2016 MELB🌐URNE

23rd World Congress on Intelligent Transport Systems

Melbourne Convention and Exhibition Centre
10–14 October 2016

MEET IN ASIA PACIFIC FOR THE WORLD'S LEADING TRANSPORT TECHNOLOGY EVENT
ACTIVATING GLOBAL MOBILITY SOLUTIONS

ITS—ENHANCING LIVEABLE CITIES AND COMMUNITIES

FINAL PROGRAM

DATE OF PUBLICATION (AUGUST 2016)

VICTORIA
State Government Australia

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Intelligent Transport Systems

ASIA-PACIFIC ITS

ERTICO ITS EUROPE

ITS AMERICA

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WELCOME MESSAGES

GREETINGS FROM THE CONGRESS CHAIR

It is with great pleasure that I welcome you to Melbourne to participate in the ITS World Congress, 10 – 14 October, 2016. This is a wonderful opportunity to join more than 7,000 attendees and 300 exhibitors from 60 countries in Melbourne, voted the world's most liveable city for six consecutive years. ITS Australia is delighted to host the 23rd World Congress on Intelligent Transport Systems 2016 on behalf of ITS Asia Pacific, ITS America and ERTICO.

"ITS—Enhancing Liveable Cities and Communities" is the theme for the Congress, providing the opportunity to demonstrate why Melbourne is regarded as the world's most liveable city and explore the benefits that ITS delivers to critical elements of our daily life. Australia is at the forefront of development and deployment of ITS technologies in many fields. Australia's ITS industry has risen to the challenge of delivering solutions to enhance our economy and communities. Our population is clustered in big cities with large urban areas where ITS technologies such as managed motorways and free flow tolling (pioneered in Australia) are leveraged to ensure mobility. Long transport distances across our vast country encourage innovation and adoption of technology across our heavy vehicle fleet, in particular to enhance safety and efficiency.

The resources industry, operating in remote locations, has led the way by embracing ITS technology such as driverless trains and automated vehicles. Improvements in productivity and safety in tough economic conditions has had a positive impact on other industry sectors. The important contribution that ITS can make to benefiting emergency services and minimising harm from natural disasters has also been recognised and is increasingly being deployed to great effect.

By attending the 2016 World Congress in Melbourne, you will have the opportunity to find out more about these innovations, and experience exciting and informative, discussions and meetings with not just Australian ITS specialists, but with those from all over the world.

In collaboration with ITS Asia Pacific, ERTICO and ITS America, ITS Australia has prepared an engaging program. In the tradition of ITS World Congresses there will be plenary, scientific, technical, commercial and interactive sessions as well as a dynamic exhibition. Through our technical tours program we are excited to showcase Melbourne as a leader in this space which will be supported by a demonstrations program featuring leading Australian and overseas applications of the latest ITS technologies.

We are also proud to announce an innovative program as part of the World Congress, involving schools and universities around Australia and Asia Pacific to encourage creativity and innovation in our next generation. Scholarships, competitions and challenges for students aged 11 – 16 years, along with university level hackathons, app and data challenges, essay and video competitions are all aimed at stimulating innovation, with students presenting their project outcomes at the congress.

The rapidly growing public interest in ITS will see the exhibition opened to the public free of charge for two days plus we will present several "Melbourne Conversations on ITS" where the community are invited to hear first-hand from global industry leaders and ask their own questions.

The 2016 World Congress is truly an opportunity for government and industry policy makers, practitioners, researchers and ITS providers to share information on social needs, opinions and technical developments addressing modern transport issues. It will be a chance to network, do business and re-connect with former acquaintances.

Of course, it is also the perfect opportunity to visit Melbourne and regional Victoria, to travel interstate and to our close neighbour, New Zealand. With wonderful food and wine, our unique heritage, animals and landscapes and welcoming culture, I welcome you to Melbourne for the 2016 World Congress.

Brian Negus
ITS Australia President
and ITS World Congress 2016 Chair

HOST ORGANISATION – ITS AUSTRALIA

Intelligent Transport Systems Australia (ITS Australia) promotes the development and deployment of advanced technologies to deliver safer, more efficient and environmentally sustainable transport across all public and private modes – air, sea, road and rail.

ITS Australia is an independent not-for-profit incorporated membership organisation representing ITS suppliers, government authorities, academia and transport businesses and users. Affiliated with peak ITS organisations around the world, ITS Australia is a major contributor to the development of the industry.

Key activities include convening national summits and international conferences, facilitating dialogue between transport modes and across government jurisdictions, promoting research and development and the export of Australian technologies.

ITS Australia advocates the application of communication, data processing and electronic technologies for in-vehicle, vehicle-to-vehicle, vehicle-to-infrastructure and mode-to-mode systems to increase transport safety and sustainability, reduce congestion, and improve the performance and competitiveness of Australia's networks.

itsaustralia
Intelligent Transport Systems

www.its-australia.com.au

ITS ASIA PACIFIC

On behalf of ITS Asia-Pacific, I would like to welcome you all to the 23rd ITS World Congress in Melbourne. Fast, safe, reliable and efficient transportation has been one of the most important elements of the society for economic growth and enhanced quality of life. We are now at the outset of an endeavor with a new set of technologies which will change the way we observe phenomena in transportation and act on it. Penetration of information and communication technologies to our daily life has given significant impact on our society. Highly automated cars will be put into market within a decade, which will dramatically reduce traffic accidents and congestion and also enable aged or challenged people to go out on their own. Inclusive society, where diverse people in diverse community actively participate in generating values, will enhance both wellness of individuals and economic development. However, technologies alone won't bring about solutions. We need to take integrated approach combining state of the art technologies with social innovations. ITS technologies integrated with social innovations should provide everyone with mobility to fully exercise his or her capacity, enabling sustainable development of the society.

The ITS World Congress in Melbourne is exactly where you find right experts from industries, academic societies and government agencies. Policies, technologies, institutional issues and human factors are all covered with supporting facts and experiences. I hope the ITS World Congress will trigger a massive process of Enhancing Liveable Cities and Communities.

Hajime Amano
Secretary General ITS Asia-Pacific

ERTICO

On behalf of ERTICO – ITS Europe and its Partners, I would like to invite you to attend the 23rd ITS World Congress in Melbourne in 2016. The theme of "ITS—Enhancing Liveable Cities and Communities" will explore the benefits that ITS brings to all aspects of our daily lives such as improving sustainability of travel, reducing congestion, and increasing the performance and competitiveness of all modes of transport. This event will provide an opportunity to share information on big data analytics, smart cities, mobile applications, environmental sustainability, vehicle and network safety, cooperative and automated vehicles, future freight and many other innovations in ITS. Australia's advanced development and deployment of ITS technologies across many sectors has helped to ensure Melbourne's position as the world's most liveable city for 6 years in a row and as an ideal venue for hosting the 2016 World Congress. European ITS stakeholders are very much looking forward to visiting and engaging in discussions on the role ITS has to play

in our future transportation. I look forward to meeting you in the exciting and vibrant city of Melbourne, and to participating together in the wide range of events planned for the Congress.

Hermann Meyer
Chief Executive ERTICO - ITS Europe

ITS AMERICA

On behalf of ITS America, I am pleased to invite you to attend the 23rd World Congress on Intelligent Transport Systems (ITS) taking place in Melbourne, Australia, from October 10 – 14, 2016.

The theme of the Congress, "ITS—Enhancing Livable Cities and Communities," will address the many benefits that ITS technologies bring to our daily lives and to our increasingly connected global economy.

Building on the success of Detroit and Bordeaux, the 23rd World Congress will take on discussions of how to advance new technologies to increase connectivity, improve mobility and create a safer, more reliable and convenient transportation network. With sessions on topics including open data, automated vehicles, smart cities and new mobile applications, submitting a paper or special interest session proposal is a great way to participate and help generate new ideas for advancing ITS solutions.

The ITS World Congress is an opportunity for policymakers, investors, practitioners, researchers and ITS providers to learn about the latest innovations and discuss best practices with other

leaders from around the world. It will be one of the most valuable educational, networking and collaborative global events you'll attend in 2016.

I look forward to seeing you in Melbourne at the 2016 ITS World Congress!

Regina Hopper
President and Chief Executive
ITS America

AUSTRALIAN GOVERMENT

It is with great pleasure that the Australian Government welcomes you to the 23rd World Congress on Intelligent Transport Systems.

The world is in the midst of rapid and transformative technological change, and transport systems will play a major role in that revolution. Many expect that such change will create unprecedented opportunities to improve safety and efficiency.

Australia has a strong record of leading the world in the adoption of intelligent transport systems, and this Congress provides an opportunity for us to share some of our successes and to learn from others. As a proud Program Partner for this world premier event, the Australian Government anticipates it will be an invaluable opportunity for knowledge sharing, collaboration and innovation – helping us all to push the boundaries of what is possible in the delivery of transport services.

We particularly welcome the theme of this year's Congress - 'Enhancing Liveable Cities and Communities'. This reflects our belief that effective transport is an essential enabler for building Australia's modern knowledge-based economy, improving road safety and access to jobs and housing, and maintaining a healthy environment.

The Australian Government is actively engaged in this area through initiatives such as our Smart Cities Plan, which outlines the Government's vision for a collaborative and innovative approach to creating liveable city spaces. The Australian Government has also recently developed the National Policy Framework for Land Transport Technology in collaboration with state and territory governments, which details our agreed national approach to emerging land transport technologies, including intelligent transport systems.

The Framework includes an action plan that will assist Australia to seize opportunities to implement these technologies and improve our cities and communities.

We hope you take inspiration from the setting for this Congress – Melbourne, one of the world's most liveable cities – and enjoy Australia's food, entertainment and hospitality.

The Hon Darren Chester MP
Minister for Infrastructure and Transport

The Hon Paul Fletcher MP
Minister for Urban Infrastructure

VICTORIA GOVERNMENT

I'm delighted to welcome you to Melbourne for the 23rd ITS World Congress. Renowned for its capacity to stage large scale business events and rated the world's most liveable city for an unprecedented six years in a row, Melbourne is the perfect place to explore this year's congress theme 'Enhancing Liveable Cities and Communities'.

Victoria's economy is thriving. We have the fastest growing population in Australia and since coming to office, 150,000 jobs have been created. New businesses are prospering and innovation is booming.

This rapid population and economic growth presents challenges. Soon our transport systems will need to accommodate the daily movement of over a million people in and out of central Melbourne and facilitate the movement of a billion tonnes of freight each year.

Advanced ITS will be key to delivering safer, more efficient and environmentally sustainable transport solutions to. ensure our state remains productive, prosperous and liveable well into the future.

Victorian businesses have expertise in manufacturing processes, advanced materials and autonomous systems and offer diverse and innovative transport technology solutions, from traffic software and communications, to route planning and scheduling, supply chain management, telecommunications infrastructure and smart car technology.

I wish you a productive and rewarding stay in Melbourne and encourage you to engage with our local companies and organisations to explore how ITS enabled solutions will help to better connect our state to global markets, jobs, education and each other.

The Hon. Daniel Andrews MP
Premier of Victoria

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TRANSPORT AND ACCOMMODATION INFORMATION

All of the following information is also available on the congress app and on the congress website at
www.itsworldcongress2016.com/destination/travel-information

TAXI

Taxis have their own taxi ranks or can be hailed from the street. Taxis are available from the ground floor level of Melbourne Airport, outside the international terminal and both domestic terminals. Expect a taxi fare of around AUD60 for a taxi ride between the CBD and Melbourne Airport. Melbourne's major taxi companies include:

13 CABS:	13 22 27—within Australia only
Arrow:	13 22 11—within Australia only
Embassy taxis:	13 17 55—within Australia only
Silver top taxis:	13 10 08—within Australia only

PUBLIC TRANSPORT

Most of Melbourne's main attractions are within walking distance to the congress venue and recommended hotels; however public transport is easily accessible and affordable. Trams within the CBD are free within the "Free Tram Zone" and no ticket is required, simply hop on / hop off (you will see signs indicating free tram zone at these stations). However, if your journey starts or finishes outside the boundaries of the Free Tram Zone, you must touch on your myki* at the reader in the normal way to make sure you have a valid ticket.

*Myki is Melbourne's smartcard ticketing system. With myki you can travel on all of Melbourne's trains, trams and buses. A myki can be purchased from train stations, some tram stops and bus interchanges, 7-Eleven stores, retail outlets and newsagents displaying the myki sign. A myki visitor pack containing a map, instructions for use, a myki card with enough value for one day's travel in Zone 1 (the entire tram network) and discounts to various Melbourne attractions is also available for purchase from the Melbourne Visitor Centre.

For more information about public transport, including ticketing and planning your journey, visit www.ptv.vic.gov.au

Melbourne's Free Tram Zone

CAR HIRE

If you require car hire, many rental companies operate from Melbourne airport. To make a booking prior to your arrival contact:

AVIS car rental: **www.avis.com.au**
Budget: **www.budget.com.au**
Europcar: **www.europcar.com.au**
Hertz car rental: **www.hertz.com.au**
Red Spot: **www.redspotcars.com.au**
Thrifty car rental: **www.thrifty.com.au**

CONGRESS ACCOMMODATION

A CLARION APARTMENTS
1 William St, Melbourne VIC 3000
850m from MCEC (12 minute walk)

B CROWN PROMENADE
8 Whiteman St, Southbank VIC 3006
500m from MCEC (7 minute walk)

C CROWN METROPOL
8 Whiteman St, Haig St, Southbank VIC 3006
170m from MCEC (3 minute walk)

D CROWN TOWERS
8 Whiteman St, Southbank VIC 3006
650m from MCEC (9 minute walk)

E CROWNE PLAZA
1-5 Spencer St, Melbourne VIC 3008
230m from MCEC (3 minute walk)

F GRAND HOTEL MELBOURNE
33 Spencer St, Melbourne VIC 3000
500m from MCEC (7 minute walk)

G HILTON SOUTH WHARF
2 Convention Centre Pl, Melbourne VIC 3006
Adjacent to MCEC

H HOLIDAY INN
575 Flinders Ln, Melbourne VIC 3000
550m from MCEC (8 minute walk)

I INTERCONTINENTAL MELBOURNE THE RIALTO
495 Collins St, Melbourne VIC 3000
1.1km from MCEC (17 minute walk)

J PENSIONE BOUTIQUE HOTEL
16 Spencer St, Melbourne VIC 3000
600m from MCEC (6 minute walk)

K VIBE SAVOY HOTEL
630 Little Collins St, Melbourne VIC 3000
850m from MCEC (10 minute walk)

L THE LANGHAM MELBOURNE
1 Southgate Ave, Southbank VIC 3006
1.3km from MCEC (16 minute walk)

M ADINA APARTMENT HOTEL
550 Flinders Street, Melbourne VIC 3000
600m from MCEC (6 minute walk)

GENERAL INFORMATION

EXHIBITION OPENING DATES AND TIMES

Date	Time
Monday 10 October 2016	1730 – 2030 hours
Tuesday 11 October 2016	0830 – 1900 hours
Wednesday 12 October 2016	0830 – 1900 hours
Thursday 13 October 2016	0830 – 1800 hours
Friday 14 October 2016	0800 – 1400 hours

REGISTRATION OPENING DATES AND TIMES

Date	Time
Sunday 9 October 2016	1430 – 2000 hours
Monday 10 October 2016	0700 – 2000 hours
Tuesday 11 October 2016	0800 – 1900 hours
Wednesday 12 October 2016	0800 – 1900 hours
Thursday 13 October 2016	0800 – 1800 hours
Friday 14 October 2016	0800 – 1630 hours

CONGRESS APP

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The Congress App is available to enhance your experience at the ITS World Congress 2016. This will include information on technical tours, demonstrations, social events, program and speakers, delegate to delegate messaging, mapping, social media, and much more. Use the Activity Feed to post about your congress experience to everyone, and check the leaderboard to see who's been the most active! Can you beat them and who will be the winner?

You can download the ITSWC app now from www.its2016.eventapp.com.au or simply search for 'ITS World Congress 2016' in the Apple App Store or Google Play Store. Login with your unique code to access the full range of features, some of which are only available to Fulltime and Day Registered delegates.

If you have any questions about the Congress App please visit the app helpdesk, located near the congress registration area.

BUSINESS NETWORKING LOUNGE

Delegates can search and contact each other directly through the congress app, send messages and arrange meetings. We encourage you to utilise this feature to network and connect with other attendees. A fully staffed Business Networking Lounge is available within the exhibition and is designed with these particular meetings in mind. For general networking we encourage you to use any of the other networking areas within the exhibition hall, including the ITS Australia Networking Lounge.

DEVICE RECHARGE BAR

If your phone or tablet is running low, recharge at the charge bar! Located within the exhibition hall this area has both power (three-pin power point / socket outlet) and USB points – please supply your own lead. With comfortable lounges, tables and chairs, this is the perfect place to recharge.

COFFEE CARTS

Kapsch Coffee Carts are available throughout the exhibition hall and the congress venue providing complimentary coffee, tea and hot chocolate to visitors and delegates. Muffins and pastries are also available for purchase at these carts.

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EXHIBITION HALL AUDITORIUM

There will be a purpose-built auditorium located at the rear of the exhibition hall. Review the program for sessions that are on each day and get involved in product launches, hosted debates, panel discussion presentations and the "Melbourne Conversations on ITS" informative community sessions.

DELEGATE CATERING

Complimentary morning and afternoon tea, as well as lunches are being served for all fulltime and day congress delegates* in the Delegate Catering area to the left of the exhibition.

* Not available to exhibitor personnel, exhibition visitors, accompanying persons or media

EXHIBITION HALL CAFÉ

Sponsored by

The exhibition is centred around the Queensland Café. Food and beverages will be available for purchase between 1100 – 1500 hours Tuesday to Thursday and 1100 – 1400 hours on Friday. Serving hot and cold items as well as soft drinks; this is also where exhibitors can make use of their catering vouchers and any other exhibition visitors can purchase food and beverages. Café style seating is available within this area.

NATIVE ANIMAL EXPERIENCE

Make your way to the Australian native animal experience section and get up close with some of Australia's iconic animals. On display for a limited time only, make your ITS 2016 experience exceptionally memorable by enjoying a personal experience where you can see a koala, a dingo, a joey (baby kangaroo) or a snake! Interact with the animals as you learn each animal's name and character with our passionate wildlife keepers. Get in touch with Australia's wildlife!

This area is located within the exhibition and will be open during the following times:

Date	Time
Tuesday 11 October 2016	1000 – 1100 hours 1500 – 1600 hours
Wednesday 12 October 2016	1000 – 1100 hours 1500 – 1600 hours
Thursday 13 October 2016	1000 – 1100 hours 1500 – 1600 hours
Friday 14 October 2016	1000 – 1100 hours

DEMONSTRATIONS AND TECHNICAL TOURS LOUNGE

Find out more about the Demonstrations by visiting the Demonstrations and Technical Tours Lounge within the exhibition (just inside Door 10). Demo representatives will be available to answer your questions, and staff will be on hand to assist with onsite bookings. Remember – only Fulltime and Day Registered delegates can book demonstrations and technical tours. Timings for Technical Tour departures will also be available from this lounge area.

Demonstrations Partner

TIME

At the time of the congress, Melbourne Australia is in the Australian Eastern Daylight Savings Time zone, 11 hours ahead of GMT (Greenwich Mean Time).

CURRENCY

The Australian Dollar (AUD) is the currency in Australia. Units are dollars and cents and exchange rates can be obtained from your bank or online. Most credit cards are accepted in Australia, including American Express, MasterCard and Visa.

GRATUITY

In Australia tipping is not required however you can leave a tip if you feel you have received exceptional service.

ELECTRICITY

The Australian electrical frequency is 230V 50Hz. While hotels may provide their guests with plug adapters on request, supplies are limited and you are recommended to bring your own.

INTERNET / BUSINESS LOUNGE

Most Australian hotels offer wired or wireless high-speed internet access in their guest rooms. Most hotels will also have a business centre with available computers and printers for their guests to use.

While onsite at the congress a complimentary wifi service is available to all delegates:

Network Name: ITS2016
Password: Melbourne

There is no other Business Lounge facility provided at the congress or at the Melbourne Convention and Exhibition Centre.

LANGUAGE

The official language of the 23rd World Congress on Intelligent Transport Systems is English.

INSURANCE

The Organising Committee of the 23rd World Congress on Intelligent Transport Systems is unable to accept responsibility for accidents or damage to the private property of participants. Please ensure that you do not leave portable and valuable pieces of equipment unattended anywhere, and that you make your own arrangements for health, travel, general and other insurance.

CLIMATE

October is Spring in Melbourne, with days and nights experiencing temperatures between 10 – 20 degrees Celsius (50 – 68 F); it is also the second wettest month, after May. The nights are quite cool and fog often occurs during the early morning, before clearing during the day. We recommend that you bring a jacket or scarf with you especially for attendance in the congress sessions rooms where air conditioning will be used.

It is commonly said, that Melbourne has 4 seasons in 1 day!

SMOKING

There is no smoking indoors or within enclosed public areas in Melbourne. The Melbourne Convention and Exhibition Centre is also a smoke free environment.

WATER

Melbourne has some of the highest quality drinking water in the world, and is safe for drinking.

SPEAKER LOUNGE (MR 111 + 112)

Sponsored by

A Speaker Lounge (Speaker Ready Room) is available for all moderators and speakers during the congress. This is a room specifically reserved for speakers to work on, load and practice their presentations or simply just to relax and de-stress prior to their presentation.

The Speaker Lounge (Speaker Ready Room) is located in Meeting Rooms 111 and 112 (level 1) at the Melbourne Convention and Exhibition Centre, is staffed by professional AV technicians and will be open during the following times:

Date	Time
Monday 10 October 2016	1200 – 1730 hours
Tuesday 11 October 2016	0800 – 1730 hours
Wednesday 12 October 2016	0800 – 1730 hours
Thursday 13 October 2016	0800 – 1730 hours
Friday 14 October 2016	0800 – 1630 hours

CONGRESS PROCEEDINGS

A printed copy of the congress proceedings is available for collection from the Registration Area for Full-Time and Day Registered delegates only, with a digital version also available by password.

PROFESSIONAL DEVELOPMENT HOURS

Attendance at the 23rd World Congress on Intelligent Transport Systems entitles you to earn up to 24 professional development hours. With over 24 possible units for you to acquire, your world congress attendance easily provides you with the opportunity to complete most, if not all of your annual PD requirement.

EMERGENCY – DIAL 000

In an emergency, dial 000 for fire, police, and ambulance.

The nearest public hospitals are:

Alfred Hospital
55 Commercial Road, Melbourne
T. +61 3 9076 2000
www.alfredhealth.org.au

Royal Melbourne Hospital
300 Grattan Street, Parkville
T. +61 3 9342 7000
www.thermh.org.au

FIRST AID ASSISTANCE

The congress will have professional first aid assistance onsite – see staff at the Registration Desk for information.

SOCIAL MEDIA

THE 2016 ITS WORLD CONGRESS MOBILE APP

NOW AVAILABLE TO DOWNLOAD

DON'T MISS OUT!

App will include the below and much more!

- Technical Tours and Demonstrations
- Activity Feed: post about your congress experience
- Session schedule
- Program and Speakers
- Social Functions
- Save bookmarked favorites to your own calendar
- Delegate to delegate messaging
- Indoor / outdoor mapping
- Local destination info: places to eat, what to see

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here

Visit the app helpdesk located near the congress registration desk area if you have any questions

CONGRESS FORMAT INFORMATION

OPENING AND CLOSING

The opening ceremony will be held on Monday 10 October in Plenary Hall 2, Melbourne Convention and Exhibition Centre. This ceremony will include the official opening of the ITS World Congress 2016 including entertainment, regional welcomes and award ceremonies. It is not to be missed!

The closing ceremony will take place directly after the final plenary session on Friday 14 October in Plenary Hall 3. This session will provide a summary of the Congress and ITS Australia will be "passing the globe" to hosts ITS America and ITS Canada.

SESSIONS

The following sessions are to be held at the Melbourne Convention and Exhibition Centre throughout the duration of the congress. A fully paid Full-Time or Day Delegate Registration type is required to attend these sessions.

● PLENARY SESSIONS:

Top level officials and industry leaders from across the globe will engage the audience in insightful presentations on future directions and challenges for Connected and Autonomous Vehicles, Smart Cities, Big Data for Transportation and Mobility as a Service developments.

SEE PAGE 31

● EXECUTIVE SESSIONS:

High-level industry executives, officials and academics from around the globe will share their expert knowledge and views on contentious ITS challenges facing government and industry. They seek to draw out the issues and the key strategies being engaged in different jurisdiction to enable industry innovations to be delivered to communities in collaboration with government.

SEE PAGE 33

● SPECIAL INTEREST SESSIONS:

Coordinated at the request of organisations or individuals, these sessions are designed as open style forums to foster discussions and debates on current hot topics.

SEE PAGE 38

● SCIENTIFIC/TECHNICAL/COMMERCIAL SESSIONS:

These sessions are comprised of presentations by international and local academics and industry experts and will include topics encompassing all technical, economic and societal aspects of ITS.

SEE PAGE 62

● INTERACTIVE SESSIONS:

Authors will present their papers on the Level 1 Foyer at the Melbourne Convention Centre through dynamic snapshot oral presentations followed by a walk through and discussion of e-posters. These sessions will provide a space for interactive discussion between the authors and their audience.

SEE PAGE 99

● INTERNATIONAL BENEFITS, EVALUATION AND COSTS (IBEC) SESSIONS:

IBEC sessions led by the IBEC working group created to provide an international forum for information exchange on best practices for measuring the costs and benefits of ITS technologies. These sessions will feature an international line up of presenters discussing best practice cost benefit analysis for road pricing, smart freight, green ITS and more.

SEE PAGE 118

● ASSOCIATED MEETINGS AND STAKEHOLDER WORKSHOPS

The congress has developed a tradition of providing open informal sessions and workshops at which new or contentious issues can be discussed by anyone with an interest in that topic. These sessions and workshops are arranged by associated organisations, groups and high level partners to the Congress.

Delegates with a Full-Time or Day Registration type are invited to attend these open meetings.

SEE PAGE 120
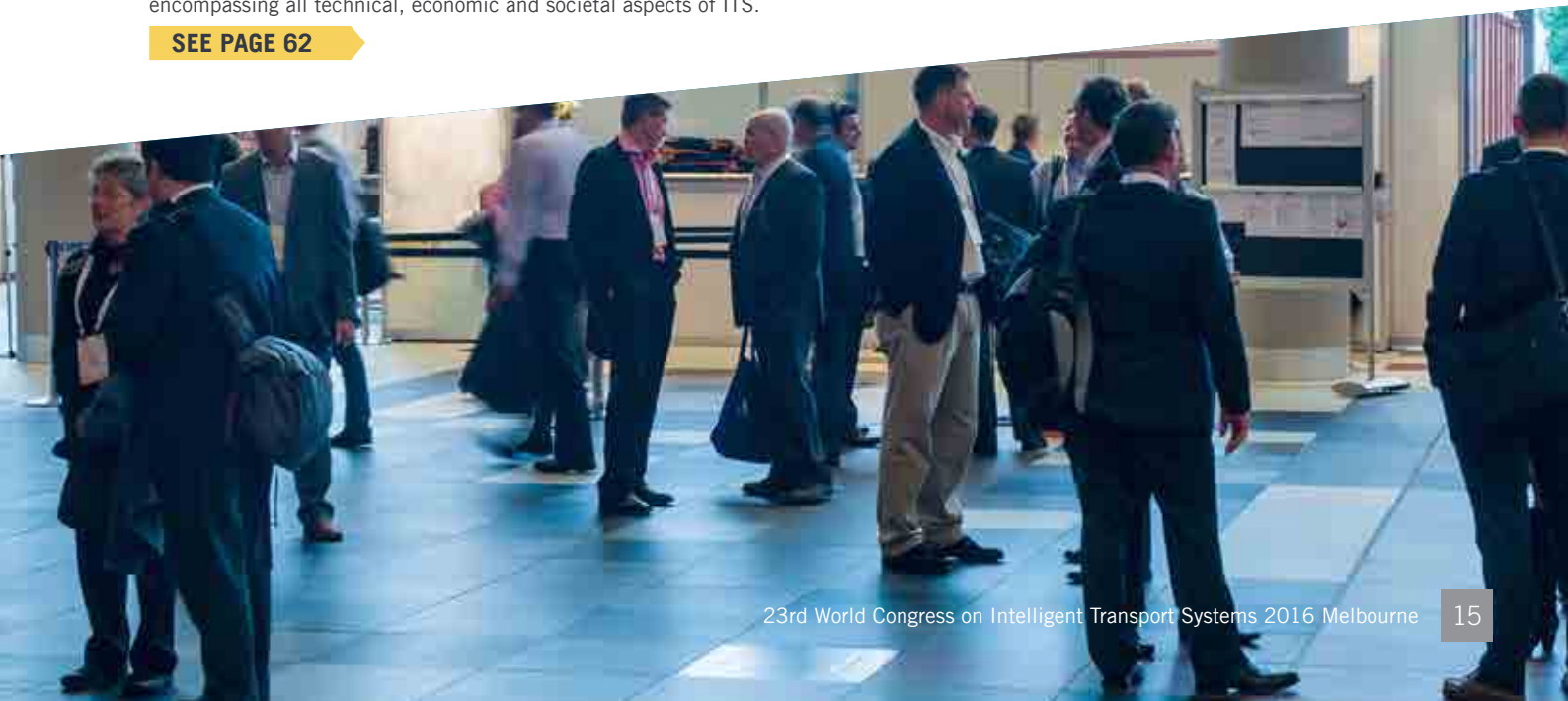
SPECIAL FEATURES
UNIVERSITY AND STUDENT ENGAGEMENT

ITS Australia is proud to continue the spotlight on the next generation of ITS professionals and to highlight career opportunities in this exciting and rapidly developing industry. The University and Student Engagement programs will showcase hundreds of students ranging from 10 year olds through to university students, providing a range of competitions, challenges and presentation opportunities throughout the entire congress week.

STUDENTS AUTOCAR PROGRAMMING CHALLENGE: SMART CITY PROJECT

Schools Program Supporter

STUDENTS: 12 – 17 YEAR OLDS

ITS Australia is engaging with students with an interest in Science, Technology, Engineering and Mathematics (STEM). With the SmartCity Project, teams of Victorian and Australian students are challenged to design, build a model of smart city consisting of intelligent vehicles, smart infrastructure and sustainable buildings. This follows on from an earlier challenge in 2015 to program an autonomous vehicle.

Student Showcase Display:

TUESDAY 11 OCTOBER 2016 – FRIDAY 14 OCTOBER 2016	EXHIBITION HALL FOYER

Presentation:

THURSDAY 13 OCTOBER 2016, 1030 – 1130 HOURS	EXHIBITION HALL AUDITORIUM

STUDENTS MODEL SOLAR CAR CHALLENGE

Students: 11 – 16 year olds

A car pursuit will be run on the grassed lawns outside the Melbourne Convention and Exhibition Centre as part of the 23rd World Congress on Intelligent Transport Systems. It is an opportunity for teams to test their cars on the pursuit track and have a look at some of what other teams have been working on. Also featured will be an indoor track showcasing alternate powering systems.

Student Showcase Display:

TUESDAY 11 OCTOBER 2016 – THURSDAY 13 OCTOBER 2016	OUTDOOR GRASSED AREA

Presentation:

	AND EXHIBITION HALL FOYER
THURSDAY 13 OCTOBER 2016, 1030 – 1130 HOURS	EXHIBITION HALL AUDITORIUM

YOUNG STUDENTS DESIGN YOUR FUTURE

Students: 10 – 13 year olds

Scienceworks will be running the Design Your Future program for school groups throughout 2016, in the lead up to the ITS World Congress. This hands-on workshop includes focused time in the Think Ahead exhibition exploring themes such as future cities and smart vehicles. Students will then design intelligent transport systems to revolutionise travel in an imaginary city. The top future transport projects will be showcased at the ITS World Congress, allowing students to present their work to their peers and experts in the field from around the world

Student Showcase Display:

TUESDAY 11 OCTOBER 2016 – FRIDAY 14 OCTOBER 2016	EXHIBITION HALL FOYER

Presentation:

THURSDAY 13 OCTOBER 2016, 1030 – 1130 HOURS	EXHIBITION HALL AUDITORIUM

STUDENT ESSAY COMPETITION

For: Australian University Students

The ITS Australia Student Essay Competition was designed to inspire Australian university students to take an active interest in the application of advanced technologies to improve transport systems, for chance to win travel and registration to the congress.

Winners will receive award recognition on stage during the congress.

2016 ASIA PACIFIC STUDENT EXCELLENCE SCHOLARSHIP PROGRAM

Supported by

For: University Students, Asia Pacific

The Scholarship Program has sponsored 10 students from participating ITS Asia Pacific Associations to attend the world congress. The Program was created to support and encourage student participation, not just attendance, at the World Congresses globally; to recognise and showcase student excellence from the Asia Pacific Region.

UNIVERSITY GRAND CHALLENGE: LANE LEVEL LOCALIZATION ON A 3D MAP

For: University Students Worldwide

In advance of the congress, Expressions of Interest were offered to universities world-wide to participate in this ITS 2016 University Grand Challenge. This is an opportunity to showcase contributions of academic research to one identified challenge in Intelligent Transportation Systems: Lane level localization on a 3D map. The best contributions to the University Grand Challenge will present their solutions at the congress.

