetings and projects locally.

Technical Committees allow participants to access information from world leading agencies and provide professional development and networking opportunities with international transport experts.

Links to the latest technical committee reports are provided below:

Performance of Transport Administrations attended by Brendan Nugent, TfNSW and Alan Colegate, Main Roads WA.

Sustainability and Climate Change attended by Helen Murphy, VicRoads.

Improved Mobility in Urban Areas attended by Robert Freemantle, VicRoads.

Road Pavements attended by Michael Moffatt, ARRB Group.

Webinar: Revised Parameter Values for the Evaluation of Road Transport Projects

Thursday, 20 August 2015
12:00 PM AEST
No charge but registration is essential

Join ARRB for an online overview of the methodologies used to update the parameter values for road user cost components. The research was funded by Austroads for the review of the National Guidelines for Transport System Management (NGTSM).

The presentation will provide insight into the revised:

- parameter values for fuel, engine oil, tyres, depreciation, value of travel time and crash costs for an extended 20 vehicle classification (including passenger cars, light and heavy commercial vehicles, and buses)
- vehicle operating cost models for both urban and rural roads
- values of travel time provided for vehicle occupants across all vehicle types, as well as values of travel time for freight
- the methodology and estimates of average cost of crashes for both human capital and willingness to pay approaches taking into account crash rates and injury severities across jurisdictions.

Download the report: 2015 National Guidelines for Transport System Management in Australia: Road Parameter Values

Australasian Road Safety Conference 2015: Program Now Available

14-16 October 2015 | Gold Coast, Queensland

Austroads is a major sponsor of the 2015 Australasian Road Safety Conference. Showcasing the latest research, programs and developments in road safety, ARSC2015 will feature a strong program of national and international keynote speakers, oral and poster presentations, workshops and symposia.

The conference is expected to attract over 400 delegates including researchers, practitioners, policy-makers and students working in the fields of behavioural science, education and training, emergency services, engineering and technology, health and rehabilitation, policing, justice and law enforcement, local, state and federal government, traffic management, vehicle safety – and more.

The program promises to cover the latest in research, practice and policy across the five pillars of action set out by the UN Decade of Action on Road Safety (Road Safety Management, Infrastructure, Safe Vehicles, User Behaviour, and Post Crash Care).

For more information visit the conference website australasianroadsafetyconference.com.au

Upcoming Workshops + Conferences

Trafinz Conference 2015
12-14 August 2015, Dunedin, New Zealand

Parking Australia Outlook Conference 2015
19-20 August 2015, Sydney, NSW

NEW ARRB Webinar: Revised Parameter Values for the Evaluation of Road Transport Projects
20 August 2015, Online, No charge but registration essential

Australian and New Zealand Society of Occupational Medicine Annual Scientific Meeting
23-26 August, Brisbane, Queensland

NEW Concrete 2015 - 27th Biennial National Conference of the Concrete Institute of Australia
30 August - 2 September 2015, Melbourne, Victoria

Asia-Pacific Cycle Congress 2015
13-16 September 2015, Brisbane, Queensland

AAPA International Flexible Pavements Conference
13-16 September 2015, Gold Coast, Queensland

Australasian Road Safety Conference
14-16 October 2015, Gold Coast, Queensland

XXVth World Road Congress
2-6 November 2015, Seoul, Korea

4th International Conference on Driver Distraction and Inattention
9-11 November 2015, Sydney, Australia

NEW ALGA 2015 National Local Roads and Transport Congress
17-19 November 2015, Ballarat, Victoria.

Sixth International Conference on Traffic and Transport Psychology 2-5 August 2016, Brisbane, Queensland

23rd ITS World Congress Melbourne 2016
10-14 October 2016, Melbourne Victoria

Austroads
Level 9, 287 Elizabeth Street
Sydney NSW 2000
Tel. +61 2 8265 3300

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FORWARD

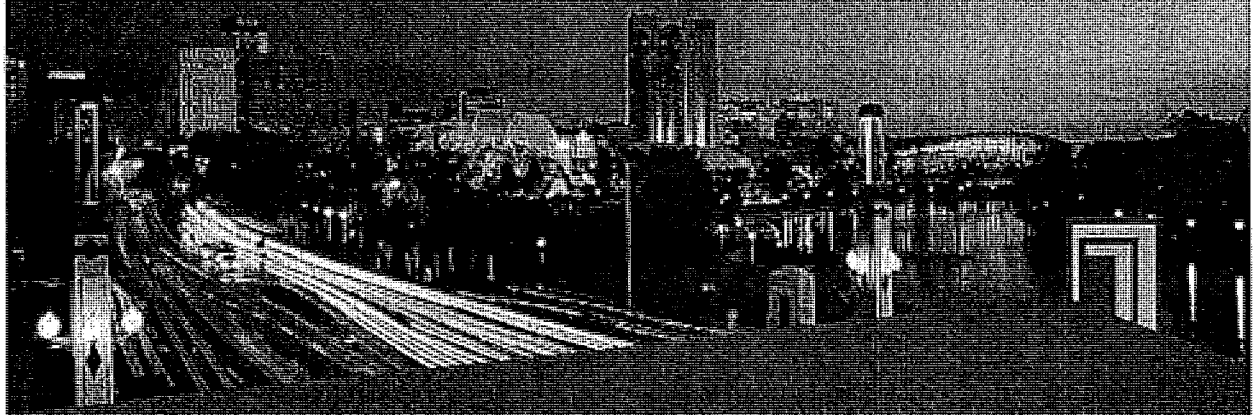
Contributions for future newsletters are always welcome.

Callow, Lauren

From: DPTI:Driverless Cars [DPTI.DriverlessCars@sa.gov.au]
Sent: Thursday, 13 August 2015 8:03 AM
Subject: Driverless Cars Newsletter - August 2015

International Driverless Cars Conference

Adelaide, South Australia, 5 & 6 November 2015



In South Australia we're working to make the driverless car future a reality.

South Australia is pleased to host the International Driverless Cars Conference to be held at the Adelaide Convention Centre on the 5th and 6th November 2015.

Driverless cars have the ability to revolutionise transport in this country and we want to be at the forefront of that paradigm shift.

The conference will provide an opportunity for experts from across Australia and the world to discuss new ideas and explore possibilities for partnerships and innovation.

To coincide with the conference, Adelaide will also host the first on-road trials of driverless cars in the Southern Hemisphere supported by the ARRB Australian Driverless Vehicle Initiative. The trials will take place on the Southern Expressway on November 7 and 8 with multiple vehicles conducting manoeuvres such as overtaking, lane changing, emergency braking and the use of on and off ramps.

arrb

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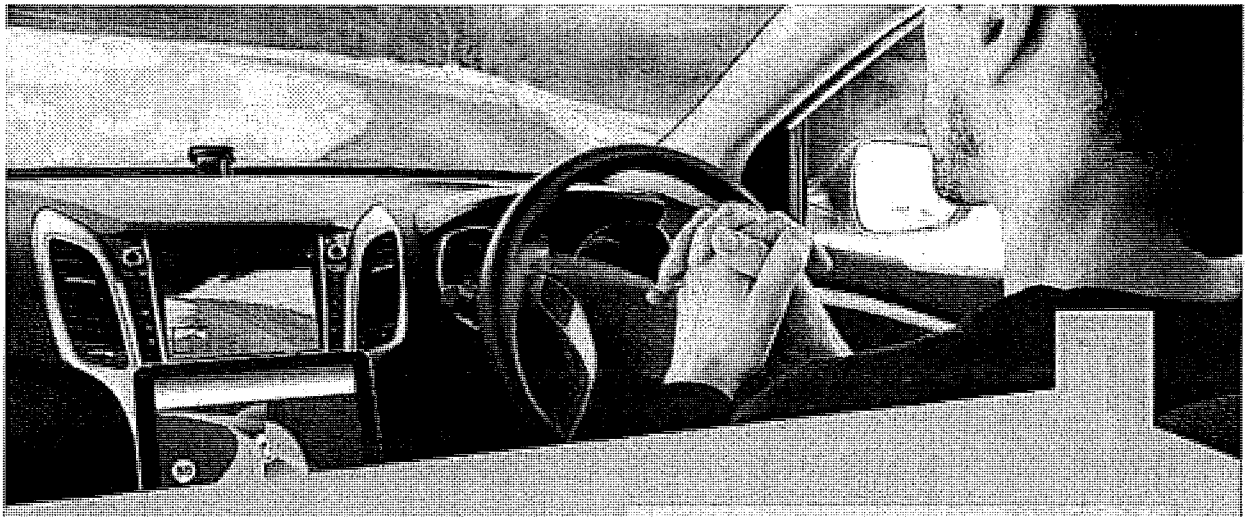
ADELAIDE
SOUTH AUSTRALIA

Government of South Australia
Department of Planning, Transport and Infrastructure



Speakers

The Premier of South Australia, Hon Jay Weatherill MP will open the conference and welcome international keynote presenters as well as a variety of speakers from Australia.

We are pleased to advise that the following speakers have already been confirmed. The full program of presenters will be announced soon.

Dr Trent Victor, Senior Technical Leader Crash Avoidance, Volvo Car Corporation, Sweden

Dr Alan Stevens, Chief Research Scientist and Research Director, Transport Research Laboratory, United Kingdom

Prof Oliver Carsten, Professor of Transport Safety, University of Leeds, United Kingdom

ARRB Group Ltd Australia including Mr Gerard Waldron, Managing Director; Dr Charles Karl, National Technical Leader; and Adj. Professor Michael Regan, Chief Scientist – Human Factors.

Bosch Australia including Mr Mark Jackman, Regional President Chassis Systems Control and Mr Carl Liersch, General Manager, Engineering, Chassis Control systems.

Mr Andrew Somers, Director, Transoptim Consulting, Australia

Mr Emil Bolongaita, Executive Director, Carnegie Mellon University, Australia.

Program

The conference program will provide the answers to your questions on how the driverless car future can be realised in Australia.

How far away is driverless car technology? Are we ready?

What laws need to be changed?

What are the safety, mobility and community benefits?

Day One – Technical experts, vehicle industry, research entities, legal groups and government agencies will discuss the future of automated vehicles and future transport changes.

Day Two – Global research will be discussed including the trials and demonstrations planned for Australia. Delegates will have the opportunity to see vehicles and automated vehicle technology in action on an off-road environment.

Adelaide, South Australia

Adelaide has been voted Australia's most livable city. It is easily accessed by air from all Australian capital cities and international destinations. The Adelaide Convention Centre is set at the heart of one of Australia's most exciting new precinct, where arts, sport, entertainment, education and medical facilities create non-stop activity. The centre offers sweeping views of the River Torrens, with key areas opening directly onto the new Riverbank Promenade. Across the river, and linked by a footbridge, is the recently redeveloped Adelaide Oval, which is now one of the most in-demand sporting and concert venues in the country.

For further information and to register your interest please visit

dpti.sa.gov.au/driverlesscars

From:	Lepore, Claudia (DPTI)
To:	"Richey, Cheryl"; ""Masterman Asa" (Asa.Masterman@infrastructure.gov.au)"; "Squire Matthew"; "Glenda Thornton"; "karen.dabner@stategrowth.tas.gov.au"; ""Cate Quinn" (Cate.Quinn@nzta.govt.nz)"; Paule, Rod; "Jennifer J Kenny"; "martin.gorman@nzta.govt.nz"; "apepi@ntc.gov.au"; "hughesg@carsafe.com.au"; "tmatthews@nevdis.com.au"
Cc:	"Leonie Pattinson"; Fitzgerald, Jane (DPTI)
Subject:	FW: International Driverless Cars Conference
Date:	Wednesday, 30 September 2015 11:51:10 AM
Attachments:	image001.gif image002.gif image003.gif image004.gif

This message is sent on behalf of Julie Holmes, General Manager, Safety and Policy Programs

Dear RLWG Members

Adelaide, South Australia will host the **International Driverless Cars Conference** on **5 and 6 November 2015.**

World renowned speakers from around the world, including France, the United Kingdom, Sweden and the United States will headline Australia's first ever driverless car conference.

Key note presenters include:

- Dr Trent Victor, Senior Technical Leader Crash Avoidance, Volvo Car Corporation, Sweden
- Dr Alan Stevens, Chief Research Scientist at the Transport Research Laboratory, and Chairman of Intelligent Transport Systems, United Kingdom, and
- Professor Raj Rajkumar, Professor and Co-Director, GM-CMU Connected Automated Driving Lab in the United States.

The second day will feature exhibitions and demonstrations of driverless car technology.

I encourage you to join me at the conference, please view the program and register at http://www.driverlesscars.sa.gov.au

Claudia Lepore
Project Manager, Registration and Licensing
Safety and Policy Programs, Safety and Services Division
Department of Planning, Transport and Infrastructure
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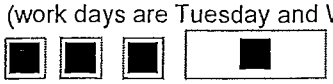
(work days are Tuesday and Wednesday)



From:	Leonie Pattinson
To:	Andrew Lee; Andrew Mahon (andrew.w.mahon@tmr.qld.gov.au); Cate Quinn; Cheryl Richey (cheryl.richey@transport.nsw.gov.au); Claudia Lepore; David Shelton (david.shelton@roads.vic.gov.au); Faye Daikos; Geoff Hughes; Davidson, Geoffrey; John Wroblewski; Julie Holmes (julie.holmes@sa.gov.au); Kelly Miller; Martin Crane (martin.crane@stategrowth.tas.gov.au); Matthew Squire; Paul Davies; Paul Scott; Paul.Rajan@nt.gov.au; Anthony Pepi; Asa Masterman; Charmaine Berry; Chris Davers; Glenda Thornton; Jane Fitzgerald (jane.fitzgerald@sa.gov.au); Jennifer Kenny; Karen Dabner; Paule, Rod; Tim Matthews
Cc:	""Arthur, Gerry" (Gerry.Arthur@transport.wa.gov.au)"; "Edwards, Carolyn (Carolyn.Edwards@transport.wa.gov.au)"
Subject:	FW: NTC factsheet
Date:	Thursday, 12 November 2015 12:52:36 PM
Attachments:	NTC Factsheet - Automated Vehicle Project.pdf

Hi All
The attached Fact Sheet is about the NTC automated vehicle project which will examine regulatory or operational barriers associated with the introduction of more automated road and rail vehicles in Australia.

The NTC will undertake public consultation on the regulatory issues in early 2016.

Regards
Leonie

Leonie Pattinson
Registration & Licensing Program Coordinator
Austroads
Level 9, 287 Elizabeth Street,
Sydney NSW 2000
Tel: +61 2 8265 3335
lpattinson@austroads.com.au
www.austroads.com.au

Preparing for more automated road and rail vehicles: Identifying regulatory or operational barriers

National Transport Commission project
November 2015

What's happening?

In November 2015, the Transport and Infrastructure Council asked the National Transport Commission (NTC) to identify whether there are any regulatory or operational barriers associated with the introduction of more automated road and rail vehicles in Australia.

By examining whether our current regulatory regimes can support either highly or fully automated vehicles, this will result in:

1. Improved understanding of the current regulatory system and its ability to continue to support increased vehicle automation (both road and rail)
2. Identification of any likely regulatory or operational barriers to be removed or overcome, with an indication of potential timing and options (including advice on desirable settings for trials)
3. A nationally-consistent approach for addressing increased vehicle automation with a single regulatory approach (as far as possible with emerging technology).

We will undertake a public consultation on the regulatory issues in early 2016, followed-up around mid-2016 with a consultation discussion paper with options analysis. The NTC aims to deliver recommendations to the Transport and Infrastructure Council within 18 months.

Why?

Vehicle manufacturers are progressively introducing higher levels of automation into vehicles for release into the public market, and as this continues, we are getting ever closer to having vehicles on our roads that can drive themselves without human intervention in certain scenarios.

There is uncertainty around whether Australia's current regulatory regime can support either highly or fully automated vehicles on public roads, or shared railways. The issues include the interaction between road transport law, rail safety law, consumer protection law, liability and insurance regimes, and common law requirements.

Without improved certainty that different levels of autonomous vehicles can legally operate across Australian jurisdictions, innovation, investment and consumer confidence will be impacted.

Who might be interested in the project?

Automated vehicles are a disruptive technology and are likely to have a significant impact on markets, public policy and the community. The NTC seeks to engage with manufacturers, technology providers, policy-makers, road agencies and community groups to identity and address the regulatory issues.

What are the next steps?

We will release an issues paper for public consultation in early 2016. The issues paper will:

- introduce the issues and provide an overview of relevant regulatory frameworks
- scope project parameters relating to regulatory focus, assumptions and scenarios; and
- discuss potential solutions to address the issues.

Subject to feedback from the issues paper, our approach is to consider any regulatory barriers – and the need to regulate for automated vehicles – based on the lifecycle of a vehicle. From vehicle design through to disposal, there are 12 areas of regulation that **are points at which vehicles interact with regulations,** and this captures a range of regulatory areas including vehicle standards, vehicle use and data access:

Vehicle design

Vehicle testing

Sale of the vehicle

Modification

Registration

Licensing of users

Use of the vehicle – including road rules and liability

System Operation – including security, infrastructure and accreditation

System monitoring – including privacy and surveillance laws

Vehicle maintenance

Recall

Disposal

Our initial assessment indicates that there are a number of significant regulatory themes to address:

- clarity over control of the vehicle and compliance with traffic laws
- liability and responsibility for the actions of an automated vehicle
- data access and privacy protection – including access for enforcement purposes; and
- safety assurance.

The NTC project will complement other research and project activities undertaken by Austroads, road agencies and other organisations. These include Austroads projects related to assessing the safety benefits of automated vehicles, any impacts on registration and licencing processes and any impacts of automated vehicle on network infrastructure. We will work with these organisations to ensure a coordinated approach is adopted and we can share knowledge and outcomes.

Discussion questions

1. What do you think are the key regulatory barriers to the use of increasingly automated vehicles?
2. What other regulatory issues could the project address?
3. Are there specific applications or scenarios to be aware of when assessing regulatory barriers?

Want to know more?

You can find out more about this project by visiting our website www.ntc.gov.au or by contacting James Williams at jwilliams@ntc.gov.au or by telephone on (03) 9236 5040.

From: Paule, Rod
To: Owen, Belinda
Subject: RE: Question on ARR 297 - Driver to have proper control of a vehicle etc
Date: Tuesday, 8 December 2015 2:06:00 PM
Attachments: image001.png

Belinda,

It appears to be a case of the technology getting in advance of the regulations..

While "proper control of the vehicle" is not defined in ARR 297, we have usually indicate it means seated in the driver's seat facing forward (except when reversing) and with at least one hand on the steering wheel and feet in position to operate the pedals.

ARR213 requires a vehicle to be secure if the driver will be over 3m from the vehicle and no one is still inside it, the driver to switch off the engine secure the windows and lock the doors. Hence, a bit of a conflict with how the BMW system works, noting the conflict is only over a metre and most probably would never be enforced.

As such, we don't appear have a regulation explaining what "proper control of the vehicle" is.

I don't think we could propose banning the system, but drivers would need to be aware that the expectation is that they would be responsible for anything that goes wrong. I don't think they could claim that they were not the driver at it was the cars fault. But I don't think this system is intended to reverse parallel park while a person is outside the vehicle. I understand it is more for accessing/exiting a carpark where there is limited space to each side of the vehicle and the person would otherwise struggle to get out of/into the vehicle.

I would be inclined to indicate that we have no clear regulation precluding its operation/use, but we have nothing that clearly allows it to be used.

Happy to discuss.

Rod

Rod Paule | Manager Road Transport Policy|
Phone 02 620 77115 | Fax 02 620 50937 |
Justice and Community Safety | **ACT Government**
Level 2, 12 Moore Street, CANBERRA ACT 2601 | GPO Box 158 CANBERRA ACT 2601 |
www.act.gov.au

From: Owen, Belinda
Sent: Tuesday, 8 December 2015 1:35 PM
To: Paule, Rod
Subject: FW: Question on ARR 297 - Driver to have proper control of a vehicle etc

Hi Rod - Do you know anything about this one? could you please point me in the right direction.
thanks!
Belinda

From: GAZEY Cathy (Con) [cathy.gazey@roadsafetycommission.wa.gov.au]
Sent: Monday 7 December 2015 20:00
To: Owen, Belinda; damon.baker@transport.nsw.gov.au; Noelani.Reardon@transport.nsw.gov.au;

Alice.Ma@transport.nsw.gov.au; dorr1ron@police.nsw.gov.au; Barbara.Littler@nt.gov.au; warren.r.anderson@tmr.qld.gov.au; jon.c.douglas@tmr.qld.gov.au; Jason.R.Hall@tmr.qld.gov.au; Andrew.Parkinson@sa.gov.au; kathy.towsty@sa.gov.au; Mark.Smith@police.sa.gov.au; alysse.gavlik@stategrowth.tas.gov.au; yasmin.maskiell@stategrowth.tas.gov.au; luke.manhood@police.tas.gov.au; Ross.McArthur@roads.vic.gov.au; Jonathon.ellks@police.vic.gov.au
Cc: CRACKEL Linley (DFG/A)
Subject: FW: Question on ARR 297 - Driver to have proper control of a vehicle etc

Hi ARRMG members

So sorry to bother you again but as a postscript to the previous email about ARR 297 and your analogous State/Territory law, would you permit vehicles with remote controlled parking (RCP) features? Specifically, we have been asked about the BMW RCP feature which has the following details:

- RCP is a driver assist function that can be used to semi-autonomously manoeuvre a vehicle to park in a perpendicular parking space, particularly beneficial where the parking space is very narrow.
- Allows the driver to safely and remotely park a vehicle whilst standing **outside the vehicle** (no more than 4m away).
- The RCP has two modes which operate independently from each other:
  - The vehicle parks forward in the parking space, and
  - The vehicle reverses out of the parking space.
- When the RCP feature of the BMW touch screen is engaged, the vehicle manoeuvres into the parking space at not more than 2km/h.
- The driver must permanently push a button on the BMW touch screen to commence and complete the parking manoeuvre. If the driver releases the button at any point or time the vehicle will immediately come to a stop and disengage the RCP feature.
- The vehicle is limited to travelling a total distance of 1.5 to 2 times the total length of the vehicle (approx. 10m).

