

# traffic

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February/March 2012

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PLUS



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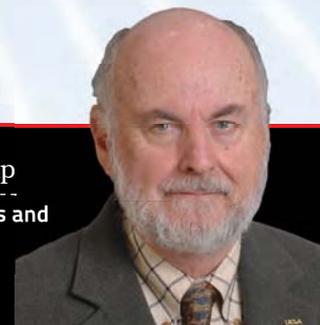
Easy targets?

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UCLA's Donald Shoup

"We've got free parking for cars and expensive housing for people – our priorities are all wrong!"



# Australia setting standards for ITS

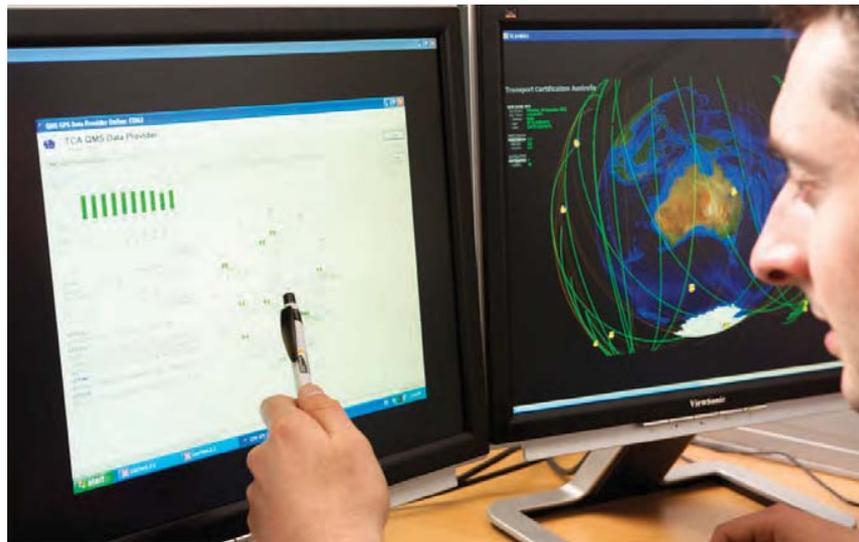
Australian transport agencies and governments were among the first in the world to realize the potential of telematics to drive the transport reform agenda, so much so that six years ago they established Transport Certification Australia (TCA), a national body with the initial role to implement and administer the Intelligent Access Program (IAP).

Chris Koniditsiotis, TCA's CEO, explains that, "Our stakeholders have more recently come to realize that TCA is not simply the administrator of the IAP. This is not surprising, because we at TCA are acutely aware that telematics and broader ITS are well placed to support and deliver public policy outcomes.

"TCA provides high-quality advice, accreditation and administration services to improve mobility. These accreditation services in the type-approval and certification of telematics and other intelligent technologies give confidence to all stakeholders for their consideration of use. Finally, we are administrators of programs such as the IAP."

Describing the IAP as a 'regulatory world first', Koniditsiotis explains exactly what it is: "The IAP uses GNSS technology to allow government to monitor heavy vehicle road use, providing them with the confidence they need to allow access or offer improved access to the road network for larger and more productive vehicles.

"In short, the IAP provides regulators with assurance that the right vehicle is on the right road at the right time. We can even set a parameter for speed so that regulators can be assured that vehicles are not traveling above a maximum speed threshold."



(Left) TCA works in a variety of areas to improve mobility (Below) The new generation of higher productivity heavy good vehicles

## Need to know?

**The benefits being reaped in Australia following the creation of a national body designed to improve standards in ITS**

- > Story of Australia's Intelligent Access Program (IAP) – a 'regulatory world first'
- > The role of Transport Certification Australia (TCA) in a number of pioneering new schemes
- > How a national telematics framework has been developed and delivered
- > Real-world benefits being experienced on a variety of roads



## Future-proof framework

As well as the IAP, TCA has also pioneered a national telematics framework. Koniditsiotis explains: "When we developed the IAP we wanted to avoid creating a rigid solution that could not adapt to meet changes in technology and society. So we established the TCA National Telematics Framework (Framework), which was designed to house the IAP as well as innovative new applications (regulatory and commercial) that had not yet been thought of.

The Framework recognizes the relationships between four essential and interconnected pillars, each crucial to advance telematics or other intelligent technologies. These pillars are: policy; technical; operational; and commercial.

The Framework's strategic timing and sustainable setting provides a nationally agreed environment to support the current and future telematics needs of governments, end users and industry.

The Framework has a number of key features,

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including: administration by TCA as the policy-taker separate to the application (or end use) delivered by the policy-maker; nationally recognized certification, audit and recertification services; and an open approach (performance based) to functional and technical solutions, only being prescriptive to achieve interoperability. Another key feature is the leveraging of existing standards and investments. Provision of a 'single' in-vehicle box supporting both multiple regulatory and commercial applications is also key.