15th ITS Asia-Pacific Forum
HONG KONG

Metropolitan Transportation
Infrastructure In Smart Cities

15TH ITS ASIA–PACIFIC FORUM & EXHIBITION

27-29 June 2017

Hong Kong Science Park, Shatin
Hong Kong SAR, China

http://www.ITSAP2017.com

For further information, please contact:
Conference Secretariat (c/o PC Tours and Travel)
302, Tower A, New Mandarin Plaza,
14 Science Museum Road, Kowloon, Hong Kong
Tel : +852 2734 3312 or +852 2734 3315
Fax : +852 2367-3375
Email : itshk@pctourshk.com

ITS HONG KONG

Organized by Intelligent Transportation Systems - Hong Kong
http://www.itshk.org

CALL FOR PAPERS • OPEN 8 AUGUST 2016 • DEADLINE 30 NOVEMBER 2016

SESSION TOPICS

AUTOMATED VEHICLES AND COOPERATIVE ITS

- **ES01:** Advancing the deployment of automated vehicles – the roles of government
- **ES02:** Advancing the deployment of automated vehicles – the roles of industry
- **SIS14:** Strategy of Practical Implementation of V-I Cooperative Systems for Traffic Accident Avoidance
- **SIS17:** Future mobility and Mobility as a Service, moving from ownership to access?
- **SIS19:** Lessons Learned in Deploying Cooperative Systems
- **SIS20:** Evaluation and standardisation of connected and automated road transport
- **SIS26:** Digital Infrastructure for Automated Vehicles: challenges and international collaboration
- **SIS28:** Utilizing probe data will create the future of ITS
- **SIS33:** Deployment challenges on automated truck platooning
- **SIS34:** Connect2Car: Connectivity and Autonomy – will there be a winner?
- **SIS35:** Radiocommunication technologies for automated driving
- **SIS38:** ITS Connectivity – A future with 5G and Satellite
- **SIS39:** Cooperative Systems - Stakeholder Contribution and Cooperation
- **SIS40:** Automated vehicle pilots: challenges for data collection and sharing
- **SIS42:** Smart Roads - Where to next?
- **SIS43:** Positioning Challenges for Automotive Safety Systems & Solutions
- **SIS47:** Automated Transport Systems: How far are we?
- **SIS56:** Image-recording-type driving event video recorder (DR) technology ensuring automated driving
- **SIS68:** Automated Vehicles: Kangaroo caught in the headlights

- **TP01:** Analyses of V2X Environments
- **TP02:** Communication Protocols and Methods
- **TP10:** Automated to Manual Driving Transition
- **TP11:** Cooperative ITS Applications
- **TP19:** Automated Vehicle Applications
- **TP20:** Deployment Scenarios for Automated Vehicle
- **TP28:** DSRC vs LTE -Comparative Analyses
- **TP29:** Map Technologies
- **TP35:** Human Machine Interface for Cooperative ITS
- **TP36:** Methodologies to Implement Cooperative ITS
- **TP44:** Improving Automated Vehicle Performance
- **TP45:** Pilots of Cooperative ITS
- **TP49:** Mobility as a Service
- **TP51:** Policies and Regulations for Automated Vehicle
- **TP58:** Positioning Technology and Techniques
- **TP59:** Securing the Cooperative Vehicle
- **TP65:** Public Acceptance of Automated Vehicle
- **TP66:** Testing and Certification of V2X
- **TP72:** Using Cooperative ITS to Enable Automated Vehicle
- **TP79:** V2I for Automated Driving
- **TP80:** Vehicle Localization and Navigation
- **TP87:** V2X Enabled Automated Vehicle Applications
- **TP88:** Automated Truck Platooning
- **SP01:** Innovative Solutions to Reduce Congestion
- **SP03:** Mapping and Routing
- **SP05:** Positioning and V2X Communication
- **SP07:** V2X Applications
- **SP22:** Human Factors

CHALLENGES AND OPPORTUNITIES OF BIG OPEN DATA

- **ES04:** Realising the promise of Big and Open Data – practical trade-offs between benefits, costs, security and privacy
- **SIS03:** Telematics and Big Data – How do we make big data meaningful?
- **SIS05:** Securing Your Digital Community in a Hostile Cyber World
- **SIS09:** Insights for Performance Measurement: 5 min to the last 5 years
- **SIS18:** Traffic sensing by various manners
- **SIS22:** Big Data, driving integrated transport services
- **SIS31:** Ensuring the long term viability of ITS decision-support tools
- **SIS41:** Innovation for livable cities utilizing autonomous driving technology and IoT Big Data
- **SIS49:** Procurement of Real-Time Traffic Data based on FCD
- **SIS53:** Data fusion of collecting public and private data during disaster mitigation
- **SIS57:** Smart Intelligent Traffic Intersections–Evaluating Challenges of Big Data for Smart Cities

- **SIS59:** Traffic State Estimation using Various Sensing Data
- **SIS71:** ITS Development and Whole Of Life Asset Management
- **TP03:** Applications and Visualization of Big Data in Public Transit, Car Sharing and Parking
- **TP12:** Better Traffic Management from Big Data
- **TP21:** Enhancing Safety through ITS -What is the data telling us?
- **TP30:** Enhancing the Driver Experience with Better Data
- **TP37:** How Traffic Big Data Fuels Traveler Information and Situational Awareness
- **TP46:** ITS Operations and Big Data
- **TP47:** Weather Information Presents Opportunities and Challenges for Big Data
- **TP53:** Mobile Sensing, Open Data and Data from Probes to Address Mobility Issues
- **TP60:** Platforms, the Cloud and Issues Related to Data Sharing and Exchange
- **TP67:** Safety and Security Issues for Big Data

- **TP74:** The Impact of Big Data on ETC and for Expressway Management
- **TP81:** Transit Riders and Bicycles, Enhancing their Experience using Data
- **TP89:** Using Big Data to Better Assess an Agency's Infrastructure and Assets
- **SP02:** Predictive Analytics
- **SP04:** Transport Data Issues

ENVIRONMENTAL SUSTAINABILITY

- **ES05:** The role of ITS in mitigating climate change and delivering green transport
- **SIS21:** Impact Assessment of Automated Driving Systems on Energy Consumption and CO2 Emissions
- **SIS55:** Global view on challenges in measuring CO2 reduction benefits from ITS
- **SIS70:** Advances on innovative EV Charging Technologies
- **TP41:** Environmental Sustainability -How Will Alternative Fuel Vehicles Contribute to a Long-Term Sustainable Outcome 1
- **TP50:** Environmental Sustainability -How Will Alternative Fuel Vehicles Contribute to a Long-Term Sustainable Outcome 2

- **TP57:** Environmental Sustainability -Initiative to Promote Sustainable Environmental Outcomes
- **TP64:** Environmental Sustainability -Use of Bicycles
- **TP71:** Environmental sustainability -Use of Existing Infrastructure and Systems to Drive Improved Environmental Outcomes
- **SP17:** Energy Efficiency
- **SP19:** Environmental Sustainability
- **CP01:** Environmental Sustainability and Logistics

FUTURE FREIGHT INCLUDING AVIATION AND MARITIME

- **ES06:** The use of connected vehicles and data exchange in Freight and Logistics, including aviation and maritime
- **SIS07:** How slow-moving government processes might respond to rapid transformative technologies
- **SIS08:** A whole-of-system system approach to aviation system modernisation
- **SIS50:** Innovative applications of ITS for road freight productivity and safety
- **SIS52:** C-ITS for optimizing transport and logistics of goods.
- **SIS64:** Knowledge and understanding of urban freight distribution and service trips

- **TP07:** Future Freight including Aviation and Maritime -The Use of Automated Vehicles on Long-Haul Freight Corridors
- **TP16:** Future Freight including Aviation and Maritime -The Use of ITS to Drive Freight Efficiency and Sustainability
- **TP25:** Future Freight including Aviation and Maritime - The Use of ITS to Optimise Freight Movements and Improve Efficiency and Productivity
- **TP34:** Opportunities and Challenges around Freight Management from an ITS Perspective

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MOBILE APPLICATIONS

- **ES07:** Using smart nomadic devices safely to enhance personal mobility
- **TP42:** Making Safer Corridors using the Digital Revolution
- **TP85:** Generating Travel Information via Bluetooth, ETC and Other Crowd Sourced Data
- **TP93:** Keeping Drivers Better Informed using Mobile Applications

POLICY, STANDARDS AND HARMONIZATION

ES08: Modifying regulatory frameworks to boost mobility innovations

SIS04: Regulation as an enabler for positive transportation change

SIS16: What is the role of government in the deployment of ITS?

SIS25: Accelerating ITS Deployment by Creating a More Diverse Workforce

SIS32: Tri-lateral Automation in Road Transportation WG: achievements and next challenges

SIS46: Certification of automated road vehicles: challenges ahead

SIS63: Real-world ITS Architectures: Benefits, Challenges and Solutions

SIS66: Start-ups disrupting mobility

SIS67: Targetting road trauma: how far can ITS take us towards zero?

SIS69: Accelerating ITS deployment: Industry and Policy compatibility

TP08: ITS Communications -Multiple Methods, Multiple Considerations

TP17: ITS Standards and Architecture -Guiding the Way to Successful Future Deployments

TP26: Policy, Standards and Harmonization -Government Role in Realizing Sustainable Outcomes 1

TP78: Policy, Standards and Harmonization -Government Role in Realizing Sustainable Outcomes 2

TP86: Policy, Standards and Harmonization -ITS Policy Roadmap, Government and Industry Perspective

SMART CITIES AND NEW URBAN MOBILITY

Topic sponsored by traffic technologies. ltd

ES09: Capitalising on the Internet of Things

ES10: Mobility as a service

ES11: Integrating physical and digital transport infrastructure to create smart cities

ES12: Smart and automated public transport enabling livable cities and improved mobility

SIS01: Keeping cities liveable, using ITS to ensure service levels meet customer expectations

SIS06: The role of ITS in a collaborative economy: towards user-oriented pricing and the gamification of mobility

SIS11: Visualize a truly multimodal managed mobility system for your Smart City

SIS12: Using traffic signal priority to maximise safety and minimise congestion for all

SIS13: ITS and the Digital City - Disruptive Technologies and the New Reality

SIS23: Parking - a driver for change?

SIS24: Signal optimisation for connected vehicles, must we sacrifice adaptivity to achieve predictability?

SIS27: Novel C-ITS applications and mobility services for Smart Cities

SIS29: Roles of data analytics and transportation modelling for fast-changing urban infrastructure

SIS30: Mobility as a Service - user centric integrated transport services

SIS36: Enabling interaction between traffic management and mobility services

SIS37: Location Intelligence, ITS and Smart Cities

SIS44: Changes in Modeling for the New Mobility: Planning Challenges for Future Transportation

SIS45: Harnessing the Economic, Societal and Environmental Benefits of Road User Charging

SIS48: Integrated Payment = Improved Mobility

SIS51: Data-Driven: Connecting Cars for Smarter Cities

SIS54: Management of mobility demand through ITS: the real challenge for Smart Cities

SIS58: Traveller Information - Meeting Increasing Customer Expectations

SIS60: Managed Motorways - Adapting the Melbourne Concept for U.S. Applications

SIS61: Pro-active Network and Incident Management

SIS62: IoT and Connected Automation: disruptive trends in transport

SIS65: Traffic Signal Control Systems for 4th Generation

SIS73: ITS for Global Mega Events

TP04: Traffic Signal Control 1

TP05: Better Efficiency with Traveler Information

TP06: Communications Technology

TP13: Traffic Signal Control 2 and Integrated Payment Systems

TP14: Integrated Payment Systems

TP15: Efficient Urban Transport Systems

TP22: Transportation Management Centers

TP23: Ensuring Safety and Efficiency for Vulnerable Road User

TP24: Improving Arterial with Better Data/Algorithm

TP31: Urban Mobility

TP32: Improving Public Transport

TP33: Incident Management

TP38: Urban Public Transport

TP39: Integrated Traffic Management

TP40: ITS for Demand Response Transport

TP48: ITS Planning

TP55: Connected Mobility

TP56: Modelling Methodologies 1

TP62: Modelling Methodologies 2

TP63: Motorway Management 2

TP69: Road User Charging 1

TP70: Parking

TP76: Road User Charging 2

TP77: Roadside ITS Infrastructure

TP83: Road User Charging 3

TP84: Network Travel Management

TP91: Road User Charging 4

TP92: Safety through ITS and Queue Management

- **SP06:** Facilities and Traffic Modelling
- **SP08:** Evaluation of Traffic Signals
- **SP10:** Impact of Technologies on Travel Demand
- **SP12:** Integrated Transport System
- **SP14:** Motorway Management 1
- **SP16:** Multi-modal Transport
- **SP18:** Public Transport Analysis

- **SP20:** Traffic Simulations
- **SP21:** Transport Modelling
- **CP02:** Sensing and Human Machine Interface
- **CP03:** Mobility as a Service and Connected ITS
- **CP06:** Public Transport
- **CP07:** Tolling and ePayment
- **CP08:** Traffic Management

VEHICLE AND NETWORK SAFETY

Topic sponsored by

TAC TRANSPORT ACCIDENT COMMISSION

- **ES03:** Realising the safety and mobility benefits of automated vehicles and cooperative ITS systems
  Session sponsored by
  EastLink Time better spent.

- **SIS15:** Advanced technologies in operation and maintenance of ITS facilities
- **SIS72:** Exploiting cloud and big data technologies for ADAS and Digital Cartography
- **TP09:** Preventative and Active Safety Systems
- **TP18:** Safety of Vulnerable Road Users
- **TP27:** Speed Advice and Monitoring
- **TP43:** Technology Innovation and Development

- **TP54:** Advanced Driver Assistance and Support Systems
- **TP61:** Human Factors and Driver Behaviour 1
- **TP68:** Human Factors and Driver Behaviour 2
- **TP75:** Maximizing Safe Network Operation
- **TP82:** Optimal Network Management 1
- **TP90:** Optimal Network Management 2
- **SP09:** Collision Avoidance
- **SP11:** Network Safety
- **SP13:** Road Safety
- **SP15:** Vehicle Sensing and Bicycle Recognition
- **CP04:** Safety 1
- **CP05:** Safety 2

KEYNOTE SPEAKERS

SCOTT CHARLTON
Chief Executive Officer, Transurban, Australia

Opening Ceremony

| MONDAY 10 OCTOBER 2016, 1600 – 1730 HOURS | PLENARY HALL 2 |

In July 2012 Scott joined Transurban Group from Lend Lease, where he was Group Chief Operating Officer. Prior to this, Scott held several senior appointments across a range of infrastructure and financial institutions, including as CFO of Leighton Holdings (2007-2009) and as a Managing Director of Deutsche Bank (1995-2003). He is Deputy Chairman of Infrastructure Partnerships Australia, and a member of the Monash Industry Council of Advisors and the Business Council of Australia.

GAVIN SMITH
President, Robert Bosch (Australia) Pty Ltd, Australia

Plenary 1: Automated and Connected Vehicles

| TUESDAY 11 OCTOBER 2016, 0900 – 1030 HOURS | PLENARY HALL 3 |

Gavin Smith joined Bosch Australia in 1990 following 10 years in various Information Technology roles at a number of well-known Multinationals in Australia and New Zealand. After a successful two years in Frankfurt as part of Bosch's Original Equipment Sales team, Gavin held a number of senior leadership positions in the company's Australian Automotive Components divisions including Regional President of the Powertrain Division from 2003 and Regional President of the Vehicle Safety Systems Division from 2008. In 2011, Gavin was promoted to the positon of President and Chairman of the local subsidiary Robert Bosch Australia. Gavin holds a Bachelor of Commerce degree from the University of Otago in New Zealand, and an MBA from Monash University in Melbourne. In addition to his Bosch responsibilities, Gavin is a councillor for the Australian Industry Group, and holds board positions with Stillwell Motor Group, FMP and the German-Australian Chamber of Commerce.

JACK DANGERMOND
President, Esri, United States

Plenary 2: Smart Cities

| WEDNESDAY 12 OCTOBER 2016, 0900 – 1030 HOURS | PLENARY HALL 3 |

Jack Dangermond is the co-founder and president of Esri. A geographer with deep roots in landscape architecture, Jack productised GIS after a decade of research and development as a regional planning consultant in his hometown of Redlands, California. Today, Esri dominates the geospatial technology industry and is the 4th largest privately held software company in the world.

The son of Dutch immigrants, Jack received an early education in botany and business at his parents' landscape supply store, Dangermond's Nursery. He credits his experience there for igniting his passion for business and landscape architecture.

After graduating from Harvard in 1969, Jack and his wife Laura used $1,100 in savings to enter the urban planning business. A consulting group called Environmental Systems Research Institute (later shortened to "Esri"), the Dangermond's first business endeavor assisted regional planning projects in the US and Japan using digital mapping and spatial analysis methods that were part of Jack's formal training at Harvard.

In 1981, Jack directed the design of the world's first commercially available GIS software product, ARC/INFO, the precursor to Esri's industry-standard geospatial platform ArcGIS. By 1999, Jack had guided Esri from a small research group of a dozen people to a global organisation of 3,500 employees. Today, Esri has more than 350,000 customers with 1 million users in 200 countries.

Jack has authored hundreds of papers on GIS relating to cartography, photogrammetry, computer science, and environmental science. In 2015, Jack and Laura received the Audubon Medal from the National Audubon Society in recognition of their conservation innovation and support for research institutions, schools, and non-profit organisations.

MICHELE HUEY
Group General Manager Strategy, Transurban, Australia

Plenary 3: Connectivity and Big Data - Challenges in capturing, securing and connecting big data

| THURSDAY 13 OCTOBER 2016, 0900 – 1030 HOURS | PLENARY HALL 3 |

In her current role as the Group General Manager, Strategy, Michele is responsible for Transurban's long-term strategy, sustainability and network planning and traffic modelling to support Transurban's portfolio of motorway networks across Australia and United States. Prior to joining Transurban in 2015, Michele was the Group Head of Procurement and Group Head of Transformation at Lendlease. In these roles, Michele led a transformation program to support the organisation's global strategy and established the group's procurement function. Michele's experience includes more than ten years in management consulting, working with organisations across the oil and gas, resources, industrial and financial services sectors on strategy development, operational improvement programs, and organisation transformations.

JEROEN WEIMAR
Chief Executive Officer, PTV, Australia

Plenary 4: Mobility as a Service

| FRIDAY 14 OCTOBER 2016, 1430 – 1530 HOURS | PLENARY HALL 3 |

Jeroen first joined Public Transport Victoria in January 2015 as Executive Director, Performance & Contract Management. In this role he was responsible for managing the franchise agreements and operating contracts for Metro, Yarra Trams, V/Line and all bus contracts across Melbourne and regional Victoria. Jeroen also led PTV's work on the re-negotiation, extension and tendering of new transport operation contracts.

Prior to joining PTV, Jeroen was the Chief Operating Officer, UK Bus at First Group plc, where he was responsible for the operation of over 6,000 buses and 17,000 staff operating across the UK and the turnaround of over 40 regional bus businesses. With over 20 years' experience in the transportation sector, Jeroen has also worked at Serco Group plc as the MD for UK Transport and was the Chief Operating Officer, Surface Transport at Transport for London.

With over 20 years of experience in the transport sphere, Jeroen further bolsters PTV's profile as a highly-capable agency, attracting excellent staff who are well-placed to meet PTV's challenges, and reach our organisational goals.

Jeroen was appointed Acting Chief Executive Officer in January 2016.

SCHEDULE AT A GLANCE

As at August 2016 - Subject to change

Time	SAT 8 Oct	SUN 9 Oct	MONDAY 10 October 2016	TUESDAY 11 October 2016	WEDNESDAY 12 October 2016
0700			Registration (7am - 8pm)		
0730					
0800				Registration (8am - 7pm) / Speaker Ready Room (8am - 5.30pm)	Registration (8am - 7pm) / Speaker Ready Room (8am - 5.30pm)
0830			Exhibitor / Schools Move In (7am - 2pm); Australian Automotive Research Centre Technical tour (8.30am - 3pm)	Exhibition (8.30am - 7pm); Demonstrations: Bus Schedule (8.30am - 6.30pm); Technical tours (8.30am - 5pm)	
0900				Plenary Session 1 (9 - 10.30am)	Plenary Session 2 (9 - 10.30am)
0930					
1000			Speaker Ready Room (10am - 5.30pm)	Animals 10-11am	
1030				Schools programs (10.30am - 2pm); Break	Break
1100					Schools programs (10.30am - 2pm); Congress sessions
1130				Congress sessions	
1200	New Zealand Technical tour				
1230				Lunch (12.30-2pm)	Lunch (12.30-2pm)
1300					
1330					
1400	Hackathon	Hackathon	SolarCar Move In (1.30-4pm)		
1430			Registration (2.30pm - 8pm)	Congress sessions	Congress sessions
1500					
1530				Animals 3-4pm; Break	Break
1600					Congress sessions
1630			Opening Ceremony (4pm - 5.30pm)	Congress sessions	
1700					
1730					
1800			Exhibition; Welcome Reception and official Exhibition Opening (5.30pm - 8.30pm)		
1830					PUBLIC Melbourne Conversation #1 (6pm - 7.30pm)
1900					
1930					
2000					
2030					
2100					
2130					
2200					
2230					
2300					
2330					

	THURSDAY 13 October 2016	FRIDAY 14 October 2016	MON 17 Oct	TUE 18

THURSDAY 13 October 2016

Animals 10-11am

Exhibition (8.30am - 7pm)

Demonstrations: Bus Schedule (8.30am - 6.30pm)

Technical tours (8.30am - 5pm)

Animals 3-4pm

Registration (8am - 6pm)

Speaker Ready Room (8am - 5.30pm)

Schools programs (10.30am - 2pm)

Plenary Session 3 (9 - 10.30am)

Break

Congress sessions

Melb Conversation #2

ITS Diversity Rec'ptn

Lunch (12.30-2pm)

Congress sessions

Break

Congress sessions

Animals 10-11am

Exhibition (8.30am - 6pm)

Demonstrations: Bus Schedule (8.30am - 6.30pm)

Technical tours (8.30am - 5pm)

Animals 3-4pm

Gala Dinner (6.30pm - midnight)

FRIDAY 14 October 2016

Registration (8am - 4.30pm)

Speaker Ready Room (8am - 4.30pm)

Schools programs (10am - 1pm)

Congress sessions

Break

Congress sessions

Melb Conversation #3

Lunch (12-1pm)

Congress sessions

Plenary Session 4 (2.30 - 3.30pm)

Closing Ceremony (3.45 - 4.45pm)

Demonstrations: Bus Schedule (8am - 3.30pm)

Technical tours (8.30am - 12.30pm)

Exhibition (8am - 2pm)

Animals 10-11am

Exhibitor Move Out

Exhibition Hall Dismantle

ITS Australia Awards Presentation Night Dinner / WC BOD Closing Dinner (6.30pm - 11pm)

MON 17 Oct

SYDNEY NSW Technical tour

BRISBANE QLD - Technical tour

TUE 18

BRISBANE QLD - Technical tour (optional Day 2)

SESSIONS AT A GLANCE

As at August 2016 - Subject to change

Sessions

- Plenary sessions
- Executive sessions
- Special Interest sessions
- Technical/Scientific/Commercial sessions
- Interactive sessions
- International Benefits, Evaluation and Costs (IBEC) sessions
- Associated Meetings and Stakeholder Workshops

SUNDAY 9 OCTOBER

0900 - 1700	**Associated Meeting** Federation of European Highways and Research Laboratories (FEHRL) General Assembly *Clarendon Room A*

MONDAY 10 OCTOBER

0730 - 1030	**Associated Meeting** ITS Safety and Sustainability Focus Group *MR 105*
0800 - 1200	**Associated Meeting** AASHTO International Day *MR 109*
0900 - 1530	**Associated Meeting** FOT-Net Data International Workshop: Data sharing and re-use in Field Operational Tests *MR 103*
1100 - 1230	**Associated Meeting** Committee for Melbourne *MR 105*
1245 - 1545	**IBEC AGM (1515 – 1545 hours)** International Benefits Evaluation Community (IBEC) workshop on connected and automated mobility *MR 205*
1330 - 1530	**High Level Policy Roundtable** *MR 219/220*
1600 - 1730	**Opening Ceremony** *Plenary Hall 2*

TUESDAY 11 OCTOBER

0900 - 1030	**Plenary Session I** Automated and Connected Vehicles *Plenary Hall 3*										
1030 - 1100	Break										
1100 - 1230	**ES01** Advancing the deployment of automated vehicles - the roles of government *Plenary Hall 3*	**Stakeholder Workshop** The future of transport - will we use carrot, stick or machine to ensure good behaviour? *MR 204*	**SIS01** Keeping cities liveable, using ITS to ensure service levels meet customer expectations *MR 210*	**SIS11** Visualize a truly multimodal managed mobility system for your Smart City *MR 211*	**SIS03** Telematics and Big Data – How do we make big data meaningful? *MR 212*	**SIS04** Regulation as an enabler for positive transportation change *MR 213*	**SIS05** Securing Your Digital Community in a Hostile Cyber World *MR 219*	**SIS07** How slow-moving government processes might respond to rapid transformative technologies *MR 220*	**TP01** Analyses of V2X Environments *MR 207*	**TP02** Communication Protocols and Methods *MR 208*	**TP03** Applications and Visualization of Big Data in Public Transit, Car Sharing and Parking *MR 209*
1230 - 1400	Break										
1400 - 1530	**ES02** Advancing the deployment of automated vehicles - the roles of industry *Plenary Hall 3*	**IBEC session 1:** Developments in Benefits, Evaluation and Costs of Road Charging *MR 204*	**SIS06** The role of ITS in a collaborative economy: Towards user-orientated pricing and the gamification of mobility *MR 210*	**SIS28** Utilizing probe data will create the future of ITS *MR 211*	**SIS08** A whole-of-system system approach to aviation system modernisation *MR 212*	**SIS09** Insights for Performance Measurement: 5 min to the last 5 years *MR 213*		**SIS13** ITS and the Digital City - Disruptive Technologies and the New Reality *MR 220*	**TP10** Automated to Manual Driving Transition *MR 207*	**TP11** Cooperative ITS Applications *MR 208*	**TP12** Better Traffic Management from Big Data *MR 209*
1530 - 1600	Break										
1600 - 1730	**ES03** Realising the safety and mobility benefits of automated vehicles and cooperative ITS systems *Plenary Hall 3*	**IBEC session 2:** Potential benefits of Mobility as a Service and what is already proven? *MR 204*	**SIS12** Using traffic signal priority to maximise safety and minimise congestion for all *MR 210*		**SIS14** Strategy of Practical Implementation of V-I Cooperative Systems for Traffic Accident Avoidance *MR 212*	**SIS15** Advanced technologies in operation and maintenance of ITS facilities *MR 213*		**Stakeholder Workshop** Transport analytics from the trenches, uncovering insight from across the industry *MR 220*	**TP19** Automated Vehicle Applications *MR 207*	**TP20** Deployment Scenarios for Automated Vehicle *MR 208*	**TP21** Enhancing Safety through ITS -What is the data telling us? *MR 209*

WEDNESDAY 12 OCTOBER

0700 - 1000	**Associated Meeting** Port of the Future *MR 109*										
0900 - 1030	**Plenary Session II** Smart Cities *Plenary Hall 3*										
1030 - 1100	Break										
1100 - 1230	**ES04** Realising the promise of Big and Open Data - practical trade-offs between benefits, costs, security and privacy *Plenary Hall 3*	**SIS18** Traffic sensing by various manners *MR 204*	**SIS19** Lessons Learned in Deploying Cooperative Systems *MR 210*	**SIS16** What is the role of government in the deployment of ITS? *MR 211*	**SIS20** Evaluation and standardisation of connected and automated road transport *MR 212*	**SIS21** Impact Assessment of Automated Driving Systems on Energy Consumption and CO2 Emissions *MR 213*	**SIS22** Big Data, driving integrated transport services *MR 219*	**SIS23** Parking - a driver for change? *MR 220*	**TP28** DSRC vs LTE -Comparative Analyses *MR 207*	**TP29** Map Technologies *MR 208*	**TP30** Enhancing the Driver Experience with Better Data *MR 209*
1230 - 1400	Break										
1400 - 1530	**ES05** The role of ITS in mitigating climate change and delivering green transport *Plenary Hall 3*	**SIS24** Signal optimisation for connected vehicles, must we sacrifice adaptivity to achieve predictability? *MR 204*	**SIS25** Accelerating ITS Deployment by Creating a More Diverse Workforce *MR 210*	**SIS26** Digital Infrastructure for Automated Vehicles: challenges and international collaboration *MR 211*	**SIS27** Novel C-ITS applications and mobility services for Smart Cities *MR 212*	**Stakeholder Workshop** Challenges and opportunities facing the deployment of automated vehicles *MR 213*	**SIS29** Roles of data analytics and transportation modelling for fast-changing urban infrastructure *MR 219*	**SIS30** Mobility as a Service - user centric integrated transport services *MR 220*	**TP35** Human Machine Interface for Cooperative ITS *MR 207*	**TP36** Methodologies to Implement Cooperative ITS *MR 208*	**TP37** How Traffic Big Data Fuels Traveler Information and Situational Awareness *MR 209*
1530 - 1600	Break										

Session topics

- **Automated Vehicles and Cooperative ITS** — *Topic sponsored by VicRoads*
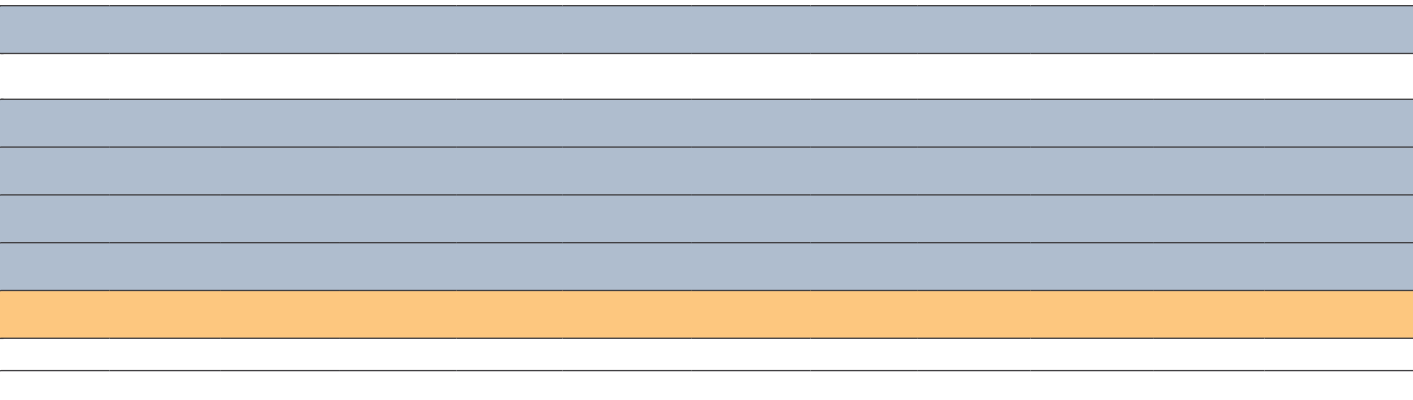- **Challenges and Opportunities of Big Open Data** — *Topic sponsored by RACV / Intelematics*
- **Environmental Sustainability**
- **Future Freight including Aviation and Maritime**
- **Mobile Applications**
- **Policy, Standards and Harmonisation**
- **Smart Cities and New Urban Mobility** — *Topic sponsored by Traffic Technologies Ltd.*
- **Vehicle Network and Safety** — *Topic sponsored by Transport Accident Commission*

TP04 Traffic Signal Control 1	TP05 Better Efficiency with Traveler Information	TP06 Communications Technology	SP01 Innovative Solutions to Reduce Congestion	SP02 Predictive Analytics	TP07 Future Freight including Aviation and Maritime -The Use of Automated Vehicles on Long-Haul Freight Corridors	TP08 ITS Communications -Multiple Methods, Multiple Considerations	TP09 Preventative and Active Safety Systems	IS01 ITS Technical Interactive Session 1	Associated Meeting Spatial Workshop: Location technologies for ITS	Stakeholder Workshop Unlocking the insights in your Big Data with location-based analytics	Navigating the threat to car companies posed by the "Big 5" New Mobility players': How can OEMs transform themselves to not just survive, but to thrive in the future (1200 - 1245 hours)
MR 216	MR 217	MR 218	MR 104	MR 103	MR 102	MR 101	MR 203	*Level 1 Foyer*	MR 109	MR 105	*Exhibition Auditorium*
											Lear Corporation Session (1245 - 1330 hours) Getting ready for 2035 - One Network Traffic Management (1330 - 1400 hours) *Exhibition Auditorium*
TP13 Traffic Signal Control 2	TP14 Integrated payment systems	TP15 Efficient Urban Transport Systems	SP03 Mapping and Routing	SP04 Transport Data Issues	TP16 Future Freight including Aviation and Maritime -The Use of ITS to Drive Freight Efficiency and Sustainability	TP17 ITS Standards and Architecture -Guiding the Way to Successful Future Deployments	TP18 Safety of Vulnerable Road Users	IS02 ITS Scientific Interactive Session 2	Associated Meeting User-Centric Transport Using ITS		
MR 216	MR 217	MR 218	MR 104	MR 103	MR 102	MR 101	MR 203	*Level 1 Foyer*	MR 109		
TP22 Transportation Management Centers	TP23 Ensuring Safety and Efficiency for Vulnerable Road User	TP24 Improving Arterial with Better Data/ Algorithm	SP05 Positioning and V2X Communication	SP06 Facilities and Traffic Modelling	TP25 Future Freight including Aviation and Maritime - The Use of ITS to Optimise Freight Movements and Improve Efficiency and Productivity	TP26 Policy, Standards and Harmonization -Government Role in Realizing Sustainable Outcomes 1	TP27 Speed Advice and Monitoring		Associated Meeting ITS Development and Deployment in Developing Countries in the Asian Region	Stakeholder Workshop Real World Application of ITS Standards	
MR 216	MR 217	MR 218	MR 104	MR 103	MR 102	MR 101	MR 203		MR 109	MR 105	

											MaaS - The Future Of Transport? *Exhibition Auditorium*
TP31 Urban Mobility	TP32 Improving Public Transport	TP33 Incident Management	SP07 V2X Applications	SP08 Evaluation of Traffic Signals	TP34 Opportunities and Challenges around Freight Management from an ITS Perspective	CP01 Environmental Sustainability and Logistics			Associated Meeting National Co-Ordination in Australia for the Deployment and Management of Automated Vehicles		
MR 216	MR 217	MR 218	MR 104	MR 103	MR 102	MR 101			MR 109		
											Optimising Public Transport: A Data Driven Approach (1300 - 1330 hours) TeamArrow – The Road to Prohelion (1330 - 1400 hours) *Exhibition Auditorium*
TP38 Urban Public Transport	TP39 Integrated Traffic Management	TP40 ITS for Demand Response Transport	SP09 Collision Avoidance	SP10 Impact of Technologies on Travel Demand	TP41 Environmental Sustainability -How Will Alternative Fuel Vehicles Contribute to a Long-Term Sustainable Outcome 1	TP42 Making Safer Corridors using the Digital Revolution	TP43 Technology Innovation and Development	Grand Challenges	Stakeholder Workshop How will Artificial Intelligence and Cognitive impact Urban Mobility	Stakeholder Workshop Quality of Traffic Information	
MR 216	MR 217	MR 218	MR 104	MR 103	MR 102	MR 101	MR 203	*Level 1 Foyer*	MR 109	MR 105	

Time	Plenary Hall 3	MR 204	MR 210	MR 211	MR 212	MR 213	MR 219	MR 220	MR 207	MR 208	MR 209
1600 - 1730	**ES06** The use of connected vehicles and data exchange in Freight and Logistics, including aviation and maritime	**SIS31** Ensuring the long term viability of ITS decision-support tools	**SIS32** Tri-lateral Automation in Road Transportation WG: achievements and next challenges	**SIS33** Deployment challenges on automated truck platooning	**SIS34** Connect2Car: Connectivity and Autonomy – will there be a winner?	**SIS35** Radio-communication technologies for automated driving	**SIS36** Enabling interaction between traffic management and mobility services	**SIS37** Location Intelligence, ITS and Smart Cities	**TP44** Improving Automated Vehicle Performance	**TP45** Pilots of Cooperative ITS	**TP46** ITS Operations and Big Data

1730 - 1930 Melbourne Conversation I
Driverless Cars and Road Safety: What will this mean for you?
Clarendon Auditorium, Melbourne Convention and Exhibition Centre

THURSDAY 13 OCTOBER

0900 - 1030 Plenary Session III
Connectivity and Big Data - Challenges in capturing, securing and connecting big data
Plenary Hall 3

1030 - 1100 Break

Time	Plenary Hall 3	MR 204	MR 210	MR 211	MR 212	MR 213	MR 219	MR 220	MR 207	MR 208	MR 209
1100 - 1230	**ES07** Using smart nomadic devices safely to enhance personal mobility	**SIS38** ITS Connectivity – A future with 5G and Satellite	**SIS39** Cooperative Systems - Stakeholder Contribution and Cooperation	**SIS40** Automated vehicle pilots: challenges for data collection and sharing	**SIS41** Innovation for livable cities utilizing autonomous driving technology and IoT Big Data	**SIS42** Smart Roads - Where to next?	**SIS43** Positioning Challenges for Automotive Safety Systems & Solutions	**SIS44** Changes in Modeling for the New Mobility: Planning Challenges for Future Transportation	**TP51** Policies and Regulations for Automated Vehicle		**TP53** Mobile Sensing, Open Data and Data from Probes to Address Mobility Issues

1230 - 1400 ITS Diversity Presentations
ITSA exhibition stand

1230 - 1400 Break

Time	Plenary Hall 3	MR 204	MR 210	MR 211	MR 212	MR 213	MR 219	MR 220	MR 207	MR 208	MR 209
1400 - 1530	**ES08** Modifying regulatory frameworks to boost mobility innovations	**SIS45** Harnessing the Economic, Societal and Environmental Benefits of Road User Charging	**SIS46** Certification of automated road vehicles: challenges ahead	**SIS47** Automated Transport Systems: How far are we?	**SIS48** Integrated Payment = Improved Mobility	**SIS49** Procurement of Real-Time Traffic Data based on FCD	**SIS50** Innovative applications of ITS for road freight productivity and safety	**SIS51** Data-Driven: Connecting Cars for Smarter Cities	**TP58** Positioning Technology and Techniques	**TP59** Securing the Cooperative Vehicle	**TP60** Platforms, the Cloud and Issues Related to Data Sharing and Exchange

1530 - 1600 Break

Time	Plenary Hall 3	MR 204	MR 210	MR 211	MR 212	MR 213	MR 219	MR 220	MR 207	MR 208	MR 209
1600 - 1730	**ES09** Capitilising on the internet of things	**SIS52** C-ITS for optimizing transport and logistics of goods	**SIS74** Future Managed Motorway Infrastructure in the context of Digital Disruption	**SIS53** Data fusion of collecting public and private data during disaster mitigation	**SIS54** Management of mobility demand through ITS: the real challenge for Smart Cities	**SIS55** Global view on challenges in measuring CO2 reduction benefits from ITS	**SIS56** Image-recording-type driving event video recorder (DR) technology ensuring automated driving	**SIS57** Smart Intelligent Traffic Intersections– Evaluating Challenges of Big Data for Smart Cities	**TP65** Public Acceptance of Automated Vehicle	**TP66** Testing and Certification of V2X	**TP67** Safety and Security Issues for Big Data

FRIDAY 14 OCTOBER

Time	Plenary Hall 3	MR 204	MR 210	MR 211	MR 212	MR 213	MR 219	MR 220	MR 207	MR 208	MR 209
0830 - 1000	**ES10** Mobility as a service	**Special Session of ITS-WC 2016 Melbourne:** Cross-linking APEC Internet of Vehicles Symposium and MMC 2016 Exhibition	**SIS58** Traveller Information - Meeting Increasing Customer Expectations	**SIS59** Traffic State Estimation using Various Sensing Data	**SIS60** Managed Motorways - Adapting the Melbourne Concept for U.S. Applications	**SIS61** Pro-active Network and Incident Management	**SIS62** IoT, the technology trend disruptive technologies in transport	**SIS63** Real-world ITS Architectures: Benefits, Challenges and Solutions	**TP72** Using Cooperative ITS to Enable Automated Vehicle		**TP74** The Impact of Big Data on ETC and for Expressway Management