Your input would be most appreciated and apologies for bothering you again. Thanks.

Cathy Gazey
Senior Policy Officer
Road Safety Commission
t: +61 8 9323 4582
w: rsc.wa.gov.au

From: GAZEY Cathy (Con)
Sent: Monday, 7 December 2015 12:01 PM
To: Owen, Belinda; damon.baker@transport.nsw.gov.au; Noelani.Reardon@transport.nsw.gov.au; Alice.Ma@transport.nsw.gov.au; dorr1ron@police.nsw.gov.au; Barbara.Littler@nt.gov.au; Warren R Anderson; Jon C Douglas; Jason R Hall; Andrew.Parkinson@sa.gov.au; kathy.towsty@sa.gov.au; Mark.Smith@police.sa.gov.au; alysse.gavlik@stategrowth.tas.gov.au; yasmin.maskiell@stategrowth.tas.gov.au; luke.manhood@police.tas.gov.au; Ross.McArthur@roads.vic.gov.au; Jonathon.ellks@police.vic.gov.au

Cc: CRACKEL Linley (DFG/A)
Subject: Question on ARR 297 - Driver to have proper control of a vehicle etc

Hi ARRMG members

Western Australia has had an enquiry from BMW Australia about *Regulation 263: Driver to have uninterrupted and undistracted views, etc* of the *Road Traffic Code 2000 (WA)* which states that a person must be 'in such a position behind the steering wheel that he or she has full control over the vehicle'. This regulation pertains to AR *Rule 297: Driver to have proper control of a vehicle etc.*

BMW Australia states that Western Australia's regulation is unlike the road rules articulated in other states and territories due to the necessity of the driver to be behind the steering wheel. Could you please advise whether this is the case for your jurisdiction? Thanks very much.

Cathy Gazey
Senior Policy Officer
Road Safety Commission
t: +61 8 9323 4582
w: rsc.wa.gov.au

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From: Paule, Rod
To: Hunter, Peter; Simmons, Craig
Cc: Davidson, Geoffrey
Subject: RE: Automated vehicles
Date: Tuesday, 15 December 2015 8:53:00 AM
Attachments: image001.jpg

Peter,

News to me. I have not heard anything about this.

Rod

Rod Paule | Manager Road Transport Policy|
Phone 02 620 77115 | Fax 02 620 50937 |
Justice and Community Safety | **ACT Government**
Level 2, 12 Moore Street, CANBERRA ACT 2601 | GPO Box 158 CANBERRA ACT 2601 |
www.act.gov.au

From: Hunter, Peter
Sent: Monday, 14 December 2015 5:18 PM
To: Paule, Rod; Simmons, Craig
Subject: FW: Automated vehicles

Rod, Craig,

Before I respond, do you know of anything that the FCAI reports is happening here.

Peter

From: James Hurnall [mailto:james.hurnall@fcai.com.au]
Sent: Monday, 14 December 2015 5:15 PM
To: Hunter, Peter
Subject: Automated vehicles

Good afternoon Peter,

I have been advised by a contact at the ARRB Australian Driverless Vehicle Initiative, that the ACT was looking at a workshop next year on automated vehicles.

Are you aware of this and/or could you provide a contact that I talk to?

Thanks,

James

Kind Regards
James Hurnall
Technical Director

From: Greenland, Karen
To: Mehrton, Andrew
Cc: Davidson, Geoffrey; Paule, Rod
Subject: RE: Driverless cars
Date: Wednesday, 16 December 2015 11:01:13 AM
Attachments: image001.jpg

Thanks I am here in first two weeks of Jan

Karen Greenland
Deputy Executive Director, Legislation, Policy and Programs
ACT Justice and Community Safety Directorate

Ph 02 62076244 or karen.greenland@act.gov.au
cid:image003.jpg@01CF2E1F.6AC457B0

From: Mehrton, Andrew
Sent: Wednesday, 16 December 2015 9:59 AM
To: Greenland, Karen
Subject: RE: Driverless cars

The main milestone at the moment is a workshop that the Canberra Business Chamber is hosting on driverless cars on 19 January. It'd be good to catch up before that if possible so I'll see if there's a time that we're all free in the first couple of weeks of January.

Our work hasn't moved on a great deal since we met with Geoff a few months ago but I'll knock together a bit of an update for your info in the next few days.

Thanks.

-Andrew

From: Greenland, Karen
Sent: Wednesday, 16 December 2015 9:19 AM
To: Mehrton, Andrew
Subject: RE: Driverless cars

Unless anything imminent at your end, could need to wait til new year to get everyone. I think with people on leave its probably going to need to be early Feb.

Karen Greenland
Deputy Executive Director, Legislation, Policy and Programs
ACT Justice and Community Safety Directorate

Ph 02 62076244 or karen.greenland@act.gov.au
cid:image003.jpg@01CF2E1F.6AC457B0

From: Mehrton, Andrew
Sent: Wednesday, 16 December 2015 9:10 AM
To: Greenland, Karen
Subject: RE: Driverless cars

Thanks, Karen.
Would you like to try and catchup prior to the break or in the new year? It looks like Rod is on already leave until the 4 January, but I'm happy to catchup with yourself and Geoff in the next few days if you'd like to meet before then.

Cheers.

-Andrew

From: Greenland, Karen
Sent: Wednesday, 16 December 2015 8:49 AM
To: Mehrton, Andrew
Cc: Davidson, Geoffrey; Paule, Rod
Subject: Driverless cars

Hi Andrew – thanks for calling earlier. Would be good to discuss what's happening in CMTEDD on this and cross-over with road safety, road transport regulation, and work on transport ministers' agenda.

If you're good to set up meeting, could you send to Geoff, Rod and I, thanks. Happy to discuss in meantime.

Karen
Karen Greenland
Deputy Executive Director, Legislation, Policy and Programs
ACT Justice and Community Safety Directorate

Ph 02 62076244 or karen.greenland@act.gov.au
cid:image003.jpg@01CF2E1F.6AC457B0

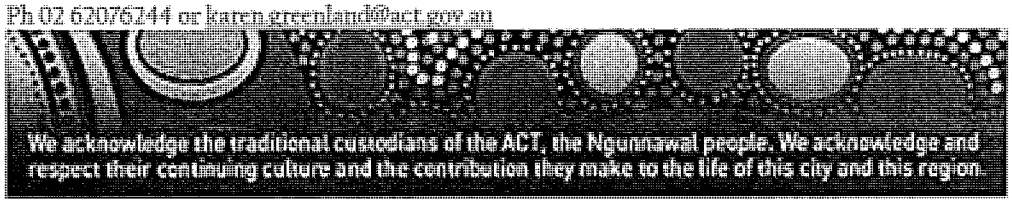
Callow, Lauren

From: Greenland, Karen
Sent: Wednesday, 13 January 2016 5:43 PM
To: Paule, Rod; Horner, David; Davidson, Geoffrey
Cc: McIntosh, Andrew
Subject: FW: Canberra Business Chamber Autonomous Vehicle Forum

Hi as discussed – good for whoever has an interest to attend. At least one person from LPP should go. Will leave to you thanks

Karen Greenland
Deputy Executive Director, Legislation, Policy and Programs
ACT Justice and Community Safety Directorate

Ph 02 62076244 or karen.greenland@act.gov.au



From: Mehrton, Andrew
Sent: Wednesday, 13 January 2016 2:17 PM
To: Greenland, Karen; Wilesmith, Brett; Wyatt, Tim; Hassett, Glen; Gill, Tony
Cc: Abel, Andrew; Gilding, Louise; Konovalov, Alexander; Shoukrallah, Rifaat
Subject: RE: Canberra Business Chamber Autonomous Vehicle Forum

Hi all,

Please see the invitation below for the Canberra Business Chamber's Autonomous Vehicle Forum being held next Tuesday afternoon.
The forum will aim to explore with community and industry representatives what opportunities autonomous vehicles could present for Canberra, as well as what the appetites and options for pursuing those opportunities might be.

It would be great if you or one of your colleagues is able to attend and contribute to the discussion. If interested, please complete the following RSVP link to help confirm numbers for the day. RSVP here.

Because there are many directorates involvement and the forum will be relatively small it'd be appreciated if each directorate limits their attendees to 1-2 key people so there is a good balance of government, community and industry views represented.

Feel free to give me a call if you'd like to discuss.

-Andrew

-----Original Appointment-----
From: Dean Seeley [mailto:dean.seeley@canberrabusiness.com]
Sent: Wednesday, 13 January 2016 1:45 PM
Subject: Canberra Business Chamber Autonomous Vehicle Forum
When: Tuesday, 19 January 2016 3:00 PM-5:30 PM (UTC+10:00) Canberra, Melbourne, Sydney.
Where: 216 Northbourne Ave Braddon ACT 2612 - 02 6247 4199

Glenn Keys, Chair of Canberra Business Chamber invites you to join him and leading industry executives to discuss and identify opportunities and challenges for an autonomous vehicle implementation strategy for the ACT.

You will also hear from ACT Government representatives on the existing and future smart city landscape.

Canberra Business Chamber Autonomous Vehicle Forum
Delivered in partnership with NRMA and ACT Government

Tuesday 19 January 2016
3-530pm (includes refreshments)
216 Northbourne Ave Braddon

PLEASE RSVP BY CLICKING HERE

For any questions or further information please do not hesitate to contact me on the numbers below.

Kind regards

Dean Seeley
Director of Programs | Canberra Business Chamber
Gnd Floor | 216 Northbourne Ave | Braddon | ACT | AUSTRALIA | 2612
P: +61 2 6247 4199 | D: +61 2 6154 6125 | [redacted]
dean.seeley@canberrabusiness.com
www.canberrabusiness.com

<< File: ATT90198 1.jpg >>

From: Kate Holland
Subject: MEDIA - Autonomous Vehicle Forum - 19 Jan 2016
Date: Tuesday, 19 January 2016 11:22:37 AM
Attachments: image001.jpg

Hi

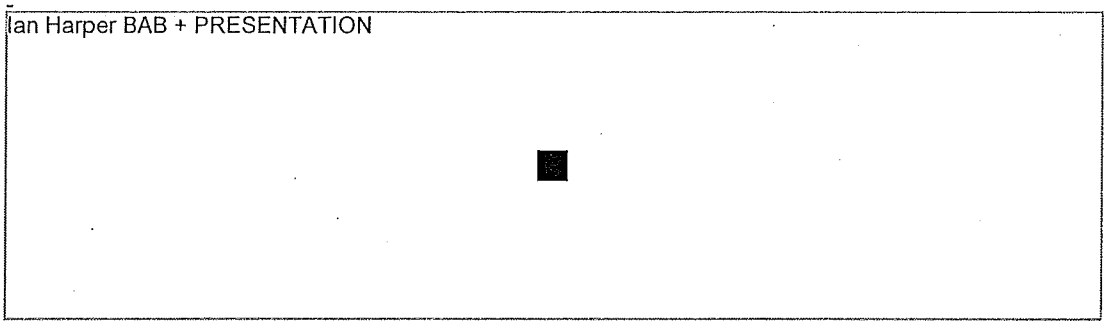
As an attendee at today's **Autonomous Vehicle Forum at 3.00pm**, I am writing to advise you know that the Canberra Times will be attending and will be taking photos to include in an article.

If for any reason you would not like to be included in the photos or have your name given to the Canberra Times, please let me know before 2.30pm today.

Kind regards

Kate Holland
Event & Communication Manager |**Canberra Business Chamber**
Gnd Floor | 216 Northbourne Ave | Braddon | ACT 2612

Tel: 02 6247 4199 | M: [redacted] | Fax: 02 6257 4421
kate.holland@canberrabusiness.com
www.canberrabusiness.com



From: Paule, Rod
To: "Dean Seeley"
Subject: RE: Canberra Business Chamber Autonomous Vehicle Forum
Date: Tuesday, 19 January 2016 9:20:00 AM
Attachments: image001.jpg
image002.jpg

Dean,

Thanks.

Rod

Rod Paule | Manager Road Transport Policy|
Phone 02 620 77115 | Fax 02 620 50937 |
Justice and Community Safety | **ACT Government**
Level 2, 12 Moore Street, CANBERRA ACT 2601 | GPO Box 158 CANBERRA ACT 2601 |
www.act.gov.au

From: Dean Seeley [mailto:dean.seeley@canberrabusiness.com]
Sent: Tuesday, 19 January 2016 9:19 AM
To: Paule, Rod
Subject: RE: Canberra Business Chamber Autonomous Vehicle Forum

Hi Rod,

We don't have representation from JACS as yet. I will add you to the list now.

See you at 3pm.

cheers

Dean Seeley
Director of Programs | Canberra Business Chamber
Gnd Floor | 216 Northbourne Ave | Braddon | ACT | AUSTRALIA | 2612
P: +61 2 6247 4199 | D: +61 2 6154 6125 | [redacted]
dean.seeley@canberrabusiness.com
www.canberrabusiness.com

Ian Harper BAB + PRESENTATION

[redacted]

From: Paule, Rod [mailto:Rod.Paule@act.gov.au]
Sent: Tuesday, 19 January 2016 9:17 AM
To: Dean Seeley <dean.seeley@canberrabusiness.com>
Subject: FW: Canberra Business Chamber Autonomous Vehicle Forum

Dean,

Firstly, apologies for the lateness of this message, but due to staff leave etc. it has not been possible to identify who from JACS should attend.

I note the registrations closed on Eventbrite, however, if possible I would like to attend representing Legislation, Policy and Programs in JACS.

I look forward to hearing back from you.

Thank you for your consideration.

Rod

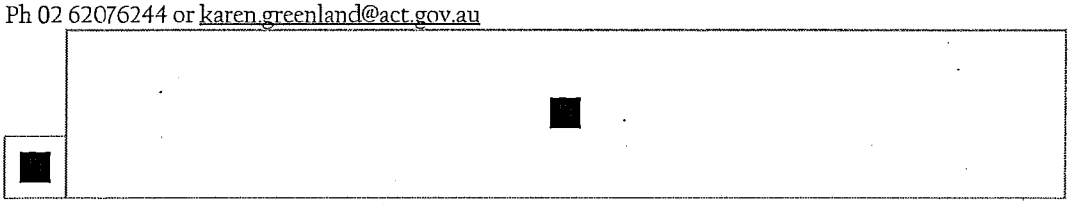
Rod Paule | Manager Road Transport Policy|
Phone 02 620 77115 | Fax 02 620 50937 |
Justice and Community Safety | **ACT Government**
Level 2, 12 Moore Street, CANBERRA ACT 2601 | GPO Box 158 CANBERRA ACT 2601 |
www.act.gov.au

From: Greenland, Karen
Sent: Wednesday, 13 January 2016 5:43 PM
To: Paule, Rod; Horner, David; Davidson, Geoffrey
Cc: McIntosh, Andrew
Subject: FW: Canberra Business Chamber Autonomous Vehicle Forum

Hi as discussed – good for whoever has an interest to attend. At least one person from LPP should go. Will leave to you thanks

Karen Greenland
Deputy Executive Director, Legislation, Policy and Programs
ACT Justice and Community Safety Directorate

Ph 02 62076244 or karen.greenland@act.gov.au



From: Mehrton, Andrew
Sent: Wednesday, 13 January 2016 2:17 PM
To: Greenland, Karen; Wilesmith, Brett; Wyatt, Tim; Hassett, Glen; Gill, Tony
Cc: Abel, Andrew; Gilding, Louise; Konovalov, Alexander; Shoukrallah, Rifaat
Subject: RE: Canberra Business Chamber Autonomous Vehicle Forum

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Feel free to give me a call if you'd like to discuss.

-Andrew

-----Original Appointment-----
From: Dean Seeley [mailto:dean.seeley@canberrabusiness.com]
Sent: Wednesday, 13 January 2016 1:45 PM
Subject: Canberra Business Chamber Autonomous Vehicle Forum
When: Tuesday, 19 January 2016 3:00 PM-5:30 PM (UTC+10:00) Canberra, Melbourne, Sydney.
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PLEASE RSVP BY CLICKING HERE

For any questions or further information please do not hesitate to contact me on the numbers below.

Kind regards

Dean Seeley
Director of Programs | Canberra Business Chamber
Gnd Floor | 216 Northbourne Ave | Braddon | ACT | AUSTRALIA | 2612
P: +61 2 6247 4199 | D: +61 2 6154 6125 | [redacted]
dean.seeley@canberrabusiness.com
www.canberrabusiness.com

<< File: ATT90198 1.jpg >>

From: Paule, Rod
To: Hunter, Peter
Subject: RE: Business chamber chief says Canberra should be first to legalise driverless cars
Date: Thursday, 21 January 2016 4:38:00 PM

Peter,

Without being able to name all government representatives, I was there, Kuga from EPD was there, Andrew Mehrton from CMTEDD was there and spoke at the beginning of the forum, and there was a Ben(?) from Roads ACT.

It was a forum organised by the business council and co sponsored by CMTEDD and the NRMA (I think). A small number of government organisations were invited with a request to keep numbers low.

Apart from Glenn Keys, Kate Lundy also spoke. There was also someone from seeing machines who spoke.

The forum then broke into groups to workshop possible trials or operations of driverless vehicles, reported back and voted, and then broke up for refreshments.

It started at about 3 and I was out of there by 6:15pm.

Rod

Rod Paule | Manager Road Transport Policy|
Phone 02 620 77115 | Fax 02 620 50937 |
Justice and Community Safety | ACT Government
Level 2, 12 Moore Street, CANBERRA ACT 2601 | GPO Box 158 CANBERRA ACT 2601 |
www.act.gov.au

-----Original Message-----
From: Hunter, Peter
Sent: Thursday, 21 January 2016 4:18 PM
To: Paule, Rod
Subject: Business chamber chief says Canberra should be first to legalise driverless cars

http://www.canberratimes.com.au/act-news/business-chamber-chief-says-canberra-should-be-first-to-legalise-driverless-cars-20160119-gm8vpi.html

Who attended, and represented who/what

From: Davidson, Geoffrey
To: Mehrton, Andrew; Paule, Rod
Cc: Greenland, Karen; Horner, David
Subject: RE: Autonomous vehicle legislation
Date: Wednesday, 27 January 2016 10:25:01 AM
Attachments: image001.jpg

If it can wait, then I think it would be preferable to include David Horner in the meeting as he is officer responsible for road transport legislation. David returns Monday.

geoff

Geoffrey Davidson | Manager, Road Safety
Legislation, Policy & Programs | Justice and Community Safety Directorate | **ACT Government**
Level 2, 12 Moore Street, CANBERRA CITY ACT 2601 | GPO Box 158, CANBERRA ACT 2608
Telephone (02) 620 77195 | Facsimile (02) 620 50937

cid:image003.jpg@01CF2E1F.6AC457B0

From: Mehrton, Andrew
Sent: Wednesday, 27 January 2016 10:10 AM
To: Paule, Rod; Davidson, Geoffrey
Cc: Greenland, Karen
Subject: Autonomous vehicle legislation

Hi Rod and Geoffrey,

On Monday Alistair Coe put out some exposure draft legislation regarding autonomous vehicle trials (available here).
Would it be possible to catch up sometime in the next few days and get your first thoughts about whether the proposed leg is workable or what would need to be looked at more closely?

Thanks.
-Andrew

Andrew Mehrton | Deputy Director, Economic Development Policy | Chief Minister, Treasury and Economic Development Directorate | ACT Government
andrew.mehrton@act.gov.au| ph: (02) 6205 8507 | fax: (02) 6213 0748

From: Davidson, Geoffrey
To: Mehrton, Andrew; Paule, Rod
Cc: Greenland, Karen; Horner, David
Subject: RE: Autonomous vehicle legislation
Date: Wednesday, 27 January 2016 10:24:00 AM
Attachments: image001.jpg

If it can wait, then I think it would be preferable to include David Horner in the meeting as he is officer responsible for road transport legislation. David returns Monday.

geoff

Geoffrey Davidson | Manager, Road Safety
Legislation, Policy & Programs | Justice and Community Safety Directorate | **ACT Government**
Level 2, 12 Moore Street, CANBERRA CITY ACT 2601 | GPO Box 158, CANBERRA ACT 2608
Telephone (02) 620 77195 | Facsimile (02) 620 50937

cid:image003.jpg@01CF2E1F.6AC457B0

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Cc: Greenland, Karen
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Thanks.
-Andrew

Andrew Mehrton | Deputy Director, Economic Development Policy | Chief Minister, Treasury and Economic Development Directorate | ACT Government
andrew.mehrton@act.gov.au| ph: (02) 6205 8507 | fax: (02) 6213 0748

From: Davidson, Geoffrey
To: Paule, Rod
Subject: FW: Autonomous vehicles in Australia
Date: Monday, 1 February 2016 8:09:00 AM
Attachments: image001.jpg

Hi Rod

Would you like to respond as the appropriate person

geoff

Geoffrey Davidson | Manager, Road Safety
Legislation, Policy & Programs | Justice and Community Safety Directorate | **ACT Government**
Level 2, 12 Moore Street, CANBERRA CITY ACT 2601 | GPO Box 158, CANBERRA ACT 2608
Telephone (02) 620 77195 | Facsimile (02) 620 50937

cid:image003.jpg@01CF2E1F.6AC457B0

From: Krajina, Danielle
Sent: Monday, 1 February 2016 7:54 AM
To: Whittaker, Leone; Schofield, Karen; Davidson, Geoffrey
Cc: Field, Julie; JACS Enquiries
Subject: FW: Autonomous vehicles in Australia

Sorry, another one for LPP.

Danielle

From: Natasha Bolsin [mailto:nbolsin@ntc.gov.au]
Sent: Thursday, 14 January 2016 3:19 PM
To: JACS Enquiries
Subject: Autonomous vehicles in Australia

For the attention of the secretariat:

I am writing form the National Transport Commission because I am currently working on a project around preparing for autonomous vehicles and rail. We are looking at regulatory and operational barriers. The safety implications of this kind of technology obviously have a great potential to impact the legislation and regulation particularly in relation to privacy, but also road rules, criminal law, product liability etc. I would be very keen to get an appropriate contact, perhaps someone from the policy team, to send through our issues paper to and get some feedback.