Benefits of the Framework are already being recognized by government, industry and the community alike.

The IAP provides a different paradigm in the way governments and industry can do business, and is not just another incremental step in the transport reform agenda. This is evidenced by the opening up of road access to state-of-the-art, high productivity heavy vehicles.



(Top) Australian roads are reaping the benefits of TCA's hard work (Above) The newer breed of vehicles offers huge payload increases

### Real-world case studies

An access scheme that includes the monitoring of route, speed and mass compliance within a single application has been implemented along the strategic Toowoomba to Port of Brisbane freight corridor. The scheme has provided regulators with the confidence to open up access to a new generation of higher productivity vehicles, 30 meters long and carrying 79 tonne gross combination mass.

Transport operators can now carry up to two 40ft containers of grain whereas previously they could only carry one, and are reporting estimated payload increases of up to 100%.

Modeling suggests that the scheme delivers an annual reduction, for each vehicle, of up to 624,000 truck kilometers, savings of approximately 230,000 liters of fuel and a reduction in greenhouse gas emissions of around 490 tonnes (or 40%).

It is not only this one corridor that is reaping the benefits; much of New South Wales and Queensland now have higher mass limits on their road networks. Monitoring for route compliance has provided regulators with the confidence to open up access to large sections of the network to hundreds of heavy vehicles carrying 10% more payload.

This 10% payload gain generally aligns with an up to 10% reduction in emissions per tonne kilometer per vehicle.

Meanwhile, monitoring for route compliance in Victoria's Green Triangle region has provided regulators with the confidence to open up access to higher productivity freight vehicles carrying up to 77.5 tonnes, resulting in a 12% payload increase, which again generally aligns with a 12% reduction in emissions per tonne kilometer per vehicle.

Implementing the learning accrued from the trials of onboard mass (OBM) systems, TCA is finalizing a national specification for type-approved OBM systems.

Like the IAP, a type-approved OBM system will: meet a regulatory standard for security, with regulators alerted if tampering or attempted tampering occurs; and meet a regulatory standard for

robustness, so that it is capable of operating in Australia's road environment (defined requirements for protection from vibration, dust and water ingress and interferences). When combined with IAP, OBM provides regulators with the highest available assurance around compliance with route, mass and speed; delivering to regulators the confidence they need to open up further access to a new generation of higher productivity vehicles.

TCA is actively working with Australian governments to advance the development of electronic systems that can record heavy vehicle driver work and rest periods. Electronic Work Diaries (EWDs) provide an opportunity for the heavy vehicle and logistics sectors to move beyond paper-based work diaries for the management of driver fatigue.

In 2010 TCA was engaged to develop a performance-based specification for EWDs under the auspices of Austroads and direction of the Australian Transport Council. Following this, TCA was asked to conduct a national pilot of EWDs on behalf of the New South Wales Roads and Maritime Services.

As well as its national efforts, TCA is also leading in the international development of a standard for regulatory telematics through the ISO TC 204 Technical Committee, ISO 15638 'Framework for collaborative telematics applications for regulated commercial freight vehicles'. ○

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Transport Certification Australia

**Providing Assurance**

**A government owned body, TCA provides national assurance in the use of information, communications and sensor solutions through identifying, delivering and deploying quality systems for the mobility of people, products and assets.**



**• ADVICE**

**Advisory Services**

Providing advice founded on a demonstrated capability to design and deploy operational systems as enablers for reform, including the development of standards and specifications, identifying operational issues, management of commercial interests and ensuring there is alignment with strategic purpose and policy intent.

**• ACCREDITATION**

**Testing and Accreditation Services**

Undertaking testing, piloting, type-approval and certification of information, communications and sensor related equipment, systems, processes and services such as the development of Heavy Vehicle On-Board Mass Monitoring (OBM) and Electronic Work Diary (EWD) and Speed Monitoring Systems.

**• ADMINISTRATION**

**Regulatory Telematics (heavy and light vehicles)**

The administration of telematics programs that monitor heavy and/or light vehicles with government regulations such as the Intelligent Access Program (IAP).

**Non-Regulatory Telematics**

The administration of telematics programs that monitor performance, compliance and service delivery with non-regulatory uses such as contract management services.



Visit [www.tca.gov.au](http://www.tca.gov.au) to learn more

TCA and Queensland Department of Transport and Main Roads jointly won the Intelligent Transport Systems (ITS) Australia, National Excellence Award 2011 for implementation of IAP and OBM on the Toowoomba to Port of Brisbane Corridor.

**Transport Certification Australia**

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