1000 - 1030 Break

Time	Plenary Hall 3	MR 204	MR 210	MR 211	MR 212	MR 213	MR 219	MR 220	MR 207	MR 208	MR 209
1030 - 1200	**ES11** Integrating physical and digital transport infrastructure to create smart cities		**SIS65** Traffic Signal Control Systems for 4th Generation	**SIS66** Start-ups disrupting mobility	**SIS67** Targetting road trauma: how far can ITS take us towards zero?			**Road Charging Roadmap** - Taking the first steps. Part 1	**TP79** V2I for Automated Driving	**TP80** Vehicle Localization and Navigation	**TP81** Transit Riders and Bicycles, Enhancing their Experience using Data

1200 - 1300 Break

Time	Plenary Hall 3	MR 204	MR 210	MR 211	MR 212	MR 213	MR 219	MR 220	MR 207	MR 208	MR 209
1300 - 1430	**ES12** Smart and automated public transport enabling livable cities and improved mobility	**SIS68** Automated Vehicles: Kangaroo caught in the headlights	**SIS69** Accelerating ITS deployment: Industry and Policy compatibility	**SIS70** Advances on innovative EV Charging Technologies	**SIS71** ITS Development and Whole Of Life Asset Management	**SIS72** Exploiting cloud and big data technologies for ADAS and Digital Cartography	**SIS73** ITS for Global Mega Events	**Road Charging Roadmap** - Taking the first steps. Part 2	**TP87** V2X Enabled Automated Vehicle Applications	**TP88** Automated Truck Platooning	**TP89** Using Big Data to Better Assess an Agency's Infrastructure and Assets

1430 - 1530 Plenary session IV
Mobility as a service
Plenary 3

1545 - 1645 Closing Ceremony
Plenary 3

Session topics

Col 1	Col 2	Col 3	Col 4	Col 5	Col 6	Col 7	Col 8	Col 9	Col 10	Col 11	Exhibition Auditorium
TP47 Weather Information Presents Opportunities and Challenges for Big Data *MR 216*	**TP48** ITS Planning *MR 217*	**TP49** Mobility as a Service *MR 218*	**SP11** Network Safety *MR 104*	**SP12** Integrated Transport System *MR 103*	**TP50** Environmental Sustainability -How Will Alternative Fuel Vehicles Contribute to a Long-Term Sustainable Outcome 2 *MR 102*	**CP02** Sensing and Human Machine Interface *MR 101*	**SIS64** Knowledge and understanding of urban freight distribution and service trips *MR 203*			**Stakeholder Workshop** Safety challenges for automated vehicles *MR 105*	
											School students presentations: Autocar programming challenge, Solar car challenge, Young students design your future (1030 - 1130 hours) *Exhibition Auditorium*
TP54 Advanced Driver Assistance and Support Systems *MR 216*	**TP55** Connected Mobility *MR 217*	**TP56** Modelling Methodologies 1 *MR 218*	**SP13** Road Safety *MR 104*	**SP14** Motorway Management 1 *MR 103*	**TP57** Environmental Sustainability -Initiative to Promote Sustainable Environmental Outcomes *MR 102*	**CP03** Mobility as a Service and Connected ITS *MR 101*	**IBEC Committee Meeting** *MR 203*	**ISO3** ITS Technical Interactive Session 3 *Level 1 Foyer*		**Stakeholder Workshop** Public Transport Victoria Stakeholder Workshop *MR 105*	
											Melbourne Conversation II Smart Transport – Smart City: Making streets better places for people (1200 - 1330 hours) *Exhibition Auditorium*
TP61 Human Factors and Driver Behaviour 1 *MR 216*	**TP62** Modelling Methodologies 2 *MR 217*	**TP63** Motorway Management 2 *MR 218*	**SP15** Vehicle Sensing and Bicycle Recognition *MR 104*	**SP16** Multi-modal Transport *MR 103*	**TP64** Environmental Sustainability -Use of Bicycles *MR 102*	**CP04** Safety 1 *MR 101*	**IBEC session 3:** Evaluation of connected and increasingly automated vehicles *MR 203*		**Associated Meeting** The Truly Integrated Transport System for Logistics *MR 109*	**Stakeholder Workshop** Australian EV Case Studies - Trends over the last 5 years *MR 105*	Traffic Technologies around the world (1430 - 1500 hours) A vision for a secure, connected future through Cooperative Intelligent Transport Systems (C-ITS) (1500 - 1530 hours) *Exhibition Auditorium*
TP68 Human Factors and Driver Behaviour 2 *MR 216*	**TP69** Road User Charging 1 *MR 217*	**TP70** Parking *MR 218*	**SP17** Energy Efficiency *MR 104*	**SP18** Public Transport Analysis *MR 103*	**TP71** Environmental sustainability -Use of Existing Infrastructure and Systems to Drive Improved Environmental Outcomes *MR 102*	**CP05** Safety 2 *MR 101*	**IBEC session 4:** Effects of automated driving to reduce accidents and fatalities - the cost/benefit perspective *MR 203*				
TP75 Maximizing Safe Network Operation *MR 216*	**TP76** Road User Charging 2 *MR 217*	**TP77** Roadside ITS Infrastructure *MR 218*	**SP19** Environmental Sustainability *MR 104*	**SP20** Traffic Simulations *MR 103*	**TP78** Policy, Standards and Harmonization -Government Role in Realizing Sustainable Outcomes 2 *MR 102*	**CP06** Public Transport *MR 101*		**ISO4** ITS Technical Interactive Session 4 *Level 1 Foyer*		**Stakeholder Workshop** Road certification criteria for autonomous vehicles *MR 105*	
TP82 Optimal Network Management 1 *MR 216*	**TP83** Road User Charging 3 *MR 217*	**TP84** Network Travel Management *MR 218*	**TP85** Generating Travel Information via Bluetooth, ETC and Other Crowd Sourced Data *MR 104*	**SP21** Transport Modelling *MR 103*	**TP86** Policy, Standards and Harmonization -ITS Policy Roadmap, Government and Industry Perspective *MR 102*	**CP07** Tolling and ePayment *MR 101*				**Stakeholder Workshop** The TfNSW future transport roadmap *MR 105*	
											Melbourne Conversation III End of Car Ownership: How will we get around? (1130 - 1300 hours) *Exhibition Auditorium*
TP90 Optimal Network Management 2 *MR 216*	**TP91** Road User Charging 4 *MR 217*	**TP92** Safety through ITS and Queue Management *MR 218*	**TP93** Keeping Drivers Better Informed using Mobile Applications *MR 104*	**SP22** Human Factors *MR 103*		**CP08** Traffic Management *MR 101*	**SIS17** Future mobility and Mobility as a Service, moving from ownership to access? *MR 211*			**Stakeholder Workshop** A vision for a secure, connected future through Cooperative Intelligent Transport Systems (C-ITS) *MR 105*	

HIGH LEVEL POLICY ROUNDTABLE

| MONDAY 10 OCTOBER 2016, 1330 – 1530 HOURS | MEETING ROOM 219/220 |

The High Level Policy Roundtable is a traditional feature of the World Congress on Intelligent Transportation Systems, bringing together Ministers and Mayors from across the world.

It is an opportunity for world leaders in Intelligent Transport Systems to meet, exchange information and explore opportunities.

Hosted by the Federal Government, on Monday 10 October, High Level Policy Roundtable guests will come to Asia Pacific to consider opportunities from key transportation and mobility technologies to enhance liveability in our cities and communities.

A focus of the meeting at the 2016 ITS World Congress in Melbourne will be two key themes:

- The top three ITS challenges faced by countries and cities over the next 3-5 years to enhance the liveability of cities and communities
- The top three initiatives being undertaken by governments and cities over the next 3-5 years to enhance the liveability of cities and communities

Discussions and information shared from the High Level Policy Roundtable will assist governments and cities in making strategic decisions and contribute to future ITS implementations around the world.

The opportunity for Ministers and Mayors to interact and engage in this forum enhances international relations, collaborations and partnerships.

We welcome our High Level Policy Roundtable guests, and their attendants, to Melbourne.

Full Time and Day Registered delegates are invited to attend and observe the formal proceedings of this meeting—places are limited. No bookings required.

OPENING CEREMONY

| MONDAY 10 OCTOBER 2016, 1600 – 1730 HOURS | PLENARY HALL 2 |

The Opening Ceremony will include the official welcome by ITS Australia and Australian Government representatives as well as the 3 regions ITS Asia Pacific, ITS America and ERTICO. The Opening Keynote presentation will be made by Mr Scott Charlton, Chief Executive Officer, Transurban. Presentation of the Hall of Fame individual Lifetime Achievement Awards will be made and senior representative from Cubic will invite guests to the Welcome Reception. Included will be an official Welcome to Country ceremony as well as lively entertainment and performances from local artists.

CLOSING CEREMONY

| FRIDAY 14 OCTOBER 2016, 1545 – 1645 HOURS | PLENARY HALL 3 |

The Closing Ceremony will celebrate achievements of the 23rd ITS World Congress 2016 and will feature the week's highlights video, official closing and keynote speeches, Rapporteur's Report presented by Professor Eric Sampson, best paper awards, video presentations and invitations to 24th ITS World Congress 2017 (Montreal) and 25th ITS World Congress 2018 (Copenhagen), and Passing the Globe Ceremony. Attendees will leave the congress inspired following a display of sensational and upbeat entertainment featuring local artists.

PLENARY SESSIONS

PL1 - AUTOMATED AND CONNECTED VEHICLES

TUESDAY 11 OCTOBER 2016, 0900 – 1030 HOURS | **PLENARY HALL 3**

In recent years the question about driverless vehicles has largely changed from "if?" to "when?" along with the accompanying "what will this mean?" and "how will we work through the issues?" These issues range from the practical "will we licence cars in the way we now licence drivers?" to the abstract "what will a driverless car choose to hit if it cannot avoid a crash?" Nevertheless, the general consensus appears to be that the potential of driverless vehicles is so large that these challenges will be overcome, even if not immediately.

This justified excitement about driverless cars can allow other aspects of automated and connected vehicles to be overlooked. In planning for the future and in realising the substantial safety and mobility benefits achievable now, industry and government will need to work through issues as diverse as managing driver distraction in partially automated vehicles and how to achieve a convergence between work on Cooperative ITS and vehicle automation.

Given the rapid pace of change in this sector, the speakers will set out both their understanding of where things are at and their views as to how we can work together over the next few years to realise the promise of automated and connected vehicles.

ALSO: Includes presentation of the Industry Award.

Keynote Speaker
Mr Gavin Smith, President, Robert Bosch (Australia) Pty Ltd

Master of Ceremonies
Ms Kim Thomas, ITS Leader, Aurecon Group, Australia

Speakers
Mr Shin Morishita, Counsellor for SIP, Bureau of Science, Technology and Innovation, Cabinet Office, Japan

Mr Peter Sweatman, Principal, CAVita, United States

Mr Wolfgang Hoefs, Head of Sector, DG CONNECT, European Commission

Mr David Buttner, President, Federal Chamber of Automotive Industries (FCAI) and Toyota Australia, Australia

PL2 – SMART CITIES

WEDNESDAY 12 OCTOBER 2016, 0900 – 1030 HOURS | **PLENARY HALL 3**

Already more than half the world's population lives in cities and UN projections shows that a further 2.5 billion people may live in cities by 2050. It is difficult to imagine a prosperous and sustainable future that does not involve smart cities; but what exactly is a smart city? Is technology enough to make a city smart, or rather how that technology is put to use that makes a city smart?

Cities rely on transport, so it follows that a smart city must include intelligent transport. There are many ways that transport can help make a city smart:

- By matching transport capacity to transport demands;
- By giving individuals personalised information and travel choices that meet their needs;
- By improving resilience in the face of disruption and disaster;
- By getting more out of the transport asset base;
- By catering better for the mobility disadvantaged; and
- By working with other elements of smart city to improve sustainability and liveability.

The speakers will set out their visions for how intelligent transport can do these and other things to make cities smarter and help achieve a more prosperous and sustainable future for the world.

ALSO: Includes presentation of the ITS 2016 Mastercard Smart City Hackathon Award Presentation

Keynote speaker
Mr Jack Dangermond, President, Esri, United States

Master of Ceremonies
Mr Neil Scales, Director General, Queensland Department of Transport and Main Roads, Australia

Speakers
Mr Men Leong Chew, Chief Executive, Land Transport Authority, Singapore

Mr Hamed Benouar, VP of Business Development and Government Relations, Sensys Networks, United States

Mr Edzard Overbeek, Chief Operating Officer, HERE, Germany

Mr Mike Mrdak, Secretary, Department of Infrastructure and Regional Development, Australian Government, Australia

PL3 - CONNECTIVITY AND BIG DATA: CHALLENGES IN CAPTURING, SECURING AND CONNECTING BIG DATA

THURSDAY 13 OCTOBER 2016, 0900 – 1030 HOURS　　　　　　**PLENARY HALL 3**

The Internet of Things (IoT) and Big Data are routinely included in descriptions of the technology megatrends changing the world, but what do they mean to transport and smart cities? How does the ubiquitous connectivity of IoT relate to the automation of vehicles and Cooperative ITS? Will transport infrastructure with its longer lifecycle be rapidly instrumented or become the isolated legacy element of a smart city? How will the Big Data from these ubiquitous connected sensors actually be used? How will issues such as security, latency and robustness be managed?

There is much promise in IoT and Big Data, but also much confusion and hype. The speakers will seek to cut through this to provide clarity, with concise visions of the future, concrete examples of what is being achieved today and visibility of what lies ahead over the next few years.

ALSO: Includes presentation of the Local Government Award.

Keynote Speaker

Ms Michele Huey, Group General Manager Strategy, Transurban, Australia

Master of Ceremonies

Mr Chris Koniditsiotis, Chief Executive, Transport Certification Australia, Australia

Speakers

Mr Il-Pyeong Kim, Assistant Minister, Road Bureau, Ministry of Land, Infrastructure and Transport, Korea

Ms Monali Shah, Director - Global Intelligent Transportation Solutions, HERE, United States

Ms Claire Depre, Head of ITS Unit at the European Commission, DG MOVE

Mr Adam Game, Director, Strategy, Intelematics, Australia

PL4 – MOBILITY AS A SERVICE

FRIDAY 14 OCTOBER 2016, 1430 – 1530 HOURS　　　　　　**PLENARY HALL 3**

The potential market for new mobility offerings is huge: in some developed countries, household spending on transport is second only to spending on housing. A weight of investment is starting to chase this opportunity; Uber has a market valuation of more than $50 billion, General Motors has invested $500 million in competitor Lyft and Daimler has acquired the RideScout and MyTaxi apps.

This shift from people owning mobility to accessing mobility will be disruptive, even in scenarios where many of us choose to continue to own a car. For cities to plan for this future of mobility and for companies to thrive in a changing market, there are many questions needing to be explored:

- How will these new mobility options change usage of buses, trams and trains?
- How will seeing the full costs of travel change travel behaviour?
- Will these new mobility options reduce or increase congestion?
- How will new mobility options cater for the mobility disadvantaged?
- Are users prepared to move to a subscription model to pay for mobility?
- How much of a boost will driverless cars give shared mobility and is success dependent on their availability?

The speakers will explore these and other questions in seeking to establish what the future of mobility will look like.

Keynote Speaker

Mr Jeroen Weimar, Chief Executive Officer, PTV, Australia

Master of Ceremonies

Mr Dean Zabrieszach, Chief Executive, HMI Technologies, Australia

Speakers

Mr Xiaojing Wang, Chair, China ITS Industry Alliance, China

Mr Matthew Cole, President, Cubic Transportation Systems and Senior Vice President, Cubic Corporation, United States

Mr Richard Harris, Xerox, United Kingdom

Mr Martin Matthews, Secretary for Transport and Chief Executive, Ministry of Transport, New Zealand

EXECUTIVE SESSIONS

ESO1 - ADVANCING THE DEPLOYMENT OF AUTOMATED VEHICLES – THE ROLES OF GOVERNMENT

TUESDAY 11 OCTOBER 2016, 1100 – 1230 HOURS | **PLENARY HALL 3**

Automated Vehicles and Cooperative ITS

Continuing innovations demonstrate that connected automated vehicles and their connectivity to each other and to the roads on which they are deployed will make driving easier, allow people to be more productive and offer greater mobility to a wider range of people and goods than ever before. They will also help improve road safety, reduce emissions and ease congestion. As a result, automated vehicles will provide significant economic, environmental and social benefits, including improving access to goods and services, and encouraging participation in the community. Drawing on international experts, this session will explore the opportunities and challenges associated with the adoption of highly automated connected vehicles. Specifically, the role of government will be discussed in terms of its responsibility to ensure their deployment meets the expectations and needs of all concerned. Among the considerations that government must address are issues such as the consistency of international technology demonstrations, field operational tests, policies and standards related to connected automated vehicles. At the heart of the conversation is that while policy is often overlooked by technologists, uniform policies are absolutely essential to ensure the adoption of highly automated connected vehicles.

Moderator:

Mr Steven Dellenback, Vice President R&D, Southwest Research Institute, United States

Speakers:

Claire Depre, Head of ITS Unit at the European Commission, DG MOVE

Mr Ken Leonard, Director of ITS Joint Program Office, USDOT, United States

Mr Hidenobu Kubota, Director for International Affairs Office, Engineering Policy Division, Road Transport Bureau, Ministry of Land, Infrastructure, Transport and Tourism, Japan

Mr Thomas de Laat, Director Ministry of Infrastructure and Environment, The Netherlands

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ESO2 - ADVANCING THE DEPLOYMENT OF AUTOMATED VEHICLES – THE ROLES OF INDUSTRY

TUESDAY 11 OCTOBER 2016, 1400 – 1530 HOURS | **PLENARY HALL 3**

Automated Vehicles and Cooperative ITS

Connected automated vehicles are advancing at a rapid pace and the technology has evolved to the point where it is becoming readily available in the market place. The private sector is investing in this technology with the expectation that it will be welcomed on the roadway network. This session will bring together international automated vehicle leaders to discuss the opportunities and challenges associated with deployment of automated vehicles. Specifically, the role of industry will be discussed in terms of their programs and the reason these programs matter to the sponsoring governments.

Moderator:

Mr Andrew Somers, Director, Transoptim Consulting, Australia

Speakers:

Mr Christian Rousseau, Executive Expert Leader, Renault Group, France

Mr T.Russell Shields, Chair, Ygomi LLC, United States

Dr Bernhard Morys, Manager, Mercedes-Benz Cars Daimler Greater China, China

Mr Frank Fosterling, Head of Advanced Development and Innovations, Continental, Germany

ESO3 - REALISING THE SAFETY AND MOBILITY BENEFITS OF AUTOMATED VEHICLES AND COOPERATIVE ITS SYSTEMS

TUESDAY 11 OCTOBER 2016, 1600 – 1730 HOURS ▶ **PLENARY HALL 3**

Vehicle Network and Safety

Combining data from conventional road infrastructure (e.g. road signs, sensors, highway radio broadcasting) with the potential goldmine of information emerging from the widespread deployment of connected vehicle and (eventually) automated Vehicles has the potential to significantly reduce the number of crashes around the world. Although the deployment of these technologies poses multiple challenges, the expected safety benefits should be identified and quantified so that both governments and business can make the necessary investments necessary to realize these benefits. For example, it has been suggested that V2V and V2I could reduce the millions of crashes that occur each year by as much as 80%, saving lives and reducing injuries. Under the expectations above, in this session, we will focus on how to efficiently improve road traffic flow and road safety by using automated vehicles and Cooperative ITS systems. Then we will focus on how the industry should begin to quantify the safety payback of them, underscoring that not only does the traveling public benefit, so also do public agencies, and companies involved in the movement of goods and services with lives saved, congestion minimized, and taxpayer funds reduced in addressing these traffic incidents.

Moderator:

Mr Ryan Lamm, Director R&D, Southwest Research Institute, United States

Speakers:

Mr Evangelos Bekiaris, Director, CERTH/HIT, Greece

Mr Christopher Mentzer, Manager R&D, Southwest Research Institute, United States

Mr Doug Fryer, Assistant Commissioner, Road Policing Command, Victoria Police, Australia

Mr Masayuki Kannan, Director ITS Policy and Program Office, Road Bureau, Ministry of Land, Infrastructure, Transport and Tourism, Japan

Ms Samantha Cockfield, Senior Manager of Road Safety, Transport Accident Commission, Australia

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ESO4 - REALISING THE PROMISE OF BIG AND OPEN DATA – PRACTICAL TRADE-OFFS BETWEEN BENEFITS, COSTS, SECURITY AND PRIVACY

WEDNESDAY 12 OCTOBER 2016, 1100 – 1230 HOURS ▶ **PLENARY HALL 3**

Challenges and Opportunities of Big Open Data

Big Data technology is transforming just about every sphere of life including ITS markets and value chains. Open Data is potentially a key building block for ITS where efficiency and effectiveness depend on access to information, especially real-time, about traffic flows, weather conditions, driver behaviour etc. Most local, regional and national governments now embrace the principle of Open Data but its realisation is uneven and often hindered by arguments about costs and payment. Big Data properly implemented is an unprecedented driver for ITS business development but it also brings concerns about the protection and security of personal information. This session will look across Big and Open data and explore how trade-offs can be achieved whereby data can be shared among competing service providers; users approve the use of personal data because it brings them new benefits; public bodies recognize that they are data custodians and not monopolist owners; and there is public understanding that "Big Data" does not mean "Big Brother"

Moderator:

Mr Leon Daniels, Managing Director Surface Transport, Transport for London, United Kingdom

Speakers:

Mr Nick Cohn, Big Data Senior Expert, TOM TOM, The Netherlands

Mr Malcolm Dougherty, Director, CalTrans, United States

Mr Tagui Ichikawa, Counsellor, National Strategy Office of ICT, Cabinet Secretariat, Japan

Mr Peter Sweatman, Principal, CAVita, United States

ESO5 - THE ROLE OF ITS IN MITIGATING CLIMATE CHANGE AND DELIVERING GREEN TRANSPORT

WEDNESDAY 12 OCTOBER 2016, 1400 – 1530 HOURS ▶ **PLENARY HALL 3**

Environmental Sustainability

Numerous projects from eco-driving to multimodality for both passengers and freight have revealed the great potential of ITS to mitigate climate change and deliver environmentally transport services. The intensive use of smartphones and future deployment of connected automated vehicles provide big and open data that will facilitate the planning, evaluation and deployment of ambitious ITS strategies supported by public and private initiatives. The analysis of these new data sources will help understand travel patterns of existing behaviour and determine how to increase public transport, electro-mobility and other alternative modes share. In this session, speakers will share outstanding experiences, future plans to increase greener transport modes and how to evaluate the benefits of ITS strategies from climate change perspective.

Moderator:

Ms Susan Harris, Chief Executive Officer, ITS Australia

Speakers:

Mr Morten Kabell, Mayor of Technical and Environmental Affairs, City of Copenhagen, Denmark

Ms Jennifer Cohan, Secretary, Delaware Department of Transportation, United States

Mr Hyoen Shik Baik, Director, ITS and Road Safety Division, Ministry of Land, Infrastructure and Transport, Korea

Mr Shuji Okuda, Director, Electric Vehicle, Advanced Technology and ITS promotion Office, Ministry of Economy, Trade and Industry, Japan

ES06 - THE USE OF CONNECTED VEHICLES AND DATA EXCHANGE IN FREIGHT AND LOGISTICS, INCLUDING AVIATION AND MARITIME

Future Freight including Aviation and Maritime

Although media attention remains on passenger cars, a growing number of truck manufacturers, suppliers, logistics providers and start-ups are investigating the potential of connected vehicle technology for the freight and logistics sector, including aviation and maritime. Linking the world of data with the physical world of goods requires increased integration of ITS and logistics. Co-operative Intelligent Transport Systems promise substantial improvements for the logistics sector from real-time information on traffic; load balancing; planning and managing freight distribution; better tracking and tracing of goods across transport networks; and better freight transport timeliness and efficiency as well as environmental sustainability. To this end, the use of Information Technology and leveraging of Big Data will be of critical importance, particularly considering the challenges we now face efficiently servicing mega vessels with a carrying capacity of more than 20.000 TEUs, and the pressure these vessels place on supporting transport and port infrastructure. Freight technologies aren't waiting for public acceptance. Private fleet truck platooning systems are emerging, freight drone deployments are rapidly becoming a reality, and unmanned commercial vehicle inspection systems are being deployed that minimize human intervention and greatly reduce delays to scheduled freight delivery times. Speakers at this session will explore the rise of Co-operative Intelligent Transport Systems and how Big Data can be leveraged to optimize end-to-end port supply chains to cope with the future increased demand.

Moderator:

Mr David Silvester, National Planning Manager, New Zealand Transport Agency, New Zealand

Speakers:

Mr Sascha Westermann, Head of ITS and Intermodal Traffic Management, Hambourg Port Authority, Germany

Mr Paul Trombino, Director, Iowa Department of Transportation, United States

Mr Cheng Peng, CEO, Navinfo, China

Ms Magda Kopczynska, Director for Innovative and Sustainable Mobility, DG MOVE, European Commission, Belgium

Mr Nick Brown, General Manager Aviation and Maritime, Ministry of Transport, New Zealand

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ES07 - USING SMART NOMADIC DEVICES SAFELY TO ENHANCE PERSONAL MOBILITY

Mobile Applications

Since the advent of smart nomadic devices, their use in the vehicle has been strongly discouraged and, in many places banned, as this activity is widely considered a distraction to the driver.

However, smart nomadic devices have also started to fill a big gap in terms of providing drivers with tools and resources to make their personal mobility quicker and safer. Road authorities have been developing apps to provide drivers with travel time, incident, detour and emergency information.

The demand for information and tools is growing, especially with the increase in the processing power of smart nomadic devices, which enables them able to do much more in less time.

As smart nomadic devices become more and more devices that are not to be used whilst undertaking the driving task, such apps are also becoming more and more redundant.

If road authorities fail to accommodate the demand, the private sector will continue to fill that gap. As a result, transport clients and users will turn to the private sector to seek information.

Road authorities might lose an important channel to influence and promote safety and other messages to road users, especially drivers.

In this session, speakers will discuss how to embrace the fact that smart nomadic devices are present almost in each vehicle and demonstrate ways in which they can be truly utilised as a personal mobility device, without compromising safety.

Moderator:

Mr Rick van Barneveld, Resolve Group, former Chief Executive Transit New Zealand, New Zealand

Speakers:

Mr Mika Rytkonen, Head of Business Development, HERE, Germany

Mr Shailen Bhatt, Executive Director, Colorado Department of Transportation, United States

Mr Jaehak Oh, Vice President, Korea Transport Institute, Korea

Mr T. Russell Shields, Chair, Ygomi, LLC, United States

Mr Anthony Ferguson, Deputy Director Traffic, Department for Transport, United Kingdom

ES08 - MODIFYING REGULATORY FRAMEWORKS TO BOOST MOBILITY INNOVATIONS

Policy, Standards and Harmonisation

Transport legislation (Regulations and Standards) tends to take a long time to create and changes equally slowly. But the transport sector is in a period of unprecedented transformation – connected and increasingly automated vehicles, Big and Open Data, Social Media, 24/7 connectivity through smart phones etc and transport business environments and models are also evolving rapidly. We also live in a world of malicious cyber-attacks, hacking and social engineering which threaten our trust in systems and the continuity of service. As ITS moves from standalone systems to more integrated and centralised services adequate protection for secure and personal or sensitive data is even more important. There are concerns that legislation designed for different technical, commercial and social times is impeding the adoption of new products and services. The challenge for regulators is finding the balance between a very open regime that encourages innovation and a more specific approach to create an open marketplace that encourages competition, inhibits monopolies and presents a sensible operating environment for transport service providers. This session will explore what governments can do to remove barriers, harmonise standards to enable interoperability, balance privacy and the public interest, and maintain an emphasis on outputs rather than a focus on the means by which they are delivered.

Moderator:

Mr Anthony Ferguson, Deputy Director Traffic, Department for Transport, United Kingdom

Speakers:

Mr Wolfgang Hoefs, Head of Sector, DG CONNECT, European Commission

Ms Leslie Richards, Director, Pennsylvania Department of Transportation, United States

Yuko Sano, Chief Superintendent, National Policy Agency, Japan

Mr Paul Retter, Chief Executive and Commissioner, National Transport Commission, Australia

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ES09 - CAPITALISING ON THE INTERNET OF THINGS

Smart Cities and New Urban Mobility

The phenomenon now commonly called Internet of Things (IoT) allows the creation of new technology-based services for the users of the transportation system, thereby improving regional mobility. Among a number of new technologies, connected and automated Vehicles and drones have the potential to be linked to the information backbone that will support the development of new traveler services. This session will focus on how these technologies can be integrated into the existing transportation infrastructure to provide information services that will benefit travelers, service providers and other transportation businesses. For example, connected and automated vehicles might have the potential to identify available parking spaces in their path, and this information could be provided to nearby travelers in real-time.

Moderator:

Mr Stan Caldwell, Executive Director, Traffic21, Carnegie Mellon University, United States

Speakers:

Mr Andrea Petti, Head of ITS, Ericsson, Sweden
Mr John Maddox, President & CEO, American Center for Mobility - Michigan Transformation Center (MTC), United States

Mr Yuji Nakamura, Director, Ministry of Internal Affairs and Communications, Japan

Mr Barry Einsig, Chief Technology Officer, Cisco Australia and New Zealand, United States

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ES10 - MOBILITY AS A SERVICE

Smart Cities and New Urban Mobility

Users are already benefitting from new technology-enabled transport services that bring different choices about trip-making and support the idea of mobility on demand. Mobility as a Service is a concept that changes the use of different transport modes from a focus on ownership and management of separate systems to a user service promise. MaaS has the potential to contribute to solving many of society's mobility problems and offers an attractive alternative to car ownership thereby giving users more choice and the possibility to influence the development of new mobility services. However MaaS will only happen through a systematic change to the ways in which we operate our transport systems. A re-definition is required regarding how we organise the transport eco-system – regulation v deregulation; private sector thinking and its business models v public transport provision; understanding the impact of MaaS on land-use planning; understanding what it takes for people to give up their private automobiles. This session will explore what needs to be done to encourage a truly user-centric transport service ecosystem.

Moderator:

Mr Sampo Hietanen, CEO and Founder, MaaS Global, Finland

Speakers:

Mr Andrew Everett, Chief Strategy Officer, Transport Systems Catapult, United Kingdom

Mr Kirk Steudle, Director, Michigan Department of Transportation, United States

Jianping Wu, Professor, Tsinghua University, China

Mr Michael Brown, Regional General Manager, Uber, United States

Mr Andrew Somers, Director, Mobility as a Service, Australia

ES11 - INTEGRATING PHYSICAL AND DIGITAL TRANSPORT INFRASTRUCTURE TO CREATE SMART CITIES

Smart Cities and New Urban Mobility

The creation of Smart Cities will require a wide variety of new technologies including new sensors, mobile environmental platforms and wearable technology, among many others. Each part of this new technology infrastructure across metropolitan areas will provide unique insights into the functioning of the city, all with the idea of making it a viable environment in which its citizens and workers exist. For example, we will know which streets are congested, where roads are icy, and how many parking spots are available, all with the purpose of helping travelers negotiate the city's streets. However, in order to best utilize the new infrastructure, innovative analytics capabilities will be needed to take full advantage of the data that is generated, to ensure that the data is of the highest possible quality, and to convert the data into actionable information.
In this session, speakers will identify the key opportunities and challenges associated with preparing for and operating Smart Cities and how best these be taken on by public agencies, private service providers, and travelers themselves.

Moderator:

Ms Pat Elizondo, Senior Vice President, Global Sales & Marketing, Xerox Service, United States

Speakers:

Mr Klaas Rozema, CTO, Dynniq, The Netherlands

Mr Scott Sedik, General Manager and Vice President, INRIX, United States

Mr John Merrit, Chief Executive, VicRoads, Australia

Dr YC Chang, Managing Director, Far Eastern Electronic Toll Collection Co, Ltd., Chinese-Taipei

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ES12 - SMART AND AUTOMATED PUBLIC TRANSPORT ENABLING LIVABLE CITIES AND IMPROVED MOBILITY

Smart Cities and New Urban Mobility

Globally over 50% of the population already lives in cities with developing countries rapidly shifting from rural towards more urban societies. In many locations urban populations are also ageing, placing different demands on services. These strains on mobility provision and limitations or physical inability to expand existing infrastructure, require cities to make difficult choices about priorities and be more innovative in the development of strategies. In many cities expanding public transport capacity is seen as a key solution and fortunately we are now seeing the emergence of connected and increasingly automated vehicles. They can conduct complex manoeuvres with far greater accuracy and safety than human controlled vehicles; operate themselves with improved service frequency; park on their own, deliver items and turn drivers into passengers able to sleep, eat, work or simply relax. The Bordeaux World Congress showed through live demonstrations the potential for driverless vehicles on ordinary roads. Urban driverless public transport is poised for deployment and future visions of individual pods and on-demand shuttles are becoming a reality. Nevertheless, potential users need to be reassured about safety, legislation needs to be clarified and adapted and we need to understand the interaction of such vehicles in mixed traffic and with vulnerable road users. This session will discuss the role that highly automated and driverless vehicles can play in public transport and review the key issues that need to be addressed to fully realise their contribution to mobility.

Moderator:

Hermann Meyer, Chief Executive Officer, ERTICO – ITS Europe

Speakers:

Mikkel Balskilde Hansen, Chief of Traffic Unit, City of Copenhagen

Mr Martin Howell, Director of External Affairs, Cubic, United Kingdom

Mr Andrew Chow, President, ITS Singapore, Singapore

Mr Chang Woon Lee, President, KOTI, Korea

SPECIAL INTEREST SESSIONS

SIS01 - KEEPING CITIES LIVEABLE, USING ITS TO ENSURE SERVICE LEVELS MEET CUSTOMER EXPECTATIONS

TUESDAY 11 OCTOBER 2016, 1100 – 1230 HOURS   **MEETING ROOM 210**

Smart Cities and New Urban Mobility

Melbourne is consistently ranked amongst the world's most liveable cities, having topped The Economist's rankings for five straight years. Keeping Melbourne's liveability high and catering for continued population growth has meant catering for changes in travel patterns using a Movement and Place strategy to preserve vibrant places while supporting important transport corridors. A SmartRoads is used to manage demands and prioritise key movements across the modes. During the session, attendees will hear from city planners including transport agencies in VicRoads and Public Transport Victoria (PTV) as well from in other cities around the world who are also using Movement and Place strategies to plan their approach to transport and how to get the best value from ITS.

Organiser
Nicholas Fisher, VicRoads, Australia

Moderator
Nicholas Fisher, VicRoads, Australia

Speakers
Nicholas Fisher, VicRoads, Australia

Amanda Fairley, Public Transport Victoria, Australia

Sameem Moslih, VicRoads, Australia

The University of New South Wales, Australia

SIS11 - VISUALIZE A TRULY MULTIMODAL MANAGED MOBILITY SYSTEM FOR YOUR SMART CITY

TUESDAY 11 OCTOBER 2016, 1100 – 1230 HOURS   **MEETING ROOM 211**

Smart Cities and New Urban Mobility

As Smart Cities emerge, leveraging cooperative ITS in creative ways will be critical in fostering an environment which produces more efficient management and operations of our transportation systems. Innovations in Connected Vehicle technologies, Integrated Corridor Management, and Decision Support Systems are making it possible to manage transport infrastructure and operations in real-time. As individuals users of the system require Mobility on Demand (MOD), Innovative operational strategies such as Demand Response Transportation and Mobility as a Service (MaaS) and new business models within the arena of shared-use mobility will make even greater impacts on our urban and rural areas. Integrating new technologies like automation, new business models like Uber and Lyft, and operational strategies like Bus Rapid Transit (BRT) through cooperative ITS will impact the way our communities move and manage mobility now and in the future.

Organiser
Matthew Lesh, Local-Motors, United States

Moderator
Matthew Lesh, Local-Motors, United States

Speakers
Koorosh Olyai, Stantec, United States

Jana Sochor, Chalmers University of Technology, Sweden

Zachary Wasserman, On-Demand Transit, United States

SIS03 - TELEMATICS AND BIG DATA – HOW DO WE MAKE BIG DATA MEANINGFUL?

TUESDAY 11 OCTOBER 2016, 1100 – 1230 HOURS   **MEETING ROOM 212**

Challenges and Opportunities of Big Open Data

The goal of this session is to get key players from the Telematics ecosystem to discuss

- Capturing and Assessing telematics data
- Challenges
- Market trends in the current & future
- Opportunities of presenting this information in meaningful way that enables Businesses to make decisions that make the ecosystem safe and secure.