Many thanks,

Natasha

Natasha Bolsin | Senior Policy Analyst | National Transport Commission
Level 15/628 Bourke Street | Melbourne VIC 3000
T: (03) 9236 5020 | F: (03) 9642 8922

Register to receive the latest NTC news at www.ntc.gov.au

From: Horner, David
To: Davidson, Geoffrey
Subject: FW: Autonomous vehicles in Australia
Date: Monday, 1 February 2016 11:02:00 AM

Geoff

I recall Karen mentioning that you were the lead on autonomous vehicles? I think it was in the context of the seminar on the week before last.

David

From: Whittaker, Leone
Sent: Monday, 1 February 2016 10:08 AM
To: Horner, David
Subject: FW: Autonomous vehicles in Australia

Hi David,

If this one is not you can you please re-direct to appropriate person.

Kind regards
Leone

From: Krajina, Danielle
Sent: Monday, 1 February 2016 7:54 AM
To: Whittaker, Leone; Schofield, Karen; Davidson, Geoffrey
Cc: Field, Julie; JACS Enquiries
Subject: FW: Autonomous vehicles in Australia

Sorry, another one for LPP.

Danielle

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Natasha Bolsin | Senior Policy Analyst | National Transport Commission
Level 15/628 Bourke Street | Melbourne VIC 3000
T: (03) 9236 5020 | F: (03) 9642 8922

Register to receive the latest NTC news at www.ntc.gov.au

From: Cloos, Karl
To: Kugathas, Kuga; Paule, Rod; Joseph, Gabriel; Chandramohan, Chandra; Blume, Kristin; Day, Michael; Deschamps, Chris; Jatheendran, Lingam; Dias, Carl; Greenland, Karen; Thompson, Peter; Marshall, Ken; Shoukrallah, Rifaat; Taylor, John; McHugh, Ben; Gill, Tony; Edwards, Marc; Potapowicz, Pawel; Peters, Paul; Vikneson, Jayanthy; Yu, Frank; Glassford, Cameron; Dimitrovska, Snezana; Davidson, Geoffrey; Ahmed, Sharfuddin; Meredith, Edward; Zeta, Darwin; Finnigan, Rebecca; Pincombe, Neil; Casimir, Amanda; Wyatt, Tim; Jollon, Michael; Norton, Timothy; Hawkins, Robyn; Horner, David
Subject: FW: Making News in Transport - Alert 453
Date: Friday, 5 February 2016 2:34:11 PM
Attachments: image001.png
image002.png

Managers Roads ACT, Road Transport, Asset Acceptance and Road Safety

FYI and circulation.

Regards

Karl Cloos
Manager Strategic Planning and Development
Roads ACT
Ph: (02) 6207-6871
Fax: (02) 6207-6587
email: karl.cloos@act.gov.au

From: Katherine Rawlinson [mailto:katherine.rawlinson@arrb.com.au]
Sent: Friday, 5 February 2016 12:17 PM
To: Katherine Rawlinson
Subject: Making News in Transport - Alert 453

Making News in Transport – Alert 453

Selected land transport-related news items from Australia and overseas 5/02/2016, produced by ARRB Group under the National Interest Services (NIS) program

Automotive technology

Thursday 28 January 2016

Front crash prevention slashes police-reported rear-end crashes (Insurance Institute for Highway Safety, United States)

Rear-end crashes are significantly reduced when vehicles are fitted with front crash prevention technology, according to a study released by the Insurance Institute for Highway Safety in the US.

View item

Click here for full report

Monday 1 February 2016

Driverless cars technology receives £20 million boost (Department for Transport, United Kingdom)
Eight collaborative research projects in the UK have received funding to develop connected and autonomous vehicle technologies including innovations for visually-impaired passengers and 'talking car' technology.

View item

Thursday 4 February 2016

Help develop appropriate laws for Australia's automated vehicles (National Transport Commission media release, Australia)
The National Transport Commission has released an issues paper on regulatory barriers to the introduction of automated road and rail vehicles in Australia and is seeking public submissions.

View item

Click here for Issues Paper and to make a submission

Heavy vehicles

Friday 29 January 2016

Expenditure Plans and Asset Registers for key freight routes (Federal Government Ministerial Media Statement, Australia)
The COAG Transport and Infrastructure Council has released two information products with the aim of accelerating heavy vehicle road reform.

View item

Click here to view the Plans and the Asset Registers

Pedestrians and Cyclists

Sunday 31 January 2016

Google Street View aids understanding of pedestrian safety, new study finds (Forbes, United States)
Researchers at Columbia University used Google Street View to analyse the safety of streetscapes for pedestrians.

View item

Click here for study abstract

Wednesday 3 February 2016

Increasing pedestrian safety in Sydney CBD (Transport for NSW Media Release, Australia)
The Sydney CBD 40km/h speed limit zone will be expanded to incorporate the Light Rail construction work area as well as the new bus routes.

View item

Wednesday 3 February 2016

Metro buses test alarms to improve pedestrian safety (The Seattle Times, United States)
A trial of bus dashboard alarms that flash when a pedestrian is in the driver's blindspot will be trialled in Washington state.

View item

Planning and Infrastructure

Monday 1 February 2016

Shaping Melbourne's future: have your say now (City of Melbourne media release, Australia)
The City of Melbourne is seeking public participation to help develop ideas for its next Future Melbourne plan.

View item

Click here for media article on Future Melbourne

Public transport

Monday 1 February 2016

Uber's ride-sharing service delivers $AU81m in consumer benefits, company-commissioned report says (ABC News, Australia)
A commissioned report released by Deloitte analyses the impact of the Uber ride-sharing

service on Australian consumers.

View item

Click here for Deloitte media release

Monday 1 February 2016

Mayor launches world-leading bus safety programme (Transport for London press release, United Kingdom)
Transport for London and the Mayor of London have launched a bus safety program which aims to develop and trial new safety technologies.

View item

Wednesday 3 February 2016

Trip announcer app leads the way for public transport passengers (Queensland Government Ministerial Media Statement, Australia)
Queensland's MyTransLink public transport app has been upgraded to include real-time audio announcements of upcoming stops and stations.

View item

Rail

Saturday 30 January 2016

Hobart light rail proposal bolstered by Infrastructure Tasmania report, supporters' lobby group says (ABC News, Australia)
Infrastructure Tasmania has released an evaluation of a proposed light rail service from the Hobart waterfront to the northern suburbs.

View item

Click here for full report

Road safety

Thursday 28 January 2016

Bad drivers to get warning letters from police (The West Australian, Australia)
Western Australian drivers with a history of traffic infringements or charges will receive warning letters or text messages from police in a bid to reduce the road toll.

View item

Thursday 28 January 2016

Evaluation of 40km/h precincts in group centres (ACT Government Ministerial Media Statement, Australia)
The ACT Government is seeking public feedback on its trial of 40 km/h speed limit precincts.

View item

Friday 29 January 2016

Report on Government Services 2016 (Productivity Commission, Australia)
The Productivity Commission's Report on Government Services for 2016 includes performance reporting for road safety in the volume on Justice.

View item

Sunday 31 January 2016

Safety rails erected to protect motorcyclists (Radio New Zealand News, New Zealand)
New safety rails designed to prevent motorcyclists from hitting guardrail posts or sliding under barriers have been installed along a stretch of road on New Zealand's Coromandel Peninsula.

View item

Monday 1 February 2016

Drive on drugs and you will be caught (Northern Territory Government Ministerial Media Statement, Australia)
New laws allowing Northern Territory police to drug test drivers came into effect on 1 February.

View item

Wednesday 3 February 2016

Improving heavy vehicle safety in Queensland (Queensland Government Ministerial Media Statement, Australia)
The Queensland Government has released a Heavy Vehicle Safety Action Plan 2016-18 with 31 initiatives to reduce accidents involving heavy vehicles.

View item

Click here for full Action Plan

Thursday 4 February 2016

WA's first point-to-point speed cameras to be installed along Forrest Highway (WA today, Australia)
Western Australia is to trial point-to-point speed cameras, which are used in several other states and territories.

View item

Transport management

Saturday 30 January 2016

Government demands gender equality in transport sector (The Guardian, United Kingdom)
The UK Government has released a transport infrastructure skills strategy outlining plans including an increase in the number of women taking up engineering and technical apprenticeships in the transport sector and the requirement that apprenticeship targets be written into government contracts.

View item

Click here for full Skills Strategy

Thursday 4 February 2016

Franchising of Sydney Ferries Network Services (Audit Office of New South Wales, Australia)
The decision to privatise the running of the Sydney Ferries Network was justified, according to a report released by the NSW Acting Auditor-General.

View item

Travel behaviour

Thursday 4 February 2016

London may soon have more bikes than cars at rush hour (Atlantic CityLab, United States)
The number of cycling commuters in London has risen sharply between 2000 and 2014 while car numbers have dropped during that time, according to a report released by Transport for London.

View item

Click here for full report

National Interest Services *supporting an informed land transport community*

Click here to subscribe to future issues of Making News in Transport, or to change your subscription status if already subscribed

---

Katherine Rawlinson
Librarian
National Interest Services

ARRB Group Ltd
Vermont South VIC 3133
Australia
P: +61 3 9881 1568
katherine.rawlinson@arrb.com.au
www.arrb.com.au

ARRB is pleased to announce our 27th ARRB Conference will be held in Melbourne, 16 - 18 November 2016. The ARRB Conference and the 37th ATRF will run parallel with one another at the same venue to create greater opportunities for delegates. Call for abstracts will open shortly!

ACT Government
Justice and Community Safety

ACT Justice and Community Safety Directorate

EXECUTIVE CORRESPONDENCE ACTION REQUIRED

This form is to be used by the Director-General or Deputy Director-General to refer executive correspondence for appropriate action.

Date Received					
Action Required	✓	Reply	☐	Advice	☐ Reply
	☐	Arrange Meeting	☐	Nil	☐ For Info Only
	☐	For appropriate action by business unit			
Refer To	☐	ACTGS	☐	Courts	☐ LPP Ken G
	☐	Strat Finance	☐	Public trustee	☐ ACTCS
	☐	SEMB	☐	ESA	☐ ACT Policing
	☐	PWS	☐	CWI	☐ Governance
For Sign Off By	☐	Director-General			
	☐	Deputy Director-General Justice			
	☐	Deputy Director-General, Community Safety			
	✓	Executive Director of			
Comments	I think we can just let MO know.				

NTC AUSTRALIA

National Transport Commission

5 February 2016

RECEIVED
11 FEB 2016
OFFICE OF THE DIRECTOR GENERAL

Ms Alison Playford
Director-General
Justice and Community Safety Directorate
Level 9, 12 Moore Street
CANBERRA CITY ACT 2601

Dear Ms Playford, Alison

Invitation to participate in the Automated Vehicles Regulatory Advisory Group

I am writing to you about the recent publication of the National Transport Commission (NTC) issues paper, *Regulatory barriers to more automated road and rail vehicles*, and to invite you to nominate a representative to participate in the NTC's Automated Vehicles Regulatory Advisory Group.

Submissions to the NTC's issues paper will be received until 8 March 2016

In November 2015, the Transport and Infrastructure Council directed the NTC to identify regulatory barriers relating to the safe introduction of more automated road and rail vehicles in Australia. Our first step in this project has been the release of an issues paper on 4 February 2016. This paper provides an overview of current rules, identifies issues and potential solutions and scopes the parameters of the project.

The issues paper may be accessed on the NTC website at http://www.ntc.gov.au/current-projects/preparing-for-more-automated-road-and-rail-vehicles/

Submissions will be received until 8 March 2016, and I invite you to make a submission. Submissions will contribute to the preparation of an NTC discussion paper with detailed options analysis, to be published mid-2016.

Automated Vehicles Regulatory Advisory Group

In addition to the public consultation process, the NTC is establishing the Automated Vehicles Regulatory Advisory Group. I invite you to nominate a representative to participate in this group.

The purpose of the advisory group is for national, state and territory government agencies to advise and assist the NTC to:

- identify unnecessary regulatory barriers to the safe introduction of automated vehicles
- develop policy and legislative options to support automated vehicles; and
- develop recommendations for consideration by the Council.

A Level 15 / 628 Bourke Street Melbourne VIC 3000
P 61 3 9236 5000 F 61 3 9642 8922
W www.ntc.gov.au ABN 67 890 861 578

The advisory group will first convene in April 2016 and is expected to continue through to the release of finalised recommendations to the Council in November 2016. Meetings will be held on an as-needs basis for approximately 1-2 hours by teleconference and chaired by the NTC.

Membership of the advisory group

Your nominated representative should have policy or regulatory expertise to represent your organisation on matters relating to the regulation of automated vehicles. This could include expertise in relation to the following subject matter areas:

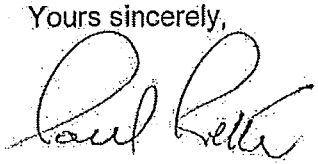
- Australian Design Rules
- In-service vehicle standards
- Australian Road Rules
- Road safety and traffic laws
- Relevant international standards, or
- Enforcement

Your nominated representative should also have sufficient seniority and authority to faithfully represent your organisation's position and interests. A proxy may be nominated if the representative is unavailable.

Please indicate your nomination to the advisory group by reply email to Trish Thacker tthacker@ntc.gov.au by **Friday, 26 February 2016**.

If you would like more information about the issues paper consultation or the advisory group, please contact Marcus Burke, Project Director, on (03) 9236 5044 or by email at mburke@ntc.gov.au.

Yours sincerely,



Paul Retter AM
Chief Executive and Commissioner

From: Paule, Rod
To: Bartram, Chris; Leach, Meredith
Cc: Warren, Prue
Subject: RE: REQUEST FOR INPUT from JACS - Invitation to participate in the Automated Vehicles Regulatory Advisory Group
Date: Tuesday, 23 February 2016 11:09:34 AM
Attachments: image001.jpg

Chris,

Will go with that.

Rod

Rod Paule | Manager Road Transport Policy|
Phone 02 620 77115 | Fax 02 620 50937 |
Justice and Community Safety | **ACT Government**
Level 2, 12 Moore Street, CANBERRA ACT 2601 | GPO Box 158 CANBERRA ACT 2601 |
www.act.gov.au

From: Bartram, Chris
Sent: Tuesday, 23 February 2016 11:01 AM
To: Leach, Meredith
Cc: Warren, Prue; Paule, Rod
Subject: FW: REQUEST FOR INPUT from JACS - Invitation to participate in the Automated Vehicles Regulatory Advisory Group

Hi Meredith,

Please note the response below from ED on this matter.

Rod – are you happy to proceed with what Andrew has provided?

Kind regards,

Chris Bartram

Directorate Liaison Officer | Justice and Community Safety Directorate
Office of Shane Rattenbury MLA
Minister for Corrections, Minister for Road Safety & Minister for Justice and Consumer Affairs
Ph: 02 6207 5292| Email: chris.bartram@act.gov.au| Web: www.justice.act.gov.au

cid:image003.jpg@01CF2E1F.6AC457B0

From: Morgan, Anneliese
Sent: Tuesday, 23 February 2016 10:55 AM
To: Bartram, Chris
Subject: FW: REQUEST FOR INPUT from JACS - Invitation to participate in the Automated Vehicles

Regulatory Advisory Group

Hi Chris,

See below email I just received - it seems my people have spoken to your people? Does JACS need anything further from EDD?

Cheers,
Anneliese

From: MACC
Sent: Tuesday, 23 February 2016 10:53 AM
To: Morgan, Anneliese
Cc: Morris, Dorena; Hurrell, Erica
Subject: FW: REQUEST FOR INPUT from JACS - Invitation to participate in the Automated Vehicles Regulatory Advisory Group

Hi Anneliese

Please see advice from Andrew Mehrton below. He has discussed with Rod Paule.

Thanks
Patti

From: Mehrton, Andrew
Sent: Friday, 19 February 2016 3:12 PM
To: MACC
Cc: Gilding, Louise
Subject: RE: REQUEST FOR INPUT from JACS - Invitation to participate in the Automated Vehicles Regulatory Advisory Group

Hi MACC,

We believe that it would be prudent for the ACT to have a representative on this project. However, I understand that JACS is considering their level of involvement pending advice on how the Government wants to respond to this issue.
Although ED does not have any regulatory responsibilities in this area, we do for the time being have carriage for formulating a policy position. Therefore, we would like to request that the government's reply nominate Louise Gilding to be a representative for the ACT on this project, either as an additional representative if JACS puts someone forward, or as the primary contact if JACS does not.

I've discussed this with Rod Paule but you may want to provide our advice back through the DLOs.

Thanks.

-Andrew

From: Morgan, Anneliese
Sent: Tuesday, 16 February 2016 6:46 PM
To: MACC; Morris, Dorena; Bogiatzis, Patti

Cc: Mehrton, Andrew
Subject: REQUEST FOR INPUT from JACS - Invitation to participate in the Automated Vehicles Regulatory Advisory Group

Hi MACC,

JACS has requested Andrew Mehrton's input on the attached please, due 19 Feb please.

Thanks,
Anneliese

-----Original Message-----
From: Bartram, Chris
Sent: Monday, 15 February 2016 4:03 PM
To: Morgan, Anneliese
Subject: FW: HP Records Manager Executive Correspondence : EXC:2016/00099 : Invitation to participate in the Automated Vehicles Regulatory Advisory Group

Hi Anneliese,

Could you please arrange for some input for JACS to the attached min corro?

Thanks in advance.

Kind regards,

Chris Bartram

Directorate Liaison Officer | Justice and Community Safety Directorate Office of Shane Rattenbury MLA Minister for Corrections, Minister for Road Safety & Minister for Justice and Consumer Affairs
Ph: 02 6207 5292| Email: chris.bartram@act.gov.au| Web: www.justice.act.gov.au

-----Original Message-----
From: Warren, Prue
Sent: Monday, 15 February 2016 3:55 PM
To: Bartram, Chris
Subject: FW: HP Records Manager Executive Correspondence : EXC:2016/00099 : Invitation to participate in the Automated Vehicles Regulatory Advisory Group

Hi Chris

Rod has requested this go to Andrew Mehrton's area in CMTEDD as per the attached email.

Thanks Prue

-----Original Message-----
From: Leach, Meredith
Sent: Monday, 15 February 2016 3:53 PM

To: Bartram, Chris
Cc: Paule, Rod; Warren, Prue
Subject: HP Records Manager Executive Correspondence : EXC:2016/00099 : Invitation to participate in the Automated Vehicles Regulatory Advisory Group

Good Afternoon

Legislation, Policy and Programs have requested CMTEDD input on the attached briefing.

Could you please facilitate this request and return to me by COB Friday 19 February 2016 if possible.

The action office on this brief is Rod Paule if you have any questions re content.

Happy to discuss.

Thank you

Kind Regards

Meredith Leach | Ministerial Liaison Officer | Ministerial Services Unit ' 02 620 76580

Mr Paul Retter AM
Chief Executive and Commissioner
National Transport Commission
Level 15 / 628 Bourke Street
MELBOURNE ACT 3000

Dear Mr Retter

Invitation to participate in the Automatic Vehicles Regulatory Advisory Group

Thank you for your letter of 5 February 2016 to Alison Playford about the above matter. I am responding on Alison's behalf. I apologise for the delay in doing so.

Policy and regulatory responsibility for autonomous vehicles is spread across a number of directorates in the ACT.

As such, at this stage, I would like to nominate to the Advisory Group:

- Louise Gilding, Executive Director, Strategy and Program Design in Chief Minister, Treasury and Economic Development Directorate
  telephone: (02) 620 50740
  email: louise.gilding@act.gov.au; and
- Rod Paule, Manager Road Transport Policy, Legislation, Policy and Programs, Justice and community Safety Directorate
  telephone: (02) 620 77115
  email: rod.paule@act.gov.au

Thank you for your efforts in progressing this project.

Yours sincerely

Karen Greenland
A/g Executive Director
Legislation, Policy and Programs
4 March 2016

From: Mehrton, Andrew
To: Paule, Rod; Horner, David; Davidson, Geoffrey; Greenland, Karen
Cc: Abel, Andrew
Subject: FW: FYI only - Mr Coe - Notice of Presentation of Bill for tomorrow
Date: Tuesday, 9 February 2016 2:53:21 PM
Attachments: 20160209121118545.pdf

Hi all,
You've probably already received it, but FYI Alistair Coe will present his driverless car bill tomorrow.

Will get in touch in the next day or so to discuss.

Thanks.

-Andrew

From: Engele, Sam
Sent: Tuesday, 9 February 2016 1:32 PM
To: Gilding, Louise; Mehrton, Andrew
Subject: Fwd: FYI only - Mr Coe - Notice of Presentation of Bill for tomorrow

FYI

Sent from my iPhone

Begin forwarded message:

> **From:** "Darville, Pam" <Pam.Darville@act.gov.au>
> **Date:** 9 February 2016 at 12:50:27 PM AEDT
> **To:** "Rutledge, Geoffrey" <Geoffrey.Rutledge@act.gov.au>, "Engele, Sam" <Sam.Engele@act.gov.au>
> **Cc:** "Junakovic, Georgia" <Georgia.Junakovic@act.gov.au>
> **Subject: FYI only - Mr Coe - Notice of Presentation of Bill for tomorrow**
>
> Just FYI ....
>
> Have sent this onto JACS and TAMS for information. Looks like it sits with JACS - Autonomous Vehicles....to prepare a Government Position.
>
> Once the Bill is presented we will be able to identify who should prepare the Gov Position for Cabinet consideration.
>
> Cheers Pam
>
> **Pam Darville | Manager - Government Business Coordination**
> Phone: +61 2 6205 0543| Mobile: [redacted] | Email: pam.darville@act.gov.au
> Chief Minister, Treasury and Economic Development Directorate | ACT Government
> Level 4 Canberra Nara Centre | London Circuit CANBERRA CITY | GPO Box 158

Canberra ACT 2601 | www.act.gov.au

RELEASED
2100 of 2448

LEGISLATIVE ASSEMBLY FOR THE
AUSTRALIAN CAPITAL TERRITORY

NOTICE OF PRESENTATION OF BILL

For next sitting, unless otherwise stated.

Alistair Coe MLA:

I give notice that, on the next day of sitting, I shall present a Bill for an Act to amend the *Road Transport (Safety and Traffic Management) Act, 1999*.