Empower customers with tools to make their journey safe and less stressful.This session will gather speakers from different industries across the globe, covering the topic from different perspectives. One key aspect that will be debated by the speakers and the attendees during this session is 'what big data actually means' and discuss the opportunities in the marketplace. The session will also cover the current challenges in capturing telematics data from a technical standpoint and discuss measures that have been put in place to overcome this.

Organiser
Kathryn Belton, Intelematics, Australia

Moderator
Dean Economou, NICTA, Australia

Speakers
Dyana Szibbo, Intelematics, Australia

Chris Bailey, AA, United Kingdom

Henry Wu, JYW Consulting, Australia

SISO4 - REGULATION AS AN ENABLER FOR POSITIVE TRANSPORTATION CHANGE

TUESDAY 11 OCTOBER 2016, 1100 – 1230 HOURS **MEETING ROOM 213**

Policy, Standards and Harmonisation

The era of the transport sector, including mobility markets, as we know it will experience a dramatic overhaul. Changes in the operating models are gaining pace. During the 2015 ITS World Congress, Mobility as a Service (MaaS), eMobility and automation were hailed as future megatrends. For them to materialize, and to bring about the positive impacts desired, the current regulatory environments need to change. However, regulation is known to be rigid and slow to adjust, especially in today's world where the speed of technological development is staggering. Therefore regulators across the globe are working hard to strike a delicate balance between enabling new, better and innovative transport services whilst securing a fair operating landscape for consumers, workforces and the environment. This session will be a moderated panel discussion. It will discuss how regulation is enabling and being adapted to the paradigm shift taking place in the transport sector. It will compare actions taken across the globe. It will also try to answer the question whether regulation is able to keep up with the pace of changes in its operating environment. Can regulation even go beyond enabling new services and bring about positive disruption?

Organiser

Krista Huhtala-Jenks, Ministry of Transport and Communications, Finland

Moderator

Sampo Hietanen, MaaS Global, Finland

Speakers

Neil Pedersen, Transport Research, United States

Magda Kopczynska, DG MOVE - Directorate General for Mobility and Transport within the European Commission., Belgium

Sampo Hietanen, MaaS Global, Finland

Krista Huhtala-Jenks, Ministry of Transport and Communications, Finland

Iain McGlinchy, Ministry of Transport, New Zealand

Phil Blythe, Chief Scientific Adviser, Department for Transport, United Kingdom

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SISO5 - SECURING YOUR DIGITAL COMMUNITY IN A HOSTILE CYBER WORLD

TUESDAY 11 OCTOBER 2016, 1100 – 1230 HOURS **MEETING ROOM 219**

Challenges and Opportunities of Big Open Data

Cyber attacks on critical public infrastructure is a rapidly growing threat and an increasing risk as we become more networked and readily accessible in our digital communities. ITS managers and public officials must understand these threats and build systems that are resilient to hackers wanting to disrupt our systems, cyber-terrorists who want to create chaos, and causal pranks that consume precious resources. This session will look at recent attacks on transportation systems and offer ways to create a security aware culture, present best practices for mitigating threats, and look at organization sharing activities to avoid repetitive attacks. Additionally, this session will look at the security, privacy, and safety issues that come from the increasing level of connectivity and what can be done to assure mobility travelers that they are truly safe.

Organiser

C Douglass Couto, Independent Consultant, United States

Moderator

C Douglass Couto, Independent Consultant, United States

Speakers

David St. Amante, Econolite, United States

Nader Mehrarari, Axio Inc., United States

Dhruba Sarmi, KPIT Technologies, India Muneesh Chellani, KPIT Technologies, India

Pete Rahn, Maryland State Highway Administration, United States

Neil Pederson, Transportation Research Board, United States

SISO7 - HOW SLOW-MOVING GOVERNMENT PROCESSES MIGHT RESPOND TO RAPID TRANSFORMATIVE TECHNOLOGIES

TUESDAY 11 OCTOBER 2016, 1100 – 1230 HOURS **MEETING ROOM 220**

Future Freight including Aviation and Maritime

In recent years, the transport sector has seen rapid technology advancements. The developing unmanned aerial vehicle (UAV) industry is opening up significant business opportunities in the commercial, freight and service industries. But with that growth, comes potential safety risks. Rapid technological change challenges traditional policy and regulatory development processes to keep pace, be flexible and responsive, and to balance the potential benefits with management of safety risks. This session will discuss the various policy and regulatory approaches to UAVs and other transformative transport technologies that are challenging the current pace of change. This will include any lessons from aviation for land transport.

Organiser

Lee McKenzie, Ministry of Transport, New Zealand

Moderator

Shelley Tucker, Ministry of Transport, New Zealand

Speakers

Jonathan Barron, New Zealand Civil Aviation Authority, New Zealand

Nick Brown, Ministry of Transport, New Zealand

Jim Coyne, UAS International, United States

SISO6 - THE ROLE OF ITS IN A COLLABORATIVE ECONOMY: TOWARDS USER-ORIENTED PRICING AND THE GAMIFICATION OF MOBILITY

TUESDAY 11 OCTOBER 2016, 1400 – 1530 HOURS ▶ **MEETING ROOM 210**

Smart Cities and New Urban Mobility

Improving urban congestion and reducing emissions stands at the core of the smart city concept and have been the focus of many research efforts over the past decades. Unfortunately, individual rational behavior usually results in inefficiency in social outcomes, especially in transport networks. Further, the emergence of extensive mobility services, e.g. on-demand transportation, carsharing, real-time parking, etc.; has redefined the way we travel. In this context, the role of Intelligent Transportation Systems has yet to be fully identified. The advent of innovative communication technologies opens the door to complement traditional transportation policies and services with real-time, user-oriented schemes. Developing a collaborative economy is therefore a promising step towards addressing these societal challenges. It is urgent to discuss the questions underlying these developments, such as the management of big data and its impact on privacy issues; the identification of new marketing strategies to support growth, e.g. gamification, incentivization; as well as pricing and the development of public/private partnerships to benefit the transportation industry. This session will explore new advances, from both industry partners and academics, in the development of user-oriented pricing schemes and innovative approaches for the gamification of mobility.

Organisers

David Rey, University of NSW, Australia

Vinayak Dixit, University of NSW, Australia

Jean-Luc Ygnace, IFSTTAR, France

Moderator

Megan Beecroft, Ministry of Transport, New Zealand

Speakers

Jean-Luc Ygnace, IFSTTAR, France

Majid Sarvi, University of Melbourne, Australia

S. Travis Waller, UNSW Australia, Australia

Zoltan Maklary, Advisian, Australia

Mike Papineau, RideFlag, United States

Neil Roberts, Yarra Trams, Keolis Downer, Australia

SIS28 - UTILIZING PROBE DATA WILL CREATE THE FUTURE OF ITS

TUESDAY 11 OCTOBER 2016, 1400 – 1530 HOURS ▶ **MEETING ROOM 211**

Automated Vehicles and Cooperative ITS

With the progress toward the creation of an "Internet of Things" (IoT) in recent years, governments and companies in many countries have shown great interest in various types of applications for probe data collected by vehicles. These include resolving road transport issues such as eliminating traffic congestion and reducing accidents, as well as the development of automated driving and "Smart Cities." Efforts have included not only promoting research and development but actual deployment of such applications. This session will present case studies of actual deployment of the use of probe data in the cooperative ITS being studied jointly by Japan, the U. S. and the EU, in order to ensure safety and achieve smoother road transport. It will also feature discussion of such matters as future directions for the use of cooperative ITS (including probe data) and the approach to international collaboration.

Organiser

Kana Ito, Road Transport Bureau, Ministry of Land, Infrastructure, Transport and Tourism, Japan

Moderator

Hironao Kawashima, Keio University, Japan

Speakers

Kana Ito, Road Transport Bureau, Ministry of Land, Infrastructure, Transport and Tourism, Japan

Carl Andersen, U.S. Department of Transportation / FHWA, United States

Wolfgang Hoefs, European Commission Directorate-General for Communication Networks, Content and Technology Smart Cities and Sustainability, Belgium

Joanna Robinson, Queensland Department of Transport and Main Roads, Australia

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SISO8 - A WHOLE-OF-SYSTEM SYSTEM APPROACH TO AVIATION SYSTEM MODERNISATION

TUESDAY 11 OCTOBER 2016, 1400 – 1530 HOURS ▶ **MEETING ROOM 212**

Future Freight including Aviation and Maritime

For most countries, aviation system modernisation has been incremental. A new suite of tools and set of processes are needed to transition systems across performance based navigation, surveillance, navigation aids and airspace, in an integrated and coherent manner. This session will explore the utility of various tools and processes, the order of their development and introduction and their overall value to a 'whole of system' transformation. It will share lessons learned and experiences to date.

Organiser

Lee McKenzie, Ministry of Transport, New Zealand

Moderator

Lee McKenzie, Ministry of Transport, New Zealand

Speakers

Steve Smyth, New Zealand Civil Aviation Authority, New Zealand

Nick Brown, Ministry of Transport, New Zealand

Greg Dunstone, Airservices Australia, Australia

SIS09 - INSIGHTS FOR PERFORMANCE MEASUREMENT: 5 MIN TO THE LAST 5 YEARS

TUESDAY 11 OCTOBER 2016, 1400 – 1530 HOURS | **MEETING ROOM 213**

Challenges and Opportunities of Big Open Data

The number of megacities has more than tripled in the last 30 years – from only 9 in 1985 to 35 in 2015. That number will only rise as people continue moving to cities and with technologies enabling the birth of Smart Cities, agencies and public services are scrambling to find the tools to help them effectively plan and manage their networks. As economies grow, other factors that agencies will need to cope with is the fact that with more people migrating to cities, with them will come the commercial vehicles and services needed to keep commerce flowing.Therefore, the development, measurement and management of networks will rely on data from a wider variety of sources. This session will discuss, through theory and use cases, how agencies are starting to use tools that enable them to track and analyse trend flows of traffic and people, and assess performance of networks through charts and dashboards for any time period from within the last 5 minutes to the last 5 years or more.

Organiser

Ali Savio, INRIX, United States

Moderator

Rick Schuman, Inrix, United States

Speakers

Olaf Vroom, National Data Warehouse for Traffic Information, The Netherlands

Charlotte Holstrøm, Vejdirektoratet, Denmark

Darcy Bullock, Purdue University, United States

SIS13 - ITS AND THE DIGITAL CITY - DISRUPTIVE TECHNOLOGIES AND THE NEW REALITY

TUESDAY 11 OCTOBER 2016, 1400 – 1530 HOURS | **MEETING ROOM 220**

Smart Cities and New Urban Mobility

Disruptive technologies and innovation are being used by both the private and public sector to better serve customers and citizens. These innovative digital cities are changing expectations for real-time services, immediate response, access to data, input to data and mobility on demand. These communities are bridging the digital divide as more people become connected to their digital communities and neighborhoods. It also provides a unique way to better operate digital transportation and ITS systems, improve communications with all system users (travelers), and enhance planning for future transportation needs.   This session will look at the uses of social media and networks, mobile computing, analytics (big data) and geospatial technologies, and cloud solutions to create better collaboration between internal and external technology customers.

Organiser

C Douglass Couto, Independent Consultant, United States

Moderator

C Douglass Couto, Independent Consultant, United States

Speakers

Terry Bills, Esri, United States

Jason JonMichael, HNTB, United States

Hamed Benouar, Sensys Networks, United States

Mohit Sindhwani, Quantum Inventions Pte Ltd, Singapore

Jo van Onsem, Xerox, Belgium

SIS12 - USING TRAFFIC SIGNAL PRIORITY TO MAXIMISE SAFETY AND MINIMISE CONGESTION FOR ALL

TUESDAY 11 OCTOBER 2016, 1600 – 1730 HOURS | **MEETING ROOM 210**

Smart Cities and New Urban Mobility

As urban traffic congestion increases across the world, in the future, how will we prioritise transport network users to maximise safety for all users, reduce the response rates of life-saving services, and minimise related network disruptions during individual and community-wide emergency management? An expert panel will discuss current successes and challenges of existing priority solutions (e.g. emergency vehicle priority [EVP], bus, tram, cyclist priority) and the innovations that may be used in the future to address the need for alternative ways of managing traffic in order to improve safety for all road users and minimise traffic disruptions. This technology (traffic signal priority) has the potential to be used in a range of traffic management scenarios, for example, road freight priority, fleet management, crisis management, Cooperative ITS, and VIP vehicle priority just to name a few. These emerging technologies will provide many new and innovative ways to identify, track and prioritise all sorts of classes of vehicles, bicycles, and pedestrians, well beyond the capabilities of current-generation EVP-type systems.

Organiser

Jonathon Clarke, Transmax, Australia

Moderator

Michael Watts, Transmax, Australia

Speakers

Brett McPherson, Transmax, Austr

Dennis Walsh, Customer Services, Safety & Regulation Division, Australia

Christian Chong-White, NSW Roads and Maritime Services, Australia

Thomas Riedel, Verkehrs-Systeme AG, Switzerland

Toshihiko Oda, Institute of Electrical Engineers of Japan, Japan

Andry Rakotonirainy, QUT, Australia

SIS14 - STRATEGY OF PRACTICAL IMPLEMENTATION OF V-I COOPERATIVE SYSTEMS FOR TRAFFIC ACCIDENT AVOIDANCE

TUESDAY 11 OCTOBER 2016, 1600 – 1730 HOURS | **MEETING ROOM 212**

Automated Vehicles and Cooperative ITS

It is the most important problem through many countries to prevent road traffic users from having traffic accident, especially critical accident, which are negative products in motorized societies. Many of traffic accidents are occurred by human error. We are considering that if driver could recognize some dangerous situations approaching to him in advance and the recognition could prevent him from occurring human error, the process will be able to restrain many of traffic accident previously. ITS technology can realize the process. We think that the V-I Cooperative systems for traffic accidents avoidance is indispensable technology during rapidly developing of autonomous vehicle around the world.Japanese Police is developing and deploying the Driving Safety Support Systems (DSSS) that is a kind of V-I Cooperative systems. Especially, the development and deployment of DSSS are promoted by Cross-Ministerial Strategic Innovation Promotion Program (SIP), Automated Driving Systems (Auds) in Japan since 2014. The V-I Cooperative systems are also developed and deployed by US and EU.This session aims to introduce the development and deployment of V-I Cooperative systems and to discuss some technological and political subjects of V-I Cooperative systems for traffic accidents avoidance.

Organisers

Takashi Kimura, UTMS Society of Japan, Japan
Tomohiro Sekikawa, National Police Agency, Japan

Moderator

Takashi Oguchi, Institute of Industrial Science, The University of Tokyo, Japan

Speakers

Tomohiro Sekikawa, National Police Agency, Japan
Masao Fukushima, UTMS Society of Japan, Japan
Masafumi Kobayashi, UTMS Society of Japan, Japan
Carl Andersen, U.S. Department of Transportation / FHWA, United States
Tom Alkim, Senior Advisor C ITS Automated Driving, Rijks waterspout, The Netherlands

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SIS15 - ADVANCED TECHNOLOGIES IN OPERATION AND MAINTENANCE OF ITS FACILITIES

TUESDAY 11 OCTOBER 2016, 1600 – 1730 HOURS | **MEETING ROOM 213**

Vehicle Network and Safety

Needless to say, the operation and maintenance of road facilities is important to keep the systems in good condition and gets the benefits from them. It has been passed nearly 20 years from the commencement of ITS deployment, and it is time to consider what is the most effective way to keep the function updated. Last year in Bordeaux, we successfully established the session of this topics for the first time. This year in this session, we will continue to address the same topic, and introduce the effective maintenance method of variable-message signs, the proactive maintenance management by big data analysis and the operation and maintenance of self-owned communication networks on our expressways. Especially, we will share the good practice of maintaining the self-owned communication networks after the large earthquake occurred in KUMAMOTO prefecture in 2014.

Organiser

Takahiro Azuma, West Nippon Expressway Facilities Company Ltd., Japan
Yasuhiko Kumagai, Kochi University of Technology, Japan

Moderator

Masao Kuwahara, Tohoku University, Japan

Speakers

Yasuhiko Kumagai, Kochi University of Technology, Japan
Tetuo Ando, West Nippon Expressway Company Limited, Japan
Masaki Komeno, Nippon Expressway Research Institute Company Limited, Japan
Shingo Shiratani, West Nippon Expressway Facilities Company Ltd., Japan
Tran Vu Tuan Phan, NACENTECH, Vietnam
Keith Weegberg, VicRoads, Australia

SIS18 - TRAFFIC SENSING BY VARIOUS MANNERS

WEDNESDAY 12 OCTOBER 2016, 1100 – 1230 HOURS | **MEETING ROOM 204**

Challenges and Opportunities of Big Open Data

Traffic sensing is the key for traffic monitoring. Traditionally, sensing devices, such as loop counter and ultrasonic detector, are embedded into the road infrastructure. Thanks to the ICT technology, traffic volume data created from probe cars or smartphone applications becomes one of the promising sources for visualizing traffic conditions. Or it may collect from advanced sensing technology such as image processing and active sensing by either OBU or RSU. However, data from different sources have different characteristics. This session will try to bring various approaches in one session and discuss in wide range their advantages and disadvantages from various applications point of views. From the point of traffic control, it may have innovative control strategy with innovative sensing approaches. New and challenging way of traffic control will be discussed from both seed and need sides.

Organiser

Nobuyuki Ozaki, Toshiba Corporation, Japan

Moderator

Nobuyuki Ozaki, Toshiba Corporation, Japan

Speakers

Nobuyuki Ozaki, Toshiba Corporation, Japan
Jeroen Brouwer, Traffic Product Manager, TomTom, Amsterdam
J. Carlos Aydos, Roads and Maritime Services, Australia
Frédéric Roulland, Xerox Research Centre Europe, France
Masahiro Nakajima, Sumitomo Electric Industries, Ltd., Japan

SIS19 - LESSONS LEARNED IN DEPLOYING COOPERATIVE SYSTEMS

WEDNESDAY 12 OCTOBER 2016, 1100 – 1230 HOURS | **MEETING ROOM 210**

Automated Vehicles and Cooperative ITS

This session surveys progress in cooperative system deployments. Cooperative systems can deliver significant benefits for road users, especially in terms of safer, more energy-efficient, and environmentally friendly surface transportation. In the fall of 2015, the United States Department of Transportation (U.S. DOT) initiated three pilot deployments of connected vehicle applications to improve multimodal surface transportation system performance and enable enhanced performance-based systems management. In Japan, the Ministry of Land, Infrastructure, Transport and Tourism (MLIT) has been conducting research and development of "Smartway" as a new vehicle-to-infrastructure cooperative system, in collaboration with academia and industry. In Europe, several countries have deployed Cooperative Intelligent Transport Systems (C-ITS) pilots in preparation of large scale deployment of C-ITS services. These have been either co-financed by EU or relied just on national funding. Thus, there is a growing interest in deployment of cooperative systems across the globe. Furthermore, to encourage the adoption and deployment of cooperative systems, it is essential to demonstrate the value of these systems. This session will also provide public and private sector stakeholders an overview of the common evaluation challenges and approaches for overcoming them. Regions and nations can benefit through collaboration and sharing of experiences.

Organiser

Michael Brown, SwRI, United States

Moderator

Michael Brown, SwRI, United States

Speakers

Kate Hartman, US DOT, United States

Blaine Leonard, Utah Department of Transportation, United States

Meenakshy Vasudevan, Noblis, United States

Hideyuki Kanoshima, National Institute for Land and Infrastructure Management, Ministry of Land, Infrastructure, Transport and Tourism, Japan

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SIS16 - WHAT IS THE ROLE OF GOVERNMENT IN THE DEPLOYMENT OF ITS?

WEDNESDAY 12 OCTOBER 2016, 1100 – 1230 HOURS | **MEETING ROOM 211**

Policy, Standards and Harmonisation

ITS technology continues to develop extremely quickly. Much of it will be implemented and marketed by private companies without the direct involvement of governments. However in some cases governments will lead deployment, either by implementing technologies directly on major transport networks, or by actively requiring ITS technologies through regulation. In other cases, governments will take an enabling role by providing supporting infrastructure, or a regulatory environment that is flexible and responsive to allow new technological innovations to be tested and deployed. This session will discuss what different government organisations are doing around the world to enable their countries to benefit from ITS as much as possible.

Organiser

Lee McKenzie, Ministry of Transport, New Zealand

Moderator

Iain McGlinchy, Ministry of Transport, New Zealand

Speakers

Nick Brown, Ministry of Transport, New Zealand

Liz Halsted, Auckland Transport, New Zealand

Randy Iwasaki, Contra Costra Transportation Authority, United States

Peter Lee, Department for Transport, United Kingdom

Päivi Antikainen, Ministry of Transport and Communications, Finland

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SIS20 - EVALUATION AND STANDARDISATION OF CONNECTED AND AUTOMATED ROAD TRANSPORT

WEDNESDAY 12 OCTOBER 2016, 1100 – 1230 HOURS | **MEETING ROOM 212**

Automated Vehicles and Cooperative ITS

Connected and automated driving has the potential to solve many of the challenges we face in road transport in terms of safety, congestion and sustainability. However, in order to be able to deploy automated vehicles, many tests have to be performed in public roads for development purposes before its final market introduction. Once mature enough, different levels of automation shall be found in our public roads. Industry, researchers and policy makers are aware of the great impact of these technologies but must balance the need of their market and societal benefits with a safe introduction of the technology. This SIS will allow relevant stakeholder to show different worldwide progress on connected and automated driving evaluation methodologies as well as best practices and standards that may lead for new certification schemes. The session will involve representatives from the industry, academia as well as policy makers that are involved in past and ongoing initiatives regarding the topic.

Organiser

Álvaro Arrúe, Applus IDIADA, Spain

Moderator

Álvaro Arrúe, Applus IDIADA, Spain

Speakers

Bastiaan Krosse, TNO, The Netherlands

Marcos Pillado, Applus+ IDIADA, Spain

Richard Bishop, Bishop Consulting, United States

Adrian Zlocki - IKA Senior Manager ADAS department, Germany

Jun Shibata, Convenor ISO TC204 WG3 and Senior Researcher, JDRMA, Japan

SIS21 - IMPACT ASSESSMENT OF AUTOMATED DRIVING SYSTEMS ON ENERGY CONSUMPTION AND CO2 EMISSIONS

WEDNESDAY 12 OCTOBER 2016, 1100 – 1230 HOURS | **MEETING ROOM 213**

Environmental Sustainability

There is growing interest in automated driving systems and its development has been advanced throughout the world. Automated driving systems are expected to contribute to reduce energy consumption and CO_2 emissions from vehicular highway traffic by improvement of traffic flow, reduction of traffic accidents and changing citizen's travel behavior. This session invites speakers from Europe, the US and Asia Pacific and introduces recent projects of each of the three regions related to development of the automated driving systems that lead reduction of energy consumption and CO_2 emissions and how we will evaluate the impact.

Organiser

Daisuke Oshima, Pacific Consultants Co., Ltd., Japan

Takashi Oguchi, Institute of Industrial Science, The University of Tokyo, Japan

Moderator

Masao Kuwahara, Tohoku University, Japan

Speakers

Akira Mitsuyasu, Pacific Consultants, Japan

Nour-Eddin El Faouzi, IFSTTAR, France

Hesham Rakha, Virginia Tech, United States

Mitsuo Yonezawa, Japan Automobile Research Institute, Japan

SIS22 - BIG DATA, DRIVING INTEGRATED TRANSPORT SERVICES

WEDNESDAY 12 OCTOBER 2016, 1100 – 1230 HOURS | **MEETING ROOM 219**

Challenges and Opportunities of Big Open Data

ITS has always been about collecting, processing and using data. However, with the recent increases in data storage, processing and availability, we are now seeing a real breakthrough in urban wide and network wide information and intelligence. Some may consider 'big data' to be just another fad and not worth understanding. This session will show how real services are being enabled that use the big data visualization and intelligence to make a real difference to transport, mobility and to daily lives as we strive for more liveable cities.

Organiser

John Funny, The Grice Consulting Group, United States

Moderator

John Funny, Grice Consulting Group, LLC, United States

Speakers

Richard Harris, Xerox, United Kingdom

Carol Schweiger, Schweiger Consulting LLC, United States

Adam Lyons, Iteris, Inc., United States

SIS23 - PARKING - A DRIVER FOR CHANGE?

WEDNESDAY 12 OCTOBER 2016, 1100 – 1230 HOURS | **MEETING ROOM 220**

Smart Cities and New Urban Mobility

Up to 30 percent of traffic in cities is caused by drivers looking for parking, especially where on-street parking is free and off-street parking is unavailable (or when there's a big difference in price between metered on-street parking spots and off-street parking). This session will focus on parking innovation and how it is supporting authorities achieve their policy objectives. Parking advances in recent years are already changing the expectations of drivers and those living and working in our cities. From smart payment systems, more efficient operations, useful current information and guidance to suitable parking areas, through data analytics and dynamic pricing - there is no doubt that parking is a major influence when it comes to making cities more liveable.

Organiser

Richard Easley, E-Squared Engineering, United States

Moderator

Richard Easley, E-Squared Engineering, United States

Speakers

Mike Hayward, Transport Logic Limited, United Kingdom

Leonid Antsfeld, Xerox, France

Murphy Sun, Sunsky International, LTD, Taiwan

Richard Easley, E-Squared Engineering, United States

SIS24 - SIGNAL OPTIMISATION FOR CONNECTED VEHICLES, MUST WE SACRIFICE ADAPTIVITY TO ACHIEVE PREDICTABILITY?

WEDNESDAY 12 OCTOBER 2016, 1400 – 1530 HOURS | **MEETING ROOM 204**

Smart Cities and New Urban Mobility

This session will explore the emerging tension between connected vehicle services that seek predictability in traffic signal timings for GLOSA (green light optimal speed advisory) / GLIDEPATH (GLOSA + automation) and the ability to use full adaptive and actuated operation. There is an argument that adaptive traffic signal operation benefits all users and that losing adaptivity outweighs the advantages of GLOSA. Should signal operators push back on predictable operation or can we find a win-win for connected vehicles and optimised signal operation?

Organiser

Andrew Somers, Transoptim, Australia

Moderator

David St Amant, President & Chief Operating Officer, Econolite Group Inc, United States

Speakers

Christian Chong-White, Roads and Maritime Services, Australia

Thomas Riedel, Verkehrs-Systeme AG, Switzerland

Robert Rausch, Vice President, Transcore, United States

SIS25 - ACCELERATING ITS DEPLOYMENT BY CREATING A MORE DIVERSE WORKFORCE

WEDNESDAY 12 OCTOBER 2016, 1400 – 1530 HOURS | **MEETING ROOM 210**

Policy, Standards and Harmonisation

Technology is no longer the Big Issue for ITS. What counts now is understanding the needs of users, having a full awareness of costs and benefits, and finding ways of deploying ITS which are acceptable and affordable. This puts emphasis on getting maximum gain from areas that have not been looked at seriously as yet. This session will be a panel discussion about the benefits of diversity in the ITS workforce and how to achieve it. The panellists will be very high-level, "VIP Status", individuals, in order to create excitement and importance around the session and its topic.The Session will be accompanied by the second annual Award for "Best Idea to Create a Diverse, Representative ITS Workforce". Theteam proposing the session will have run and judged the competition for the Award prior to Melbourne, and will present the Award at the Congress.

Organiser

Jennie Martin, ITS United Kingdom, United Kingdom

Moderator

Susan Harris, Chief Executive Officer, ITS Australia, Australia

Speakers

Kim Thomas, Aurecon, Australia

Timothy Scott, SICE PTY Ltd, Australia

Martin Russ, AustriaTech, Austria

Pat Elizondo, Senior Vice President Global Sales & Marketing, Xerox Services, United States

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SIS26 - DIGITAL INFRASTRUCTURE FOR AUTOMATED VEHICLES: CHALLENGES AND INTERNATIONAL COLLABORATION

WEDNESDAY 12 OCTOBER 2016, 1400 – 1530 HOURS | **MEETING ROOM 211**

Automated Vehicles and Cooperative ITS

The rule of Digital Infrastructure appears essential in order to support the deployment of highly automated vehicles. Digital Infrastructure indicates the static and dynamic digital representation of the physical world with which the automated vehicle will interact to operate.The activities related to Digital Infrastructure address several aspects such as for instance standardized representations, content types, guarantee quality, collection and minimum requirements.In this Special Interest Session, several points will be debated taking into account the point of view of several stakeholders. The focus will be on how to create a Digital Infrastructure framework between public authorities and map providers including governance, role and responsibilities, roadmap towards a digital infrastructure and regulations. The issue of impact/benefits of shift of investments between roadside furniture (post signs) and digital infrastructure will be also considered in the discussion. Finally some applications of Digital Infrastructure in different use cases will be presented.The discussion in this session will benefits from the contribution of the European Project Vehicle and Road Automation (www.vra-net.eu) Working Group on Digital Infrastructure and of the Trilateral Automation in Road Transportation WG which fosters the international cooperation, between US, Japan and Europe on this point.

Organiser

Davide Brizzolara, ERTICO - ITS Europe

Moderator

Maxime Flament, ERTICO - ITS Europe

Speakers

Ahmed Nasr, HERE, Belgium

Stephen T'Siobbel, TOM TOM, Belgium

Carl Andersen, U.S. Department of Transportation / FHWA, United States

Geert Van Der Linden, EUROPEAN COMMISSION, Belgium

Ryota Shirato, Nissan, Japan

SIS27 - NOVEL C-ITS APPLICATIONS AND MOBILITY SERVICES FOR SMART CITIES

WEDNESDAY 12 OCTOBER 2016, 1400 – 1530 HOURS | MEETING ROOM 212

Smart Cities and New Urban Mobility

The last decade significant effort has been put in C-ITS and respective applications and services have been developed. Huge benefits are anticipated from the insertion of such systems on the roads, making them safer, more efficient and more sustainable. Although great progress has been made, the deployment of C-ITS is rather slow in Europe and worldwide and there are still issues to be tackled in order to address properly the needs of drivers and travelers and result in overall improved mobility in urban areas. The session is aiming to present the current developments in the field and discuss the way forward. During this session the speakers and the attendees will have the chance to discuss about the current C-ITS applications, the challenges hindering their large scale deployment and to debate about the next steps.

Organiser

Angelos Amditis, Institute of Communication and Computer Systems (ICCS), Greece

Moderator

Angelos Amditis, Institute of Communication and Computer Systems (ICCS), Greece

Speakers

Suzanne Hoadley, POLIS, Belgium

Andreas Festag, Technical University Dresden, Germany

Oliver Sawade, Group Manager, Fraunhofer FOKUS, Germany

Miranda Blogg, Department of Transport and Main Roads, Australia

Jean-Charles Pandazis, ERTICO - ITS Europe

SIS29 - ROLES OF DATA ANALYTICS AND TRANSPORTATION MODELLING FOR FAST-CHANGING URBAN INFRASTRUCTURE

WEDNESDAY 12 OCTOBER 2016, 1400 – 1530 HOURS | MEETING ROOM 219

Smart Cities and New Urban Mobility

Rapidly increasing cities are facing a high demand for new and efficient urban infrastructure. For example, the Australian Federal, State and Territory Governments have made commitments to invest over $100 billion in infrastructure in order to support the fast-increasing urban population. Following this commitment, a number of ambitious infrastructure projects (e.g. WestConnex and Western Sydney Airport in New South Wales, East West Link in Victoria, Bruce Highway in Queensland) have been launched to reshape the transportation systems in major cities of Australia: Sydney, Melbourne, Brisbane, etc. In this context, transportation modelling and simulation techniques are the perfect tool to understand and accurately estimate the travel demand around the city. But a fast-changing urban infrastructure will attract new moving population, thus inevitably entailing new generated data which will trigger new challenges in modelling, prediction and decision making (e.g. demand estimation and prediction, incident management and project management). In this context, this session focuses on the role of data analytics, transportation modelling and their combination to deal with challenges in a fast-changing urban infrastructure in Australia and/or different countries around the globe.

Organisers

Adriana Simona Mihaita, NICTA / Data61 / CSIRO, Australia

Yan Xu, NICTA, Australia

Moderator

Adriana Simona Mihaita, NICTA / Data61 / CSIRO, Australia

Speakers

Aditya Menon, NICTA, Australia

J. Carlos Aydos, Roads and Maritime Services, Australia

Alexandre Torday, TSS, Australia

Josh Johnson, Southwest Research Institute, United States

Dr Chueh, Chia-Hung (Charles), CEO of Datarget Innovation Inc., R.O.C.

Siew Mun Leong, President of ITS Malaysia, Malaysia

SIS30 - MOBILITY AS A SERVICE - USER CENTRIC INTEGRATED TRANSPORT SERVICES

WEDNESDAY 12 OCTOBER 2016, 1400 – 1530 HOURS | MEETING ROOM 220

Smart Cities and New Urban Mobility

Mobility as a Service is a concept that changes the use of different transport modes from separate systems to a service promise. It has the potential to fundamentally change the behaviour of travellers in and beyond cities, hence regarded as a biggest paradigm change in transport since affordable cars came to market.Integrating services through smart, 'Mobility as a Service' (MaaS) solutions puts users at the heart of the transport network, offering tailor-made travel services based on preferences. These services also provide the means to achieve the smarter, simplified transportation landscape envisioned and expected by future users.This session will consider the current status of MaaS and outline plans for deployment from the Mobility as a Service Alliance

Organiser

Richard Harris, Xerox, United Kingdom

Moderator

Rasmus Lindholm, ERTICO - ITS Europe

Speakers

Sampo Hietanan, MaaS Global, Finland

Richard Harris, Xerox, United Kingdom

Jacob Bangsgard, FIA

Carol Schweiger, Schweiger Consulting LLC, United States

SIS31 - ENSURING THE LONG TERM VIABILITY OF ITS DECISION-SUPPORT TOOLS

WEDNESDAY 12 OCTOBER 2016, 1600 – 1730 HOURS | **MEETING ROOM 204**

Challenges and Opportunities of Big Open Data

This session will report the state-of-the-art of existing decision-support tools and platforms for cooperation. It aims to consolidate knowledge, information and results; to tackle fragmentation of and obstacles to deployment; and to answer questions raised by policy and decision-makers in the domain of mobility and transport in the three Regions. Based on the ongoing European initiative for creating an ITS Observatory, a one-stop resource for information on Intelligent Transport Systems, this session will focus on the crucial aspects of ensuring the long term viability of database platforms and encouraging the continuous update of the information. How to collect the information and make it useful? What business models can be applied? How can we create online information platforms without public funding? How can we guarantee the usability of online decision-support tools? This session will highlight differences and synergies between platforms for cooperation and decision-support tools across the World by showing examples of successful initiatives from the three regions. It will look at success factors, obstacles and challenges, and will aim to define guidelines for creating efficient and sustainable knowledge resources.

Organiser

Richard Harris, Xerox, United Kingdom

Moderator

Eric Sampson, ERTICO – ITS Europe

Speakers

Richard Harris, Xerox, United Kingdom

Phil Blythe, University of Newcastle, United Kingdom

Marcia Pincus, US DOT, United States

Steve Kanowski , Queensland Department of Transport and Main Roads, Australia

Martin Boehm, Head of Mobility Systems & ITS Deployment, AustriaTech, Austria

Tom Kern, Managing Director, National Operations Center of Excellence, AASHTO, United States

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SIS32 - TRI-LATERAL AUTOMATION IN ROAD TRANSPORTATION WG: ACHIEVEMENTS AND NEXT CHALLENGES

WEDNESDAY 12 OCTOBER 2016, 1600 – 1730 HOURS | **MEETING ROOM 210**

Policy, Standards and Harmonisation

The European Commission (EC) (DG-CONNECT), the United States Department of Transportation (USDOT) and the Road Bureau of Ministry of Land, Infrastructure, Transport and Tourism (MLIT) of Japan have a long history of sharing information on ITS (Intelligent Transportation Systems) activities and a EU-US-JP Trilateral Automation in Road Transportation Working Group was specifically established to support the cooperation between on the topic of Vehicle and Road Automation. Several topics are addressed by the active working groups: "Accessible Transportation" to discuss automated transportation solutions for all people, including those with disabilities; "Digital infrastructure" to identify the role of digital maps for automation; "Human factors" to identify solutions for driver and other road user interactions; also "Security" and "Roadworthiness Testing" are addressed.This session will provide an overview of the main topics of collaboration discussing the preliminary results and the future collaboration initiatives of the previous mentioned working groups. Relevant representatives of Europe, United States and Japan will provide a presentation highlighting their point of view and then common conclusions will be drafted considering the achieved results.

Organiser

Davide Brizzolara, ERTICO - ITS Europe

Moderator

Maxime Flament, ERTICO - ITS Europe

Speakers

Jane Lappin, Toyota, United States

Carl Andersen, U.S. Department of Transportation / FHWA, United States

Wolfgang Hoefs, European Commission Directorate-General for Communication Networks, Content and Technology Smart Cities and Sustainability, Belgium

Shinji Itsubo, National Institute for Land and Infrastructure Management, Japan

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SIS33 - DEPLOYMENT CHALLENGES ON AUTOMATED TRUCK PLATOONING

WEDNESDAY 12 OCTOBER 2016, 1600 – 1730 HOURS | **MEETING ROOM 211**

Automated Vehicles and Cooperative ITS

Truck platooning is regarded as one of the first commercially viable applications of connected automated driving. Within different regions of the world, different organizations (OEMs, service providers, authorities, research institutes) are exploring the opportunities to get automated truck platooning towards deployment on public roads. Technical challenges still remain to ensure functionally safe and reliable operation, different logistics business models are investigated, legal frameworks need to be adopted and harmonized and the acceptance of truck drivers and other road users is to be explored in pilot projects. Lessons learned from the European Truck Platooning Challenge which will be held on the 6th of April 2016 as part of the Dutch Presidency of the European Union will be shared, (functional) safety issues are addressed, as well as the insights and challenges from two key projects from the US on truck platooning, a vision on truck platooning from the Japanese perspective (to be confirmed) and last but not least, the challenges for deployment in Australia.

Organiser

Bastiaan Krosse, TNO, The Netherlands

Moderator

Bastiaan Krosse, TNO, The Netherlands

Speakers

Steven Shladover, University of California, Berkeley, United States

Dirk-Jan Bruijn, de, Rijkswaters, The Netherlands

Jeroen Ploeg, TNO, The Netherlands

Charles Karl, ARRB Group, Australia

Richard Bishop, Bishop Consulting, United States

Florien van der Windt, Project leader Automated Driving, Rijkswaterstaat, The Netherlands

SIS34 - CONNECT2CAR: CONNECTIVITY AND AUTONOMY – WILL THERE BE A WINNER?

WEDNESDAY 12 OCTOBER 2016, 1600 – 1730 HOURS ▸ **MEETING ROOM 212**

Automated Vehicles and Cooperative ITS

The assumption is that the future of ground transportation will inherently include vehicles that "talk" to each other and the surrounding infrastructure utilizing many different networks. These communications will eventually reduce traffic congestion, traffic accidents (especially fatalities), and provide options for a better, safer driving experience. This panel brings together leaders from the various organizations to talk about how this collaboration works today, and how autonomous vehicles might affect how we view the need for connectivity. The session will discuss the areas where we need some deeper thought and address current issues that may impede the progress in realizing the future goals of integrated transportation. Further, we will highlight the possibilities of new technologies coming to the market now that will impact implementation of V2V/V2I, and identify the next steps for the automotive and transportation industries.

Organiser

Joy Lancaster, SAE International, United States

James Sherman, SAE International, United States

Moderator

Regina Hopper, President and CEO, ITS America, United States

Speakers

John Ellis, Ellis and Associates, United States

Paul Godsmark, Canadian Automated Vehicles Centre of Excellence, Canada

James Sherman, SAE International, United States

Randy Iwasaki, Contra Costa Transportation Authority, United States

Neil Pederson, TRB, United States

SIS35 - RADIOCOMMUNICATION TECHNOLOGIES FOR AUTOMATED DRIVING

WEDNESDAY 12 OCTOBER 2016, 1600 – 1730 HOURS ▸ **MEETING ROOM 213**

Automated Vehicles and Cooperative ITS

In November 2015, World Radio Conference 2015 (WRC-15) approved a WRC-19 new agenda item on global or regional spectrum harmonization of ITS Applications. This means, ITS was recognized as an important radiocommunication applications in ITU-R. In this session, the speakers invited from Europe, the United States, Japan, and the automaker will report current status of their ITS radiocommunication policies, standards and technologies.Especially, In Japan, 700 MHz band Vehicle to Vehicle (V2V) Communication and Vehicle to Infrastructure (V2I) Communication have been already in operation. The 5.9 GHz Wireless Access in Vehicular Environments (WAVE) will also be used soon in Europe and North America. We will figure out and dissect current issues regarding our international harmonization of ITS radiocommunication standards and related projects, and then discuss solutions to each toward WRC-19.

Organiser

Takanori Mashiko, Ministry of Internal Affairs and Communications (MIC), Japan

Moderator

Satoshi (Sam) Oyama, Association of Radio Industries and Businesses, Japan

Speakers

Hiroaki Satake, Ministry of Internal Affairs and Communications (MIC), Japan

Niels Peter Skov Andersen, C2C-CC Communications Consortium, Denmark

John Kenney, Toyota Info-Communication Center, United States

Colin Langtry, International Telecommunication Union, Switzerland

Norifumi Ogawa, Mazda Motor Corporation, Japan

SIS36 - ENABLING INTERACTION BETWEEN TRAFFIC MANAGEMENT AND MOBILITY SERVICES

WEDNESDAY 12 OCTOBER 2016, 1600 – 1730 HOURS ▸ **MEETING ROOM 219**

Smart Cities and New Urban Mobility

Traffic Management is evolving into a multi-stakeholder cooperation where road operators and traffic information service providers, including OEMs are offering optimal end-to-end mobility guidance for people and goods. In the new traffic management concept, traffic planners are using floating car data in order to estimate traffic flow and study congestion patterns and bottlenecks while traffic information service providers are able to integrate relevant traffic management plans and strategies in their traffic information feed to their customers. The TM 2.0 Innovation Platform is leading this win-win concept in Europe, while similar traffic management developments are taking place in the US, Japan and Australia. This Session, will discuss the different traffic stakeholders viewpoints on TM 2.0 and identify differences and similarities globally among them.

Organiser

Andrea Toth, ERTICO - ITS Europe

Lina Konstantinopoulou, ERTICO - ITS Europe

Moderator

Johanna Tzanidaki, TomTom, The Netherlands

Speakers

Ulrich Fastenrath, BMW, Germany

Yuko Sano, National Police Agency of Japan, Japan

Robert Sheehan, US DOT, United States

Thomas Kusche, Westdeutscher Rundfunk Köln, Germany

Fred Curtis, Intelematics, Australia

Martin Russ, Managing Director, AustriaTech, Austria

SIS37 - LOCATION INTELLIGENCE, ITS AND SMART CITIES

WEDNESDAY 12 OCTOBER 2016, 1600 – 1730 HOURS

MEETING ROOM 220

Smart Cities and New Urban Mobility

Demand for dynamic and sustainable urban ecosystems and creating livable cities is growing and putting enormous pressure on urban planners and local governments to better utilize the technology to transform urban centres to smart cities. Population growth, land scarcity and environmental sustainability have shifted the focus of most road and transport agencies from expanding the road network to better utilizing and operating the existing road network and maximising the utility of existing transport infrastructure through the use of Intelligent Transport Systems (ITS).ITS and Smart Cities have used Location Intelligence to a great degree for the integration, analysis and visualization of real-time and static information. Many of the ITS and Smart City applications have been heavily reliant on Location Intelligence. This includes journey planning, navigation, traveller information, safety management; incident management and traffic management systems.

Organiser

Hossein Parsa, VicRoads, Australia

Moderator

Hossein Parsa, VicRoads, Australia

Speakers

Evan Quick, Esri Australia, Australia

Mohsen Kalantari, The University of Melbourne, Australia

Yanming Feng, Queensland University of Technology, Australia

Meead Saberi, Monash University, Australia

Hossein Parsa, VicRoads, Australia

SIS64 - KNOWLEDGE AND UNDERSTANDING OF URBAN FREIGHT DISTRIBUTION AND SERVICE TRIPS

WEDNESDAY 12 OCTOBER 2016, 1600 – 1730 HOURS

MEETING ROOM 203

Future Freight including Aviation and Maritime

Cities face every day new challenges in urban freight. It is therefore more and more essential to deeply understand what are they and how can be overcome. ITS solutions, involving public and private stakeholders are a key element on this aspect and can be used for implementing efficient rules of urban freight transport. Coordinated policies for a more sustainable urban mobility will help to make aware to a wide public of their benefits and advantages. This session aims to provide knowledge and understanding of freight distribution and service trips and discuss the take up process in worldwide cities.

Organiser

Lina Konstantinopoulou, ERTICO - ITS Europe

Moderator

Georgia Aifandopoulou, CERTH, Greece

Speakers

Lina Konstantinopoulou, ERTICO - ITS EUROPE, Belgium

Steve Manders, Jacobs Group (Australia) Pty Ltd, Australia

Suzanne Hoadley, POLIS, Belgium

SIS38 - ITS CONNECTIVITY – A FUTURE WITH 5G AND SATELLITE

THURSDAY 13 OCTOBER 2016, 1100 – 1230 HOURS

MEETING ROOM 204

Automated Vehicles and Cooperative ITS

Many ITS services rely on resilient connectivity fabric. The deployment of such ITS services in countrieswith extended urban areas, sparsely populated area, large geographical landmass and extensive roadnetworks poses technological challenge. In many cases such challenges can only be addressedadequately by combining terrestrial and space technologies. Vehicular connectivity can be achievedthrough satellite using devices no larger than a smart phone and in many cases are not as expensive. Insparsely populated regions, where investment in terrestrial infrastructure can be prohibitively costly,satellite communications provides instantaneous coverage over large geographical footprints. Suchconnectivity is sufficient for the deployment of essential ITS services such as emergency calls, fleetmanagement, remote diagnostics and road tolling. These technologies – in conjunction with theirterrestrial counterparts - not only have the potential to address existing challenges, but also to unlocknew areas of exploitation for ITS services and applications for the future. With new satelliteconstellations in the near future, along with the convergence of terrestrial and satellite technology withinthe scope of 5G, the provisioning of high bandwidth connectivity on the move – in urban, rural andwilderness - will become a reality and pave the way for richer ITS services.

Organiser

Ashweeni Beeharee, Satellite Applications Catapult Ltd, United Kingdom

Moderator

Ashweeni Beeharee, Satellite Applications Catapult Ltd, United Kingdom

Speakers

Terry Bleakley, Intelsat, Singapore

Jiansong Gan, Huawei, China

Joel Schroeder, Inmarsat, United Kingdom

SIS39 - COOPERATIVE SYSTEMS - STAKEHOLDER CONTRIBUTION AND COOPERATION

THURSDAY 13 OCTOBER 2016, 1100 – 1230 HOURS   **MEETING ROOM 210**

Automated Vehicles and Cooperative ITS

As a follow-up to a similar session last year, this session would update attendees on successful cooperative system programs from around the world. Each region has an ongoing program of demonstrations and trials with the goal of real commercial deployment. M City and the Mobility Transformation Center in Michigan, USA and the European Commission's Cooperative ITS Platform are showing how the public and private sectors can work together to prove out new technologies. In Japan, the government continues to develop a cross-ministerial Strategic Innovation Program. This session will update attendees on these and other programs providing insight and understanding as to how initiatives are progressing.

Organiser

Richard Harris, Xerox, United Kingdom

Moderator

Scott Silence, Xerox, United States

Speakers

Maxime Flament, ERTICO, Belgium

James Sayer, University of Michigan Transportation Research Institute, United States

Takahiko Uchimura, ITS Japan, Japan

Peter Sweatman, CAVita, United States

Risto Kulmala, Finnish Transport Agency, Finland

Wei Ping Ong, Xerox Services, Singapore

Claire Depre, European Commission

SIS40 - AUTOMATED VEHICLE PILOTS: CHALLENGES FOR DATA COLLECTION AND SHARING

THURSDAY 13 OCTOBER 2016, 1100 – 1230 HOURS   **MEETING ROOM 211**

Automated Vehicles and Cooperative ITS

During the past years the numbers of Field Operational Tests (FOT) and Naturalistic Driving Study (NDS) have been performed worldwide and nowadays companies and research organizations are developing large-scale FOTs and Pilots for automated vehicles.The open research questions to be answered by FOTs will take into account several aspects: not only the functional one but also those related to the wide societal impact. This will require the collection a massive amount of data and several issues have to be faced: data acquisition (e.g. standard format and the related attributes) and analysis have to be efficiently to support the assessment. In addition, data sharing practices should be considered to improve significance, comparability and transferability of up-coming FOT results supporting the involved stakeholders. Capitalising on the previous experience (e.g. FESTA methodology), the proposed session aims to discuss the next challenges highlighting the research needs and possible solutions. The following questions will be discussed: How to perform data collection and analyse data? How to evaluate the impact and foster data sharing?The discussion of this session will support the debate among researchers and industrial stakeholders on the topic considering the international activities in different regions of the world.

Organiser

Davide Brizzolara, ERTICO - ITS Europe

Moderator

Satu Innamaa, VTT, Finland

Speakers

Bastiaan Krosse, TNO, The Netherlands

Kazuya Takeda, Nagoya University, Japan

Carl Andersen, U.S. Department of Transportation / FHWA, United States

Paul Tyler, Data61, Australia

Helena Gellerman, SAFER, Chalmers, Sweden

SIS41 - INNOVATION FOR LIVABLE CITIES UTILIZING AUTONOMOUS DRIVING TECHNOLOGY AND IOT BIG DATA

THURSDAY 13 OCTOBER 2016, 1100 – 1230 HOURS   **MEETING ROOM 212**

Challenges and Opportunities of Big Open Data

Currently OEMs, IT giants, are collecting tremendous amount of IoT Big Data from the vehicles, especially for autonomous driving. These data include precise vehicle speed and location, vehicle trajectory, images of the vehicle surroundings, 6-axis acceleration, condition of devices such as wiper, light, brake, ABS and so on. With these data we can understand cities' context in real time. Also, Mobility IoT Big Data can be gathered from smart phones and transportation IC cards. If can mash up these Big Data with the vehicle Big Data, we can perceive the mobility of the entire city more clearly. Once we understand the context of the city in real time, we may change cities' functionalities/behaviors according to the context. We will discuss how we can gather these Mobility IoT Big Data and make contribution to Livable Cities and Communities.

Organiser

Naoki Tokitsu, Internet ITS Consortium, Japan

Moderator

Makoto Maekawa, NEC, Japan

Speakers

Makoto Maekawa, NEC, Japan

Takuro Yonezawa, Keio University, Japan

Mandali Khalesi, Here, Japan

Stefan Myhrberg, Ericsson, Sweden

Tsuguo Nobe, Intel K. K., Japan

SIS42 - SMART ROADS - WHERE TO NEXT?

MEETING ROOM 213

Automated Vehicles and Cooperative ITS

EastLink is a 40km Managed Motorway and private toll road in Melbourne's east, beginning to plan for the new generation of autonomous and connected vehicles (V2X). Consultation with various State and Federal bodies showed lack of clarity for legislative direction, design and build for the future planning of public and private roadways to suit these future capabilities. Consideration must be given to the likely features, functions and standards for future road operations and infrastructure, specifically including:

- Legislation and compliance,
- Safety,
- Performance and operations in both the near term mixed traffic scenario and ultimately to a wholly autonomous vehicle environment.

This session aims to canvass viable solutions for the State, Federal and International road operators, consistent with the development of connected and autonomous vehicles and the supporting infrastructure.Due to the short time available it is proposed to limit the discussion to the requirements of an essential, high level "Policy Framework" as the first step to viable vehicle and road integration.

Organiser

Ian Oxworth, ConnectEast PL, Australia

Moderator

Charles Griplas, ConnectEast PL, Australia

Speakers

Stuart Ballingal, Austroads, Australia

Knut Evensen, Q-Free, Norway

Peter Sweatman, CAVita, United States

SIS43 - POSITIONING CHALLENGES FOR AUTOMOTIVE SAFETY SYSTEMS & SOLUTIONS

MEETING ROOM 219

Automated Vehicles and Cooperative ITS

All forms of automotive applications including Connected Vehicles, Cooperative ITS, Advanced Driver Assistance Systems and Autonomous Vehicles depend or will depend on GNSS as the absolute positioning system. Within the next few years, GNSS will be put to the test as a core technology enabling this next wave of automotive ITS applications emerge as V2X, which collectively includes V2V, V2I, V2P, and all other vehicle communications-based safety systems. Compared to any GNSS application available to date, these safety-critical applications undoubtedly bring in the toughest combination of challenges to GNSS. The expectation is for GNSS to deliver near real-time position with an accuracy of a meter or better for a mobile user moving anywhere from residential speed zones to freeway speed zones through any kind of drivable environment imaginable. More importantly, GNSS-based system is expected to notify the user of any compromise of performance with very high reliability, leaving ample time for human involvement or to engage appropriate safety mechanisms, if necessary. This SIS will focus on V2X applications, standards, current state of the art, and challenges.

Organiser

Chaminda Basnayake, Renesas Electronics, Canada

Moderator

Chaminda Basnayake, Renesas Electronics, Canada

Speakers

Angelo Joseph, Rockwell Collins, United States

Ian Sainsbery, Director of Engineering, Locata Corporation, Australia

Allison Kealy, Department of Infrastructure Engineering, University of Melbourne, Australia

Rod Bryant, u-blox AG, Australia

SIS44 - CHANGES IN MODELING FOR THE NEW MOBILITY: PLANNING CHALLENGES FOR FUTURE TRANSPORTATION

MEETING ROOM 220

Smart Cities and New Urban Mobility

The shift in young people's mobility, including extensive use of technology, NOT purchasing/owning a private automobile and lack of interest in getting a driver's license, are, in part, changing the way we need to look at mobility. For this and several other reasons, we will need to make significant changes in travel modeling. The current travel preference modeling and analysis does not account for new mode choice behavior, especially with the advent of MaaS and Internet of Mobility, and new modes (e.g., Bridj, Uber, Lyft). Further, travel behavior will be influenced by incorporating incentives or rewards to encourage social involvement in being mobile (e.g., rating services). Finally, changes in land use due to autonomous and shared use modes will have to be included. This session will explore the current work that is being done to develop new transportation models that incorporate these elements.

Organiser

Carol Schweiger, Schweiger Consulting LLC, United States

Moderator

Carol Schweiger, Schweiger Consulting LLC, United States

Speakers

Dean Economou, Telstra, Australia

Jana Sochor, Chalmers University of Technology, Sweden

S.K. Jason Chang, National Taiwan University, Chinese-Taipei

Marije de Vreeze, Connekt / ITS Netherlands, The Netherlands

Nick Jones, Transport Systems Catapult, United Kingdom

SIS45 - HARNESSING THE ECONOMIC, SOCIETAL AND ENVIRONMENTAL BENEFITS OF ROAD USER CHARGING

THURSDAY 13 OCTOBER 2016, 1400 – 1530 HOURS   **MEETING ROOM 204**

Smart Cities and New Urban Mobility

Road user charging has three key drivers of change:- A pressing need for governments to develop alternative funding sources for public infrastructure, facilitating economic growth. - Secondly, new systems employing GNSS and connective technologies are accelerating the decline of traditional road tolling solutions.- Third driver is an increasing awareness of and demand for liveable cities and communities.Our panellists will explore and elaborate on the key drivers causing migration from traditional tolling systems to multi-lane free-flowing (MLFF) systems, with an emphasis on the resulting economic, social and environmental benefits.

Organiser

Richard Whitehead, Main Roads Western Australia, Australia

Dom Thatcher, Main Roads Western Australia, Australia

Moderator

David Ungemah, WSP l, United States

Speakers

Dirk van Amelsfort, VIktoria Swedish ICT, Sweden

Malcolm Dougherty, CalTrans, United States

Kellie Houlahan, Main Roads Western Australia, Australia

Gideon Mbiydzenyuy, Netport Science Park AB, Sweden

SIS46 - CERTIFICATION OF AUTOMATED ROAD VEHICLES: CHALLENGES AHEAD

THURSDAY 13 OCTOBER 2016, 1400 – 1530 HOURS   **MEETING ROOM 210**

Policy, Standards and Harmonisation

This session will present the challenges for the certification of automated road vehicles and it will foster the debate on views and recommendations for handling certification for automated road vehicles.It will focus both on operational and infrastructural constraint and requirements. It will also consider system versus device-level testing/certification. Benefit of a global testing framework for vehicle and system suppliers as well as system operators and road/transport/urban authorities will be illustrated. The session will also debate the topic of the standards needed for the certification in order to enable the deployment of automated vehicles.The following speakers will provide a worldwide overview on the topic referring to specific projects.

Organiser

Davide Brizzolara, ERTICO - ITS Europe

Moderator

Francois Fischer, ERTICO - ITS Europe

Speakers

Álvaro Arrúe, Applus IDIADA, Spain

Bastiaan Krosse, TNO, The Netherlands

Phil Blythe, University of Newcastle, United Kingdom

Carl Andersen, U.S. Department of Transportation / FHWA, United States

Sharon Nyakuengama, Australian Government, Australia

Iain McGlinchy, Ministry of Transport, New Zealand

SIS47 - AUTOMATED TRANSPORT SYSTEMS: HOW FAR ARE WE?

THURSDAY 13 OCTOBER 2016, 1400 – 1530 HOURS   **MEETING ROOM 211**

Automated Vehicles and Cooperative ITS

The goal of this session is to gather all the key players and the relevant stakeholders in automation in road transport, assess the current developments in the field and identify probable path(s) for future deployment. This session will gather speakers from different sectors and geographical areas covering well the topic from different perspectives, i.e. automotive manufacturers, traffic managers, automation solution providers, maps providers, researchers. One key aspect that will be debated by the speakers and the attendees during this session is how far we are from full automation in the road transport system. With the term automated transport systems we envisage a transport system in which all involved elements are automated to a certain extent, thus including not only driverless cars but also automated transport operations and automated traffic management.

Organiser

Angelos Amditis, Institute of Communication and Computer Systems (ICCS), Greece

Moderator

Angelos Amditis, Institute of Communication and Computer Systems (ICCS), Greece

Speakers

Steven Shladover, University of California, Berkeley, United States

Giovanni Russo, Research Staff Member Optimization, Control and Decision Science, IBM Research, Ireland

Dennis Walsh, Queensland Transport and Main Roads, Australia

Risto Kulmala, Finnish Transport Agency, Finland

Brent Stafford, HERE Maps, Australia

SIS48 - INTEGRATED PAYMENT = IMPROVED MOBILITY

THURSDAY 13 OCTOBER 2016, 1400 – 1530 HOURS

MEETING ROOM 212

Smart Cities and New Urban Mobility

Integrated payment is a necessity to improve mobility, particularly as we move away from mode-specific travel. Further, multiple payment options (including "dematerializing" transport tickets into a single payment mechanism for multiple modes); the use of mobile devices for payment (for both public transport and tolls); and open payment systems that result in lower ticket issuance and distribution costs and help achieve interoperability must be considered in the "new mobility." This session will cover examples of where integrated payment systems have resulted in improved mobility and will discuss lessons learned from these examples.

Organiser

Carol Schweiger, Schweiger Consulting LLC, United States

Moderator

Richard Easley, E-Squared Engineering, United States

Speakers

Noora Saloon, Sito, Finland

Frederic Roulland, Xerox Research Center, France

Arnd Baetzner, Mobility Genossenschaft, Switzerland

SIS49 - PROCUREMENT OF REAL-TIME TRAFFIC DATA BASED ON FCD

THURSDAY 13 OCTOBER 2016, 1400 – 1530 HOURS

MEETING ROOM 213

Challenges and Opportunities of Big Open Data

Floating Car Data (FCD) is considered a promising source for traffic data. In the Netherlands and Denmark, road authorities have started researching the possibilities this data source offers through a number of pilot projects and procurements. In this session, the National Data Warehouse for Traffic Information (NDW) from the Netherlands and the Vejdirektoratet from Denmark will jointly present the findings of their initial pilot projects and procurement ambitions for the future, together with the companies that have participated and assisted them in the supply of FCD. These two organizations are European front-runners in the large scale procurement of FCD: their experience and findings so far will offer novel insights in the processes and possibilities of this kind of data. A panel discussion will follow, allowing different perspectives and insights to be discussed with the audience.

Organiser

Edoardo Felici, National Data Warehouse for Traffic Information, The Netherlands

Moderator

Olaf Vroom, National Data Warehouse for Traffic Information, The Netherlands

Speakers

Jeroen Brouwer, TomTom, The Netherlands

Jan Cools, Chief Executive Officer, Be-Mobile

Edoardo Felici, National Data Warehouse for Traffic Information, The Netherlands

Charlotte Holstrøm, Vejdirektoratet, Denmark

Mandali Khalesi, Here, Japan

Rick Schuman, INRIX, United States

SIS50 - INNOVATIVE APPLICATIONS OF ITS FOR ROAD FREIGHT PRODUCTIVITY AND SAFETY

THURSDAY 13 OCTOBER 2016, 1400 – 1530 HOURS

MEETING ROOM 219

Future Freight including Aviation and Maritime

This SIS brings together practitioners, experts from Australia, Sweden and South Africa (other countries to be confirmed), representing government organisations, universities and industry. The focus will be how the exchange of information, knowledge and capability with respect to ITS initiatives, policies and programs (focussing on heavy vehicle reforms) are benefitting regions through mutual cooperation. The centrepiece is Australia's Intelligent Access Program (IAP), which has operated in Australia since 2008. The IAP is the first land-based regulatory application of telematics. Collaboration between Sweden and Australia was initiated in 2009. An Operational Pilot of the IAP in Sweden began in 2013 as a key part of Sweden's HCT research and innovation program, ahead of HCT reforms in 2017. The collaborative relationships that exist between Australia, Sweden and South Africa assists in the identification of policy, institutional, legal, operational, technical and commercial elements that contribute to the development of ITS initiatives across the globe. The SIS will consist of presentations and an interactive discussion.

Organiser

Gavin Hill, Transport Certification Australia (TCA), Australia

Moderator

Gavin Hill, Transport Certification Australia (TCA), Australia

Speakers

Sten Wandel, Lund Univserity, Sweden

Chris Koniditsiotis, Transport Certification Australia, Australia

Chris Walker, University of New South Wales, Australia

Marcus Burke, National Transport Commission (Australia), Australia

Sipho Khumalo, Cross Border Road Transport Agency (CBRTA), South Africa

SIS51 - DATA-DRIVEN: CONNECTING CARS FOR SMARTER CITIES

THURSDAY 13 OCTOBER 2016, 1400 – 1530 HOURS   MEETING ROOM 220

Smart Cities and New Urban Mobility

Managing the massive population growth in our cities is one of the most important development challenges of the 21st century. Over half of the world's population lives in our urban centers. We have 28 Megacities of 10 million or more people. By 2030, this will increase to 41 megacities, placing a huge strain on an aging infrastructure. Increasing congestion makes mobility more stressful for urban residents and more challenging for cities' transportation management efforts. Emerging connected car technologies can now leverage floating car data, taking on a new approach to enable mobility. At its most fundamental level, the ability to understand current traffic conditions for all roads through the connected car forms the foundation for autonomous vehicles in the future. Automaker OEMs, can now leverage data generated inside as well as outside of the vehicle to deliver new services, such as smarter parking – helping drivers find the closest and most cost effective parking, intermodal like intermodal navigation that navigates drivers to a bus or train when traffic conditions or available charge prevents them from completing their journey on time. These mark just a few examples of how technology helps reduce urban congestion and build and promote smarter cities worldwide.

Organiser

Ali Savio, INRIX, United States

Moderator

Ted Trapanier, Inrix, United States

Speakers

Steffen Rasmussen, City of Copenhagen, Denmark

Sebastian Althen, Siemens, United States

Eric-Mark Huitema, IBM, The Netherlands

Sam Friedman, ParkMe, Germany

Charlotte Vithen, Danish Road Directorate, Denmark

SIS52 - C-ITS FOR OPTIMIZING TRANSPORT AND LOGISTICS OF GOODS

THURSDAY 13 OCTOBER 2016, 1600 – 1730 HOURS   MEETING ROOM 204

Future Freight including Aviation and Maritime

ITS can support reducing CO2 emissions thanks to higher load factors and an overall efficiency of the whole logistics system (including the infrastructure) without forgetting more efficient travel (traffic) management. Transport operators could more easily measure and work on a reduction of their environmental impacts. First of all, this session will develop how C-ITS can optimize each transport leg (e.g. Eco driving, slow steaming, speed advice at intersections or reduction of time spent to look for a parking place thanks to real-time information on available places). Furthermore, it could also show how goods could be transported in innovative ways (Port loading/unloading optimization, last mile delivery and automation). Finally, the usefulness of C-ITS will be demonstrated in the security management of the transport of dangerous goods. The speakers of this session will present their experience of the benefits of C-ITS to the transport of goods acquired through several experimentations and pilots launched in 3 European (Compass4D, CO-GISTICS and CORE) and 2 French national (Noscifel, GeotransMD) projects.

Organiser

Andre Perpey, Geoloc Systems, France

Moderator

Jean-Philippe Mechin, CEREMA DTerSO, France

Speakers

Helene Wiedemann, Renault, France

Antonella DIfazio, Telespazio, Italy

Andre Perpey, Geoloc Systems, France

German Herrero, Computer Science, Engineering, Entertainment and Arts, Atos S.A., France

Lina Konstantinopoulou, ERTICO - ITS Europe

Eric Louette, ITS Officer, Ministry of Ecology, Sustainable Development and Energy, France

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SIS74 - FUTURE MANAGED MOTORWAY INFRASTRUCTURE IN THE CONTEXT OF DIGITAL DISRUPTION

THURSDAY 13 OCTOBER 2016, 1600 – 1730 HOURS   MEETING ROOM 210

Assorted topics

Digital Disruption is a common theme across multiple industries, and stands to impact the ITS industry greatly into the future. This session looks at how our major motorway infrastructure providers are planning for future operational needs across their networks.

Organiser

Kim Thomas, Aurecon, Australia

Moderator

Hoa Nguyen, Aurecon, Australia

Speakers

Manu Hingorani, QTMR, Australia

Marco Morgante, Roads and Maritime Services NSW, Australia

Vincent Vong, VicRoads, Australia

Chris Coghlan, VicRoads, Australia

SIS53 - DATA FUSION OF COLLECTING PUBLIC AND PRIVATE DATA DURING DISASTER MITIGATION

THURSDAY 13 OCTOBER 2016, 1600 – 1730 HOURS

MEETING ROOM 211

Challenges and Opportunities of Big Open Data

General public has recently raised concerns to reexamine their current disaster reduction activities due to the increase of unexpected natural disasters.We also have to consider the large-scale earthquake that is estimated to occur and reevaluate the system to minimize casualties as much as possible.Under these circumstances, information delivery to drivers are critical for their own and it is serious for the administrators of the local government too.In this session, we'd like to introduce how we can provide these type of information not just in Japan, but to the people in need and how we can use public data to improve the quality.

Organiser

Makoto Otsuki, ITS Japan, Japan

Moderator

Masao Kuwahara, Tohoku University, Japan

Speakers

Masao Kuwahara, Tohoku University, Japan

Makoto Bando, Tokushima Prefecture, Japan

Yoshifumi Matsumoto, Kyusyu Practice group of IT&ITS-QPITS, Japan

Satomi Sudo, Micro Media Disaster Information Network, Japan

Nobuyuki Ozaki, Toshiba Corporation, Japan

SIS54 - MANAGEMENT OF MOBILITY DEMAND THROUGH ITS: THE REAL CHALLENGE FOR SMART CITIES

THURSDAY 13 OCTOBER 2016, 1600 – 1730 HOURS

MEETING ROOM 212

Smart Cities and New Urban Mobility

The proposed SIS deals with one of the main themes of the ITS World Congress 2016 "Smart Cities and New Urban Mobility". Such topic is really important and quite urgent also due to the environmental challenges now faced by many big cities in the Asia Pacific area, for which ITS could represent a possible solution, especially as regards the management of mobility demand.The SIS will focus on the exchange of policies, best practices and lessons learnt regarding ITS for mobility demand management from different cities. In this SIS "advanced in ITS" and "less advanced in ITS" cities from Asia/Europe will be involved as well as some big companies, that can explain their experiences working together with urban authorities on large ITS projects, and the results obtained. The cities of Torino, Singapore and Beijing will be involved as speakers, order to have two cities with advanced policies on the management of mobility demand, and one city (Beijing) that is experimenting big problems concerning the environmental impact due to traffic congestion As companies, speakers will include Swarco, Engineering an Italian company that worked with the city of Milan for Expo 2015, and Inrix.

Organiser

Olga Landolfi, TTS Italia, Italy

Moderator

Olga Landolfi, TTS Italia, Italy

Speakers

Richard Harris, Xerox, United Kingdom

Andrew Chow, ITS Singapore, Singapore

Scott Sedlik, INRIX, United States

Carmine Rossin, Engineering SpA, Italy

Gino Franco, SWARCO, Austria

Fabrizio Arnedodo, Chief Technology Officer, 5T. Torino, Italy

Hao Liu, Beijing Transportation Information Center, China

SIS55 - GLOBAL VIEW ON CHALLENGES IN MEASURING CO2 REDUCTION BENEFITS FROM ITS

THURSDAY 13 OCTOBER 2016, 1600 – 1730 HOURS

MEETING ROOM 213

Environmental Sustainability

ITS has the potential to be one of the major enablers to reduce CO_2 emission if successfully deployed. Many initiatives have investigated and demonstrated the effectiveness of the proposed solutions. One of the main issues remaining is the comparison of the solutions with respect to the claimed reduction of emission, i.e. the way they are validated and the corresponding impact assessment.International cooperation has taken place since many years, between the different region Europe, Japan and USA in order to "speak" the same language when addressing this topic of measuring the level of CO_2 reduction of ITS solution in transport. ERTICO just conducted a study in Europe on "ITS reducing CO_2 emission for passenger cars" presented at the ACEA press conference during the Frankfort Motorshow in September 2015 As a conclusion of this work, the challenge remains to propose a reproducible way/methodology to assess ITS systems/services for reducing CO_2 emission on which we can rely to take the right decisions and push for the most promising solutions.This session will provide the current status of the activities in the three regions and discuss the way forward to harmonise the way we perform such measurement.

Organiser

Jean-Charles Pandazis, ERTICO - ITS Europe

Moderator

Jean-Charles Pandazis, ERTICO - ITS Europe

Speakers

Matthew Barth, University of California - Riverside, United States

Jean-Charles Pandazis, ERTICO - ITS Europe, Belgium

Ryota Horiguchi, i-Transport Lab. Co., Ltd., Japan

SIS56 - IMAGE-RECORDING-TYPE DRIVING EVENT VIDEO RECORDER (DR) TECHNOLOGY ENSURING AUTOMATED DRIVING

THURSDAY 13 OCTOBER 2016, 1600 – 1730 HOURS　　　　**MEETING ROOM 219**

Automated Vehicles and Cooperative ITS

This SIS developed a global consensus through last six WCs that "image-recording type driving event video recorder" (DR) technology contributed greatly to the reduction of traffic accidents combined with matured software application. As shown in the SIS session at Bordeaux in 2015, some 5million units of DR are distributed in Japan at 2014 and similarly widely spread in East Asia among professional and private drivers including taxi, bus and trucks as well as private cars. More concerns with an application of DR for safety management are increasing nowadays particularly while "automated driving" is likely put into practice by the year of "Tokyo Olympic and Paralympics 2020" as illustrated in "driverless taxi" in less populated country side in Japan. Even if "automated driving" spreads, the traffic accident will never disappear as far as the mixed traffic of "an automated driving car" and "the conventional manually-operated driving car" continues. There is new and big turn of a DR recording the operation of the car exactly and a crucial role is highly expected on this context. The DR technology is indispensable to inspect whether "an automated driving car" realized designed specifications.

Organiser

Koji Ukena, UK-Consultant, Japan

Moderator

Sadao Horino, Kanagawa University, Japan

Speakers

Joseph Kanianthra, Active Safety Engineering LLC, United States

Takurou Miyazaki, NTT DATA i-corporation, Japan

Koji Ukena, UK-Consultant, Japan

Takahiko Uchimura, ITS Japan, Japan

Sadao Horino, Kanagawa University, Japan

SIS57 - SMART INTELLIGENT TRAFFIC INTERSECTIONS–EVALUATING CHALLENGES OF BIG DATA FOR SMART CITIES

THURSDAY 13 OCTOBER 2016, 1600 – 1730 HOURS　　　　**MEETING ROOM 220**

Challenges and Opportunities of Big Open Data

Smart Intelligent Traffic Intersections (SITI) talking to Connected Cars will provide the foundations for Smart Cities of the future generating Big Data on Transportation Systems, Vehicles, Bicyclists, Pedestrians and User Information Systems as we start seeing Self-driving Cars on the roads using Machine Intelligence to detect obstacles in their pathways. This is the 3rd of a series of Special Interest Sessions started at the ITS World Congress Detroit generating a lot of interest for Connected Cars of the Future; at Bordeaux for leveraging the Internet of Things and now at Melbourne to evaluate challenges of Big Data Science for Smart Cities, for Collection, Transmission and Urban Analytics of V2X Data. Can similar Machine Intelligence proposed to be used for Autonomous Cars also be used in Roadside Infrastructure to provide Data Visualization and Predictive Analytics? How will we apply Data Fusion to sensor data coming from various sources at traffic intersections? What are the human factors and what will be the Human Machine Interfaces for such emerging systems? What kind of intelligence will be required at the edge for such computing?