Alistair Coe MLA
9 February 2016

Road Transport (Safety and Traffic Management) (Autonomous Vehicle Trials) Amendment Bill 2016

Received 11.51
9/2/16

From: Davidson, Geoffrey
To: Georgeson, Matthew
Cc: Bartram, Chris; Jaques, Alison
Subject: RE: Is this statement correct?
Date: Tuesday, 9 February 2016 2:29:00 PM

Kind of. More like -

the Government is already able to exempt vehicles and persons from provisions of the road transport legislation, including to make provision for trials of autonomous vehicles by disallowable instrument under section 13 of the Road Transport (General) Act 1999. The disallowable instrument can include conditions and restrictions on the exemption.

This is how we did lane filtering and segways.

From: Georgeson, Matthew
Sent: Tuesday, 9 February 2016 2:27 PM
To: Davidson, Geoffrey
Cc: Bartram, Chris; Jaques, Alison
Subject: Is this statement correct?

the Government is already able to approve trials of autonomous vehicles under section 13 of the Road Transport (General) Act 1999 by disallowable instrument.

Matthew Georgeson | Adviser to Shane Rattenbury MLA
Minister for Education; Minister for Corrections;
Minister for Justice and Consumer Affairs; Minister for Road Safety
ACT Greens Member for Molonglo
t: 6205 0419 | f: 6205 0007 | matthew.georgeson@act.gov.au |

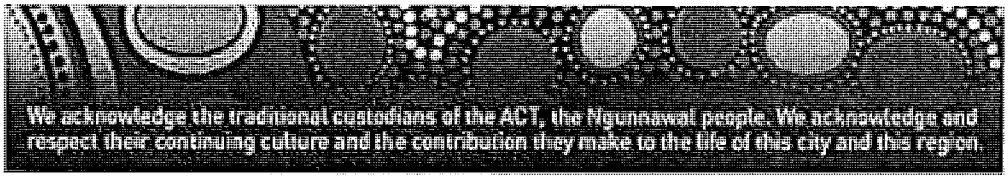
Follow Shane on Facebook and Twitter

Callow, Lauren

From: Davidson, Geoffrey
Sent: Wednesday, 10 February 2016 12:16 PM
To: Paule, Rod; Horner, David
Subject: FW: Joint Chief Minister & Minister Rattenbury media release - Autonomous cars: extra red tape will stifle innovation

FYI

Geoffrey Davidson | Manager, Road Safety
Legislation, Policy & Programs | Justice and Community Safety Directorate | **ACT Government**
Level 2, 12 Moore Street, CANBERRA CITY ACT 2601 | GPO Box 158, CANBERRA ACT 2608
Telephone (02) 620 77195 | Facsimile (02) 620 50937



From: Bartram, Chris
Sent: Wednesday, 10 February 2016 11:30 AM
To: Davidson, Geoffrey; Greenland, Karen
Subject: FW: Joint Chief Minister & Minister Rattenbury media release - Autonomous cars: extra red tape will stifle innovation

FYI

From: ACT Government Executive Media
Sent: Wednesday, 10 February 2016 11:27 AM
Subject: Joint Chief Minister & Minister Rattenbury media release - Autonomous cars: extra red tape will stifle innovation

---

ANDREW BARR MLA
CHIEF MINISTER

Treasurer
Minister for Economic Development
Minister for Urban Renewal
Minister for Tourism and Events

Member for Molonglo

SHANE RATTENBURY MLA

Minister for Corrections
Minister for Education
Minister for Justice and Consumer Affairs
Minister for Road Safety

Member for Molonglo

MEDIA RELEASE

Autonomous cars: extra red tape will stifle innovation

The growing interest in driverless vehicles is welcome, but if we cut and paste overseas regulation we risk giving the cars a red light in Canberra.

Self-driving cars could well be a technological breakthrough that contributes to the way people move around cities this century. They can bring full mobility for more people, improve access to our public transport system, and free up hours a week for those who commute to work.

I can see a place for Canberra as a leader in this field, just as we led the way with transport innovation around ridesharing. I recently met with Tesla and my office is in touch with Google about opportunities for this transport innovation.

It is fantastic that the business community recognises this opportunity and it is encouraging – if surprising – to see some interest from the Liberals in a new idea.

We need clever regulation to make sure this technology is introduced safely and shaped to benefit all Canberra users – particularly for Canberrans living with a disability who are currently unable to drive or easily access public transport. We can currently permit trials of this technology under existing regulation.

Well-meaning but overly prescriptive or mis-timed regulation could cripple the potential of this technology. Already Google has criticised the model of regulation proposed by the Canberra Liberals, which seems to be based on Californian rules, because it places limits on this future technology before it is fully developed and risks locking out the people who will need it most.

Minister responsible for transport regulation Shane Rattenbury said:

"This legislation is unnecessary as the Government can already allow trials of autonomous vehicles under section 13 of the Road Transport (General) Act 1999 by disallowable instrument.

"The Liberals' 'autonomous car' bill is just a transparent part of their anti public transport, anti light rail campaign.

"Autonomous vehicles do have the potential to improve road safety and social inclusion in particular, and the ACT government is keen to support the innovation.

"However, we also need to be realistic about the role autonomous vehicles can play. They are not an alternative to sustainable transport solutions, such as buses and light rail. The sensible and responsible approach for the future is to plan our city sustainably, building an integrated transport system that includes public and active transport, as well as emerging technologies such as autonomous vehicles, and ensuring we don't become congested and polluted like Australia's bigger cities."

The ACT government has a strong track record of encouraging new entrants and new technologies into the Canberra market – Uber is an obvious example. One reason regulating ridesharing has worked so well is that we worked closely with industry to get the full benefit from the technology, while ensuring protections for the community.

I want to work with the industry to make sure that any regulatory changes we make to bring the early versions of self-drive technology to our city attract global leaders in this area.

Statement ends

Media contacts: Mark Paviour T (02) 6205 2775 **M** 0466 521 634 mark.paviour@act.gov.au

Ali Jaques T (02) 6205 3897 **M** 0481 035 764 alison.jaques@act.gov.au

ACT LEGISLATIVE ASSEMBLY
Phone (02) 6205 0011 Email barr@act.gov.au

CANBERRA

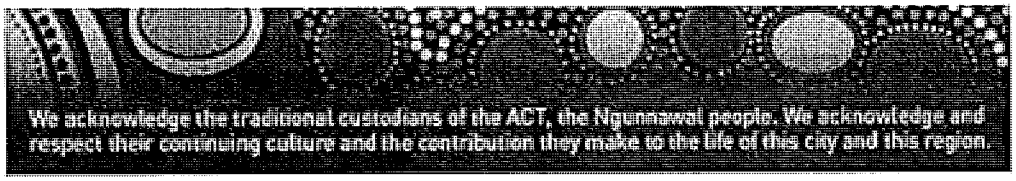
@ABarrMLA AndrewBarrMLA andrewbarr

Callow, Lauren

From: Davidson, Geoffrey
Sent: Wednesday, 10 February 2016 12:16 PM
To: Mehrton, Andrew
Subject: RE: Joint Chief Minister & Minister Rattenbury media release - Autonomous cars: extra red tape will stifle innovation

ta

Geoffrey Davidson | Manager, Road Safety
Legislation, Policy & Programs | Justice and Community Safety Directorate | **ACT Government**
Level 2, 12 Moore Street, CANBERRA CITY ACT 2601 | GPO Box 158, CANBERRA ACT 2608
Telephone (02) 620 77195 | Facsimile (02) 620 50937



From: Mehrton, Andrew
Sent: Wednesday, 10 February 2016 11:55 AM
To: Paule, Rod; Davidson, Geoffrey; Horner, David
Cc: Greenland, Karen
Subject: FW: Joint Chief Minister & Minister Rattenbury media release - Autonomous cars: extra red tape will stifle innovation

Hi all,
FYI, Ministers Barr and Rattenbury released the following statement this morning which indicates they do not intend to work with the Coe bill.

-Andrew

From: De Landelles, Ian
Sent: Wednesday, 10 February 2016 11:29 AM
To: Mehrton, Andrew
Subject: FW: Joint Chief Minister & Minister Rattenbury media release - Autonomous cars: extra red tape will stifle innovation

Ian De Landelles | Manager
Phone 02 6205 1481 Fax 02 6207 0123 Mobile [redacted]
Communications | Chief Minister, Treasury and Economic Development Directorate | ACT Government
Level 7 TransACT House 470 Northbourne Ave. Dickson ACT 2612
GPO Box 158 Canberra ACT 2601 | www.economicdevelopment.act.gov.au

---

From: ACT Government Executive Media
Sent: Wednesday, 10 February 2016 11:27 AM
Subject: Joint Chief Minister & Minister Rattenbury media release - Autonomous cars: extra red tape will stifle innovation

ANDREW BARR MLA
CHIEF MINISTER

Treasurer
Minister for Economic Development
Minister for Urban Renewal
Minister for Tourism and Events

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MEDIA RELEASE

10 February 2016

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We need clever regulation to make sure this technology is introduced safely and shaped to benefit all Canberra users – particularly for Canberrans living with a disability who are currently unable to drive or easily access public transport. We can currently permit trials of this technology under existing regulation.

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Minister responsible for transport regulation Shane Rattenbury said:

"This legislation is unnecessary as the Government can already allow trials of autonomous vehicles under section 13 of the Road Transport (General) Act 1999 by disallowable instrument.

"The Liberals' 'autonomous car' bill is just a transparent part of their anti public transport, anti light rail campaign.

"Autonomous vehicles do have the potential to improve road safety and social inclusion in particular, and the ACT government is keen to support the innovation.

"However, we also need to be realistic about the role autonomous vehicles can play. They are not an alternative to sustainable transport solutions, such as buses and light rail. The sensible and responsible approach for the future is to plan our city sustainably, building an integrated transport system that includes public and active transport, as well as emerging technologies such as autonomous vehicles, and ensuring we don't become congested and polluted like Australia's bigger cities."

The ACT government has a strong track record of encouraging new entrants and new technologies into the Canberra market – Uber is an obvious example. One reason regulating ridesharing has worked so well is that we worked closely with industry to get the full benefit from the technology, while ensuring protections for the community.

I want to work with the industry to make sure that any regulatory changes we make to bring the early versions of self-drive technology to our city attract global leaders in this area.

Statement ends

Media contacts: **Mark Paviour** T (02) 6205 2775 M 0466 521 634 mark.paviour@act.gov.au
Ali Jaques T (02) 6205 3897 M 0481 035 764 alison.jaques@act.gov.au

ACT LEGISLATIVE ASSEMBLY
Phone (02) 6205 0011 Email barr@act.gov.au

CANBERRA

@ABarrMLA AndrewBarrMLA andrewbarr

Callow, Lauren

From: Mehrton, Andrew
Sent: Wednesday, 10 February 2016 4:27 PM
To: Greenland, Karen; Paule, Rod; Davidson, Geoffrey; Horner, David
Cc: McIntosh, Andrew
Subject: RE: Joint Chief Minister & Minister Rattenbury media release - Autonomous cars: extra red tape will stifle innovation

Hi Karen,
No info as yet.

-Andrew

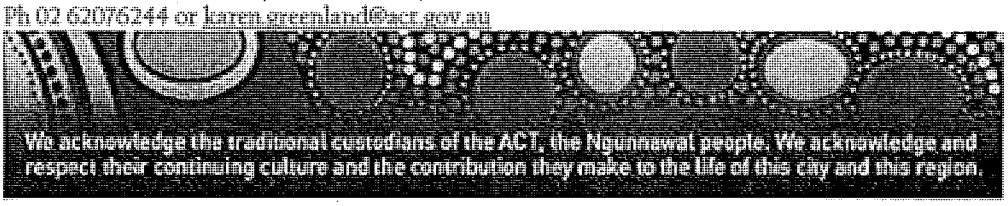
From: Greenland, Karen
Sent: Wednesday, 10 February 2016 1:49 PM
To: Mehrton, Andrew; Paule, Rod; Davidson, Geoffrey; Horner, David
Cc: McIntosh, Andrew
Subject: RE: Joint Chief Minister & Minister Rattenbury media release - Autonomous cars: extra red tape will stifle innovation

Thanks Andrew – any info about when the Coe Bill likely to be scheduled for debate? Am presuming both CM and Minister Rattenbury will wish to speak in opposition.

Karen

Karen Greenland
Deputy Executive Director, Legislation, Policy and Programs
ACT Justice and Community Safety Directorate

Ph 02 62076244 or karen.greenland@act.gov.au



From: Mehrton, Andrew
Sent: Wednesday, 10 February 2016 11:55 AM
To: Paule, Rod; Davidson, Geoffrey; Horner, David
Cc: Greenland, Karen
Subject: FW: Joint Chief Minister & Minister Rattenbury media release - Autonomous cars: extra red tape will stifle innovation

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Sent: Wednesday, 10 February 2016 11:29 AM
To: Mehrton, Andrew
Subject: FW: Joint Chief Minister & Minister Rattenbury media release - Autonomous cars: extra red tape will stifle innovation

Ian De Landelles | Manager
Phone 02 6205 1481 Fax 02 6207 0123 Mobile [redacted]
Communications | Chief Minister, Treasury and Economic Development Directorate | ACT Government
Level 7 TransACT House 470 Northbourne Ave. Dickson ACT 2612
GPO Box 158 Canberra ACT 2601 | www.economicdevelopment.act.gov.au

From: ACT Government Executive Media
Sent: Wednesday, 10 February 2016 11:27 AM
Subject: Joint Chief Minister & Minister Rattenbury media release - Autonomous cars: extra red tape will stifle innovation

ANDREW BARR MLA
CHIEF MINISTER

Treasurer
Minister for Economic Development
Minister for Urban Renewal
Minister for Tourism and Events

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SHANE RATTENBURY MLA

Minister for Corrections
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MEDIA RELEASE

10 February 2016

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Statement ends

Media contacts: Mark Paviour T (02) 6205 2775 M 0466 521 634 mark.paviour@act.gov.au
Ali Jaques T (02) 6205 3897 M 0481 035 764 alison.jaques@act.gov.au

ACT LEGISLATIVE ASSEMBLY
Phone (02) 6205 0011 Email barr@act.gov.au

CANBERRA

@ABarrMLA AndrewBarrMLA andrewbarr

From: Leach, Meredith
To: Bartram, Chris; Paule, Rod; Balshaw, Greg
Cc: Warren, Prue
Subject: RE: TRIM Context Notification - Action Reassigned. Allocate to action officer - MIN:2016/000503 - Driverless vehicle trials in the ACT - [redacted]
Date: Wednesday, 10 February 2016 11:18:50 AM
Attachments: image001.jpg

Thank you Chris!

Kind Regards,

Meredith Leach | Ministerial Liaison Officer
Phone 02 62076580 | Fax 02 62070514 |
Ministerial Services Unit | Justice and Community Safety Directorate | **ACT Government**
Physical Address | 12 Moore Street Canberra | Mail Address | GPO Box 158 Canberra ACT 2601 |
www.jacs.act.gov.au

From: Bartram, Chris
Sent: Wednesday, 10 February 2016 11:16 AM
To: Paule, Rod; Balshaw, Greg
Cc: Leach, Meredith; Warren, Prue
Subject: FW: TRIM Context Notification - Action Reassigned. Allocate to action officer - MIN:2016/000503 - Driverless vehicle trials in the ACT - [redacted]

Hi,

Please see attached the input (tracked changes) from EDD for the response to [redacted] for your appropriate action.

Happy to discuss, thanks.

Kind regards,

Chris Bartram

Directorate Liaison Officer | Justice and Community Safety Directorate
Office of Shane Rattenbury MLA
Minister for Corrections, Minister for Road Safety & Minister for Justice and Consumer Affairs
Ph: 02 6207 5292 | Email: chris.bartram@act.gov.au | Web: www.justice.act.gov.au

cid:image003.jpg@01CF2E1F.6AC457B0

[redacted]

From: Morgan, Anneliese
Sent: Wednesday, 10 February 2016 10:58 AM
To: Bartram, Chris
Subject: FW: TRIM Context Notification - Action Reassigned. Allocate to action officer - MIN:2016/000503 - Driverless vehicle trials in the ACT - [redacted]

Hi Chris,

Please see attached from Andrew Mehrton (with edits in tracked changes), cleared by his Exec Director. Andrew said "No significant comments from me. I think the response says pretty much all we can say at this point. Happy to discuss with Rod if he'd like."

Cheers,
Anneliese

-----Original Message-----
From: Howell, Elizabeth On Behalf Of CMCD DLO
Sent: Thursday, 4 February 2016 5:16 PM
To: Morgan, Anneliese
Cc: Bartram, Chris
Subject: FW: TRIM Context Notification - Action Reassigned. Allocate to action officer - MIN:2016/000503 - Driverless vehicle trials in the ACT - [redacted]

Hi Anneliese

Are autonomous vehicles being looked into by Economic Development? Could you please arrange input for Chris/JACS as below?

Thanks
Elizabeth

-----Original Message-----
From: Bartram, Chris
Sent: Thursday, 4 February 2016 5:07 PM
To: CMCD DLO
Subject: FW: TRIM Context Notification - Action Reassigned. Allocate to action officer - MIN:2016/000503 - Driverless vehicle trials in the ACT - [redacted]

Hi Elizabeth,

Could you please seek input from CMTEDD in relation to the attached? You'll note the emails below from JACS that provide some context.

Grateful if input could be provided by 10 February, thanks.

Kind regards,

Chris Bartram

Directorate Liaison Officer | Justice and Community Safety Directorate Office of Shane Rattenbury MLA Minister for Corrections, Minister for Road Safety & Minister for Justice and Consumer Affairs
Ph: 02 6207 5292| Email: chris.bartram@act.gov.au| Web: www.justice.act.gov.au

-----Original Message-----
From: Warren, Prue
Sent: Thursday, 4 February 2016 4:32 PM
To: Bartram, Chris
Cc: Leach, Meredith
Subject: FW: TRIM Context Notification - Action Reassigned. Allocate to action officer - MIN:2016/000503 - Driverless vehicle trials in the ACT - [redacted]

Good afternoon Chris

Could you please seek input from CMTEDD into the attached ministerial reply to [redacted]
Rod Paule has requested this go to Andrew Mehrton's area for review and input to be inserted via track to the draft letter (attached). If the input could be provided by 10 February 2016 that would be great.

Thanks Prue

-----Original Message-----
From: Paule, Rod
Sent: Thursday, 4 February 2016 4:10 PM
To: Warren, Prue
Subject: FW: TRIM Context Notification - Action Reassigned. Allocate to action officer - MIN:2016/000503 - Driverless vehicle trials in the ACT - [redacted]

Prue,

I have prepared a draft response to this one, and attached it to the record, but we are not really taking the lead on autonomous vehicles.

Can we send this over to CMTEDD, Andrew Mehrton's areas, to get their input into what I have drafted, or whether they wish to take it over?

Thanks in advance.

Rod

Rod Paule | Manager Road Transport Policy| Phone 02 620 77115 | Fax 02 620 50937 | Justice and Community Safety | ACT Government Level 2, 12 Moore Street, CANBERRA ACT 2601 | GPO Box 158 CANBERRA ACT 2601 | www.act.gov.au

-----Original Message-----
From: Records Manager [mailto:RecordsManager8.1@act.gov.au]
Sent: Wednesday, 3 February 2016 12:26 PM
Subject: TRIM Context Notification - Action Reassigned. Allocate to action officer - MIN:2016/000503 - Driverless vehicle trials in the ACT - [redacted]

MIN:2016/000503 - Driverless vehicle trials in the ACT - [redacted]
Action: Allocate to action officer
Responsible Location: Paule, Rod (Mr)
Due Date: 2016-02-04 at 12:36
This Action has been recently reassigned to you and is due to be started on 2016-02-03 at 12:36. Could you please ensure that it is completed by 2016-02-04 at 12:36.

Action Notes:

--
This E-mail Message has been automatically generated by TRIM Context (JACS Production).

From: Balberona, Justinieta
To: Paule, Rod; Cloos, Karl; Taylor, John; Zeta, Darwin; Ivancic, Kristijan; Hubbard, Benjamin; Burns, Sara; Mehrton, Andrew; Abel, Andrew; Conners, Rohen
Cc: Kugathas, Kuga; Wyatt, Tim; Sorbara, Robert
Subject: FW: In the news [SEC=UNCLASSIFIED]
Date: Wednesday, 10 February 2016 5:04:34 PM
Attachments: image001.png
image002.jpg
image003.png
image004.png
image005.png
FW Political Alert - NTC calls on transport industry to provide more data for a study on the nations transport movements _SECUNCLASSIFIED.msg

Good afternoon All

FYI.

Best regards
Justinieta

From: Wilkinson Tracey [mailto:Tracey.Wilkinson@infrastructure.gov.au]
Sent: Wednesday, 10 February 2016 9:44 AM
To: Hyles Andrew; Andrew Poole; Anita Curnow; Anna Nardis; Brett Clifford; Carolyn Saad; Jack Schafer; Jeff Potter; Balberona, Justinieta; Kevin Loftus; Kym Foster; Lillia Rozaklis; Lindsay Oxlad; JAMES Marcus; Marinus Larooij; Matt Elischer; Peter Taylor; Phoebe Flinn; Sorbara, Robert; Russell Hoelzl; Russell Ingham; Sharleen Foody; Wyatt, Tim; Trish Grunert
Subject: FW: In the news [SEC=UNCLASSIFIED]

FYI

Regards

Tracey Wilkinson
Austroads Freight Program | Program Administrator
NGTSM Steering Committee | Secretariat (National Guidelines for Transport System Management)
Commonwealth Department of Infrastructure and Regional Development
GPO Box 594 CANBERRA ACT 2601
Phone 02 6274 7921 | **Email** tracey.wilkinson@infrastructure.gov.au

---

From: An Nguyen [mailto:anguyen@austroads.com.au]
Sent: Wednesday, 10 February 2016 9:34 AM
To: Nick Koukoulas; David Francis; LOCKWOOD Natalie (PMAST/A); Jill Hislop; stuart.ballingall@roads.vic.gov.au; Leonie Pattinson; Wilkinson Tracey; Tony Arnold; Marilyn.DiStefano@roads.vic.gov.au
Cc: Elaena Gardner
Subject: In the news

Victorian police could get James Bond pursuit tech

The radical idea, like something dreamed up by James Bond's gadget master Q, has been recommended by the police union after a survey of 3000 rank and file officers found 93 per cent disagreed with the current pursuit policy.