Organiser

Harsh Verma, R Systems, United States

Moderator

Ted Trepanier, Inrix, United States

Speaker

David St. Amant, Econolite, United States

Bob Rausch, Transcore, United States

Darcy Bullock, Purdue University, United States

Hamed Benouar, Sensys Networks, United States

SIS58 - TRAVELLER INFORMATION - MEETING INCREASING CUSTOMER EXPECTATIONS

FRIDAY 14 OCTOBER 2016, 0830 – 1000 HOURS　　　　**MEETING ROOM 210**

Smart Cities and New Urban Mobility

Providing reliable, timely and accurate traffic and travel Information (including public transport information) to customers is critical for well-informed travel decisions (pre-trip) as well as information during the customer's journey (on-trip). With advancing technology and diversified data sources there is now more data available than ever before. As a result, customers' expectations about the information, when and how it is provided, has increased.As government agencies how do we keep up with these changing expectations and what service do we provide to meet their expectations? What is our relationship with industry and how do we work together to provide better information to the customer? This session will explore some of the customer research that has been undertaken and how government agencies and industry are meeting expectations. This session will also look at how traffic and travel information services are using emerging/ agile technologies to merge and blend multiple data sets from a wide variety of sources to meet those customer expectations.

Organiser

Joanna Robinson, Queensland Department of Transport and Main Roads, Australia

Moderator

Phil Charles, The University of Queensland, Australia

Speakers

Sharon Hunter, Transport Management Centre, Australia

Joanna Robinson, Queensland Department of Transport and Main Roads, Australia

Paige Fitzgerald, Waze, United States

Danny Woolard, GEWI, United Kingdom

Wietske Smith, Translink, Australia

SIS59 - TRAFFIC STATE ESTIMATION USING VARIOUS SENSING DATA

Challenges and Opportunities of Big Open Data

The session focuses on recent development of traffic state estimation using various sensing data such as traffic detector data, probe vehicle data, bluetooth data, mobile data image data, twitter data. etc. Conventionally, traffic detectors have been used as major sensors for traffic monitoring. However, various data especially from moving objects are now available because of the advanced sensing and communication technologies. Studies, that try to utilize these available sensing data to monitor and predict traffic states, have been therefore a hot issue throughout the world. This session is organized to exchange our cutting-edge research outcomes.

Organiser

Masao Kuwahara, Tohoku University, Japan

Moderator

Masao Kuwahara, Tohoku University, Japan

Speakers

Atsushi Fukuda, Department of Transportation Systems Engineering, College of Science and Technology, Nihon University, Japan

Sorawit Narupiti, Chulalongkorn University, Thailand

Hironobu Kitaoka, Toyota Motor, Japan

Nour-Eddin El Faouzi, IFSTTAR, France

Tetsuhiro Ishizaka, Department of Transportation Systems Engineering, College of Science and Technology, Nihon University, Japan

Agachai Sumalee, Kingmongkut's Institute of Technology, Thailand

Hai Vu, Swinburne University of Technology, Australia

SIS60 - MANAGED MOTORWAYS - ADAPTING THE MELBOURNE CONCEPT FOR U.S. APPLICATIONS

Smart Cities and New Urban Mobility

Managed Motorways builds upon existing ITS and managed lanes concepts to implement a comprehensive package of strategies to fully control freeway traffic. Managed motorways utilize extensive data, coordinated ramp metering and advanced system management to synchronize traffic flow to match real time operational capacity. Experience on M1 in Melbourne shows fully traffic control can eliminate recurring congestion and increase throughput by up to 25% during peak periods. Key to the success in Melbourne is the ability to control all access to the freeway. Transmax STREAMS provides the framework for coordinating components, including HERO and ALINEA algorithms that optimize ramp metering to balance traffic. VicRoads success has prompted interest in adapting the concept for U.S. applications. Colorado and Utah DOT's have completed feasibility assessments with modeling for I-15 in Utah showing potential to reduce total travel delays by 37%. CDOT has identified a 13 mile section of I-25 in Denver for a managed motorways pilot to be operational in 2017. This session will review the Melbourne experience with managed motorways and keys to success, and will provide an overview of current U.S. efforts to implement the concept.

Organiser

Darren Henderson, WSP | Parsons Brinckerhoff, United States

Moderator

Darren Henderson, WSP | Parsons Brinckerhoff, United States

Speakers

John Gaffney, VicRoads, Australia

Maurice Burley, Independent Contractor, Australia

Peter Chalmers, Transmax, Australia

Shailen Bhatt, Colorado DOT, United States

David Ungemah, WSP |, United States

SIS61 - PRO-ACTIVE NETWORK AND INCIDENT MANAGEMENT

Smart Cities and New Urban Mobility

This SIS will present perspectives on the vision of proactive transport network and incident management, and the opportunities, challenges and learnings of agencies as they move towards it. Increasing emphasis on the integration and reliability of urban transport networks has led to a focus on how incidents are managed to minimise customer impacts. Transport agencies are moving from a reactive road incident management focus to a pro-active transport network management focus, where potential disruptions are predicted and prevented before they eventuate. Agencies are also planning for the shift from predominantly single to multi-modal network management services, in recognition that customers traverse different modes during their journeys and the overall capacity of all modes in the system need to be optimised to achieve best outcomes. This requires a new level of business integration across numerous stakeholders in the transport operations domain. ITS/ICT are significant enablers by helping to achieve more complete situational awareness, greater proactive transport management capabilities, collaborative operations and information sharing, faster execution of operational processes and improved analytical capabilities. Participants in this SIS will share their experience, planning and learnings on optimising multi-modal incident management through services delivered by TMCs.

Organiser

Lachlan Faulkner, Queensland Department of Transport and Main Roads, Australia

Moderator

John Oppes, Queensland Department of Transport and Main Roads, Australia

Speakers

Scott White, Transport for New South Wales, Australia

Lachlan Faulkner, Queensland Department of Transport and Main Roads, Australia

Kathryn Musgrave, New Zealand Transport Agency, New Zealand

Adam Fried, Waze, United States

Pascal Labouze, Transport for New South Wales, Australia

Shigemi Ishida, Kyushu University, Japan

SIS62 - IOT AND CONNECTED AUTOMATION: DISRUPTIVE TRENDS IN TRANSPORT

FRIDAY 14 OCTOBER 2016, 0830 – 1000 HOURS　　　　**MEETING ROOM 219**

Smart Cities and New Urban Mobility

Australians are amongst the fastest adopters of new technology in the world. We are frequently used to market test new technologies and devices. In most cases the physical effects of these devices on our society is minimal, however, this is certainly not the case with connected, automated vehicles. In parallel we see increasing information systems throughout of built environment along with electrically powered vehicles and a myriad of public transport and active transport offerings. Collision of this wide range different system functions will now require a managed interaction to reap the greatest rewards for society. The Internet of things will be the cornerstone of the discussion, as a key enabling technology which is providing unprecedented connectivity and immediate benefit to a wide range of business users in Australia. Looking further forward the panel will discuss the implications for IoT in interacting with automated vehicles and other transport systems. Key opportunities and barriers to deployment will be discussed..

Organisers

Shivaani Polley WSP | Parsons Brinckerhoff, Australia

Glenn Geers, ARRB Group, Australia

Moderator

Glenn Geers, ARRB Group, Australia

Speakers

Henry Okraglk, WSP, Australia

Hussein Dia, Swinburne University of Technology, Australia

Dirk van Amelsfort, VIktoria Swedish ICT, Sweden

James Sayer, University of Michigan Transportation Research Institute, United States

Reinhard Pfliegl, Chief Executive Office, A3PS

SIS63 - REAL-WORLD ITS ARCHITECTURES: BENEFITS, CHALLENGES AND SOLUTIONS

FRIDAY 14 OCTOBER 2016, 0830 – 1000 HOURS　　　　**MEETING ROOM 220**

Policy, Standards and Harmonisation

ITS architectures benefit jurisdictions and suppliers by allowing more efficient development of ITS solutions to deliver better real-world benefits to users and managers of the transport network. This SIS provides a rare opportunity to engage with developers of ITS architectures from around the world who will share their practical experiences and collectively illustrate:1.   What ITS Architectures look like and their different approaches, 2.   Real-world benefits ITS architecture can deliver in developing solutions, and3.   Challenges faced in developing, deploying & maintaining the ITS architectures, and real-world experiences of how these were overcome,An interactive Q&A panel is intended to round out the session. Given the breadth of experience, both novices and experienced practitioners alike will acquire greater awareness, understanding and ideas for deploying ITS architectures around the globe to assist in local application.

Organiser

Jason Venz, Deptartment of Transport and Main Roads, Australia

Moderator

Jason Venz, Deptartment of Transport and Main Roads, Australia

Speakers

David Yee, Transport Management Consulting, Australia

Tom Lusco, Iteris, Inc., United States

Horst Wieker, htw saar, University of Applied Sciences, Germany

Knut Evensen, Q-Free, Norway

Neil Frost, iSAHA, South Africa

SIS65 - TRAFFIC SIGNAL CONTROL SYSTEMS FOR 4TH GENERATION

FRIDAY 14 OCTOBER 2016, 1030 – 1200 HOURS　　　　**MEETING ROOM 210**

Smart Cities and New Urban Mobility

This session will present the R&D framework of the next generation traffic signal control system utilizing information and communication technology to detect the vehicles approaching the intersections instead of the conventional detectors. The detection technology might include the connected vehicle with V2X communication and a few promising sensors installed in the infrastructure. New hardware and software systems are integrated with a innovative concept of control and management algorithms. A methology of how to test a system on the road would be discussed in terms of performance measures to be evaluated and validated.

Organiser

Young-Jun Moon, The Korea Transport Institute, Korea

Moderator

Young-Jun Moon, The Korea Transport Institute, Korea

Speakers

Sangsun Lee, Hanyang University , Korea

Jae-Hyoung Park, Metabuild, Korea

Gyehyeong Ahn, Korea Road Traffic Authority, Korea

Kitae Jang, Korea Advanced Institute of Science and Technology(KAIST), Republic of Korea

Anjae Lee, Pantom, Korea

SIS66 - START-UPS DISRUPTING MOBILITY

FRIDAY 14 OCTOBER 2016, 1030 – 1200 HOURS

MEETING ROOM 211

Policy, Standards and Harmonisation

Disruption creates new opportunities, and this session is the only one at the congress to focus specifically on how start up companies are disrupting mobility. Hear from founders and CEO of start-ups in the shared mobility and Mobility as a Service sector as these entrepreneurs present how their business idea will change the future of mobility and what they have learned along their journey so far.

Organiser

Andrew Somers, Mobility as a Service Australia, Australia

Moderator

Andrew Somers, Mobility as a Service Australia, Australia

Speakers

Will Davies, Car Next Door, Australia

Steve Johnson, Carhood, Australia

Mosstyn Howell, UbiPark, Australia

Paul Nyberg, Shareit Blox Car, Finland

Yann Leriche, TRANSDEV, France

Sampo Hietanen, MaaS Finland, Finland

SIS67 - TARGETTING ROAD TRAUMA: HOW FAR CAN ITS TAKE US TOWARDS ZERO?

FRIDAY 14 OCTOBER 2016, 1030 – 1200 HOURS

MEETING ROOM 212

Policy, Standards and Harmonisation

Recognising that over 1.2 million die and some 50 million are injured in road crashes annually across the world, the UN has included a target within the UN Sustainable Development Goal (SDG) 3 of the 2030 Agenda for Sustainable Development, to ""by 2020, halve the number of global deaths and injuries from road traffic accidents"". A safe system approach is vital in meeting this target as well as the target in many advanced nations to strive towards zero preventable deaths and injuries from road crashes. When so many lives can be saved with innovative, integrated technologies, why are ITS solutions sometimes overlooked in setting road safety agendas? This session will discuss how the broader range of ITS can support the mission of reducing road trauma and what target might be set for ITS to contribute towards reaching zero.

Organiser

Lauchlan Mcintosh, McIntosh Management Services, Australia

Moderator

Lauchlan Mcintosh, McIntosh Management Services, Australia

Speakers

Mark Jackman, Robert Bosch Australia, Australia

Younghan Youn, Korea University of Technology and Education, Korea

Samantha Cockfield, Transport Accident Commission, Australia

SIS68 - AUTOMATED VEHICLES: KANGAROO CAUGHT IN THE HEADLIGHTS

FRIDAY 14 OCTOBER 2016, 1300 – 1430 HOURS

MEETING ROOM 204

Automated Vehicles and Cooperative ITS

Road vehicles and our road environment are becoming increasingly better equipped to improve driver safety. Driverless vehicles may be with us in the very near future. The implications for road agencies and operators to plan; deliver and maintain infrastructure; consider standards and regulation; and importantly how to manage access and operation of our networks will become a key challenge. On a wider scale the societal implications are significant with great potential impacts on public transport and mobility. Key challenge: How do we meet these key challenges while our understanding of the technologies is as yet incomplete and development of most technologies are controlled by other countries? This has led to many governments appearing to be like a kangaroo 'caught in the headlights' of the fast pace of technology and a changing society. The panel will discuss how they see a systems approach to managing and solving these complex objectives of our society. Key principles forming part of the discussion are the changing role of public and private organisations in delivering solutions, collaboration, and public engagement. This is a roll-call for effective leadership for the creation and fulfilment of a vision of a safer, smarter future for us all.

Organisers

Wayne Glenn WSP | Parsons Brinckerhoff, Australia

Lachie Gray WSP | Parsons Brinckerhoff, Australia

Moderator

Dennis Walsh, Queensland Transport and Main Roads, Australia

Speakers

Lauren Isaac, WSP | Parsons Brinckerhoff, United States

Stuart Ballingall, Austroads, Australia

Carl Liersch, Robert Bosch, Australia

Jack Hall, P.E. ITS CV/AV Program Manager, Contra Costa Transportation Authority, Australia

SIS69 - ACCELERATING ITS DEPLOYMENT: INDUSTRY AND POLICY COMPATIBILITY

FRIDAY 14 OCTOBER 2016, 1300 – 1430 HOURS **MEETING ROOM 210**

Policy, Standards and Harmonisation

Industry is already working towards open systems, standards and operating models. However, there is still much to be done. This session will consider how best to accelerate ITS deployment. The eminent panel of speakers will share their perspectives and insight into future mobility. In particular it will address how recent developments and new thinking can help overcome barriers to deployment. It also considers the importance and the role of political leadership and how industry can best cooperate with the authorities to ensure sustained operational acceleration.Topics covered include open data, transport revenue, integrated systems and services and unlocking the potential of the always connected society.

Organiser

Richard Harris, Xerox, United Kingdom

Moderator

Rasmus Lindholm, ERTICO - ITS Europe

Speakers

Grace Ong, Land Transport Authority of Singapore, Singapore

Leonid Antsfeld, Business Development for Transportation, Xerox Research Centre Europe, France

Robert Sykora, Siemens, Germany

Klaas Rozema, Dynniq, The Netherlands

Atsushi Yano, Sumitomo Electric Industries. Ltd., Japan

SIS70 - ADVANCES ON INNOVATIVE EV CHARGING TECHNOLOGIES

FRIDAY 14 OCTOBER 2016, 1300 – 1430 HOURS **MEETING ROOM 211**

Environmental Sustainability

Even though progress in EV range extension has been impressive lately, analogous progress was achieved for ICE vehicles at lower price. This fact combined with the scarcity of the EV charging stations and the long recharging times reduce the user acceptance hindering the large market penetration of EVs. Novel recharging technologies aim at increased user convenience and decreased EV immobilization time so that EVs become more attractive to the consumer and become a viable, affordable solution for daily short and long range mobility. Nonetheless these new technologies and the now technically and business-wise isolated charging infrastructures need to be unified to enable the proliferation of EVs and the decarbonization of transport. More frequent, short-duration, high-power charging can eliminate the "range anxiety" of future EV drivers but as a prerequisite many technical, policy and standardization hurdles must be overcome. In this workshop key experts will have the chance to discuss advances on electromobility technologies, EV-focused V2X ICT and standardization SoA and gaps that delay wide market deployment.

Organiser

Angelos Amditis, Institute of Communication and Computer Systems (ICCS), Greece

Moderator

Jean-Charles Pandazis, ERTICO - ITS Europe

Speakers

Angelos Amditis, Institute of Communication and Computer Systems (ICCS), Greece

Ning Duan, Research Scientist, IBM Research, China

Paolo Guglielmi, Politecnico di Torino, Italy

YouJun Choi, Korea Automotive Technology Institute/ E-Mobility Research Center, Korea

Beth Rehman, Elways AB, Norway

SIS71 - ITS DEVELOPMENT AND WHOLE OF LIFE ASSET MANAGEMENT

FRIDAY 14 OCTOBER 2016, 1300 – 1430 HOURS **MEETING ROOM 212**

Challenges and Opportunities of Big Open Data

The field of ITS is an area of rapid change through technological and operational advances which provide a challenge for asset owners and managers to understand the whole of life value beyond the initial investment.In this session asset owners, managers, industry experts and researchers can discuss approaches to lifecycle asset management considering influencing how ITS is deployed, asset assessment, asset performance data and the use of methods such as reliability centered maintenance in an often forgotten and unglamorous area of ITS.

Organiser

Dean Parker, New Zealand Transport Agency, New Zealand

Speakers

Marcus Van der velden, ARCADIS, Australia

Nalinda Punchihewa, VicRoads, Australia

Ian Espada, ARRB Group, Australia

Lina Inglis, ARRB Group, Australia

Quddus Wazirzada, Roads and Maritime, NSW Government, Australia

Dean Parker, New Zealand Transport Agency, New Zealand

SIS72 - EXPLOITING CLOUD AND BIG DATA TECHNOLOGIES FOR ADAS AND DIGITAL CARTOGRAPHY

FRIDAY 14 OCTOBER 2016, 1300 – 1430 HOURS ▶ **MEETING ROOM 213**

Vehicle Network and Safety

The Cloud-LSVA project presents a research plan to advance technology and performance in the key automotive industry by employing Semi-Automated Video Annotation, Scene Recognition, Object Recognition and Deep Learning, in conjunction with vehicle sensor data. The complexity of data produced by automotive sensors presents a significant research challenge that, if addressed, will provide quantifiable impact on society and industries. The Cloud-LSVA project will focus on applications in the Advanced Driver Assistance Systems (ADAS) and Digital Cartography domains. Real consumer demand for the next generation of ADAS technologies exists and is growing and both domains are key underpinning elements of the Semi-Autonomous and Autonomous vehicle initiatives. The current session will feature topics on the relation between ADAS and Big Data; the importance of - Computer Vision based semi-automatic annotation, as well as touch on the sensitive issue of Insurance and liability in the future autonomous vehicles.

Organiser

Andrea Toth, ERTICO - ITS Europe

Francois Fischer, ERTICO - ITS Europe

Moderator

Francois Fischer, ERTICO - ITS Europe

Speakers

Suzanne Little, DCU, Ireland

Oihana Otaegui, Vicomtech, Spain

Hassane Essafi, CEA, France

Mr Marcos Nieto, Principal Researcher, Vicomtech

SIS73 - ITS FOR GLOBAL MEGA EVENTS

FRIDAY 14 OCTOBER 2016, 1300 – 1430 HOURS ▶ **MEETING ROOM 219**

Smart Cities and New Urban Mobility

This session will present how ITS takes the global mega events (e.g. World Cup Soccer, Olympic Games, etc.) which generate additional travel demands and have significant impacts on transport systems in the host cities and regions. Managing transport systems before and during a global mega event obviously is a big challenge in ITS area. Speakers from around the world who are operators of public transport, provider of ITS services with traveller information or transport planner for mega events will introduce their experiences with transport services for the Olympic Games 2012 London, 2014 in Sochi, 2016 in Rio, 2018 in PyeongChang, 2020 in Tokyo, and 2022 in Beijing.

Organiser

Young-Jun Moon, The Korea Transport Institute, Korea

Moderator

Young-Jun Moon, The Korea Transport Institute, Korea

Speakers

Kyuok Kim, The Korea Transport Institute, Korea

Jae-Hyoung Park, Metabuild, Korea

Sang-Keun Lee, Korea Research Institute for Human Settlement, Korea

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SIS17 - FUTURE MOBILITY AND MOBILITY AS A SERVICE, MOVING FROM OWNERSHIP TO ACCESS?

FRIDAY 14 OCTOBER 2016, 1300 – 1430 HOURS ▶ **MEETING ROOM 203**

Automated Vehicles and Cooperative ITS

Although a transition to fully self-driving cars is still several years away, disruptive changes to mobility business models are already occuring. The global megatrend of the rise of the sharing economy that has disrupted industries such as tourist accommodation is starting to be felt in transport. This session will seek to address some of the questions that result from this disruption. What do these new forms of mobility look like and how will people choose to use them to get around? Given the long-standing romance of the motor car, how ready are people to move from car ownership from accessing on-demand transport services? How well might Mobility as a Service be suited to markets such as Australia and New Zealand?

Organiser

Andrew Somers, Mobility as a Service Australia, Australia

Moderator

Geoff Rose, Institute of Transport Studies, Monash University, Australia

Speakers

Hussein Dia, Swinburne University of Technology, Australia

Alexa Delbosc, Monash University, Australia

Sampo Hietanen, MaaS Finland, Finland

Andrew Somers, Mobility as a Service Australia, Australia

SCIENTIFIC SESSIONS

SP01 - INNOVATIVE SOLUTIONS TO REDUCE CONGESTION

TUESDAY 11 OCTOBER 2016, 1100 – 1230 HOURS | **MEETING ROOM 104**

Automated Vehicles and Cooperative ITS

Moderator: Dominique Winn, Transport for NSW, Australia

EU-SP0229 Preconditions for establishing and maintaining test sites for cooperative mobility
Aki Aapaoja, VTT Technical Research Centre of Finland Ltd., Finland

AN-SP0286 An innovative approach to reduce road traffic congestion
Manoucher Pajouhesh-Kia, Independent?, Australia

AP-SP0500 Labelling the depth of traffic congestion with model adaptation approach
Takamasa Koshizen, Honda R&D Co. Ltd., Japan

AP-TP0641 Developing and implementing moving light guide system in urban expressway
Dai Tamagawa, Hanshin Expressway Company Limited, Japan

SP02 - PREDICTIVE ANALYTICS

TUESDAY 11 OCTOBER 2016, 1100 – 1230 HOURS | **MEETING ROOM 103**

Challenges and Opportunities of Big Open Data

Moderator: Mohsen Ramezani, Monash University, Australia

AP-SP0121 Road event learning from streaming telematics data
Weishan Dong, IBM Research, China

AN-SP0135 Automatic classification of traffic incident's severity using machine learning approaches
Hoang Nguyen, NICTA / Data61 / CSIRO, Australia

EU-SP0627 Predictive dynamic distributed network management
Phillip Walsh, Mott MacDonald, Australia

AP-SP0629 An Anonymity Comparison between Theoretical Model and Real Log of Transit Ridership
Seongun Choi, Graduate School of Information Science and Technology, The University of Tokyo, Japan

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SP03 - MAPPING AND ROUTING

TUESDAY 11 OCTOBER 2016, 1400 – 1530 HOURS | **MEETING ROOM 104**

Automated Vehicles and Cooperative ITS

Moderator: Phil Delaney, CRC for Spatial Information, Australia

AP-SP0064 Methods to reduce the nodes of multi-hypothesis map matching algorithm
Kai Zhang, Tsinghua University, China

EU-SP0065 Towards a Semantically Enriched Local Dynamic Map
Patrik Schneider, Siemens AG Österreich, Austria

AP-SP0376 Information Capacity of Graphic Route Information Panels at Motorway Junctions
Yoshiyasu Murashige, Japan Expressway Technical Research Institute, Japan

AP-SP0502 Reachability Analysis for Electric Cars: Project Management Inspired Approach
Shunichiro Suenaga, National Institute of Informatics, Japan

SP04 - TRANSPORT DATA ISSUES

TUESDAY 11 OCTOBER 2016, 1400 – 1530 HOURS | **MEETING ROOM 103**

Challenges and Opportunities of Big Open Data

AN-SP0148 Calibration and clustering of traffic flow fundamental diagrams for mesoscopic simulation applications
Ziyuan Gu, Monash University, Australia

AP-SP0197 Decision Fusion with Conflicting Evidences for Vehicle Classification of Convolutional Neural Networks
Jianrong Wu, Fujitsu Research and Development Center, China

EU-SP0370 Setting up an ITS innovation environment with many stakeholders
Juho Kostiainen, VTT Technical Research Centre of Finland Ltd., Finland

AP-SP0696 Traffic state estimation of Nanjing based on multi-source data fusion
Weifang Wang, ITS Research Centre, China

SP05 - POSITIONING AND V2X COMMUNICATION

TUESDAY 11 OCTOBER 2016, 1600 – 1730 HOURS **MEETING ROOM 104**

Automated Vehicles and Cooperative ITS

Moderator: Makoto Itami, Tokyo University of Science, Japan

EU-SP0104 **The European InDrive Project – Automotive EGNSS for High Integrity ITS Applications**
Robin Streiter, Technische Universität Chemnitz, Germany

AP-SP0223 **A machine learning approach to detect non-line-of-sight GNSS signals in Nav2Nav**
Monsak Socharoentum, National Electronics and Computer Technology Center, Thailand

AN-SP0565 **A Study on Consumer Grade GNSS Receiver for Time Synchronization in VANET**
Khondokar Fida Hasan, Queensland University of Technology, Australia

AP-SP0573 **Improving Positioning Precision of Pedestrians by Using both GPS Satellites and Vehicles**
Ryo Yamashita, The University of Electro-Communications, Japan

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SP06 - FACILITIES AND TRAFFIC MODELLING

TUESDAY 11 OCTOBER 2016, 1600 – 1730 HOURS **MEETING ROOM 103**

Challenges and Opportunities of Big Open Data

Moderator: Wayne Harvey, VicRoads, Australia

AP-SP0021 **An Investigation On Generic Properties Of PFLOW**
Mikio Sasaki, Denso Corporation, Japan

EU-SP0228 **Optimizing Allocation of Public Facilities in Sustainable Urban Planning**
Alessandra Pascale, IBM Research, Ireland

AP-SP0390 **Application of particle filter to identification of time-varying car-following model**
Makoto Kasai, Nippon Expressway Research Institute Company Limited, Japan

EU-SP0587 **Travel times and vehicle statistics using CAM messages over ETSI ITS-G5**
Ola Martin Lykkja, Q-Free ASA, Norway

SP07 - V2X APPLICATIONS

WEDNESDAY 12 OCTOBER 2016, 1100 – 1230 HOURS **MEETING ROOM 104**

Automated Vehicles and Cooperative ITS

Moderator: John Wall, Transport for NSW, Australia

AP-SP0103 **Node-Clustering in Vehicle-to-Pedestrian Communications for Crash Warning Applications**
Takeshi Hirai, Nagoya University, Japan

EU-SP0106 **Software Defined Platform for Data Fusion in Safety Critical ITS Applications**
Robin Streiter, Technische Universität Chemnitz, Germany

AM-SP0304 **Subtle anomaly detection in the global dynamics of connected vehicle systems**
Michael Brown, SwRI, United States

EU-SP0548 **Fusion of V2X and Sensor Data Based on Motion Pattern Correlation**
Oliver Sawade, Fraunhofer FOKUS, Germany

SP08 - EVALUATION OF TRAFFIC SIGNALS

WEDNESDAY 12 OCTOBER 2016, 1100 – 1230 HOURS **MEETING ROOM 103**

Smart Cities and New Urban Mobility

Moderator: Masafumi Kobayashi, Sumitomo Electric Industries, ltd., Japan

AN-SP0041 **Evaluation of Traffic Signal Performance and Signal Failure Impact**
Clarissa Han, ARRB Group, Australia

AP-SP0584 **Development of Novel Queue-Length Based Signal Control Algorithm for Individual Road Intersection**
Yong Yao Yang, Zhe Jiang Supcon Information Co.,Ltd., China

EU-SP0619 **Evaluation of a Fuzzy Intelligent Traffic Signal Control System Using Traffic Simulation**
Junchen Jin, KTH Raoyal Instiute of Technology, Sweden

SP09 - COLLISION AVOIDANCE

WEDNESDAY 12 OCTOBER 2016, 1400 – 1530 HOURS　　　　　MEETING ROOM 104

Vehicle Network and Safety

Moderator:　Jianqiang Wang, Tsuinghua University, China

EU-SP0260　**A New Method for Identifying Hazardous Road Locations using GPS and Accelerometer**
　　　　　Kristian Hegner Reinau, Aalborg University, Denmark

EU-SP0460　**Using EDR to evaluate the loss of control risk**
　　　　　Thierry Serre, IFSTTAR, France

AP-SP0622　**Deployment of a roadside-enhanced V2X Field Trial System for Intersection Collision Avoidance**
　　　　　Mingta Tu, Industrial Technology Research Institute, Chinese-Taipei

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SP10 - IMPACT OF TECHNOLOGIES ON TRAVEL DEMAND

WEDNESDAY 12 OCTOBER 2016, 1400 – 1530 HOURS　　　　　MEETING ROOM 103

Smart Cities and New Urban Mobility

Moderator:　Justin Passaportis, GoGet Car Share, Australia

AP-SP0119　**Optimal automated booking of on-demand transportation**
　　　　　Theja Tulabandhula, Xerox Research Centre India, India

AP-SP0300　**Analysis of micro-car's influence on traffic network**
　　　　　Rui Mu, Nagoya University, Japan

EU-SP0647　**Evaluating the social network concept within new ICT-enabled mobility schemes**
　　　　　Susan Grant-Muller, University of Leeds, United Kingdom

AM-SP0670　**Analysis of the impacts of CAV technologies on travel demand**
　　　　　Joshua Auld, Argonne National Laboratory, United States

SP11 - NETWORK SAFETY

WEDNESDAY 12 OCTOBER 2016, 1600 – 1730 HOURS　　　　　MEETING ROOM 104

Vehicle Network and Safety

AP-SP0074　**Evaluation of an assistive technology for winter maintenance personnel**
　　　　　Naoto Takahashi, Civil Engineering Research Institute for Cold Region, Japan

EU-SP0108　**CHOREM: Choreographing services for emergency management**
　　　　　Lei Chen, VIktoria Swedish ICT, Sweden

AN-SP0269　**An ITS application to predict urban railway level crossing closure times**
　　　　　Inhi Kim, Institute of Transport Studies, Monash University, Australia

AN-SP0586　**Evaluation of in-vehicle technologies to prevent unlicensed driving in Queensland**
　　　　　Sebastien Demmel, Queensland University of Technology, Australia

AM-SP0732　**Investigating the Feasibility of Using SHRP2 Naturalistic Driving Study to Support Data Requirements of VSL Decision Making Algorithms**
and　　　　　**its Application in Connected Vehicle**
　　　　　Ali Ghasemzadeh, University of wyoming, United States

SP12 - INTEGRATED TRANSPORT SYSTEM

WEDNESDAY 12 OCTOBER 2016, 1600 – 1730 HOURS　　　　　MEETING ROOM 103

Smart Cities and New Urban Mobility

Moderator:　Chris Bax, Cubic, Australia

AP-SP0143　**Cloud Implementation of Interagency Traffic Management and Control System with Case Study**
　　　　　Shing Tenqchen, CHTTL, Chinese-Taipei

AN-SP0318　**Pedestrian Activity Analysis Using High Dimensional Clustering in a City Environment**
　　　　　Tuan Doan, The University of Melbourne, Australia

EU-SP0654　**Bluetooth Beacon Enabled Mobility Services and Opportunities in Public Transit**
　　　　　Janne Lahti, VTT Technical Research Centre of Finland, Finland

AP-SP0706　**Network Resilience and Recoverability in Urban Rapid Transit Systems during Disruption**
　　　　　Ghim Ping Ong, National University of Singapore, Singapore

SP13 - ROAD SAFETY

THURSDAY 13 OCTOBER 2016, 1100 – 1230 HOURS   MEETING ROOM 104

Vehicle Network and Safety

Moderator: Shunsuke Kamijo, The University of Tokyo, Japan

AP-SP0067 **A Dynamic Freeway Climbing Lane Operations Strategy for Safer Truck Traffic Management**
Cheol Oh, Hanyang University, Republic of Korea

AM-SP0118 **Analysis of Incidents Durations: Estimation of Random Parameter and Quantile Regressions**
Behram Wali, The University of Tennessee, Knoxville, United States

EU-SP0486 **Where can SSAM support Safety Analysis - An Austrian Example**
Michael Haberl, Graz University of Technology, Austria

AN-SP0582 **Assistive tactical decisions for safe and fast trajectories**
Gregoire Larue, Centre for Accident Research & Road Safety - QLD, QUT, Australia

AM-SP0733 **Examining the Impact of the Compliance Rate and the Penetration of Automatic Daytime Running Lights on the Safety Effectiveness of Regulatory Headlight Signs**
Mohamed Ahmed, University of Wyoming, United States

SP14 - MOTORWAY MANAGEMENT 1

THURSDAY 13 OCTOBER 2016, 1100 – 1230 HOURS   MEETING ROOM 103

Smart Cities and New Urban Mobility

Moderator: Nobuhiro Uno, Kyoto University, Japan

AN-SP0066 **Can variable speed limits promote higher traffic flows on motorways?**
J. Carlos Aydos, Roads and Maritime Services, Australia

AM-SP0434 **A Cycle-Based Variable Speed Limit Methodology for Improved Freeway Merging**
Jia Hu, Federal Highway Administration, United States

AP-SP0555 **Effects of Variable Speed Limits and Ramp Metering on Reducing Freeway Congestions**
Zhibin Li, Southeast University, China

SP15 - VEHICLE SENSING AND BICYCLE RECOGNITION

THURSDAY 13 OCTOBER 2016, 1400 – 1530 HOURS   MEETING ROOM 104

Vehicle Network and Safety

Moderator: Chris Jones, VicRoads, Australia

AP-SP0201 **Occluded Driving Vehicle Detection Based on Fast R-CNN with Refined Region Proposals**
Xiaoqing Liu, Fujitsu Research and Development Centor., Ltd. Shanghai Laboratory, Shanghai, China

AN-SP0263 **Using Dynamic Time Warping for Vehicle Classification via Inductive Loops**
Mahmood Hikmet, HMI Technologies, New Zealand

AN-SP0279 **Design of an Over-height Vehicle Detection and Warning System**
Jo Chang, Opus International Consultants Ltd, New Zealand

AP-SP0705 **Robust Multi-directional Bicycle Recognition under Pose Variation using Stereo Vision**
Kousuke Matsushima, National Institute of Technology, Kurume College, Japan

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SP16 - MULTI-MODAL TRANSPORT

THURSDAY 13 OCTOBER 2016, 1400 – 1530 HOURS   MEETING ROOM 103

Smart Cities and New Urban Mobility

Moderator: Mike Clarke, Yarra Ranges, Australia

AN-SP0081 **Measuring Excessive Congestion Delay and Travel Time Reliability Cost for Multi-modal Travels**
Clarissa Han, ARRB Group, Australia

EU-SP0276 **New Approach to Integrated Cross Modal Transport FOX and USEiT Projects Experience**
Ewa Zofka, Road and Bridge Research Institute (IBDiM), Poland

AP-SP0572 **Examining commuting intention conversion from private cars to bicycles using smartphone application**
Keiichi Higuchi, TTRI (Toyota Transportation Research Institute), Japan

SP17 - ENERGY EFFICIENCY

THURSDAY 13 OCTOBER 2016, 1600 – 1730 HOURS   **MEETING ROOM 104**

Environmental Sustainability

Moderator: Haruki Kawanaka, Aichi Prefectural University, Japan

EU-SP0528 Immersive driving simulation architecture to support gamified eco-driving instructions
Olivier Orfila, IFSTTAR, France

AP-SP0574 Time Sharing of Driving Modes from Probe Data for Fuel Consumption Estimation
Napon Srisakda, Graduate School of Science and Technology, Nihon University, Japan

EU-SP0669 Verifying claims of energy efficiency improvement A practical & systematic approach
Konstantinos Demestichas, ICCS - Institute of Communication and Computer Systems, Greece

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SP18 - PUBLIC TRANSPORT ANALYSIS

THURSDAY 13 OCTOBER 2016, 1600 – 1730 HOURS   **MEETING ROOM 103**

Smart Cities and New Urban Mobility

Moderator: Andrea Rau, TUM CREATE Limited, Singapore

AN-SP0133 Modelling the Direct Impact of Tram Operations on Traffic
Duy Nguyen, Monash University, Australia

AP-SP0235 Increasing the Capacity of Signalized Intersections with dedicated bus lane
Yanxi Hao, Key Laboratory of Road and Traffic Engineering of the Ministry of Education, Tongji University, China

EU-SP0373 Time reliability diagnosis by AVL data in bus transit networks
Benedetto Barabino, Technomobility srl, Italy

SP19 - ENVIRONMENTAL SUSTAINABILITY

FRIDAY 14 OCTOBER 2016, 0830 – 1000 HOURS   **MEETING ROOM 104**

Environmental Sustainability

Moderator: Ryota Horiguchi, i-Transport Lab. Co., Ltd., Japan

EU-SP0530 Wireless Sensor Networks for Monitoring and Prediction of Road Traffic Induced Emissions
Xiaoliang Ma, KTH Royal Institute of Technology, Sweden

EU-SP0535 OBSIe Innovative Noise Measurement Method for Sustainable Urban Development
Ewa Zofka, Road and Bridge Research Institute (IBDiM), Poland

AN-SP0691 Life-cycle greenhouse gas emissions of electric and conventional vehicles in Australia
Peter Stasinopoulos, RMIT University, Australia

EU-SP0730 Thermal performance of the Heating system of the Electric Vehicle
Aisling Doyle, Transport Research Institute, Scotland

SP20 - TRAFFIC SIMULATIONS

FRIDAY 14 OCTOBER 2016, 0830 – 1000 HOURS   **MEETING ROOM 103**

Smart Cities and New Urban Mobility

Moderator: Takashi Oguchi, The University of Tokyo, Japan

AP-SP0344 Simulation framework for the autonomous mobility on demand systems in SimMobility
Katarzyna Marczuk, National University of Singapore, Singapore

AN-SP0363 Integrating a mesoscopic traffic simulation model and a simplified NO2 estimation model
Adriana Simona Mihaita, NICTA / Data61 / CSIRO, Australia

AP-SP0474 A Traffic Simulation for Hyper-congestion Traffic Flow on Shanghai Urban Expressway
Danpeng Ma, Nagoya University, Japan

EU-SP0480 Dynamic Optimisation of Urban Collective Taxis by Discrete-Event Simulation
Jennie Lioris, IFTTAR, France

SP21 - TRANSPORT MODELLING

Smart Cities and New Urban Mobility

Moderator: Hiroko Mori, Aichi Shukutoku University, Japan

AN-SP0142 **Estimating Time Dependent Origin-Destination Demand Using SCATS Traffic Count Data**
Sajjad Shafiei, Institute of Transport Studies, Monash University, Australia

AP-SP0237 **A Multi-objective Algorithm for Eco-Efficient Demand Responsive Transit Systems (DRTS)**
Ta-Yin Hu, Department of Transportation & Communication Management Science, National Cheng Kung University, Chinese-Taipei

AP-SP0365 **Application of T-S Fuzzy Inference System on Urban Distribution Demand Forecasting**
Shanshan Fang, Beijing Key Laboratory of Traffic Engineering,Beijing University of Technology, China

EU-SP0537 **Max Pressure Variant controls for a network of signalized intersections**
Jennie Lioris, IFTTAR, France

SP22 - HUMAN FACTORS

Automated Vehicles and Cooperative ITS

Moderator: Steve Spalding, RACQ, Australia

AN-SP0293 **Real-time feedback reduces the incidence of fatigue events in heavy vehicles**
Mike Lenne, Seeing Machines, Australia

AP-SP0508 **Factors related to driving behaviour of older drivers**
Misako Yamagishi, Nagoya University, Japan

AP-SP0708 **An Integrated Framework for Real-Time Interaction of Vehicles with Human**
Youngmi Baek, DGIST, Republic of Korea

AN-SP0728 **Detecting passenger discomfort from abnormal driving manoeuvres**
Jonathan Liono, RMIT, Australia

TECHNICAL SESSIONS

TP01 – ANALYSES OF V2X ENVIRONMENTS

TUESDAY 11 OCTOBER 2016, 1100 – 1230 HOURS **MEETING ROOM 207**

Automated Vehicles and Cooperative ITS

Moderator: Peter Bentley, Collaborative ITS Consulting, Australia

AP-TP0313 **Local adaptive network reconstruction strategy for V2X**
Lei Du, Research Institue of Highway, Ministry of Transport, P.R.C., China

AP-TP0352 **A Feasiblility Study on Traffic Safety Effect of Cooperative ITS**
Tag-young Kim, The Korea Transport Institute, Republic of Korea

AP-TP0648 **Analysis of speed limit control in V2X environment**
Jooyoung Kim, Integrated Urban Research Center, University of Seoul, Republic of Korea

AM-TP0690 **Evaluating performance of content & rate control schemes**
S M Osman Gani, West Virginia University, United States

TP02 - COMMUNICATION PROTOCOLS AND METHODS

TUESDAY 11 OCTOBER 2016, 1100 – 1230 HOURS **MEETING ROOM 208**

Automated Vehicles and Cooperative ITS

Moderator: Evangelos Bekiaris, CERTH, Greece

AM-TP0357 **Integrating vehicular safety contextual information with channel congestion control for DSRC**
Hongsheng Lu, Toyota InfoTechnology Center, United States

AP-TP0453 **Performance evaluation of DS/SS-IVC Scheme based on Location Oriented Hadamard Code Allocation**
Kazuki Kobayashi, Tokyo University of Science, Japan

EU-TP0529 **Decentralized congestion control for multi-hop vehicular communication**
Andreas Festag, Fraunhofer Institute for Transportation and Infrastructure Systems, Germany

AN-TP0549 **Telecommunications Network Strategies for ITS and Smart Cities**
Andrew Craig, Aurecon, Australia

EU-TP0636 **Next steps for multi-channel operation in EU V2X Systems**
Tim Leinmueller, DENSO Automotive Deutschland, Germany

AP-TP0676 **Delay Reduction by Relay-Assisted Broadcast Transmission for Dependable V2V communications**
Yasushi Yamao, The University of Electro-Communications, Japan

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TP03 - APPLICATIONS AND VISUALIZATION OF BIG DATA IN PUBLIC TRANSIT, CAR SHARING AND PARKING

TUESDAY 11 OCTOBER 2016, 1100 – 1230 HOURS **MEETING ROOM 209**

Challenges and Opportunities of Big Open Data

Moderator: S.K. Jason Chang, National Taiwan University, Chinese Taipei

EU-TP0232 **Experimenting with early business models for parking data publication**
Ali Lattunen, Finnpark Ltd., Finland

EU-TP0257 **Predictive Analytics: the Future of Optimising Autonomous and Car-Share Performance**
Peter Soutter, Good Trave, Ireland

AP-TP0319 **Analysis of relationship between fare structure and passenger behaviour using smartcard data**
Hiroshi Shimamoto, University of Miyazaki, Japan

AP-TP0645 **The Development of Big Data Visualization for Taiwan Bus Fleets**
Siang-Jie Chen, Institute of Transportation, Chinese-Taipei

TP04 - TRAFFIC SIGNAL CONTROL 1

Smart Cities and New Urban Mobility

Moderator: Meng Lu, Dynniq, The Netherlands

EU-TP0459 **SCATS Virtual Bus Priority and Information System for Dublin City**
Trevor Platt, Nicander, United Kingdom

AP-TP0501 **Case Study of Queue Growth Equalization for Urban Traffic Signal Optimization**
In Gwun Jang, Korea Advanced Institute of Science and Technology(KAIST), Republic of Korea

AN-TP0519 **The SCATS Priority Engine**
Ghassan Jarjees, Prioritize Pty Ltd, Australia

AP-TP0563 **Customer and service reporting in SCATS**
Christian Chong-White, NSW Roads and Maritime Services, Australia

AP-TP0607 **Strategies for decreasing delays at Median U-Turns**
Sandy Mae Gaspay, IIS, The University of Tokyo, Japan

TP05 - BETTER EFFICIENCY WITH TRAVELER INFORMATION

Smart Cities and New Urban Mobility

Moderator: Vera Jin, Sopra Steria Asia Pte. Ltd., Singapore

AP-TP0076 **Evaluating Social and Economic Benefits of VICS WIDE and Its Future Prospects**
Toshihiko Oda, Vehicle Information and Communication System Center, Japan

EU-TP0112 **Strategic Routing and "virtual" Traffic Control System**
Ulrich Haspel, Bavarian Road Administration, Germany

AM-TP0115 **The role of the traveler in future traffic flow improvement**
Greg Yova, QvisionTechnology.com, United States

AP-TP0224 **Expressway Operations Management Using a GPS Vehicle Location Management System**
Masanori Tomita, NEXCO Engineering Niigata Company Limited, Japan

AP-TP0423 **Unlocking Big Data for Smarter City traffic**
Phil Allen, TomTom, New Zealand

AN-TP0650 **Smart Work Zone**
Scott Benjamin, WSP | Parsons Brinckerhoff, Austroads, Australia

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TP06 - COMMUNICATIONS TECHNOLOGY

Smart Cities and New Urban Mobility

Moderator: François Fischer, ERTICO - ITS Europe, Belgium

AP-TP0191 **Analysis of Radio Propagation for Automobile using Ray-tracing Techniques on 79GHz band**
Toshiteru Hayashi, Japan

AP-TP0210 **Evaluation of dsrc antenna for mlff on toll road**
Michiaki Nishikori, Nippon Expressway Research Institute Company Limited, Japan

AP-TP0218 **Development of vehicle management system using MQTT communication**
Kenta Hara, Mitsubishi Research Institute, Inc., Japan

AN-TP0451 **Centre to Centre Interface: Gateway Solution for Traffic and Incident Data Exchange**
Victor Shapilsky, Roads and Maritime Services, Australia

TP07 - FUTURE FREIGHT INCLUDING AVIATION AND MARITIME -THE USE OF AUTOMATED VEHICLES ON LONG-HAUL FREIGHT CORRIDORS

TUESDAY 11 OCTOBER 2016, 1100 – 1230 HOURS   MEETING ROOM 102

Future Freight including Aviation and Maritime

Moderator: Lina Konstantinopoulou , ERTICO - ITS Europe, Belgium

AN-TP0292 **A review of current and emerging technologies used for heavy vehicle enforcement**
David Green, ARRB Group, Australia

AN-TP0333 **Higher productivity road trains and regulatory ITS: results of trialling Super Quads**
Paul Corkill, Transport Certification Australia, Australia

EU-TP0642 **Regulatory Telematics Architecture for Dangerous Goods Transport and Cooperative ITS**
Fabrice Reclus, CEREMA Centre-Est, France

EU-TP0697 **A TMP for long distance freight transport**
Masclee Marjolein, Rijkswaterstaat, The Netherlands

TP08 - ITS COMMUNICATIONS -MULTIPLE METHODS, MULTIPLE CONSIDERATIONS

TUESDAY 11 OCTOBER 2016, 1100 – 1230 HOURS   MEETING ROOM 101

Policy, Standards and Harmonisation

Moderator: Adam Lyons, Iteris, United States

EU-TP0102 **Electric mobility requirements for ITS architectures**
Horst Wieker, htw saar, University of Applied Sciences, Germany

EU-TP0109 **Wireless Roadside Access Technology Trial on England's Highways**
Gabriel Ozique, Fluor Corporation, United Kingdom

AP-TP0164 **LTE-based V2X Services: A 3GPP Standardization Perspective**
Yi Shi, Huawei Technologies, China

AN-TP0496 **DSRC and RF Spectrum Sharing**
Andrew Myles, Cisco Systems, Australia

TP09 - PREVENTATIVE AND ACTIVE SAFETY SYSTEMS

TUESDAY 11 OCTOBER 2016, 1100 – 1230 HOURS   MEETING ROOM 203

Vehicle Network and Safety

Moderator: Toshio Yokoyama, Honda R&D Co., Ltd., Japan

AP-TP0158 **Development of Information Contents for Driving Safety of Vehicles due to Crosswinds**
Hiromichi Shirato, Kyoto University, Japan

AP-TP0170 **Analysis of Vehicle Collision Avoidance using Model Predictive Control with Threat Assessment.**
Umar Zakir Abdul Hamid, Malaysia-Japan International Institute of Technology, Universiti Teknologi Malaysia, Malaysia

AP-TP0258 **Experimental Analysis of Influence of Pedestrian Approaching Information with Different Accuracy**
Toshiyuki Nakamura, Kyoto University, Japan

AP-TP0379 **Verification of the Detection of Raised Profile Line Marikings by Millimeter-Wave Radar**
Kotaro Ishimoto, Fujitsu Ten Limited, Japan

AP-TP0441 **Japan road sign classification using cascade convolutional neural network**
Reza Fuad Rachmadi, Image Media Lab., Kumamoto University, Japan

TP10 - AUTOMATED TO MANUAL DRIVING TRANSITION

MEETING ROOM 207

Automated Vehicles and Cooperative ITS

Moderator: Meng Lu, Dynniq, The Netherlands

AP-TP0092 **Human-factors issues of transition from an automated driving system to manual driving**
Ryohei Homma, Japan Automobile Research Institute, Japan

AP-TP0355 **Time Required for Take-Over from Automated to Manual Driving when Exiting Highway**
Arata Takada, Shibaura Institute of Technology, Japan

AP-TP0384 **Driver model in unconscious driving state**
Kenta Yamazaki, Shibaura Institute of Technology, Japan

AP-TP0499 **Time required for take-over from automated to manual driving by driver behaviour**
Toshio Ito, Shibaura Institute of Technology, Japan

AP-TP0599 **Effects of Feedback in Driver's Drowsiness Level Estimation from Event Data Recorder**
Yuki Kaneko, Aichi Prefectural University, Japan

TP11 - COOPERATIVE ITS APPLICATIONS

MEETING ROOM 208

Automated Vehicles and Cooperative ITS

AM-TP0176 **Jacobs Engineering Group Connected Vehicle Deployment: Lessons Learned**
Christopher Armstrong, Jacobs Engineering Group, United States

AP-TP0332 **Joint public–private research for the realization of next-generation C-ITS in Japan**
Gaku Ohtake, National Institute for Land and Infrastructure Management, MLIT, Japan

EU-TP0383 **Towards C-ITS DAY1 for PTW - issues and opportunities**
Arne Pirschwitz, Diplom Ingenieur, BMW Motorrad. Germany

AP-TP0421 **Proposed ACC improvements for congestion mitigation**
Hitoshi Yoshimura, National Institute for Land and Infrastructure Management, MLIT, Japan

EU-TP0635 **An Open Source TTCN-3 conformance testing tool for C-ITS**
Álvaro Arrúe, Applus IDIADA, Spain

TP12 - BETTER TRAFFIC MANAGEMENT FROM BIG DATA

MEETING ROOM 209

Challenges and Opportunities of Big Open Data

Moderator: David Hanus, Transurban, Australia

EU-TP0035 **Travel time estimation on highways**
Jure Pirc, Q-Free Traffic Design, Slovenia

AP-TP0149 **Verify China National Urban Traffic Congestion Patterns through Location-Based Big Data Techniques**
Cheng Li, China Academy of Transportation Sciences, Ministry of Transportation, China

AN-TP0225 **Post-Implementation of Pinch Point Projects**
Ian Espada, ARRB Group, Australia

AN-TP0571 **A new process for learning what is 'normal' on road networks**
David Johnston, Intelligent Transport Services, Australia

TP13 - TRAFFIC SIGNAL CONTROL 2

TUESDAY 11 OCTOBER 2016, 1400 – 1530 HOURS　　　　　**MEETING ROOM 216**

🏙 Smart Cities and New Urban Mobility

Moderator: Graham Hanson, Department for Transport, UK Government, United Kingdom

EU-TP0071 **Measuring public transport priority quality with special attention to competing calls**
Thomas Riedel, Adaptive Traffic Control AG and Verkehrs-Systeme AG, Switzerland

AM-TP0287 **Active Control of Traffic Signals using a Multi-objective Approach and Evolutionary Algorithms**
Samara Leal, CEFETMG, Brazil

AP-TP0562 **Frame signal control based on traffic condition using estimated data in Korea**
Inhi Kim, Institute of Transport Studies, Monash University, Australia

AP-TP0505 **Development of a Realtime Optimal Signal Control Algorithm Using Vehicular Trajectory Data**
Eum Han, Ajou University, South Korea

TP14 - INTEGRATED PAYMENT SYSTEMS

TUESDAY 11 OCTOBER 2016, 1400 – 1530 HOURS　　　　　**MEETING ROOM 217**

🏙 Smart Cities and New Urban Mobility

Moderator: Eddie Lim, NCS Pte. Ltd., Singapore

EU-TP0461 **MOBiNET: EU-wide interoperable payment services**
Rasmus Lindholm, ERTICO – ITS Europe, Belgium

AP-TP0620 **The Use of Ticketing Vending Machine in Indonesia**
Ahmad Munawar, Gadjah Mada University, Indonesia

TP15 - EFFICIENT URBAN TRANSPORT SYSTEMS

TUESDAY 11 OCTOBER 2016, 1400 – 1530 HOURS　　　　　**MEETING ROOM 218**

🏙 Smart Cities and New Urban Mobility

Moderator: Steve Manders, Jacobs, Australia

AP-TP0129 **Implementation of an Integrated Traffic Management System**
Chong Chee Chung, ST Electronics (Info-comm Systems) Pte Ltd., Singapore

AM-TP0169 **From Smart to Intelligent Mobility**
John Jung, Intelligent Community Forum, United States

AN-TP0445 **Operational Efficiency Audits, A New Tool for Optimizing Freeways Designs**
Kamal Weeratunga, Main Roads Western Australia, Australia

AN-TP0595 **The Integrated Network Management (INM) Framework**
Hai Vu, Swinburne University of Technology, Australia

TP16 - FUTURE FREIGHT INCLUDING AVIATION AND MARITIME - THE USE OF ITS TO DRIVE FREIGHT EFFICIENCY AND SUSTAINBILITY

TUESDAY 11 OCTOBER 2016, 1400 – 1530 HOURS　　　　　**MEETING ROOM 102**

📦 Future Freight including Aviation and Maritime

Moderator: Lina Konstantinopoulou, ERTICO - ITS Europe, Belgium

AP-TP0113 **New Approaches for Heavy Vehicle Traffic Management Using ETC2.0**
Kazuya Tamada, National Institute for Land and Infrastructure Management, MLIT, Japan

AP-TP0213 **Study of heavy vehicle toll management with ITS technology**
Hideyuki Wakishima, CTI Engineering Co., Ltd., Japan

EU-TP0230 **Large Scale Train Detector Network ensures efficiency and safety in train operation**
Martin Novak, Prosoft Sued Consulting Gmbh, Austria

AM-TP0290 **Impact study of the implementation of free-flow system in Brazilian highways**
Tulio Santos, Federal University of Rio de Janeiro, Brazil

AN-TP0336 **On board mass monitoring for regulatory purposes: operational learnings**
Paul Corkill, Transport Certification Australia, Australia

TP17 - ITS STANDARDS AND ARCHITECTURE -GUIDING THE WAY TO SUCCESSFUL FUTURE DEPLOYMENTS

TUESDAY 11 OCTOBER 2016, 1400 – 1530 HOURS MEETING ROOM 101

Policy, Standards and Harmonisation

Moderator: Sadahiro Kawahara, JTEKT Corporation, Japan

AN-TP0299 **Australia's National ITS Architecture Framework (NIAF) – An Enterprise Architecture Approach**
Jason Venz, Dept. of Transport and Main Roads, Australia

AM-TP0427 **Design of an architectural model suitable for Colombia Metropolitan West Central Area.**
Luz Natalia Giraldo Martínez, INTEGRA S.A., Colombia

AN-TP0475 **Interfacing SCADA and ITS: Challenges, Learnings, and Successes**
Robert Hodges, Queensland Department of Transport and Main Roads, Australia

AN-TP0578 **New Zealand Transport Agency Principles of ITS Standards Specifications and Guidelines**
Cormac McBride, TDG, New Zealand

EU-TP0716 **Implementation of portfolio, program, project & IT best practices in GDDKiA.**
Krzysztof Modelewski, Generalna Dyrekcja Drog Krajowych i Autostrad, Poland

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TP18 - SAFETY OF VULNERABLE ROAD USERS

TUESDAY 11 OCTOBER 2016, 1400 – 1530 HOURS MEETING ROOM 203

Vehicle Network and Safety

Moderator: Kiran Kapila, International Road Federation, India

AP-TP0145 **Categorization of c-ITS Safety Services of Two-Wheeled Vehicles**
JooYoung Kim, Korea National University of Transportation, Republic of Korea

AN-TP0189 **Impact of Autonomous Vehicles**
Nicholas Platt, RACV, Australia

AP-TP0208 **Development of the multi-function Push Button Box considering usability of pedestrians**
Takashi Shimizu, Tokyo Metropolitan Police Department, Japan

AP-TP0236 **Semi-supervised Learning on Real-time Pedestrian Detection System**
Kuo-Ching Chang, Automotive Research & Testing Center, Chinese-Taipei

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TP19 - AUTOMATED VEHICLE APPLICATIONS

TUESDAY 11 OCTOBER 2016, 1600 – 1730 HOURS MEETING ROOM 207

Automated Vehicles and Cooperative ITS

Moderator: Michael Case, RACV, Australian

EU-TP0087 **LUTZ Pathfinder real-world trials of fully automated pods**
Eric Chan, Transport Systems Catapult, United Kingdom

AN-TP0272 **Synopsis of advi's autonomous vehicle demonstration**
Shoukry Marzouk, ARRB Group, Australia

AN-TP0338 **A Review of Issues Encountered Installing Aftermarket DSRC Equipment into Heavy Vehicles in Australia**
Paul Tyler, Data61, Australia

EU-TP0407 **GATEway – early results from a living laboratory for automated vehicles**
Nick Reed, TRL, United Kingdom

AP-TP0659 **Basic study on general acceptability of automated truck platoon using driving simulator**
Toshiyuki Sugimachi, The University of Tokyo, Japan

TP20 - DEPLOYMENT SCENARIOS FOR AUTOMATED VEHICLE

TUESDAY 11 OCTOBER 2016, 1600 – 1730 HOURS MEETING ROOM 208

Automated Vehicles and Cooperative ITS

Moderator: Yoichi Sugimoto, Honda R&D Co., Ltd., Japan

AN-TP0098 **Is Australia ready for Mobility as a Service?**
Andrew Somers, Mobility as a Service Australia, Australia

AN-TP0193 **Autonomous Cars will be Fun to Drive**
Nick Szwed, Consultant, Australia

AN-TP0543 **Proposed Methodology for Cooperative ITS Implementation**
Mark Henaway, Aurecon, Australia

TP21 - ENHANCING SAFETY THROUGH ITS -WHAT IS THE DATA TELLING US?

TUESDAY 11 OCTOBER 2016, 1600 – 1730 HOURS ▶ **MEETING ROOM 209**

Challenges and Opportunities of Big Open Data

Moderator: Sally S.F. Lai, Takming University of Science and Technology, Chinese Taipei

AP-TP0359 **Study of VADS using Big Open Data for Safety Driving Scoring Index**
Youngho Kim, Ajou University, Republic of Korea

AP-TP0416 **Effect of the In-vehicle Traffic Sign on Driving Behavior and Gaze Movement**
Kimihiko Nakano, The University of Tokyo, Japan

AN-TP0425 **Leveraging Traffic Content and High Frequency Data in Usage Based Insurance**
Jason Lowder, Intelematics Australia, Australia

AP-TP0458 **Driving Assistance Technology to Prevent Potential Hazards**
Chiharu Yamamoto, Fujitsu Ten Limited, Japan

TP22 - TRANSPORTATION MANAGEMENT CENTERS

TUESDAY 11 OCTOBER 2016, 1600 – 1730 HOURS ▶ **MEETING ROOM 216**

Smart Cities and New Urban Mobility

Moderator: Mark Stead, Transport for London, United Kingdom

EU-TP0105 **Co-operation between the Finnish road authorities in the TMCs.**
Sami Luoma, Finnish Transport Agency, Finland

AM-TP0274 **Improving Service by Reconfiguring Maryland's State Highway Administration's Statewide Operations Center**
Jeffrey Randall, Jacobs Engineering Group, United States

AN-TP0358 **The Role of an Integrated Transport Management Centre**
Scott White, Transport for New South Wales, Australia

AP-TP0374 **The start of ITS operation in the New Traffic Control Center**
Masayuki Tokuda, East Nippon Expressway Company Limited, Japan

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TP23 - ENSURING SAFETY AND EFFICIENCY FOR VULNERABLE ROAD USER

TUESDAY 11 OCTOBER 2016, 1600 – 1730 HOURS ▶ **MEETING ROOM 217**

Smart Cities and New Urban Mobility

Moderator: Susan Grant-Muller, University of Leeds, United Kingdom

AN-TP0306 **Emergency Vehicle priority**
Kelvin Marrett, Queensland Transport and Main Roads, Australia

AP-TP0177 **Valuation on Traffic Safety Improvement by Providing Warning Information**
Fumitaka Kurauchi, Gifu University, Japan

AP-TP0194 **A Study of Pedestrian Recognition Method Using 79GHz-band Infrastructure Radar System**
Toshihiro Kasahara, Panasonic System Networks Co., Ltd., Japan

AN-TP0684 **Improving Network Safety for Vehicle and Pedestrian While Maintaining Network Capacity**
David Jones, Dept. of Transport and Main Roads, Australia

EU-TP0686 **V2X-based cooperative protection system for vulnerable road users, impact on traffic**
Tim Ruß, ifak e.V. Magdeburg, Germany

TP24 - IMPROVING ARTERIAL WITH BETTER DATA/ALGORITHM

TUESDAY 11 OCTOBER 2016, 1600 – 1730 HOURS **MEETING ROOM 218**

Smart Cities and New Urban Mobility

Moderator: Ryota Horiguchi, i-Transport Lab. Co., Ltd., Japan

AP-TP0017 **Data Processing Procedure for DSRC Probe-based ATIS on Signalized Arterial**
Jinhwan Jang, Korea Institute of Construction Technology, Korea

EU-TP0037 **Real-time traffic situation awareness based on open data sources**
Laura Niittyla, Mattersoft Ltd., Finland

AP-TP0325 **Clustering analysis of link-based traffic pattern of urban network**
Hee-jin Jung, Korea Institute of Science Technology Information, Korea

AP-TP0411 **Real-time traffic signal control with simple calculation using probe vehicle data**
Jinchao Wu, Tsinghua University, China

AM-TP0713 **Large scale urban active traffic management systems nyc's midtown in motion**
Mohamed Talas, NYCDOT, United States

TP25 - FUTURE FREIGHT INCLUDING AVIATION AND MARITIME - THE USE OF ITS TO OPTIMISE FREIGHT MOVEMENTS AND IMPROVE EFFICIENCY AND PRODUCTIVITY

TUESDAY 11 OCTOBER 2016, 1600 – 1730 HOURS **MEETING ROOM 102**

Future Freight including Aviation and Maritime

AP-TP0083 **Freight Vehicle Identification Based on Records and Rules of V2I Communication**
Kazunori Inoue, Panasonic Corporation, Japan

AN-TP0271 **Prioritising Actions to Provide Enhanced Travel Information for Commercial Travel Operations**
Jo Chang, Opus International Consultants Ltd, New Zealand

AN-TP0454 **Mobile Mapping Technology for Managing Heavy Vehicle Access Conditions**
Lina Inglis, ARRB Group, Australia

AN-TP0688 **Truck and Trailer Management in Fleet Optimisation**
Mark Wallace, Faculty of Information Technology, Monash University, Australia

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TP26 - POLICY, STANDARDS AND HARMONIZATION -GOVERNMENT ROLE IN REALIZING SUSTAINABLE OUTCOMES 1

TUESDAY 11 OCTOBER 2016, 1600 – 1730 HOURS **MEETING ROOM 101**

Policy, Standards and Harmonisation

Moderator: Marcus Blake, National Transport Commission, Australia

AM-TP0172 **Public- private partnerships approach for sustainable development**
Osama Elhamshary, California Department of Transportation, United States

AN-TP0349 **Implementing electronic work diaries - safety, productivity, efficiency**
Peter Girgis, Transport Certification Australia Limited, Australia

AM-TP0448 **Adapting road agency business models to private sector provision of ITS**
Matthew Dorfman, D'Artagnan Consulting, United States

AM-TP0492 **Procurement and logistics – closing the gap**
Michael Onder, 3C Consulting LLC, United States

AN-TP0558 **Asset Management – Establishing The VicRoads ITS Approach**
Marcus Van der velden, ARCADIS, Australia

EU-TP0700 **Assisted and Automated Driving – Effects on value added and employment**
Andrej Cacilo, Researcher, Germany

TP27 - SPEED ADVICE AND MONITORING

TUESDAY 11 OCTOBER 2016, 1600 – 1730 HOURS   **MEETING ROOM 203**

Vehicle Network and Safety

Moderator: Josh Johnson, Southwest Research Institute, United States

AP-TP0195   **Traffic Accident Deterrence Measures Utilising Uplink Data Analysis**
Akira Endo, Tokyo Metropolitan Police Department, Japan

EU-TP0296   **Utilization of traffic light assistance in Trondheim**
Orjan Tveit, NPRA, Norway

AN-TP0317   **Hard braking and older drivers**
Anna Chevalier, The George Institute for Global Health, School of Public Health, The University of Sydney, Australia

AP-TP0361   **The effect of the Congestion Relief by the Moving Light Guide System**
Hiroyuki Kameoka, Central Nippon Expressway Company Limited, Japan

AP-TP0397   **An Immune based dynamic evaluation model for traffic congestion of urban roads**
Feng Wang, Henan University of Technology, China

AN-TP0542   **Rapid deployment of Intelligent Speed Adaptation through a smartphone application**
John Wall, Transport for NSW, Australia

TP28 - DSRC VS LTE -COMPARATIVE ANALYSES

WEDNESDAY 12 OCTOBER 2016, 1100 – 1230 HOURS   **MEETING ROOM 207**

Challenges and Opportunities of Big Open Data

Moderator: Jack Opiola, D'Artagnan Consulting, United States

AM-TP0056   **Assessment of Emerging Wireless Technologies for Vehicle Safety Applications**
Hirofumi Onishi, Alpine Electronics Research of America, Inc., United States

EU-TP0246   **Co-operative ITS: IEEE 802.11p or LTE?**
Kees Moerman, NXP Semiconductors, The Netherlands

AM-TP0308   **Preliminary Comparison of Suitability of DSRC and LTE-V2X for V2V Safety Applications**
Takayuki Shimizu, TOYOTA InfoTechnology Center, U.S.A., Inc., United States

AM-TP0419   **Dedicated Short-Range Communications: Revolutionizing Transportation and Advancing Spectrum Innovation**
Suzanne Sloan, U.S. Department of Transportation, United States

AN-TP0604   **Communications for Autonomous Vehicles in the Mining Sector**
Craig Copes, Titan ICT Consultants, Australia

TP29 - MAP TECHNOLOGIES

WEDNESDAY 12 OCTOBER 2016, 1100 – 1230 HOURS   **MEETING ROOM 208**

Automated Vehicles and Cooperative ITS

Moderator: Satoru Nakajo, The University of Tokyo, Japan

AP-TP0144   **LDM(Local Dynamic Map) Requirements Definition For Cooperative Automated Driving (Level2)**
Jiyeon Lee, ITS Korea, Republic of Korea

AP-TP0226   **Development of automatic map creation function**
Akira Otabe, AISIN AW CO., LTD., Japan

EU-TP0503   **Geolocation accuracy improvement by means of shared C-ITS sensor information.**
Paul Spaanderman, PaulsConsultancy BV, The Netherlands

EU-TP0525   **Leveraging synergies between the HAD and the ADAS map**
Stephen T'Siobbel, TomTom Maps, Belgium

TP30 - ENHANCING THE DRIVER EXPERIENCE WITH BETTER DATA

WEDNESDAY 12 OCTOBER 2016, 1100 – 1230 HOURS **MEETING ROOM 209**

Challenges and Opportunities of Big Open Data

Moderator: Koji Oguri, Aichi Prefectural University, Japan

AM-TP0072 Integrating social media, dispatch, and commercial probe data for after-action reviews
Stephen Remias, Wayne State University, United States

AP-TP0440 An Application of the Mesh-wised Traffic Information System for Nationwide Road Network
Hisatomo Hanabusa, i-Transport Lab. Co., Ltd., Japan

AN-TP0466 Understanding the causes of traffic congestion in Brisbane, Australia
Katherine Johnston, Dept. of Transport and Main Roads, Australia

AP-TP0517 The Issues in Promoting Wider Use of ETC2.0
Aiko Iwasaki, West Nippon Expressway Company Limited, Japan

AP-TP0569 LoS Evaluation using ETC2.0 Probe-Data in Serious Traffic Jam Section
Hiroki Yamazaki, Kyoto University, Japan

AN-TP0576 Addressing Sydney's traffic congestion using a new service delivery model
Norman Cheung, Roads and Maritime Services, Australia

TP31 - URBAN MOBILITY

WEDNESDAY 12 OCTOBER 2016, 1100 – 1230 HOURS **MEETING ROOM 216**

Smart Cities and New Urban Mobility

Moderator: Stephan Winter, University of Melbourne, Australia

AN-TP0022 Strategy to Systems: An integrated approach to transform the way we move
Kathryn Musgrave, New Zealand Transport Agency, New Zealand

AP-TP0028 Urban mobility ITS application deployment in Japan
Junichi Hirose, Highway Industry Development Organization, Japan

AP-TP0096 Intelligent Transport Systems Developments in South Australia
Philip Blake, Department of Planning, Transport and Infrastructure, South Australia, Australia

EU-TP0638 Smart Corridors – What are they and the benefits?
Ian Achurch, Northamptonshire County Council, United Kingdom

AN-TP0711 Policies and Strategies to foster ITS to support Sustainable Mobility
Josef Czako, Policy Committee on ITS – International Road Federation, Switzerland

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TP32 - IMPROVING PUBLIC TRANSPORT

WEDNESDAY 12 OCTOBER 2016, 1100 – 1230 HOURS **MEETING ROOM 217**

Smart Cities and New Urban Mobility

EU-TP0243 In-Vehicle Real-Time Navigation in Public Transit Vehicles for Multi-Modal Transport Routes
Olaf Czogalla, ifak e.V. Magdeburg, Germany

AM-TP0495 The new mobility revolution: what role and opportunities for public transport?
Alexandre Savard, GIRO Inc. and Organizing Committee for the 2017 ITS World Congress in Montréal, Canada

AN-TP0541 Specifying for life: O-Bahn City Access Project, Adelaide South Australia.
Matthew Taylor, iSolve Engineered Solutions, Australia

AP-TP0693 Demand Sensitive Scheduling of Public Transport using past ticketing data
Narayanan Edakunni, Xerox Research Centre India, India

AN-TP0707 A simple way to improve public transport uses and ease congestion
Ranjan Pant, New Zealand Transport Agency, New Zealand

TP33 - INCIDENT MANAGEMENT

Smart Cities and New Urban Mobility

Moderator: Jean-Michel Henchoz, DENSO, Belgium

AN-TP0211 **Micro trenching and distributed acoustic sensing technologies for congestion and incident management**
Henry Wu, JYW Consulting, Australia

AP-TP0362 **A Study on System for Finding Hit-and-Run Based on CCTVs**
Kyunghoon Kang, MiraeNS, South Korea

AN-TP0603 **Next Generation Incident Management, a review of other industries for transportation management**
Kim Thomas, Aurecon, Australia

AP-TP0675 **Application of ITS to Risk and Emergency Management**
Yoshiyuki Kato, CTI Engineering Co., Ltd., Japan

AN-TP0699 **Automatic Incident Detection using Distributed Acoustic Sensing**
Robin Marston, VicRoads, Australia

TP34 - OPPORTUNITIES AND CHALLENGES AROUND FREIGHT MANAGEMENT FROM AN ITS PERSPECTIVE

Future Freight including Aviation and Maritime

Moderator: Pete Costello, Iteris, United States

AN-TP0034 **Initiative to improve productivity, safety and environmental of urban freight operations**
Steve Manders, Jacobs Group (Australia) Pty Limited, Australia

AM-TP0261 **Use of data analytics to help revolutionize the heavy vehicle insurance market**
Gail Levario, EROAD Inc., United States

AN-TP0436 **Overcoming Barriers to the Off-Peak Movement of Freight in Urban Areas**
Samantha Taylor, ARRB Group, Australia

AP-TP0533 **Advanced simulation model in the region of Tokyo metropolitan urban expressway rings**
Takashi Oguchi, Institute of Industrial Science, The University of Tokyo, Japan

AN-TP0689 **Container Transport Optimisation: Challenges and Opportunities**
Mark Wallace, Faculty of Information Technology, Monash University, Australia

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TP35 - HUMAN MACHINE INTERFACE FOR COOPERATIVE ITS

Automated Vehicles and Cooperative ITS

Moderator: Richard Easely, E-Squared

EU-TP0205 **Designing a Dual-display HMI System for Connected Vehicles: the AutoNet2030 Approach**
Panagiotis Pantazopoulos, Institute of Communication and Computer Systems (ICCS), Greece

AN-TP0329 **Participant Management and HMI design in the establishment of a CITS testbed**
Vanessa Vecovski, Transport for New South Wales, Australia