Police Association Victoria secretary Ron Iddles said that policy had had a "major impact on morale". Officers were concerned about the public's perception that criminals were able to evade arrest too easily.

http://www.carsguide.com.au/car-news/victorian-police-could-get-james-bond-pursuit-tech-39549

Community path upgrades to promote active transport

Suburbs across Canberra will soon see the effects of a $1.45 million upgrade to community footpaths and cycle paths, helping to promote active travel and making it easier for residents to get to the local shops, said Minister for Transport and Municipal Services, Meegan Fitzharris.

"The works have now commenced and involve widening existing paths and the installing new paths at 26 sites across 18 suburbs in Canberra to improve accessibility," Minister Fitzharris said.

http://www.cmd.act.gov.au/open_government/inform/act_government_media_releases/meegan-fitzharris-mla-media-releases/2016/community-path-upgrades-to-promote-active-transport

Trial of autonomous vehicle

Western Australia is leading the way in automated vehicle technology with the staged trial of a driverless and fully electric shuttle bus to take place this year.

Transport Minister Dean Nalder said the Department of Transport was working closely with the RAC to ensure compliance with road and vehicle safety standards while they trialled an autonomous shuttle bus.

"It is not a matter of if this technology will come to WA, but when it will, and that time is fast approaching. Initially, the trials will be conducted at RAC's driving centre, but eventually the shuttle will take to Perth roads," Mr Nalder said.

https://www.mediastatements.wa.gov.au/Pages/Barnett/2016/02/Trial-of-autonomous-vehicle.aspx

http://www.radioaustralia.net.au/international/2016-02-09/frenchmade-driverless-electric-bus-to-be-trialled-in-perth-by-rac/1545490

Elderly drivers in Queensland: Research finds health affected by loss of licence

THE health of seniors who have their driving licences removed is so badly affected that they are five times more likely to end up in a nursing home than pensioners who are still on the road.

New research highlights that when driving ends in old age people have double the risk of depressive symptoms and diminished cognitive abilities and physical functioning.

http://www.dailytelegraph.com.au/news/national/elderly-drivers-in-queensland-research-finds-health-affected-by-loss-of-licence/news-story/e30c95e4307bef773344e52d5a9e145d?sv=ed270d6445402a27be42e69a02ff4e9&csp=e2a2f91d468807c1dd3243e162cabbd0

White out on truck bumpers

The requirement for semi trailer rear bumpers to be painted white has been removed in a move the Australian Trucking Association reckons will save transport operators more than $12 million over the next decade.

The move, initially proposed by the ATA, was announced last week by Federal Minister for Major Projects, Territories and Local Government, Paul Fletcher.

http://www.northqueenslandregister.com.au/story/3715687/white-out-on-truck-bumpers/?cs=4770

Inquiry announced into 'metre matters' bicycle overtaking laws

Greens transport spokesperson Samatha Dunn says a new parliamentary inquiry into the Greens 'Metre Matters' bill is the first step towards minimum passing distances for bicycles.

"I introduced the Metre Matters bill last year to make it clear that drivers must leave a one metre distance when passing a cyclist on the road. Parliament has now launched a public inquiry into the bill," Samantha Dunn said.

"Last year Vicroads released the results of a public survey which showed that over 98% of cyclists and 68% of other road users support a one metre passing rule.

http://foreignaffairs.co.nz/2016/02/09/inquiry-announced-into-metre-matters-bicycle-overtaking-laws/

Hundreds of cyclists pinged for not wearing helmets during SA police operation

Changes to cycling rules introduced in late October require drivers to leave a minimum one-metre gap when overtaking cyclists when the speed limit is 60 kilometres per hour or lower, or 1.5m when the limit is above 60kph.

Police had been letting drivers off with a warning until late January, when they said the "three-month education phase" was over.

But over the three-week operation, only three drivers had to be cautioned.

The fine for failing to comply with the laws is $287 plus a $60 victims-of-crime levy.

http://www.abc.net.au/news/2016-02-09/hundreds-cyclists-pinged-for-not-wearing-helmets-sa-police-say/7151084

http://www.adelaidenow.com.au/news/the-pulse-adelaides-live-news-weather-and-traffic-blog/news-story/af4a99f2d7a235a1f035ce666f9e18d1?sv=3c9d8867fb6fc08d4b52f0500c1199df&csp=b3c8de129b837d9265dfad110ad03747

http://www.barossaherald.com.au/story/3715238/cyclists-star-in-state-road-safety-firing-line/

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Austroads
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Sydney NSW 2000
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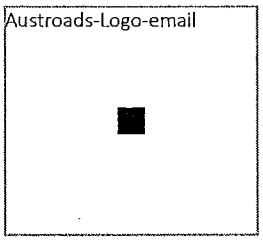
anguyen@austroads.com.au
www.austroads.com.au



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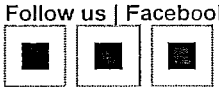


From: Paule, Rod
To: Mehrton, Andrew; Greenland, Karen; Davidson, Geoffrey; Horner, David; McIntosh, Andrew
Subject: FW: Google's self-driving car AI can be the vehicle's legal driver, US government says
Date: Thursday, 11 February 2016 4:27:55 PM

For information only.

Rod

Rod Paule | Manager Road Transport Policy|

Phone 02 620 77115 | Fax 02 620 50937 |

Justice and Community Safety | **ACT Government**

Level 2, 12 Moore Street, CANBERRA ACT 2601 | GPO Box 158 CANBERRA ACT 2601 |

www.act.gov.au

From: Hunter, Peter
Sent: Thursday, 11 February 2016 2:04 PM
To: Paule, Rod
Subject: FW: Google's self-driving car AI can be the vehicle's legal driver, US government says

---

From: Smith, Rickman (DPTI) [mailto:Rickman.Smith@sa.gov.au]
Sent: Thursday, 11 February 2016 2:00 PM
To: Austin, Peter (NHVR); Ioanni, Barry (DPTI); Bellary, Anant (Qld); Chan, Michael (VicRoads); David Black (TfN); Del Beato, Julian (NTC); Dikranian, Gregory (TfN); Hester, Mark (VSS); Hosie, David (WA); Hoy, Steven (VSSB); Hunter, Peter; Jones, Chris (VicRoads); Leavy, Dan (TfN); Lilley, Simon (VSS); Lo, Wayne (NT DPI); Marcolina, John (DoT-WA); Muirhead, Bill (Transport NT); Pepi, Anthony (NTC); Ratto, Hernan (RMS NSW); Redmond, Ann (VSS); Ross. Michael (Qld); Spencer, Stephen (VSSB); Stratos, Kyriakou (VicRoads); Suratno, Basuki (TfN); Swann, Greg (NHVR); Uprichard, Davey (NZTA); VSS; Wilson, John (Tas)
Subject: Google's self-driving car AI can be the vehicle's legal driver, US government says

http://arstechnica.co.uk/cars/2016/02/googles-self-driving-car-ai-can-be-the-vehicles-legal-driver-us-government-says/

Rickman Smith
Senior Vehicle Engineer

Marine & Vehicle Operations Section

Operational Services Directorate
Safety & Services Division
Department of Planning, Transport and Infrastructure
T 08 8348 9676 • M [redacted] • E rickman.smith@sa.gov.au
Kateena St REGENCY PARK SA 5010 • PO 1533 ADELAIDE SA 5001 • www.dpti.sa.gov.au

We acknowledge and respect Aboriginal peoples as South Australia's first peoples and nations, we recognise Aboriginal peoples as traditional owners and occupants of land and waters in South Australia and that their spiritual, social, cultural and economic practices come from their traditional lands and waters; and they maintain their cultural and heritage beliefs, languages and laws which are of ongoing importance; We pay our respects to their ancestors and to their Elders.

From: Greenland, Karen
To: Horner, David
Subject: FW: Link to decision [SEC=UNCLASSIFIED, DLM=Sensitive]
Date: Thursday, 11 February 2016 9:38:53 AM
Attachments: image001.jpg

Karen Greenland
Deputy Executive Director, Legislation, Policy and Programs
ACT Justice and Community Safety Directorate

Ph 02 62076244 or karen.greenland@act.gov.au

cid:image003.jpg@01CF2E1F.6AC457B0

From: Schofield, Karen
Sent: Wednesday, 10 February 2016 5:50 PM
To: Greenland, Karen
Cc: Wahren, Lee-Anne
Subject: Link to decision [SEC=UNCLASSIFIED, DLM=Sensitive]

Hi Karen

Here is a link to the Decision from September re: ED bringing forward a submission in early 2016 outlining the Government's position on Autonomous Vehicles.

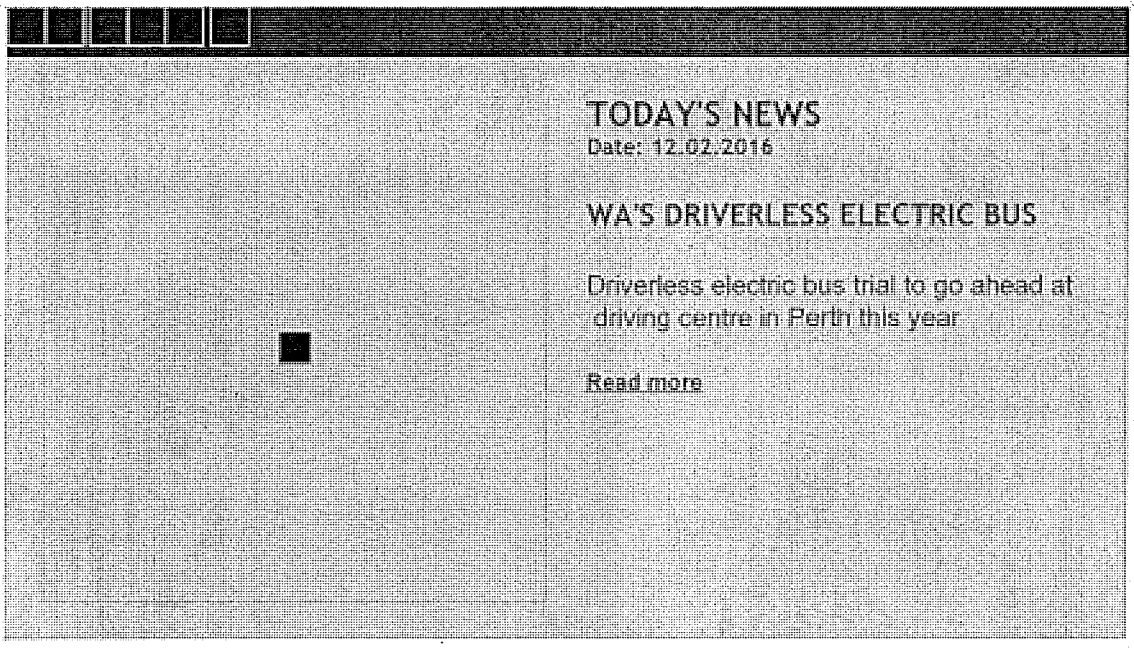
Lee-Anne we need to discuss this one in the morning.

Kind Regards

Karen Schofield | Senior Manager
Phone 02 6205 4775 | Fax 02 62070514|
Ministerial Support Unit| Justice and Community Safety Directorate | **ACT Government**
Physical Address | 12 Moore Street Canberra | Mail Address |GPO Box 158 Canberra ACT 2601 |
www.jacs.act.gov.au

From: ABC
To: Paule, Rod
Subject: BUSNEWS: WA driverless, January DELIVERIES, Optare Tempo VIDEO, Suppliers outlook, NSW technology, VTC milestone, Sydney speed, VIC service, QLD fares, WA traffic, QLD app
Date: Friday, 12 February 2016 9:00:53 AM

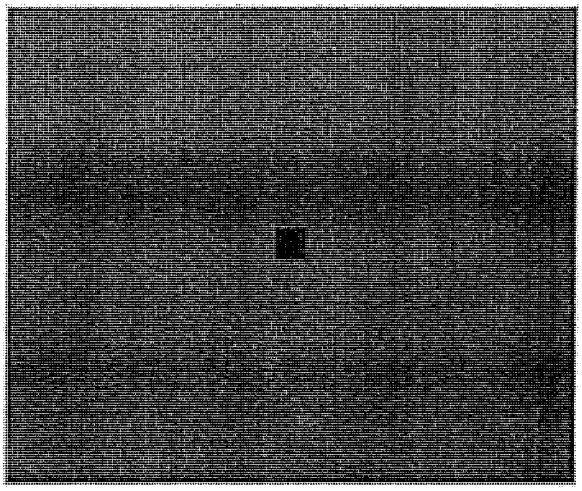
Having trouble reading this email? View it **online**



SHARP DECLINE

Just 92 buses were delivered in January, compared to 117 in December

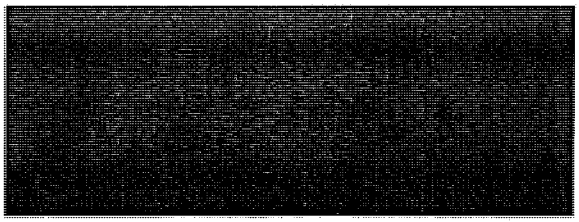
Read more



VIDEO REVIEW: OPTARE TEMPO

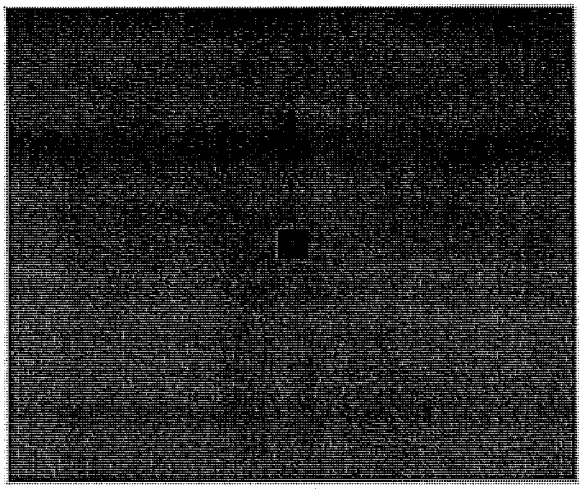
The Optare Tempo has had a potential breakthrough in Australia, writes Steve Skinner

Read more



CHASSIS: 2016 SUPPLIERS OUTLOOK

Australian suppliers are looking forward to a prosperous 2016 following a successful year

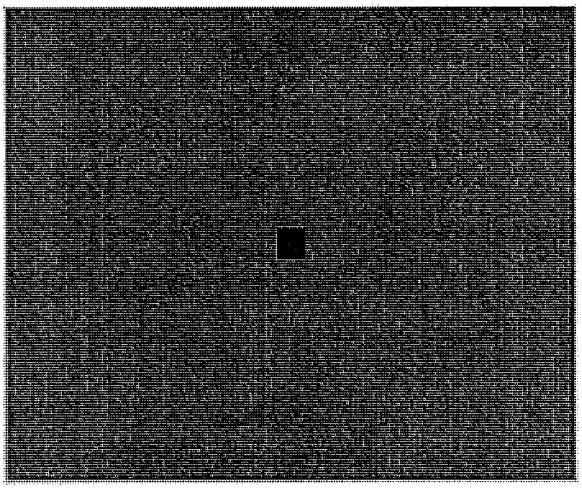


Read more

SYDNEY'S PT TECH SUMMIT

Future Transport Summit to get the ball rolling on new and emerging PT technology in NSW

Read more



VICTORIAN TOURING COACHES GOING STRONG

Melbourne bus industry identity going strong since starting his first operation in the 1950s

Read more

BUSES TO CRAWL IN SYDNEY

An extension of speed restrictions in Sydney's CBD may slow some bus services further

Read more

VIC STUDENT SERVICE SAVED

Student bus service saved by Victorian Government after Federal Government cuts

Read more

QLD FARES REVALUATED

Queensland's independent Fare Review Taskforce is on track to deliver findings by mid-2016

Read more

SIMPLE PLAN FOR WA TRAFFIC

Yellow box junctions to be trialled at four busy Perth intersections to keep buses moving

Read more

QLD PT APP UPGRADE

Latest version of the Translink app helps lead the way for QLD public transport passengers

Read more

FEATURED EXECUTIVE JOBS

MC DRIVER

Our client is a market leader in the Logistics Industry working in sectors such as Retail, FMCG, Resources and Industrial, Australian Linehaul and Government and Defence

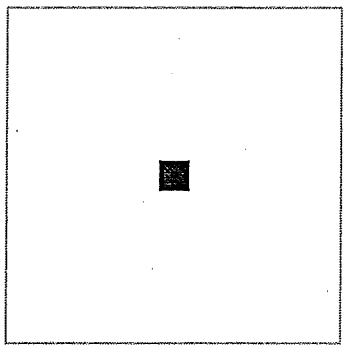
Read more

METROPOLITAN LOCAL B-DOUBLE DRIVERS

Local B-Double driver required for the Sydney area.

Read more

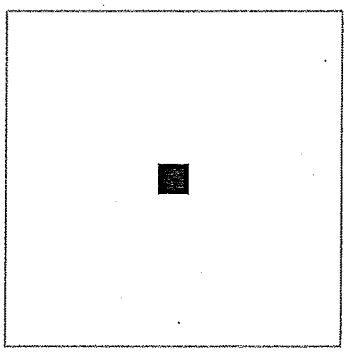
NEW BUSES



Search, compare & choose new buses

- Optare Tempo
- BCI Citirider
- Hyundai MD9000

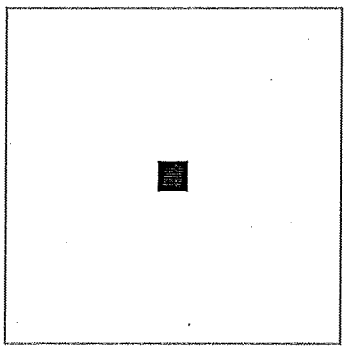
USED BUSES



Place your ad online & in print

- Scania Buses
- Mercedes-Benz Buses
- Hino Buses

JOBS



Australia's specialist logistics job portal

- Bus Driver (VIC)
- Bus Driver (QLD)
- MC Drivers (NSW)

From: Cloos, Karl
To: Kugathas, Kuga; Paule, Rod; Joseph, Gabriel; Chandramohan, Chandra; Blume, Kristin; Day, Michael; Deschamps, Chris; Jatheendran, Lingam; Dias, Carl; Greenland, Karen; Thompson, Peter; Marshall, Ken; Shoukrallah, Rifaat; Taylor, John; McHugh, Ben; Gill, Tony; Edwards, Marc; Potapowicz, Pawel; Peters, Paul; Vikneson, Jayanthy; Yu, Frank; Glassford, Cameron; Dimitrovska, Snezana; Davidson, Geoffrey; Ahmed, Sharfuddin; Meredith, Edward; Zeta, Darwin; Finnigan, Rebecca; Pincombe, Neil; Casimir, Amanda; Wyatt, Tim; Jollon, Michael; Norton, Timothy; Hawkins, Robyn; Horner, David
Cc: Katherine Rawlinson
Subject: FW: Making News in Transport - Alert 454
Date: Friday, 12 February 2016 1:24:39 PM

Roads ACT, Road Transport, Asset Acceptance, Road safety

FYI and circulation.
Regards
Karl

From: Katherine Rawlinson [mailto:katherine.rawlinson@arrb.com.au]
Sent: Friday, 12 February 2016 12:40 PM
To: Katherine Rawlinson
Subject: Making News in Transport - Alert 454

Making News in Transport – Alert 454

Selected land transport-related news items from Australia and overseas 12/02/2016, produced by ARRB Group under the National Interest Services (NIS) program

Automotive technology

Tuesday 9 February 2016

Trial of autonomous vehicle (Western Australian Government Ministerial Media Release, Australia)
The Western Australian Government and the RAC will trial a driverless, fully electric shuttle bus later this year.

View item

Budget announcements

Tuesday 9 February 2016

U.S. Transportation Secretary Anthony Foxx unveils $US98.1 billion FY 2017 budget proposal to expand safe, clean transportation options for more communities across the country (Department of Transportation, United States)
The US Government has released a 2017 budget proposal for transport with focus areas including cleaner transport options, autonomous vehicles, safety initiatives, and

cybersecurity.

View item

Environment

Friday 5 February 2016

Online shopping might not be as green as people think it is (University of Delaware, United States)
A study by researchers at the University of Delaware investigated the impacts of online shopping on local transport networks and greenhouse gas emissions.

View item

Click here for article abstract

Tuesday 9 February 2016

Sydney bus shelters to get a cool makeover and adapt to climate change (Sydney Morning Herald, Australia)
Four western Sydney councils have launched a design competition for new bus shelters that are adapted to extreme heat conditions and integrate digital technologies.

View item

Click here for more information on the competition

Wednesday 10 February 2016

DEXUS customers to benefit from GoGet partnership (DEXUS Property Group media release, Australia)
Commercial property group DEXUS has formed a partnership with car-share company GoGet to offer tenants access to car-share vehicles in CBD buildings as a more sustainable alternative to their existing car fleet operations.

View item

Thursday 11 February 2016

Vehicle Emissions Discussion Paper (Department of Infrastructure and Regional Development, Australia)
The Federal Government's Vehicle Emissions Ministerial Forum has released a discussion paper canvassing ways to reduce the impact of vehicle emissions, including alternative fuels, electric vehicles, and fleet purchasing policies.

View item

Heavy vehicles

Friday 5 February 2016

Have your say on the 60m Road Train Trial (Main Roads Western Australia, Australia)
The Western Australian Government has launched a survey to get public feedback on its trial of 60m quad road trains on a section of the Great Northern Highway.

View item

Innovation

Monday 8 February 2016

Open government data and why it matters (Australian Policy Online, Australia)
A new Federal Government report examines the economic impacts of open government data in Australia and internationally in areas including transport.

View item

Wednesday 10 February 2016

Future Transport: what's the next big idea? (Transport for NSW Media Release, Australia)
The NSW Government has launched a 12-month program to uncover innovative ideas for products, technologies, and trends that could transform transport in the state.

View item

Click here for media release on launch of Moovit and Transit App in Sydney

Wednesday 10 February 2016

What road designers have in mind for driverless cars (The Fifth Estate, Australia)
The Smart Transportation Alliance has awarded its Best Innovation Project for 2016 to a concept for an electrically-powered smart highway that could accommodate driverless vehicles.

View item

Click here for more information on the project

Materials technology

Monday 8 February 2016

Riddle of cement's structure is finally solved (MIT News, United States)
Findings by researchers at MIT could lead to the development of concrete that is more durable and less CO2-intensive to produce.

View item

Click here for article abstract

Planning and Infrastructure

Monday 8 February 2016

NTC calls on Australia's transport industry to provide more data for a study on the nation's transport movements (National Transport Commission media release, Australia)
The National Transport Commission has launched a project to gather detailed data from the commercial and government-funded road and rail transport sector on the movement of goods and people with the aim of informing future policy and planning.

View item

Monday 8 February 2016

Report: WestConnex could compromise Bays Precinct (The Fifth Estate, Australia)
Sydney's WestConnex toll road could have negative impacts on the Bays Precinct development, according to an independent analysis of the project's updated business case by SGS Economics and Planning.

View item

Public transport

Wednesday 10 February 2016

Shop 'til your stop: new trial to 'click and collect' your groceries at train stations (Transport for NSW Media Release, Australia)
Sydney Trains is partnering with Woolworths in a 12-month grocery collection trial at Bondi Junction Station.

View item

Road safety

Tuesday 9 February 2016

Safe System Infrastructure on Mixed Use Urban Arterials: expression of interest for candidate sites (ARRB Group, Australia)
Austroads is conducting a study on how to improve safety on mixed use urban arterial roads and is seeking candidate sites on state- and local government-managed roads for inclusion in the project.

View item

Thursday 11 February 2016

Trends in serious injury due to road vehicle traffic crashes, Australia: 2001 to 2010 (Australian Institute of Health and Welfare, Australia)
The Australian Institute of Health and Welfare (AIHW) has released a report with statistics on rates of serious injury among all categories of road users caused by traffic crashes.

View item

Click here for AIHW report on injury rates among indigenous children (transport crashes in the top five causes)

Traffic management

Monday 8 February 2016

Yellow box junctions to keep our traffic flowing (Western Australian Government Ministerial Media Release, Australia)
Yellow box junctions, designed to deter motorists from stopping within intersections, will be trialled at four Perth locations.

View item

Thursday 11 February 2016

Motorcycle trial revved up and ready (Adelaide City Council media release, Australia)
Motorcycle and scooter riders will be offered unlimited free parking in designated areas of Adelaide's CBD in a 9-month trial to help reduce car traffic congestion.

View item

National Interest Services *supporting an informed land transport community*

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Katherine Rawlinson
Librarian
National Interest Services

ARRB Group Ltd
Vermont South VIC 3133
Australia
P: +61 3 9881 1568
katherine.rawlinson@arrb.com.au
www.arrb.com.au

Do you know of an urban arterial route that has a significant road safety problem? If it includes a mixture of road users (particularly pedestrians and cyclists) we may be able to help with solutions as part of a new safety project for Austroads. Please see details of the Mixed use urban arterial project on our website.

From: Warren, Prue
To: Paule, Rod
Subject: RE: TRIM Context Notification - Action Overdue. Draft documents - EXC:2016/00099 - Invitation to participate in the Automated Vehicles Regulatory Advisory Group
Date: Monday, 15 February 2016 3:41:03 PM

Will do.

-----Original Message-----
From: Paule, Rod
Sent: Monday, 15 February 2016 2:23 PM
To: Warren, Prue
Subject: FW: TRIM Context Notification - Action Overdue. Draft documents - EXC:2016/00099 - Invitation to participate in the Automated Vehicles Regulatory Advisory Group

Prue,

Could we please get CMTEDD (Andrew Mehrton's area) input on this as CMTEDD has been driving the autonomous vehicles issues in the ACT to date.

Thanks in advance.

Rod

Rod Paule | Manager Road Transport Policy| Phone 02 620 77115 | Fax 02 620 50937 | Justice and Community Safety | ACT Government Level 2, 12 Moore Street, CANBERRA ACT 2601 | GPO Box 158 CANBERRA ACT 2601 | www.act.gov.au

-----Original Message-----
From: Records Manager [mailto:RecordsManager8.1@act.gov.au]
Sent: Monday, 15 February 2016 2:05 PM
Subject: TRIM Context Notification - Action Overdue. Draft documents - EXC:2016/00099 - Invitation to participate in the Automated Vehicles Regulatory Advisory Group

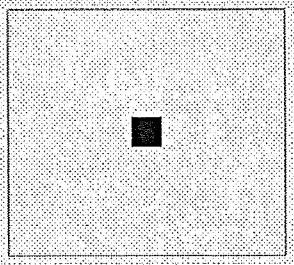
EXC:2016/00099 - Invitation to participate in the Automated Vehicles Regulatory Advisory Group
Action: Draft documents
Responsible Location: Paule, Rod (Mr)
Due Date: 2016-02-15 at 14:02
This Action is overdue. It was due on 2016-02-15 at 14:02.
Could you please ensure the status of this Action is addressed as a matter of urgency.

--
This E-mail Message has been automatically generated by TRIM Context (JACS Production).

From: Austroads
To: Paule, Rod
Subject: Austroads Newsletter February 2016
Date: Tuesday, 16 February 2016 2:00:20 PM

Latest Austroads news, publications and upcoming seminars

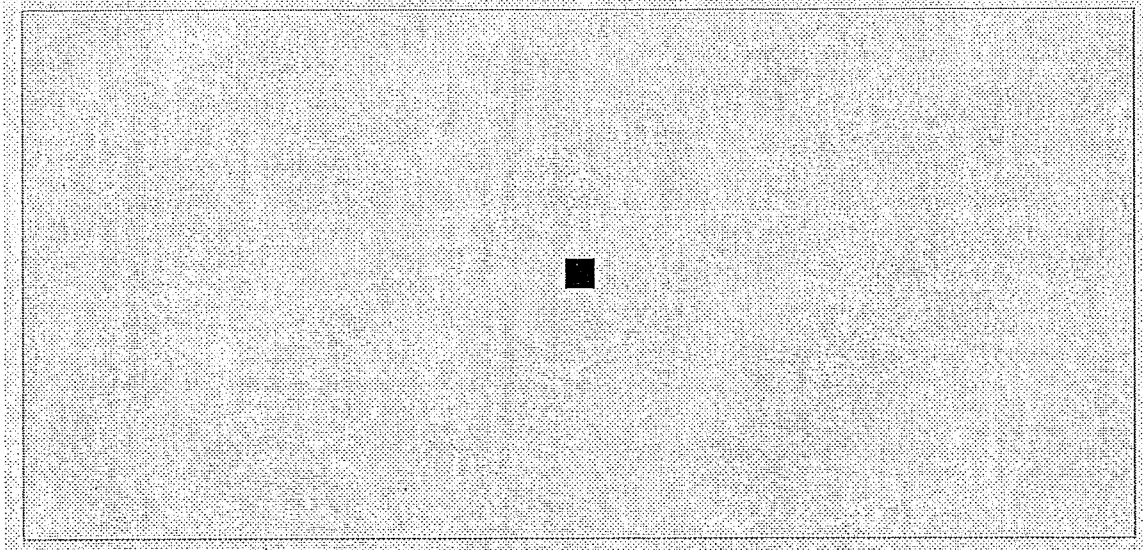
No Images? Click here

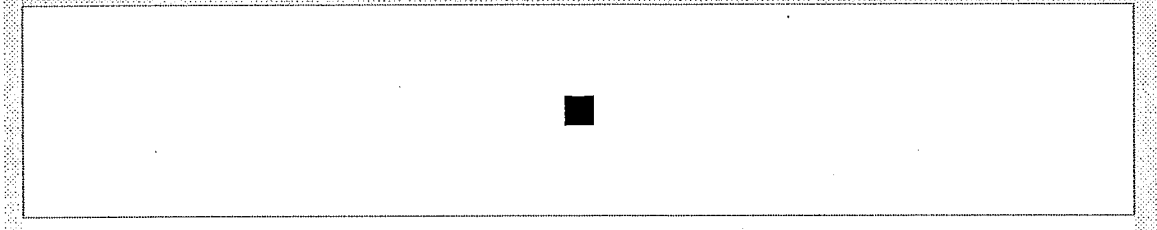


AustroadsNews | February 2016

Welcome to the first edition of AustroadsNews for 2016. We've had a busy start to the year having already published 10 reports.This newsletter provides a **run-down on our latest publications**, and links to upcoming seminars and conferences.

If you have been forwarded this email you can subscribe here to receive future updates.





Austroads Road Assets Metadata Standard Workshop Invitation

Do you collect, utilise and share road asset data?

Workshop session are being held across Australia and New Zealand to allow practitioners to contribute to the development of a Road Assets Metadata Standard.

The standard covers eight key areas: inventory; infrastructure performance; works and costs; access; demand; classification; condition; and customer levels of service.

The purpose of the workshops are to:

- identify the key data fields for common asset reporting;
- obtain information to harmonise these fields; and
- evaluate the impacts and benefits of harmonising fields.

Who should attend

This workshops are intended for the people who collect, utilise and share road asset data. This includes road management agencies, government agencies that use that information and private industry practitioners that either support road agencies or use road data. It is specifically targeted at technical staff.

Full day workshops are planned in the following locations. Please follow the link to register.

Melbourne, Tuesday, 23 February 2016

Hobart, Wednesday, 24 February 2016

Canberra, Thursday, 25 February 2016

Auckland, Tuesday, 1 March 2016

Sydney, Tuesday, 1 March 2016

Christchurch, Wednesday, 2 March 2016

Brisbane, Thursday, 3 March 2016

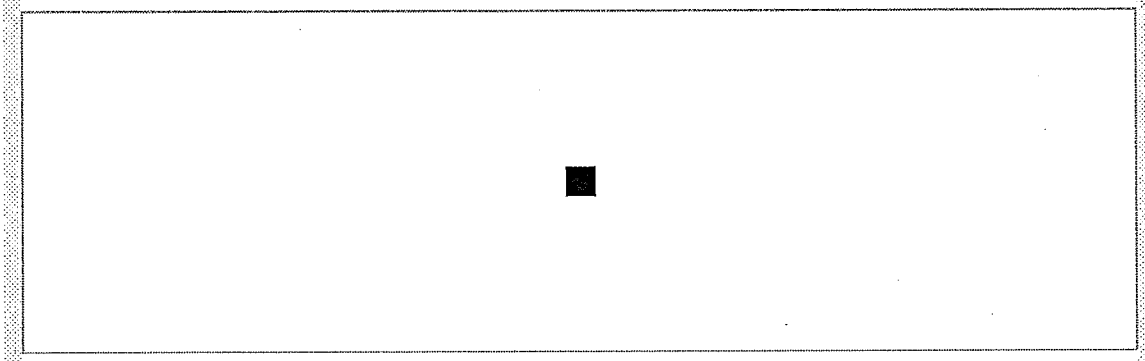
Wellington, Tuesday, 8 March 2016

Darwin, Tuesday, 8 March 2016

Adelaide, Thursday, 10 March 2016

Perth, Wednesday, 16 March 2016

For more information and project updates please visit apps.opus.co.nz/austroads and register your interest.



Safe System Infrastructure on Mixed Use Urban Arterials - Expression of Interest for Candidate Sites

A large proportion of fatal and serious road crashes in Australia and New Zealand occur on urban arterial roads. These higher volume roads often include a mixture of different road users including pedestrians, cyclists and motorcyclists, and cars, buses, delivery vehicles.

There are few examples demonstrating how to improve safety, consistent with the Safe System vision, on an entire corridor whilst maintaining mobility. This new project from Austroads is aimed at addressing existing gaps in effective Safe System solutions, including emerging solutions, which may be implemented on urban arterials.

Austroads is seeking sites on state- and local government-managed roads for inclusion in this project. These sites are expected to be around 200 m-2 km in length and have a demonstrated safety problem.

Routes may include:

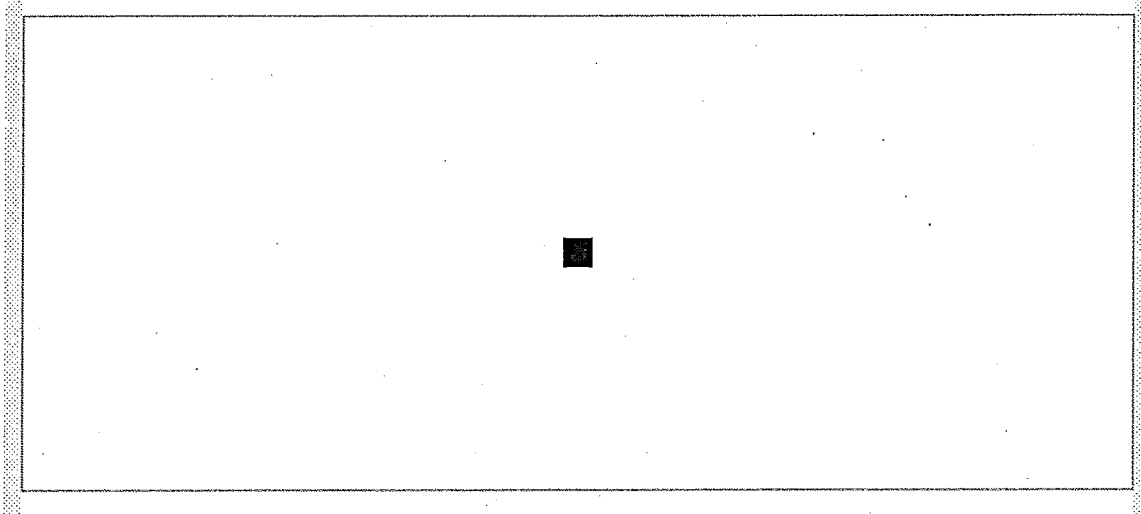
- strip shopping centre, entertainment precincts
- roads with a mix of pedestrians, cyclists, public transport, cars, delivery vehicles, emergency vehicles
- higher volume roads with pedestrian and cyclist activity.

The project team would work with successful road agencies to identify Safe System solutions, and determine the expected impact on safety and mobility from these. The project does not include the preliminary or detailed design or construction of these solutions. Detailed case studies will be prepared and published based on the

selected sites.

Interested in participating in this project?

If you are interested in participating in this project, or would like further information, please contact the Project Manager for this work: Blair Turner, phone 03-9881-1661, or email: info@arrb.com.au.



Safe System Assessment Framework

Austroads has published an assessment framework designed to help road agencies methodically consider Safe System objectives in road infrastructure projects.

The Safe System approach involves different elements of the system working together to help eliminate death and serious injury. It involves shared responsibility in reaching this objective, including road users and road managers each taking a role. A key objective for road managers is to ensure that when driver errors do occur, they do not result in high severity outcomes.

The framework will be useful in assessing how closely road design and operation align with the Safe System objectives, and in clarifying which elements need to be modified to achieve closer alignment with Safe System objectives.

Inputs to the development of the framework involved a review of literature (including an assessment of previous attempts at developing such a framework), contact with local and international Safe System experts, inputs from a national workshop involving road safety infrastructure experts, and workshops with the project working group including trials of the proposed framework.

This report provides a summary of the development of the framework. The approach captured within the framework involves identifying the key crash types that result in death and serious injury, and using a risk assessment approach, identifying elements that might contribute to severe outcomes. These key crash types include run-off-road, head-on, intersection, other (including rear end) and vulnerable road user (pedestrian, cyclist and motorcyclist) crashes. The risk elements considered

include road user exposure to risk (e.g. traffic volumes), likelihood of a crash, and the likely severity outcome in the event of a crash.

The framework includes all 'pillars' of the system, including an assessment of issues relating to the road and travel speeds. It also ensures consideration of other pillars which are typically included less often in infrastructure projects. These include road user issues and vehicle-related issues. Post crash care is also considered.

A treatment hierarchy is presented highlighting examples of Safe System solutions addressing each of the key crash problem types. Case studies are also provided illustrating how the framework might be applied.

Download the report

NEVDIS becomes sole Australian administrator of World Manufacturer Identifier

Since 1981, global automotive manufacturers have used a complex numbering system called a Vehicle Identification Number (VIN) that uniquely describes a vehicle. The VIN provides a coded description of the vehicle including: manufacturer, year of production, place of production and vehicle characteristics.

The World Manufacturer Identifier (WMI) forms the first 3 characters of the 17-character VIN.

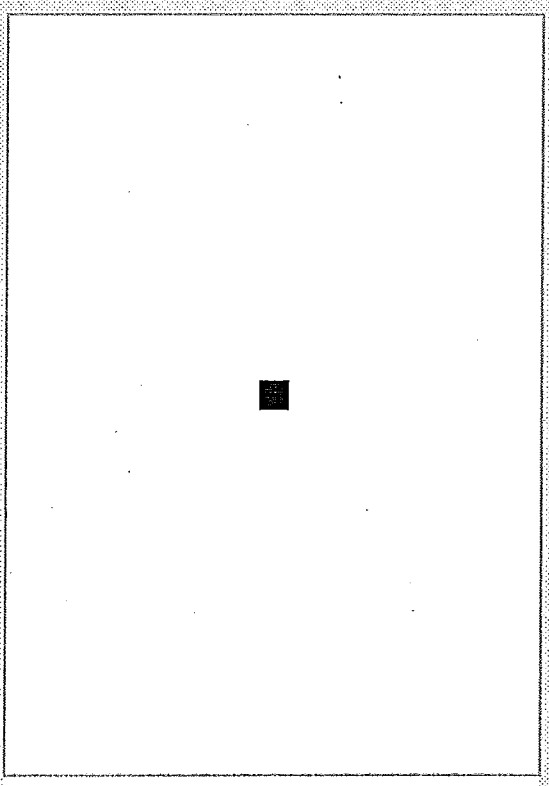
WMIs are structured differently depending on the manufacturer's volume. In Australia, less than 500 vehicles per annum is designated as a Low Volume Manufacturer and more than 500 vehicles is designated as High Volume.

On a global scale, WMIs are administered by the US based company Society of Automotive Engineers (SAE). Locally in Australia, low volume WMIs were managed by NEVDIS, while high volume WMIs were managed by SAI Global.

From January 1 2016, NEVDIS became the sole administrator of all WMIs issued to

Australian Vehicle Manufacturers. The consolidation of WMI administration will tighten management and make it easier for manufacturers.

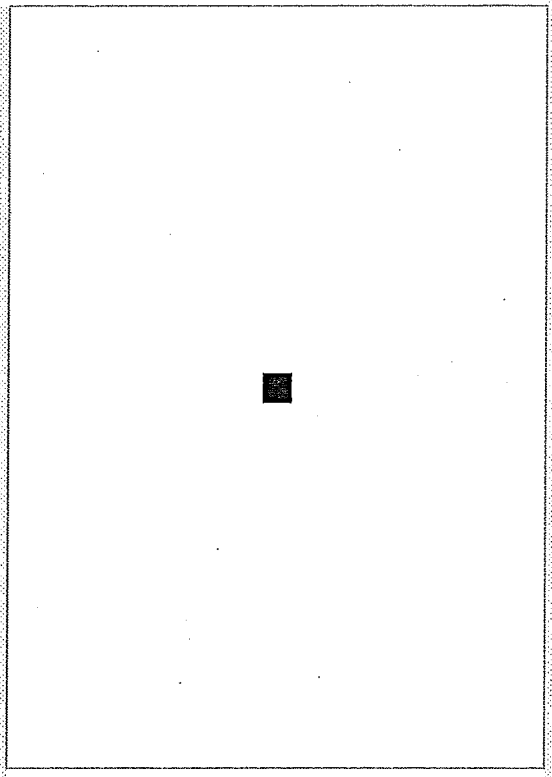
This decision to make NEVDIS the Australian WMI administrator has been endorsed by SAI Global and SAE.



Development Priorities Identified for PBS Route Assessment Tool

Austroads has released a report which investigates expansion options and priorities for the Performance Based Standards Route Assessment Tool (PBS RAT).

The PBS RAT is an online tool designed to help local government road managers determine the most appropriate heavy



Optimum Steer Axle Mass Limits

An optimum steer axle mass limit is defined as one that will accommodate the needs of the transport industry into the future while ensuring road network sustainability.

In Australia the maximum legal steer axle limits are 6.0 t, with a concession of 0.5 t for vehicles fitted with specified technologies. Road trains are permitted to operate with 6.7 t on the steer axle if fitted with tyres wider than 375 mm. The Northern Territory allows further increases, in increments of 100 kg, up to 7.0 t, under a permit process.

Austroads has released a report that

vehicle configurations for operation on local road assets.

Federal, state and local road managers, as well as industry experts, were consulted to prioritise system development directions.

The report identifies and ranks system expansion priorities based on factors such as demand, importance, impact, usability and development feasibility.

The proposed draft development priorities are:

- Classification of non-PBS vehicles module
- Bridge data collection module for local government
- A swept path analysis support tool for intersection assessment
- A safety module (to be determined).

The report also proposes undertaking a more focused investigation using the priorities identified in this initial investigation.

Download the report

examines issues associated with potential changes to mass limits for steer axles on heavy vehicles in Australia.

The project aimed to establish optimum steer axle mass limits, with a particular focus on suitability for road trains, to accommodate the needs of the transport industry into the future. The practical engineering issues associated with a heavier load on the steer axle and the fitments of wider tyres were investigated via industry consultation.

The study concluded that an optimum steer axle mass limit of 7.0 t, with a wider (greater than 375 mm) tyre size requirement, can be considered. This has been determined based on tests on sealed unbound granular pavements, at a standard tyre pressure of 760 kPa. This increase in steer axle mass limit can be applied to road train operators with confidence that there will be minimal change in operation.

The findings suggest that it is possible to increase steer axle mass above to a value between 7.0 t and 7.2 t, however an increase to 7.0 t allows a margin of safety for the limitations of testing on which the reference loads were based. An increase to 7.0 t will also be consistent with current limits in the Northern Territory for road trains.

Download the report

Improving HPV Access through Charging Regimes

Austroads has released the results of an assessment of charging regimes and their capacity to increase high productivity vehicle (HPV) access.

Four charging regimes were identified and assessed: the National Transport Commission's Heavy Vehicle Charging Regime (PAYGO); New Zealand's Road User Charging (NZRUC) Regime; a Mass Distance Location (MDL) Charging Model; and a Corridor or Area Charging Model.

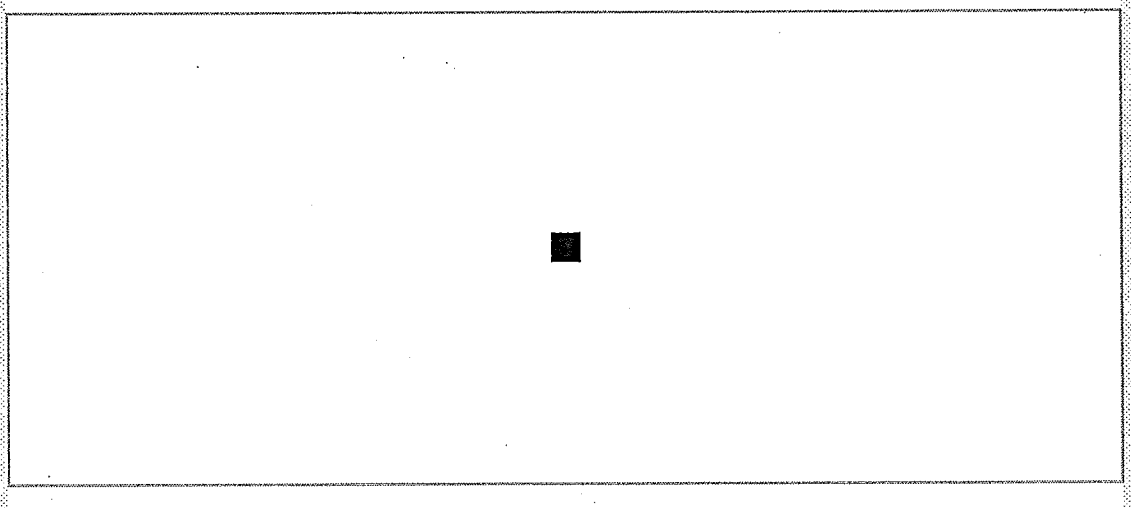
The analysis found that:

- PAYGO delivers stability and underlying support for increasing HPV access. Its national approach cannot recompense road managers for freight upgrade investment, and within category subsidies exist.
- NZRUC aligns HPV road use impacts with a corresponding mass distance charge for road cost recovery. Charge levels are derived from the extensive information from its distance licence sales. NZRUC delivers a fairer charging, more flexible but higher resource cost system, while facilitating HPV use.
- MDL remains a conceptual road charging approach, without any trials to establish its viability and practicality. Its potential to recover HPV road impact costs by route segment rather than nationally at reasonable costs is not known. A trial to prove MDL practicality and effect on increased HPV access could be progressed.
- A road, corridor or area charging regime could be introduced to complement the PAYGO or NZRUC regime, but not the MDL model. Progressing this concept requires significant matters being addressed.

It was found that A-doubles are the most efficient form of HPV, with logistics constraining about 40 percent of long distance HPVs from using the major case study inland freight route. Four types of related research are suggested, including

for the effect of increasing HPV access on freight contestable rail corridors.

Download the report



ITS Performance and Benchmarking

Austroads has released a consistent methodology to evaluate and report intelligent transport systems (ITS) asset performance from a road user perspective.

ITS assets are being installed throughout the road environment to manage and control the road network.

Over time, faults in ITS assets can have significant impacts upon the throughput, productivity and reliability of the network.

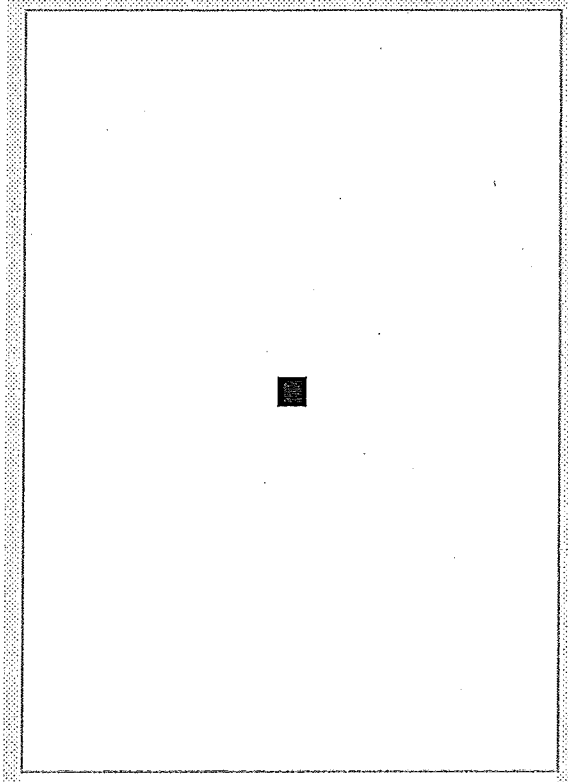
Quantifying the cost to the community of signal faults allows jurisdictions to prioritise and initiate action to reduce the occurrence.

This report reviews current ITS performance evaluation practices amongst Austroads and road agencies. VicRoads methodology was adopted and generalised, and a five-step framework was established to retrieve, analyse and report on asset performance.

User availability estimated from major alarms was used as the key performance indicator. Asset alarm data from SCATS signals, motorway electronic variable speed limit signs and lane use management systems, and school zone electronic speed limit signs were collected from various Austroads jurisdictions to demonstrate the processes of the methodology.

The methodology could form the basis of a national process for Austroads jurisdictions to collect, analyse and report the performance of critical ITS assets consistently across all jurisdictions.

Download the report

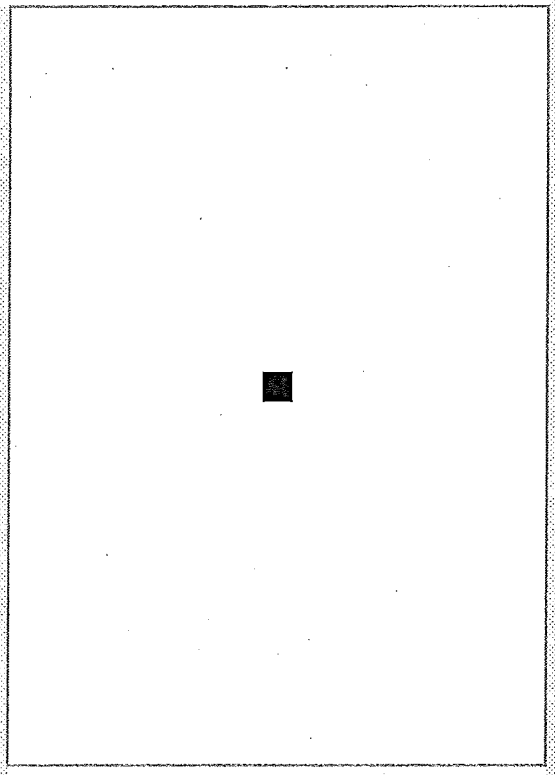


Long Term Pavement Performance Project 2014-15 Summary

Austroads has released a summary of activities completed during 2014–15 for the Austroads long term pavement performance monitoring project.

Austroads has funded the long-term pavement performance study since late 1994. The project monitors the structural and functional performance of 19 in-service pavement test sites across Australia.

The report includes a summary of the LTPP/LTPPM current conditions and



Incorporating Uncertainty in Pavement Management System Modelling

Austroads has published a proof of concept study using the data condensation technology of stochastic information packets (SIPs) in MS Excel to allow complete storage of all collected data. This approach, when connected to a pavement management system (PMS), was able to use the measured uncertainties of the variables employed in predicting pavement performance to accurately quantify the risks, in percentile probabilities, of achieving the target level of service and of meeting annual targeted maintenance costs.

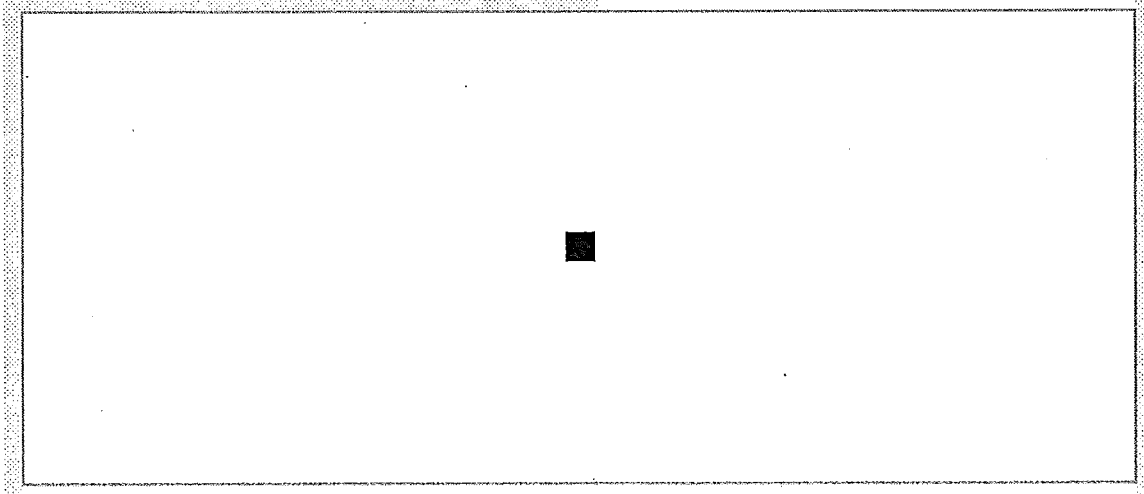
The SIPs used in this study open opportunities in data collection, storage and analysis. Because large quantities of

performance trends over the monitoring period, a brief summary of the latest development of the probabilistic RD modelling with SIPs, and an overview of the proposed 2015-16 work program.

Download the report

data can be stored in a relative small space, the full data set can easily be stored, transported and used. Cost estimates, project management, quality control, quality assurance and in general all engineering calculations where currently averages are used as input, can be replaced with the techniques described in this study.

Download the report



Public Demand for Safer Speeds

Austroads has published research which aims to identify a range of potential interventions for future trial and evaluation aimed at creating, increasing, and/or sustaining public demand for safer speeds.

Speeding is a major contributor to road injuries and fatalities and remains prevalent. Changing community perceptions about speeding is an important priority.

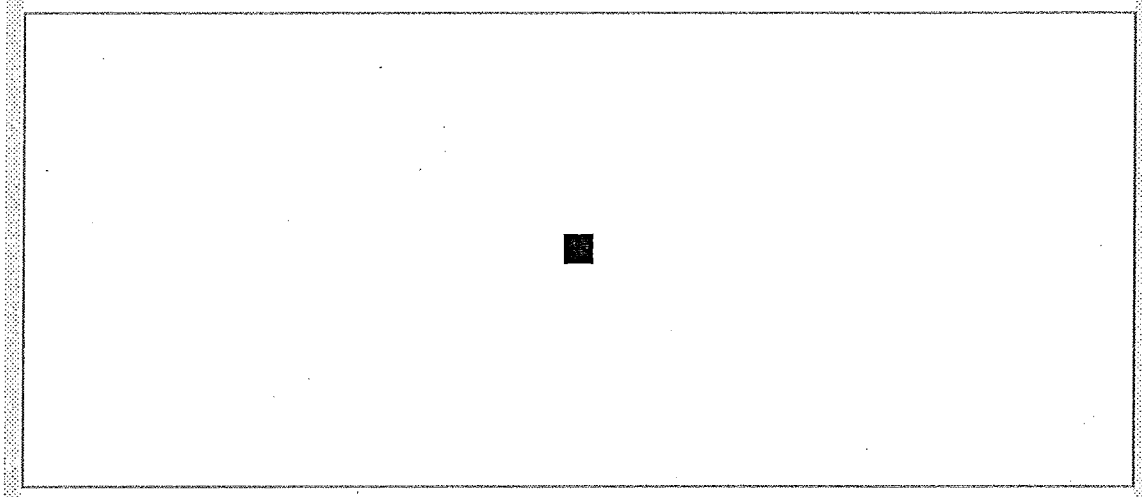
The project had three phases: a literature review; consultations with key stakeholders regarding intervention options (including feasibility, and likely benefits and costs of identified interventions); and providing research results, including recommendations for future phases of the program of work.

The literature review led to the development of a draft Campaign Strategy targeting nine aims across three themes underpinning this research: 1) creating, 2) increasing, and 3) sustaining public demand for safer speeds on the road. Twenty-one stakeholders commented on the suitability and feasibility of, and likely barriers to, countermeasures within the draft Campaign Strategy and its applicability to the Australian and New Zealand context. There was overwhelming positive support for the proposed Campaign Strategy by most respondents; many, noting that it

addressed key misperceptions and complemented many existing approaches. A small number of respondents expressed some concerns with various aspects. Stakeholder feedback was incorporated into the final proposed Campaign Strategy to enhance its potential effectiveness.

Wide diversity across jurisdictions makes the recommendation of individual interventions for specific areas problematic. Individual jurisdictions should consider a range of costs and benefits of the proposed Campaign Strategy to determine the likely feasibility from their unique perspective. Issues to be addressed when considering implementation of the proposed Campaign Strategy include speed limit setting policies, resourcing, messaging and advertising strategies, and political will associated with promoting safer speeds.

Download the report



Updated Freight Axle Mass Limits Investigation Tool Released

Austroads has published a hands-on user guide for the Freight Axle Mass Limits Investigation Tool (FAMLIT) and made the tool available to download.

FAMLIT is a Microsoft Excel-based pavement life-cycle costing analysis tool that takes road and traffic inputs and produces equivalent annual uniform cost outputs. These costs are based on the present value of the road agency maintenance and rehabilitation works costs over the life of each road segment.

FAMLIT can be used to understand and quantify the marginal cost of road wear caused by increased heavy vehicle traffic loads to inform road asset managers of the potential increases in maintenance and rehabilitation costs on their network.

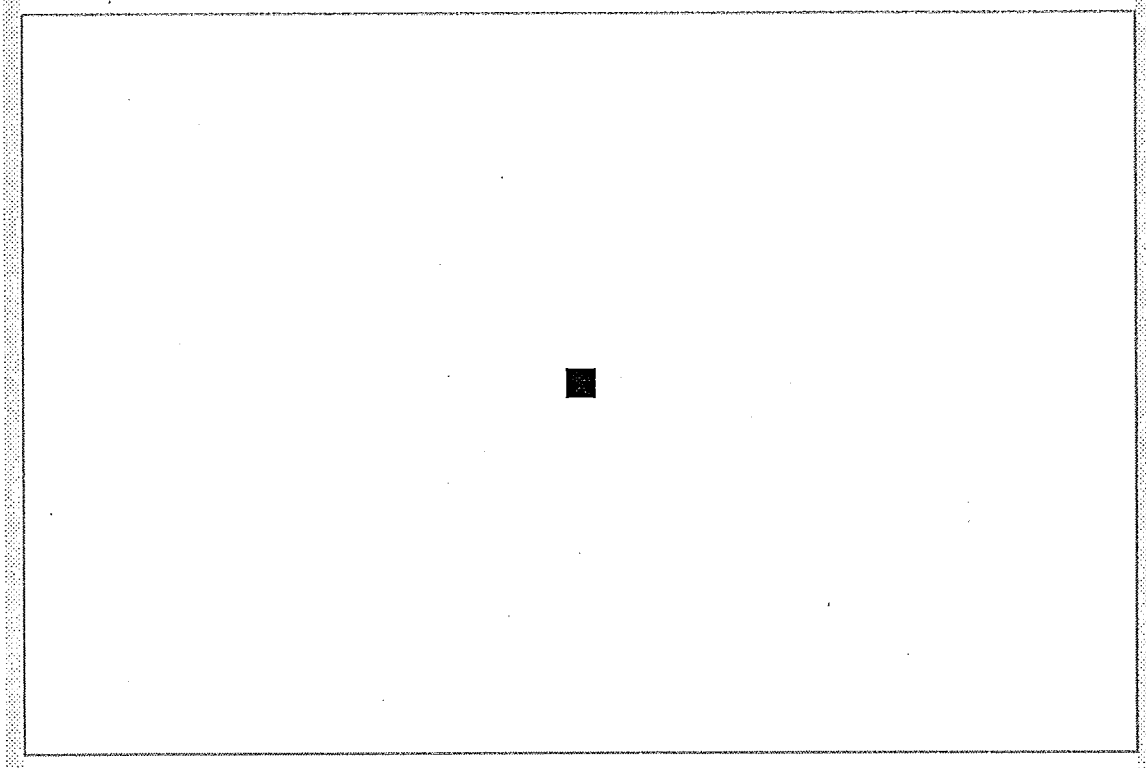
This is increasingly important as freight companies are seeking to run heavier axle loads to increase productivity, while road agencies in response to increased road wear need to be able to rigorously and transparently demonstrate the need for

increased road funding to retain existing levels of service for heavy vehicle users. Due to these factors, the marginal cost of road wear has been used as a means of quantifying road wear costs associated with specific axle load increases above the current axle load limits.

FAMLIT has been simplified and expanded to make it more user-friendly, which allows it to be easily applied to more tasks. The underlying code has also been overhauled to make it more stable and efficient, which will make future maintenance and modifications to the code easier.

The user guide describes the tool's data inputs, data outputs and performance models.

Download the FAMLIT Tool and User Guide



WA autonomous vehicle trial the first of its kind Australia

Western Australia will trial a driverless and fully electric shuttle bus this year.

The Department of Transport is working with the RAC to ensure the trial complies with road and vehicle safety standards.

The shuttle bus has been developed by NAVYA SAS, a French company specialising in intelligent transport systems. It can transport up to 15 passengers

and has a maximum speed of 45kmh with an average speed of 25kmh.

Initially, the trials will be conducted at RAC's driving centre, but eventually the shuttle will take to Perth roads. The Department of Transport is working with the RAC to identify the routes on Perth roads where the trials would take place.

These types of vehicles are being tested and trialled in other countries and have autonomous features such as radar cruise control and lane detection warning systems.

Other safety features of the shuttle bus include multi-sensor technology, providing 3D perception that allows it to map the environment, detect obstacles on the road and interpret traffic signs.

Help develop appropriate laws for Australia's automated vehicles

The NTC have released an issues paper and called for submissions from the public on how to develop the best laws and regulations for this emerging road and rail technology.

Chief Executive of the NTC Paul Retter said Australia's current laws and regulations weren't written with automated vehicles in mind, but now that increasingly automated vehicles were being developed it was time to look closely at what changes may be needed.

"Automated vehicles will be safer, more productive and give senior Australians and those with a disability more independence in their lives. However the benefits offered by these vehicles will only be realised if we get Australia's laws and regulations right," Mr Retter said.

"Governments and industry need to work together to make sure Australians get the best laws for these new vehicles.

"While we have already identified a number of potential issues we are asking anyone with an interest in the future of transport to have their say. This feedback will help to make sure we address all of the issues associated with automated vehicles.

"For example, many road safety laws assume that there will always be a human driver, but how do automated vehicles comply with a legal requirement to hold a driver's licence, or comply with authorised officers or give assistance if a person is injured?

"The NTC will need to look at fundamental concepts including defining the driver, what is meant by 'control of the vehicle' and consider how automated vehicles should interact with other road users."

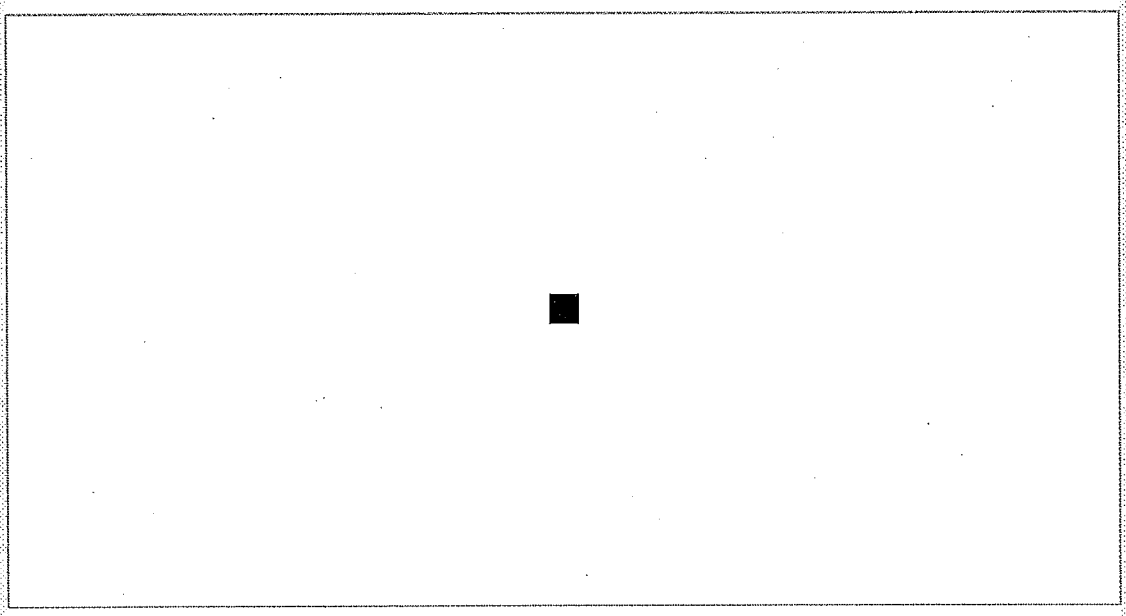
Mr Retter said the NTC would work to ensure future regulations promote innovation and competition, and continue to remain consistent with international standards and conventions whenever it is safe and appropriate to do so.

He said many different types of automated vehicles would be developed in the future and therefore the NTC will consider a flexible and performance-based regulatory approach that helps to encourage new transport technology.

Submissions to the issues paper are due by Tuesday, 8 March 2016. These submissions will help the NTC develop a discussion paper with detailed options analysis to be published in mid-2016.

More information is available at http://www.ntc.gov.au/current-projects/preparing-for-more-automated-road-and-rail-vehicles/

Download the report



Vehicle Emissions Discussion Paper

In February 2016, the Vehicle Emissions Ministerial Forum released a Discussion Paper for public comment to examine ways to reduce the health and environmental impacts from motor vehicle emissions.

The Vehicle Emissions Discussion Paper seeks views on measures to achieve the

Australian Government's greenhouse gas emissions reduction targets, air quality objectives, and improvements in energy productivity in the context of road vehicles.

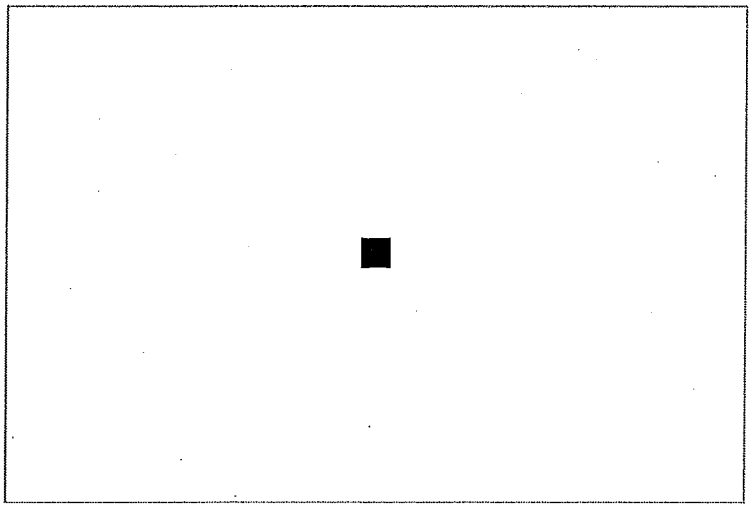
The Discussion Paper explores issues associated with:

- mandatory noxious emissions and fuel efficiency (CO_2) standards;
- education and information for consumers;
- alternative fuels and electric vehicles;
- financial incentives;
- fleet purchasing policies; and
- emissions testing arrangements.

The closing date for submissions is 8 April 2016.

Download the Discussion Paper

Centre for Pavement Engineering Education



There is still time to enrol for first semester subjects at the Centre for Pavement Engineering Education (CPEE).

Austroads funds the ongoing development of **pavement technology** units delivered by CPEE in their Graduate Certificate and Masters courses.

CPEE also offers study options in **infrastructure asset management** and **road engineering construction.**

Single units of study are available as well as under graduate and post graduate qualifications via distance education. Distance education provides a convenient option to learn without the need to attend classrooms.

CPEE's qualifications are well regarded in state road agencies and in the contracting, local government and the consulting sectors.

Semester 1 commences on 22nd February 2016 so now is the perfect time to apply to study or re-enrol into one of the few specialist infrastructure professional programs available.

For more information visit www.pavementeducation.edu.au/study.

2016 Australasian Road Safety Conference Abstract Extension

The deadline for abstract submission for the 2016 Australasian Road Safety Conference has been extended until 26 February 2016.

The conference organisers have received many abstract and symposia submissions but have decided to extend the abstract submission deadline for those who have been unable to finalise their abstract by the original deadline date.

If you are yet to submit your abstract, you are encouraged to share your expertise, and join us in Canberra in September 2016. We encourage abstract submissions from the broad spectrum of stakeholders involved in reducing road trauma and look forward to your support at ARSC2016.

More information about abstract and symposia submission

Submit your abstract online

Upcoming Workshops + Conferences

NEW ARRB Webinar: Treating Crash Locations – What's new in the Austroads Guidelines? | 25 February 2016, Online

NEW TMAA National Traffic Management Conference: Building Traffic Management Across Australia | 10 March 2016, Sydney, NSW

World of Asphalt 2016 | 22-25 March 2016, Nashville, Tennessee, United States

2 Walk and Cycle Conference | 6-8 July 2016, Auckland, New Zealand

Sixth International Conference on Traffic and Transport Psychology | 2-5 August 2016, Brisbane, Queensland

NEW IPWEA Sustainability in Public Works Conference 2016 | 24-26 August 2016, Melbourne, Victoria

NEW International Transportation Geotechnics International Conference 2016 | 4-7 September 2016, Guimarães, Portugal

2016 Australasian Road Safety Conference 2016 (ARSC2016) | 6-8 September 2016, Canberra, ACT

23rd ITS World Congress Melbourne 2016 | 10-14 October 2016, Melbourne, Victoria

NEW Construction Materials Industry Conference 2016 (CMIC16) | 26-28 October 2016 , Melbourne, Victoria

27th ARRB Conference | 16-18 November 2016, Melbourne, Victoria

SAVE THE DATE Austroads Bridge Conference | 3-6 April 2017, Melbourne, Victoria

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Contributions for future newsletters are always welcome.
Please email the Austroads Communications Manager, Elaena Gardner
egardner@austroads.com.au

From: Paule, Rod
To: McIntosh, Andrew
Subject: FW: Making News in Transport - Alert 456
Date: Monday, 29 February 2016 10:27:00 AM

Andrew,

3 reports on autonomous vehicles.

I sent this across to Andrew Mehrton in CMTEDD as his area has been leading some of the discussions about trying to make the ACT a leader in this field. The international work is such that that is probably impossible. Aside from what is below, there was some announcement last week or the week before that California was legislating to not require steering wheels, brake pedals etc. on driverless cars and that the "self driving system" would be considered to be the driver.

Rod

Rod Paule | Manager Road Transport Policy|
Phone 02 620 77115 | Fax 02 620 50937 |
Justice and Community Safety | **ACT Government**
Level 2, 12 Moore Street, CANBERRA ACT 2601 | GPO Box 158 CANBERRA ACT 2601 |
www.act.gov.au

From: Cloos, Karl
Sent: Friday, 26 February 2016 5:07 PM
To: Kugathas, Kuga; Paule, Rod; Joseph, Gabriel; Chandramohan, Chandra; Blume, Kristin; Day, Michael; Deschamps, Chris; Jatheendran, Lingam; Dias, Carl; Greenland, Karen; Thompson, Peter; Marshall, Ken; Shoukrallah, Rifaat; Taylor, John; McHugh, Ben; Gill, Tony; Edwards, Marc; Potapowicz, Pawel; Peters, Paul; Vikneson, Jayanthy; Yu, Frank; Glassford, Cameron; Dimitrovska, Snezana; Davidson, Geoffrey; Ahmed, Sharfuddin; Meredith, Edward; Zeta, Darwin; Finnigan, Rebecca; Pincombe, Neil; Casimir, Amanda; Wyatt, Tim; Jollon, Michael; Norton, Timothy; Hawkins, Robyn; Horner, David; Hubbard, Benjamin
Subject: FW: Making News in Transport - Alert 456

Managers Roads ACT, Road Transport, Asset Acceptance and Road Safety

FYI
Regards
Karl

From: Katherine Rawlinson [mailto:katherine.rawlinson@arrb.com.au]
Sent: Friday, 26 February 2016 12:44 PM
To: Katherine Rawlinson
Subject: Making News in Transport - Alert 456

Making News in Transport – Alert 456

Selected land transport-related news items from Australia and overseas 26/02/2016, produced by ARRB Group under the National Interest Services (NIS) program

Automotive technology

Thursday 11 February 2016

Making all vehicles autonomous could prevent up to 95% of all traffic accidents (Institution of Mechanical Engineers, United Kingdom)
The UK's Institution of Mechanical Engineers has released a report calling on government and industry to address barriers to the integration of driverless vehicles into the road network.

View item

Click here for full report

Friday 19 February 2016

More than 50 semi-autonomous vehicles to test platooning on Dutch motorway (Traffic Technology Today, United Kingdom)
Vehicles from a range of different manufacturers will test their semi-autonomous driving and platooning capabilities on a public highway in the Netherlands.

View item

Wednesday 24 February 2016

UK given green light to become world leader in driverless cars (TRL press release, United Kingdom)
The UK's Transport Research Laboratory (TRL) has announced its participation in a new initiative to study the data requirements needed to support autonomous vehicle navigation.

View item

Environment

Monday 22 February 2016

Cutting emissions could prevent nearly 300,000 US air pollution deaths (Carbon Brief, United States)
A new study by scientists at Duke University in the US estimates the number of lives saved and the economic benefits gained if emissions were reduced in the transport and energy sectors.

View item

Click here for article abstract

Innovation

Friday 19 February 2016

Volvo Cars tests replacing keys with smart phone app (Volvo Cars, United States)
Volvo Cars is testing a digital car key, with the aim of facilitating car sharing.

View item

Friday 26 February 2016

Apple co-founder to headline Future Transport Summit 2016 (Transport for NSW Media Release, Australia)
Apple co-founder Steve Wozniak will attend the NSW Government's two-day transport technology summit, which is part of its Future Transport initiative.

View item

Pedestrians and Cyclists

Thursday 25 February 2016

Adelaide's new designed future: shaping our streets for success (Adelaide City Council, Australia)
Adelaide City Council has released a new design manual to provide standards and guiding principles for the design of streets and public spaces.

View item

Click here to view Manual

Planning and Infrastructure

Tuesday 23 February 2016

Melbourne Metro Rail project: Victoria pleads for $4.5b in federal funding (ABC News, Australia)
The Victorian Government has released an updated business case for the Melbourne Metro Rail project.

View item

Click here for full Business Case

Public transport

Monday 22 February 2016

New reforms for commercial passenger vehicle industry (Northern Territory Government Ministerial Media Statement, Australia)
The Northern Territory Government will introduce a range of reforms as part of its review of the commercial passenger vehicle industry, but will not be authorising ridesharing services.

View item

Click here for full Review Report

Monday 22 February 2016

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View item

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View transcript of speech

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Katherine Rawlinson
Librarian
National Interest Services

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katherine.rawlinson@arrb.com.au
www.arrb.com.au

Do you know of an urban arterial route that has a significant road safety problem? If it includes a mixture of road users (particularly pedestrians and cyclists) we may be able to help with solutions as part of a new safety project for Austroads. Please see details of the Mixed use urban arterial project on our website.

From: Mehrton, Andrew
To: Paule, Rod
Subject: RE: Making News in Transport - Alert 456
Date: Monday, 29 February 2016 9:21:59 AM

Thanks, Rod

-Andrew

From: Paule, Rod
Sent: Monday, 29 February 2016 9:21 AM
To: Mehrton, Andrew
Subject: FW: Making News in Transport - Alert 456

Andrew,

3 articles on autonomous vehicles that may be of interest.

Rod

Rod Paule | Manager Road Transport Policy|
Phone 02 620 77115 | Fax 02 620 50937 |
Justice and Community Safety | **ACT Government**
Level 2, 12 Moore Street, CANBERRA ACT 2601 | GPO Box 158 CANBERRA ACT 2601 |
www.act.gov.au

From: Cloos, Karl
Sent: Friday, 26 February 2016 5:07 PM
To: Kugathas, Kuga; Paule, Rod; Joseph, Gabriel; Chandramohan, Chandra; Blume, Kristin; Day, Michael; Deschamps, Chris; Jatheendran, Lingam; Dias, Carl; Greenland, Karen; Thompson, Peter; Marshall, Ken; Shoukrallah, Rifaat; Taylor, John; McHugh, Ben; Gill, Tony; Edwards, Marc; Potapowicz, Pawel; Peters, Paul; Vikneson, Jayanthy; Yu, Frank; Glassford, Cameron; Dimitrovska, Snezana; Davidson, Geoffrey; Ahmed, Sharfuddin; Meredith, Edward; Zeta, Darwin; Finnigan, Rebecca; Pincombe, Neil; Casimir, Amanda; Wyatt, Tim; Jollon, Michael; Norton, Timothy; Hawkins, Robyn; Horner, David; Hubbard, Benjamin
Subject: FW: Making News in Transport - Alert 456

Managers Roads ACT, Road Transport, Asset Acceptance and Road Safety

FYI
Regards
Karl

From: Katherine Rawlinson [mailto:katherine.rawlinson@arrb.com.au]
Sent: Friday, 26 February 2016 12:44 PM
To: Katherine Rawlinson
Subject: Making News in Transport - Alert 456

Making News in Transport – Alert 456

Selected land transport-related news items from Australia and overseas

26/02/2016, produced by ARRB Group under the National Interest Services

(NIS) program

Automotive technology

Thursday 11 February 2016

Making all vehicles autonomous could prevent up to 95% of all traffic accidents (Institution of Mechanical Engineers, United Kingdom)

The UK's Institution of Mechanical Engineers has released a report calling on government and industry to address barriers to the integration of driverless vehicles into the road network.

View item

Click here for full report

Friday 19 February 2016

More than 50 semi-autonomous vehicles to test platooning on Dutch motorway (Traffic Technology Today, United Kingdom)

Vehicles from a range of different manufacturers will test their semi-autonomous driving and platooning capabilities on a public highway in the Netherlands.

View item

Wednesday 24 February 2016

UK given green light to become world leader in driverless cars (TRL press release, United Kingdom)

The UK's Transport Research Laboratory (TRL) has announced its participation in a new initiative to study the data requirements needed to support autonomous vehicle navigation.

View item

Environment

Monday 22 February 2016

Cutting emissions could prevent nearly 300,000 US air pollution deaths (Carbon Brief, United States)

A new study by scientists at Duke University in the US estimates the number of lives saved and the economic benefits gained if emissions were reduced in the transport and energy

sectors.

View item

Click here for article abstract

Innovation

Friday 19 February 2016

Volvo Cars tests replacing keys with smart phone app (Volvo Cars, United States)
Volvo Cars is testing a digital car key, with the aim of facilitating car sharing.

View item

Friday 26 February 2016

Apple co-founder to headline Future Transport Summit 2016 (Transport for NSW Media Release, Australia)
Apple co-founder Steve Wozniak will attend the NSW Government's two-day transport technology summit, which is part of its Future Transport initiative.

View item

Pedestrians and Cyclists

Thursday 25 February 2016

Adelaide's new designed future: shaping our streets for success (Adelaide City Council, Australia)
Adelaide City Council has released a new design manual to provide standards and guiding principles for the design of streets and public spaces.

View item

Click here to view Manual

Planning and Infrastructure

Tuesday 23 February 2016

Melbourne Metro Rail project: Victoria pleads for $4.5b in federal funding (ABC News, Australia)
The Victorian Government has released an updated business case for the Melbourne

Metro Rail project.

View item

Click here for full Business Case

Public transport

Monday 22 February 2016

New reforms for commercial passenger vehicle industry (Northern Territory Government Ministerial Media Statement, Australia)
The Northern Territory Government will introduce a range of reforms as part of its review of the commercial passenger vehicle industry, but will not be authorising ridesharing services.

View item

Click here for full Review Report

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National Interest Services

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www.arrb.com.au

From: Greenland, Karen
To: Mehrton, Andrew
Cc: McIntosh, Andrew; Davidson, Geoffrey; Paule, Rod; Georgeson, Matthew
Subject: University of Leeds | News > Technology > Will driverless cars increase reliance on roads?
Date: Sunday, 6 March 2016 11:52:49 AM

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http://www.leeds.ac.uk/news/article/3831/will_driverless_cars_increase_reliance_on_roads

Interesting question raised in this article about whether automated vehicles could influence travel choices in favour of cars and away from PT or other modes.

From: Stonham, Carol
To: Paule, Rod; Hunter, Peter
Subject: Barr pushes for autonomous vehicles trials in Canberra | The RiotACT
Date: Tuesday, 8 March 2016 1:41:47 PM

http://the-riotact.com/barr-plugs-cbr-for-autonomous-vehicles-trials/165929

From: McIntosh, Andrew
To: Paule, Rod; Horner, David; Davidson, Geoffrey
Date: Tuesday, 8 March 2016 3:56:25 PM

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http://www.canberratimes.com.au/act-news/barr-wants-canberra-to-be-test-site-for-driverless-cars-20160308-gndam3.html

Regards
Andrew

Callow, Lauren

From: Paule, Rod
Sent: Friday, 11 March 2016 2:46 PM
To: Greenland, Karen; McIntosh, Andrew; Mehrton, Andrew
Subject: FW: BUSNEWS: WA driverless, January DELIVERIES, Optare Tempo VIDEO, Suppliers outlook, NSW technology, VTC milestone, Sydney speed, VIC service, QLD fares, WA traffic, QLD app

All,

Apologies for the delay in sending.

Just for information – article on driverless bus trial in WA.

Rod

Rod Paule | Manager Road Transport Policy|
Phone 02 620 77115 | Fax 02 620 50937 |
Justice and Community Safety | **ACT Government**
Level 2, 12 Moore Street, CANBERRA ACT 2601 | GPO Box 158 CANBERRA ACT 2601 |
www.act.gov.au

From: ABC [mailto:australianbusandcoach@e.bauertrader.com.au]
Sent: Friday, 12 February 2016 9:01 AM
To: Paule, Rod
Subject: BUSNEWS: WA driverless, January DELIVERIES, Optare Tempo VIDEO, Suppliers outlook, NSW technology, VTC milestone, Sydney speed, VIC service, QLD fares, WA traffic, QLD app

TODAY'S NEWS
Date: 12.02.2016

WA'S DRIVERLESS ELECTRIC BUS

Driverless electric bus trial to go ahead at driving centre in Perth this year

Read more

SHARP DECLINE

Just 92 buses were delivered in

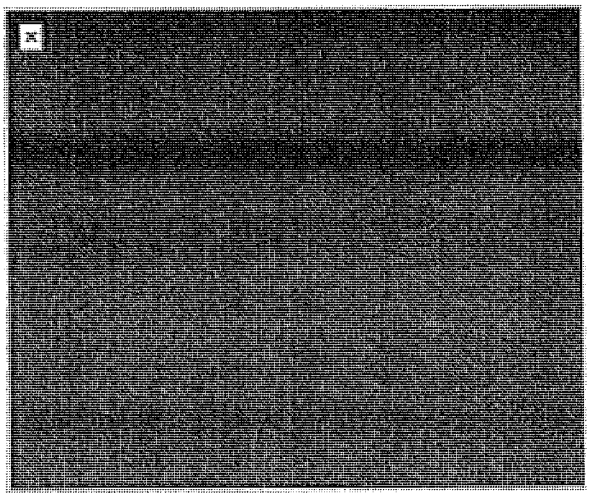
January, compared to 117 in December

Read more

VIDEO REVIEW: OPTARE TEMPO

The Optare Tempo has had a potential breakthrough in Australia, writes Steve Skinner

Read more



CHASSIS: 2016 SUPPLIERS OUTLOOK

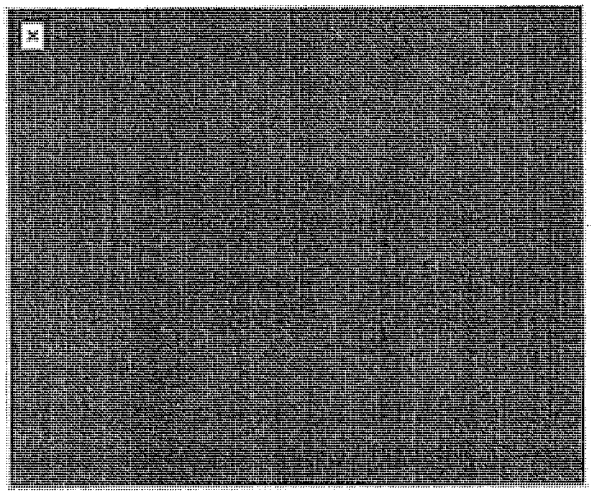
Australian suppliers are looking forward to a prosperous 2016 following a successful year

Read more

SYDNEY'S PT TECH SUMMIT

Future Transport Summit to get the ball rolling on new and emerging PT technology in NSW

Read more



VICTORIAN TOURING COACHES GOING STRONG

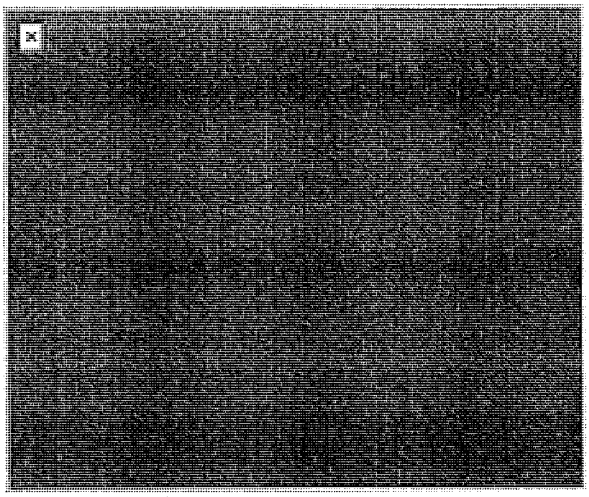
Melbourne bus industry identity going strong since starting his first operation in the 1950s

Read more

BUSES TO CRAWL IN SYDNEY

An extension of speed restrictions in Sydney's CBD may slow some bus services further

Read more



VIC STUDENT SERVICE SAVED

Student bus service saved by Victorian Government after Federal Government cuts
Read more

QLD FARES REVALUATED

Queensland's independent Fare Review Taskforce is on track to deliver findings by mid-2016
Read more

SIMPLE PLAN FOR WA TRAFFIC

Yellow box junctions to be trialled at four busy Perth intersections to keep buses moving
Read more

QLD PT APP UPGRADE

Latest version of the Translink app helps lead the way for QLD public transport passengers
Read more

FEATURED EXECUTIVE JOBS

MC DRIVER

Our client is a market leader in the Logistics Industry working in sectors such as Retail, FMCG, Resources and Industrial, Australian Linehaul and Government and Defence
Read more

METROPOLITAN LOCAL B-DOUBLE DRIVERS

Local B-Double driver required for the Sydney area.
Read more

NEW BUSES

Search, compare & choose new buses

- Optare Tempo
- BCI Citirider
- Hyundai MD9000

USED BUSES

Place your ad online & in print

- Scania Buses
- Mercedes-Benz Buses
- Hino Buses

JOBS

Australia's specialist logistics job portal

- Bus Driver (VIC)
- Bus Driver (QLD)
- MC Drivers (NSW)