AP-TP0369 **Distraction Free Human Machine Interface Design Study for Personal Gadgets**
Praveen Kumar Mogilipalepu, Renault Nissan Technology Business Centre India Pvt Ltd, India

AP-TP0491 **An HMI for users' understanding of the function of driver assistance systems**
Nobuyo Kasuga, Shibaura Institute of Technology, Japan

TP36 - METHODOLOGIES TO IMPLEMENT COOPERATIVE ITS

Automated Vehicles and Cooperative ITS

Moderator: Toru Saito, Honda R&D Co., Ltd., Japan

AP-TP0120   **Driver drowsiness detection to assess differences between states of drowsiness and relaxation**
Yasuhiko Nakano, Fujitsu Laboratories Ltd., Japan

AP-TP0150   **Development of the Standard Architecture of China Urban Intelligent Bus Systems**
Xianglong Liu, China Academy of Transportation Sciences, Ministry of Transportation, China

EU-TP0239   **Impact assessment methodology for connected ITS corridor**
Alan Stevens, Transport Research Laboratory, United Kingdom

AN-TP0568   **A Research Agenda to Inform Smart Mobility Policies for the Urban Millennium**
Hussein Dia, Swinburne University of Technology, Australia

EU-TP0442   **Evaluations of the collaborative TEAM-applications**
Merja Penttinen, VTT Technical Research Centre of Finland, Finland

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TP37 - HOW TRAFFIC BIG DATA FUELS TRAVELER INFORMATION AND SITUATIONAL AWARENESS

Challenges and Opportunities of Big Open Data

Moderator: Graeme Scott, IBI Group, United Kingdom

AN-TP0080   **The Role of Real-Time Crowdsourced Information and Technology in Supporting Traveller Information**
Dale Harris, Abley Transportation Consultants Ltd, New Zealand

AP-TP0348   **Statistical approach to improve accuracy of traffic speed fused from various sensors**
Sok Ee Poh, Land Transport Authority of Singapore, Singapore

AP-TP0618   **Automated data deduction of road updates with road authorities' help**
Satoru Nakajo, The University of Tokyo, Japan

EU-TP0721   **Innovative procurement method of real-time traffic information snapshot**
Mika Kulmala, City of Tampere, Finland

AN-TP0722   **Fuelling intelligent traffic management with crowdsourcing and open data**
Simon Jackson, Esri Australia, Australia

TP38 - URBAN PUBLIC TRANSPORT

Smart Cities and New Urban Mobility

Moderator: Carol Schweiger, Schweiger Consulting LLC, United States

AP-TP0161   **The Development and Application of Taiwan Railway Traveler Information System**
Chao Hsuan Lee, CECI Engineering Consultants, Inc., Chinese-Taipei

AP-TP0512   **The Network of iBeacon guides the Passenger of the Tramway**
Hitoshi Morita, University of Nagasaki, Japan

EU-TP0609   **Bus priority at roundabouts**
Arvid Aakre, NTNU - Norwegian University of Science and Technology, Norway

EU-TP0038   **Enhancing public transport planning by data visualization**
Laura Niittyla, Mattersoft Ltd, Finland

TP39 - INTEGRATED TRAFFIC MANAGEMENT

WEDNESDAY 12 OCTOBER 2016, 1400 – 1530 HOURS　　　　MEETING ROOM 217

Smart Cities and New Urban Mobility

Moderator: Michael Watts, Transmax, Australia

AM-TP0167 **Using moveable barrier in the new urban environment**
Paul Grant, Lindsay Transportation Solutions, United States

AN-TP0298 **New Zealand's First Smart Motorway**
Bruce Walton, Beca Ltd, New Zealand

AN-TP0340 **Working Towards On-Road Dynamic Variable Speed Limit and Ramp Metering Integration**
Vincent Vong, VicRoads, Australia

EU-TP0429 **DATEX II and C-ITS: a promising engagement in SCOOP@F**
Loïc Blaive, CEREMA, France

AP-TP0640 **Signal control with critical path mechanism for coordinating the highway and freeway**
Fan Yu, National Chiao Tung University, Chinese-Taipei

AM-TP0683 **– How to monitor and tune the world largest Traffic Control System**
Lihua Zhang, Transcore, United States

TP40 - ITS FOR DEMAND RESPONSE TRANSPORT

WEDNESDAY 12 OCTOBER 2016, 1400 – 1530 HOURS　　　　MEETING ROOM 218

Smart Cities and New Urban Mobility

Moderator: Fumitaka Kurauchi, Gifu University, Japan

EU-TP0117 **Towards novel public transport services via optimisation of demand and supply**
Marcin Seredynski, Luxembourg Institute of Science and Technology, Luxembourg

AN-TP0393 **Technology-based options for taxis and hire cars in Australia**
Gavin Hill, Transport Certification Australia (TCA), Australia

AN-TP0552 **Cost-efficient Co-modal Ride-sharing Scheme Through Anticipatory Dynamic Optimisation**
Ronny Kutadinata, The University of Melbourne, Australia

TP41 - ENVIRONMENTAL SUSTAINABILITY -HOW WILL ALTERNATIVE FUEL VEHICLES CONTRIBUTE TO A LONG-TERM SUSTAINABLE OUTCOME 1

WEDNESDAY 12 OCTOBER 2016, 1400 – 1530 HOURS　　　　MEETING ROOM 102

Environmental Sustainability

Moderator: Fabio Galatioto, Transport Systems Catapult, United Kingdom

AN-TP0136 **Smart Data-logging System for Coordination of EVs in Distributed Energy Management System**
Sayidul Morsalin, Macquarie University, Australia

AP-TP0152 **Operational Evaluation of the EV and Wireless Battery Charges for road Maintenance**
Hiroshi Kobayashi, Centoral Nippon Expressway Company Limited, Japan

AP-TP0432 **Methodologies for EV Charge Point Planning**
Andrew Pickford, MVA Hong Kong, Hong Kong

AM-TP0497 **Energy Impact of Connected and Automated Vehicles**
Dominik Karbowski, Argonne National Laboratory, United States

AP-TP0521 **85 kHz band 44 kW wireless rapid charging system for electric bus**
Shuichi Obayashi, Toshiba Corporation, Japan

TP42 - MAKING SAFER CORRIDORS USING THE DIGITAL REVOLUTION

WEDNESDAY 12 OCTOBER 2016, 1400 – 1530 HOURS | **MEETING ROOM 101**

Mobile Applications

Moderator: Anita Byrnes, Forum8, Australia

EU-TP0216 **Impacts and CBA of new ITS deployments in NEXT-ITS corridor**
Merja Penttinen, VTT Technical Research Centre of Finland Ltd., Finland

AM-TP0062 **Performance Measures of Smartphone Warning Messages in Work Zones and Intersections**
Qing Li, Texas Southern University, United States

AN-TP0178 **Real-time Recommendation of Safest Routes for Emergency Evacuation**
Hoang Tam Vo, IBM Research Australia, Australia

AN-TP0488 **Using mobile devices as an alternative to a fixed infrastructure for Surface Transport Management**
Kevin Moat, Cubic Transportation Systems, United Kingdom

AN-TP0606 **Computationally Simulating Intermodal Terminal Attractiveness and Demand**
Soumya Banerjee, NICTA / Data61 / CSIRO, Australia

TP43 - TECHNOLOGY INNOVATION AND DEVELOPMENT

WEDNESDAY 12 OCTOBER 2016, 1400 – 1530 HOURS | **MEETING ROOM 203**

Vehicle Network and Safety

Moderator: Makoto Miwa, CloudMindsJapan kk, Japan

AP-TP0099 **Vehicle control using edge computing and mobile network**
Masatoshi Ito, Denso Corporation, Japan

EU-TP0165 **Remote operation of canal locks and bridges in England**
Robert Lynch, Arcadis Consulting Ltd, United Kingdom

EU-TP0680 **Requirements for Next generation 112 eCall**
Kate Yeadon, Post Luxembourg, Luxembourg

TP44 - IMPROVING AUTOMATED VEHICLE PERFORMANCE

WEDNESDAY 12 OCTOBER 2016, 1600 – 1730 HOURS | **MEETING ROOM 207**

Automated Vehicles and Cooperative ITS

Moderator: Risto Kulmala, Finnish Transport Agency, Finland

EU-TP0045 **Evaluation of a laser-based reference system fro ADAS**
Nico Steinhardt, Honda Research Institute EU GmbH, Germany

AM-TP0116 **V2P Communications for Vehicle-Pedestrian Crash-Warning**
Kelly Wu, Alpine Electronics Research, United States

AP-TP0122 **Situation Assessment for Autonomous Lane Change Based on Precision Map**
Jihyun Yoon, Hyundai Motors, Republic of Korea

AP-TP0214 **Object detection method for AGV by computer vision with artificial neural networks**
Jittima Varagul, Shibaura Institute of Technology, Japan

EU-TP0494 **UDRIVE Data Protection Concept**
Helena Gellerman, Chalmers University of Technology, Sweden

EU-TP0630 **Evaluation of safety and performance in a multi-brand environment of cooperative automation**
Álvaro Arrúe, Applus IDIADA, Spain

TP45 - PILOTS OF COOPERATIVE ITS

    MEETING ROOM 208

Automated Vehicles and Cooperative ITS

Moderator: Masahiko Ikawa, Mitsubishi Electric Corporation, Japan

EU-TP0297 **Implementing Traffic light assistance in Trondheim**
Ørjan Tveit, NPRA, Norway

AN-TP0303 **CITI – An Update on Australia's First Pilot Deployment of CITS**
Paul Tyler, Data61, Australia

AN-TP0422 **Assessing the benefits and costs of C-ITS in Queensland**
Miranda Blogg, Project Manager, Department of Transport and Main Roads, Australia

AM-TP0433 **Tampa Hillsborough Expressway Authority Connected Vehicle Pilot Deployment**
Steve Novosad, HNTB, United States

AM-TP0462 **Developing a Connected Vehicle Deployment Plan: Real-World Strategies for Early Deployment**
Scott Shogan, WSP | Parsons Brinckerhoff, United States

TP46 - ITS OPERATIONS AND BIG DATA

WEDNESDAY 12 OCTOBER 2016, 1600 – 1730 HOURS   MEETING ROOM 209

Challenges and Opportunities of Big Open Data

Moderator: Andry Rakotonirainy, Queensland University of Technology, Australia

AN-TP0435 **Tourism Signage - Baby Steps to a Digital World**
Joanna Robinson, Queensland Department of Transport and Main Roads, Australia

AP-TP0444 **A study of applying probe data for prediction method**
Yuichi Takayanagi, Panasonic System Networks co., Ltd, Japan

EU-TP0479 **Relating different types of data in the NDW Traffic Observatory at DiTTlab**
Edoardo Felici, National Data Warehouse for Traffic Information, The Netherlands

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TP47 - WEATHER INFORMATION PRESENTS OPPORTUNITIES AND CHALLENGES FOR BIG DATA

WEDNESDAY 12 OCTOBER 2016, 1600 – 1730 HOURS   MEETING ROOM 216

Challenges and Opportunities of Big Open Data

Moderator: Gavin Leng, Transport Systems Group, Australia

EU-TP0111 **Maintaining visibility of data quality in a world of Big Open Data.**
Daniel Johns, Vaisala, United Kingdom

AM-TP0114 **Innovations in automating real-time winter road condition reporting in Minnesota**
Peter Davies, Castle Rock Associates, United States

AP-TP0262 **Challenging for extended rainfall service: a preliminary study**
Toshitaka Azuma, Vehicle Information and Communication System Center, Japan

AP-TP0341 **An analysis of probe data deriving from a road management system**
Katsuhiko Nakamura, East Nippon Expressway Company Limited, Japan

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TP48 - ITS PLANNING

WEDNESDAY 12 OCTOBER 2016, 1600 – 1730 HOURS   MEETING ROOM 217

Smart Cities and New Urban Mobility

Moderator: Rasmus Lindholm, ERTICO - ITS Europe, Belgium

AN-TP0378 **Overview of Intelligent Transportation Systems Deployment and Future Development in New Zealand**
Neha Sharma, The University of Auckland, New Zealand

EU-TP0410 **A Platform to support service lifecycle management for ITS**
Rafia Inam, Ericsson AB, Sweden

AM-TP0559 **ITS Strategic Planning – A Foundation for Sustaining Livable Cities and Communities**
Steven Cyra, HNTB Corporation, United States

AP-TP0692 **An integrated transportation platform for engaging commuters in modern smart cities**
Mohit Sindhwani, Quantum Inventions Pte Ltd, Singapore

TP49 - MOBILITY AS A SERVICE

Automated Vehicles and Cooperative ITS

Moderator: Dennis Walsh, Department of Transport and Main Roads, Australia

EU-TP0157   **Integration as a conduit for sustainable forms of Mobility as a Service**
Steven Sarasini, VIktoria Swedish ICT, Sweden

EU-TP0209   **Dublin vs. Helsinki – A 'Mobility as a Service' comparison**
Orla O'Halloran, Ove Arup and Partners Ltd., Ireland

AN-TP0472   **Autonomous mobility on demand – A review of recent literature**
Hussein Dia, Swinburne University of Technology, Australia

EU-SP0532   **Future Needs and Visions for Mobility-as-a-Service: Insights from European Workshops**
Jana Sochor, Chalmers University of Technology, Sweden

AN-TP0540   **Modelling the Impacts of Autonomous Shared Mobility Systems**
Hussein Dia, Swinburne University of Technology, Australia

EU-TP0666   **State-of-the-art survey on stakeholders' expectations towards Mobility-as-a-Service (MaaS)**
David König, AustriaTech - Gesellschaft des Bundes für technologiepolitische Maßnahmen, Austria

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TP50 - ENVIRONMENTAL SUSTAINABILITY -HOW WILL ALTERNATIVE FUEL VEHICLES CONTRIBUTE TO A LONG-TERM SUSTAINABLE OUTCOME 2

Environmental Sustainability

Moderator: Jean-Charles Pandazis, ERTICO - ITS Europe, Belgium

AP-TP0153   **ADAS Sensor Requirements for Eco Driving**
Takahiro Narita, Denso Corporation, Japan

AN-TP0347   **A multivariate regression model to predict the GHG emission in urban logistics**
Reham Alhindawi, School of Aerospace, Mechanical and Manufacturing Engineering, RMIT University, Australia

EU-TP0396   **Location-based Hydrogen efficiency of a Fuel-cell car in Different Climates**
Ernst Pucher, Vienna University of Technology, Austria

EU-TP0447   **Assessment of a battery electric taxi fleet based on empirical taxi data**
Martin Reinthaler, AIT Austrian Institute of Technology GmbH, Austria

EU-TP0718   **Environmental incident management: lower-cost AQM equipment and ITS opportunities**
Graeme Scott, IBI Group, United Kingdom

TP51 - POLICIES AND REGULATIONS FOR AUTOMATED VEHICLE

Automated Vehicles and Cooperative ITS

Moderator: Matthew Leyson, Australian Driverless Vehicle Initiative, Australia

AM-TP0175   **Challenges and Opportunities of Worldwide Connected Vehicle and Automated Vehicle Deployment**
Brian Burkhard, Jacobs Engineering Group, United States

AN-TP0185   **Autonomous vehicles - re-engineering the regulators**
James Holgate, Martin Small Consuiting, Australia

AP-TP0289   **Addressing regulatory barriers to more automated road and rail vehicles**
James Williams, National Transport Commission, Australia

AP-TP0360   **Investigation of Registration, Driver Licensing and Insurance Issues Associated with Automated Vehicles**
Michael Regan, ARRB Group, Australia

AN-TP0649   **Guidance on Impacts of Automated Vehicles for ANZ Road Operators**
Scott Benjamin, WSP | Parsons Brinckerhoff, Austroads, Australia

TP53 - MOBILE SENSING, OPEN DATA AND DATA FROM PROBES TO ADDRESS MOBILITY ISSUES

THURSDAY 13 OCTOBER 2016, 1100 – 1230 HOURS | **MEETING ROOM 209**

Challenges and Opportunities of Big Open Data

Moderator: Davide Brizzolara, ERTICO – ITS Europe, Belgium

AN-TP0047 **Technologies to Monitor Individual Vehicles**
David Green, ARRB Group, Australia

EU-TP0124 **Using big data to improve urban mobility**
Richard Harris, Xerox, United Kingdom

AM-TP0190 **Leveraging Big Data to Identify and Address Mobility Issues**
Aditya Mokkapati, ARCADIS, United States

AP-TP0196 **Processing of Probe Data to Detect Transportation Modes**
Hiroyuki Kumazawa, Osaka Sangyo University, Japan

EU-TP0220 **Open source big data landscape and possible ITS applications**
Adam Warski, SoftwareMill, Poland

TP54 - ADVANCED DRIVER ASSISTANCE AND SUPPORT SYSTEMS

THURSDAY 13 OCTOBER 2016, 1100 – 1230 HOURS | **MEETING ROOM 216**

Vehicle Network and Safety

Moderator: Lauchlan McIntosh, Australasian College of Road Safety, Australia

AP-TP0054 **Pedestrian recognition for autonomous emergency braking system**
Takahiro Baba, Denso Corporation, Japan

EU-TP0173 **Enabling technologies for testing ADAS/HAD**
Roman Katz, Ibeo Automotive Systems GmbH, Germany

AP-TP0280 **Cooperative Vehicular Surrounding Sensing System**
Che-Cheng Chang, Automotive Research & Testing Center (ARTC), Chinese-Taipei

AP-TP0326 **Nighttime pedestrian detection by onboard monocular camera**
Yuki Takata, Shibaura Institute of Technology, Japan

EU-TP0651 **In-vehicle object detection through Time-of-Flight camera background segmentation**
Benedikt Brück, TU München, Germany

TP55 - CONNECTED MOBILITY

THURSDAY 13 OCTOBER 2016, 1100 – 1230 HOURS | **MEETING ROOM 217**

Smart Cities and New Urban Mobility

Moderator: Jean-Michel Henchoz, DENSO, Belgium

EU-TP0240 **Simulation Platform for Prototyping, Testing, and Validation of Cooperative Intelligent Transportation Systems**
Ines Ben Jemaa, IFSTTAR, France

AP-TP0277 **A Method to Improve Parking Space Efficiency using Centrally Controlled Auto-valet Parking**
Takeki Ogitsu, Gunma University, Japan

AN-TP0468 **Mapping the value of collaborative mobility**
Hussein Dia, Swinburne University of Technology, Australia

EU-TP0481 **Business models for incentive- based mobility services for changing traveller behavior**
Dirk van Amelsfort, VIktoria Swedish ICT, Sweden

AP-TP0628 **Connected Mobility Services in Future Smart City**
Da Wang, Robert Bosch (SEA) Pte Ltd, Singapore

TP56 - MODELLING METHODOLOGIES 1

Smart Cities and New Urban Mobility

Moderator: Mark Nogaki, Econolite, United States

EU-TP0128 **Adapting Turn-by-Turn Navigation to User Expectations with the Help of Machine Learning**
Henning Hasemann, TomTom, Germany

AP-TP0251 **Pedestrian swarming modeling at signalized intersections**
Yu Qin, Beijing University of Technology, China

AN-TP0388 **Traffic Flow Modelling with Point Processes**
K.W. Lim, ANU and NICTA, Australia

AN-TP0617 **Simulating Intelligent Transport Systems with Discrete Traffic Models on Grid Topologies**
Frank Lehmann, University of Auckland, New Zealand

AN-TP0656 **Accessibility Driven Planning with Open Data**
Callum Hooper, Arup, Australia

TP57 - ENVIRONMENTAL SUSTAINABILITY -INITIATIVE TO PROMOTE SUSTAINABLE ENVIRONMENTAL OUTCOMES

Environmental Sustainability

Moderator: Jean-Charles Pandazis, ERTICO - ITS Europe, Belgium

EU-TP0160 **Control Centre – European Common Model**
Philip Gardner, ARCADIS, United Kingdom

EU-TP0409 **Short-term prediction of Traffic levels and Pollution exceedances using ensemble techniques**
Fabio Galatioto, Transport Systems Catapult, United Kingdom

AN-TP0538 **Road corridor regeneration alongside Australian toll roads – Two case studies**
Matthew Brennan, Transurban, Australia

AP-TP0621 **Assisted Human Powered Vehicle with Innovative Steering System for Sustainable Urban Mobility**
Jeffrey Too Chuan Tan, The University of Tokyo, Japan

EU-TP0624 **Climate and pollution challenges - ITS can make a difference !**
Helge Jensen, City of Oslo, Agency for Urban Environment, Norway

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TP58 - POSITIONING TECHNOLOGY AND TECHNIQUES

Automated Vehicles and Cooperative ITS

Moderator: Richard Couto

AP-TP0082 **Ultra-Low Field Magnetic Guidance System**
Michiharu Yamamoto, Aichi Steel Corporation, Japan

EU-TP0398 **Safe vehicle trajectory prediction using deep neural networks and camera images**
Dzmitry Tsishkou, Imra Europe Sas, France

AP-TP0593 **Moving Sensor Detectable Code on Lane Markings for Vehicle Position Estimation**
Yumi Ishino, Aichi Prefectural University, Japan

EU-TP0615 **Advanced topological map matching: a step towards full integrity and reliability**
Lauri Koponen, TomTom International B.V, The Netherlands

TP59 - SECURING THE COOPERATIVE VEHICLE

Automated Vehicles and Cooperative ITS

Moderator: Kian-Keong Chin, Land Transport Authority, Singapore

AM-TP0315 A Novel Approach to Digital Key Sharing for Vehicle Access Control
Pino Porciello, TrustPoint Innovation Technologies Ltd, Canada

AM-TP0350 International Harmonisation of C-ITS-Task Group 7
Peter Girgis, Transportation Certification Australia, Australia

AN-TP0353 ITS16 Technical Paper - Implementing a secure, operational environment for C-ITS
Peter Girgis, Transport Certification Australia Limited, Australia

AP-TP0380 Automatic Braking and Lane-keeping Design for Driver Assistance System
Ping-Ming Hsu, Automotive Re, Chinese-Taipei

AM-TP0661 Privacy Enhancement for Interconnected Vehicles via Secure Multiparty Computation
Muthuramakrishnan Venkitasubramaniam, University of Rochester, United States

AP-TP0723 Security System for Connected Vehicles
Takeshi Kishikawa, Panasonic Corporation, Japan

TP60 - PLATFORMS, THE CLOUD AND ISSUES RELATED TO DATA SHARING AND EXCHANGE

Challenges and Opportunities of Big Open Data

Moderator: Kazuya Takeda, Nagoya University, Japan

EU-TP0265 oneTRANSPORT: A smart mobility open and scalable data platform
Mark Wedlock, Ove Arup and Partners, London, United Kingdom

EU-TP0561 FOT project agreements crucial for data sharing
Helena Gellerman, Chalmers University of Technology, Sweden

AP-TP0633 Development of a Big Data Platform for Urban Traffic Management
Quanfang Fan, Zhejiang Supcon Information Technology Co., Ltd., China

EU-TP0644 A Road Operator's View on Cloud-based ITS – Requirements and Cooperation Models
Bernd Datler, ASFINAG, Austria

TP61 - HUMAN FACTORS AND DRIVER BEHAVIOUR 1

Vehicle Network and Safety

Moderator: Jane Lappin, Toyota, United States

AP-TP0049 Visual behavior and vehicle fluctuation in using HUD and gesture input interfaces
Hiroshi Uno, Japan Automobile Research Institute, Japan

AP-TP0126 Examining driver`s injury severity in two-vehicle crashes: Case study in Toyota City
Jia Yang, TTRI (Toyota Transportation Research Institute), Japan

AP-TP0283 Distributed Vehicular Network System Regardless of Node Crashes
Che-Cheng Chang, Automotive Research & Testing Center (ARTC), Chinese-Taipei

AP-TP0343 Human Skeleton Recognition using 3D Depth Camera on Vehicle
Yoshihisa Asayama, Fujitsu Laboratories Ltd., Japan

AP-TP0367 Success of Red Light Camera System in Bangkok
Amornchai Leelakajonjit, Royal Thai Police, Thailand

AP-TP0389 Extraction and analyses of rat-run traffic based on floating car data
Yuki Sakuragi, Toyohashi University of Technology, Japan

TP62 - MODELLING METHODOLOGIES 2

THURSDAY 13 OCTOBER 2016, 1400 – 1530 HOURS   MEETING ROOM 217

Smart Cities and New Urban Mobility

Moderator: Russell Pinchen, New Zealand Transport Agency, New Zealand

AN-TP0270   **Trackside Safety Innovation – Queensland Rail Track Access System**
James Dong, JYW Consulting Ltd., Australia

AP-TP0631   **Bus system modelling using smart card data in Singapore**
Yuan Zhou, Tum Create Ltd., Singapore

AN-TP0695   **Network management and planning with the operational controller as the constraint**
Julian Laufer, VicRoads, Australia

TP63 - MOTORWAY MANAGEMENT 2

THURSDAY 13 OCTOBER 2016, 1400 – 1530 HOURS   MEETING ROOM 218

Smart Cities and New Urban Mobility

Moderator: Phil Charles, University of Queensland, Australia

AN-TP0048   **One Network, Planning for Operations of Australasia's largest motorway tunnel.**
Blair Monk, ITSNZ and Aurecon, New Zealand

AP-TP0351   **Advanced traffic monitoring system for expressways**
Sadaaki Hattori, West Nippon Expressway Company Limited, Japan

AN-TP0356   **Diverging Diamond Intersections and their impact on Smart Motorways**
Kerry Farley, Arup, Australia

AM-TP0545   **Next generation i-495 & i-95 express lanes in washington dc**
Joe Silva, Transurban, United States

TP64 - ENVIRONMENTAL SUSTAINABILITY -USE OF BICYCLES

THURSDAY 13 OCTOBER 2016, 1400 – 1530 HOURS   MEETING ROOM 102

Environmental Sustainability

AP-TP0192   **Effect on bicycle network plan and expectation of ITS for bicycle traffic**
Ryoichi Ebisawa, Tokyo Metropolitan Police Department, Japan

AP-TP0337   **Cluster analysis of Beijing public bicycle stations using behavioral dataset**
Zheng Zhang, Beijing University of Technology, China

EU-TP0392   **First European evaluation of a vehicle occupancy sensor fosters carpooling**
Fabrice Reclus, Cerema Centre-Est, France

AP-TP0509   **Evaluating the Bicycle-friendliness of Asian Cities**
Nikola Medimorec, Kojects, Republic of Korea

AN-TP0557   **Automatic Cycle and Pedestrian Monitoring**
Chris Myatt, TDC Systems Pty Ltd, Australia

EU-TP0637   **A GID-based approach to determine beneficial meeting points for long-distance ride-sharing trips**
Paul Czioska, Leibniz Universitat Hannover, Germany

TP65 - PUBLIC ACCEPTANCE OF AUTOMATED VEHICLE

THURSDAY 13 OCTOBER 2016, 1600 – 1730 HOURS   MEETING ROOM 207

Automated Vehicles and Cooperative ITS

Moderator: Maxime Flament, ERTICO - ITS Europe, Belgium

EU-TP0212   **Bumps in the road?**
Stuart Pritchard, Arcadis Consulting (UK) Ltd, United Kingdom

AN-TP0231   **Ant colonies as inspiration for cooperative and automated transportation systems**
Tanya Latty, The University of Sydney, Australia

AP-TP0312   **Feasibility Study on Novel System of Auto-parking with Human Cooperation**
Yuta Abe, Tokyo University of Science, Japan

TP66 - TESTING AND CERTIFICATION OF V2X

Automated Vehicles and Cooperative ITS

Moderator: Matthew Leyson, Australian Driverless Vehicle Initiative, Australia

EU-TP0088   **Simulation of Vehicle Flocking Using Game Engine**
Jo Skjermo, SINTEF, Norway

AM-TP0264   **Next stage certification environment for connected vehicles**
Michael Brown, SwRI, United States

AM-TP0415   **Certification for V2X technologies supporting connected vehicle deployments**
Dmitri Khijniak, 7layers, United States

EU-TP0687   **Automated testing of V2X-based applications for cooperative traffic systems**
Tim Ruß, ifak e.V. Magdeburg, Germany

TP67 - SAFETY AND SECURITY ISSUES FOR BIG DATA

Challenges and Opportunities of Big Open Data

Moderator: Panagiotis Lytrivis, Institute of Communication and Computer Systems (ICCS), Greece

EU-TP0268   **Protecting the data, should it be encrypted?**
Peter Crumpton, Fluor Ltd, United Kingdom

AP-TP0291   **Ways to regulate enforcement access and use of ITS personal information**
James Williams, National Transport Commission, Australia

AP-TP0372   **Feasibility study of identifying passable routes after disasters made from ETC2.0 probe data**
Tomoaki Mizutani, National Institute for Land and Infrastructure Management, MLIT., Japan

AP-TP0408   **Development of Road Patrol Support System and Car Telematics Platform**
Koichi Sakai, Metropolitan Expressway Co., Ltd., Japan

AP-TP0643   **Adaptive Scaling Anonymization Method to Secure Privacy of Transport Trajectory Data**
Toshiro Hikita, Graduate School of Information Science and Technology, The University of Tokyo, Japan

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TP68 - HUMAN FACTORS AND DRIVER BEHAVIOUR 2

Vehicle Network and Safety

Moderator: Pri Boyd, Siemens, United Kingdom

AP-TP0284   **Validation Study on Evaluation of Traffic Safety Using fNIRS**
Yamamoto Kouji, Central Nippon Expressway Company Limited, Japan

AP-TP0334   **Virtual experience and dynamic evaluation system of distracted driving**
Ying Yao, Beijing University of Technology, China

AP-TP0386   **The analysis of sudden braking event using event-data-recorder data**
Kentaro Kondo, Fujitsu Ltd., Japan

EU-TP0418   **Evaluating traffic signs use of the tachistoscopic method**
Romain Chaumontet, CEREMA, France

AP-TP0611   **Analysis of wrong-use of urban expressway entrance by using probe data**
Takehiro Nishi, Hanshin Expressway R&D Company Limited, Japan

TP69 - ROAD USER CHARGING 1

Smart Cities and New Urban Mobility

Moderator: Bob McQueen, The OCash Company, United States

AP-TP0015   **A review of rfid-based etc system architecture for multi-lane free flow**
Noriani Mohammed Noor, Malaysia

AP-TP0053   **Passive RFID-Based ETC System for Multi-Lane Free Flow using Cloud Computing**
Noriani Mohammed Noor, Malaysia

AP-TP0377   **Hybrid dsrc trial for integrated etc**
Yosuke Takeuchi, Mitsubishi Heavy Industries, Ltd., Japan

AP-TP0567   **Design and implementation of MLFF system under the ETC national standard**
Panpan Hu, Wuhan Wanji Information Technology Co., Ltd., China

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TP70 - PARKING

Smart Cities and New Urban Mobility

Moderator: Tongkarn Kaewchalermtong, Chulachomklao Royal Military Academy/ ITS Thailand, Thailand

AP-TP0234   **Smart Parking Service for Smart City**
Yisyuan Huang, National Taiwan University, Chinese-Taipei

AP-TP0302   **A Study on Information Provision to Tourists for Effective Usage of P&R**
Nobuhiro Uno, Kyoto University, Japan

AP-TP0382   **Gaze-based signage recognition for parking navigation system**
Kazuyo Yoshimura, Mitsubishi Electric Corporation Advanced Technology R&D Center, Japan

AP-TP0452   **Analysis of Packet Collision in Parking Navigation System**
Yuka Kawashima, Tokyo University of Science, Japan

AP-TP0510   **An intelligent Parking System Design Based on Bluetooth Technology**
Quanfang Fan, Zhejiang Supcon Information Technology Co. Ltd., China

AP-TP0616   **Application of RFID Technology in Urban Parking Management System**
Shen Jianhui, Zhe Jiang Supcon Information Co. Ltd., China

TP71 - ENVIRONMENTAL SUSTAINABILITY -USE OF EXISTING INFRASTRUCTURE AND SYSTEMS TO DRIVE IMPROVED ENVIRONMENTAL OUTCOMES

Environmental Sustainability

Moderator: Fabio Galatioto, Transport Systems Catapult, United Kingdom

EU-TP0107   **Monitoring and Optimizing Coordinated Signal Control**
Michael Haberl, Graz University of Technology, Austria

AP-TP0156   **Application of Simultaneous Optimization Control for Reductions of Numbers of Vehicle Detectors**
Koichiro Iwaoka, Panasonic System Networks Co., Ltd., Japan

AP-TP0207   **The experiment of axle load measurement on highway for long-term structure maintenance**
Takehiro Yamada, Central Nippon Expressway Company Limited Nagoya Branch, Japan

AN-TP0579   **VicRoads Collaborative Performance Based Asset Management Contract Model for ITS Asset Maintenance**
Nalinda Punchihewa, VicRoads, Australia

EU-TP0717   **HITRANS-E-Paper Real Time Passenger Transport Information Systems**
Graeme Scott, IBI Group, United Kingdom

TP72 - USING COOPERATIVE ITS TO ENABLE AUTOMATED VEHICLE

FRIDAY 14 OCTOBER 2016, 0830 – 1000 HOURS ▶ **MEETING ROOM 207**

Automated Vehicles and Cooperative ITS

Moderator: Michael Brown, Southwest Research Institute, United States

AP-TP0052 **An Investigation on PFLOW in View of Generic Transform**
Mikio Sasaki, Denso Corporation, Japan

AP-TP0181 **A Study of Adjacent Signal Recognition Enhancement System**
Kengo Kishimoto, UTMS Society of Japan, Japan

AP-TP0346 **Effect Evaluation of Cooperative ITS Services**
Hiroaki Kimura, UTMS Society of Japan, Japan

AP-TP0476 **Development of evaluation methodology for cooperative automated driving highway systems**
Jungmin Kim, ITS Korea, Republic of Korea

TP74 - THE IMPACT OF BIG DATA ON ETC AND FOR EXPRESSWAY MANAGEMENT

FRIDAY 14 OCTOBER 2016, 0830 – 1000 HOURS ▶ **MEETING ROOM 209**

Challenges and Opportunities of Big Open Data

Moderator: Hiroyuki Kumazawa, Osaka Sangyo University, Japan

EU-TP0046 **The Electronic Toll Collection in the Czech Republic 9 years success**
Karel Feix, Kapsch Telematic Services, Czech Republic

AP-TP0305 **Field experiment of distribution support using ETC 2.0 probe data**
Tatsuyuki Negishi, National Institute for Land and Infrastructure Management, MLIT, Japan

AP-TP0327 **Study of resting behavior on inter-urban expressways using ETC2.0 probe data**
Shoichi Hirai, Nippon Expressway Research Institute Company Limited, Japan

AP-TP0366 **Effort to Improve the Service in Expressways by Utilizing Big Data**
Yasushi Kimura, Nexco-East Innovation & Communications Company Limited, Japan

AN-TP0570 **A platform for real-time operational decision support using a Cell Transmission Model**
Andrew Hooper, Auckland Motorway Alliance, New Zealand

TP75 - MAXIMIZING SAFE NETWORK OPERATION

FRIDAY 14 OCTOBER 2016, 0830 – 1000 HOURS ▶ **MEETING ROOM 216**

Vehicle Network and Safety

Moderator: Risto Kulmala, Finnish Transport Agency, Finland

AN-TP0039 **Effectiveness of wet weather pilot scheme on M1 (Sydney)**
Quddus Wazirzada, Roads & Maritime, NSW Government, Australia

AP-TP0400 **System which detects persons entering the expressway by using an infrared camera**
Kazuhisa Kojima, East Nippon Expressway Company Limited, Japan

AN-TP0420 **Alcohol interlocks - a national approach**
Peter Girgis, Transport Certification Australia Limited, Australia

AN-TP0469 **Exploring ITS Enhancing Safety in Road Construction**
Alexander Chapman, Lend Lease Services, Australia

AN-TP0470 **The Necessity of a F.I.T. Intelligent Transport System**
Alexander Chapman, Lend Lease Services, Australia

TP76 - ROAD USER CHARGING 2

MEETING ROOM 217

Smart Cities and New Urban Mobility

Moderator: Carl Anderson, USDOT, United States

AP-TP0134 **VPS (Vehicle Position System) with Bluetooth Beacon Technology**
JJ Fan, YDT Technology International Co. Ltd., Chinese-Taipei

AP-TP0381 **Verification of the GNSS Positioning Accuracy and sky view factor**
Masayuki Yagi, Nippon Expressway Research Institute Company Limited, Japan

AN-TP0564 **Applications of 5G mobile communications for road user charging**
Shannon Crum, D'Artagnan Consulting, United States

AM-TP0585 **Road Usage Charging Systems: Five Approaches to Ensuring Personal Privacy Protection**
Jeff Doyle, D'Artagnan Consulting, LLP, United States

EU-TP0646 **Accuracy of Smartphones for GNSS Road User Charging**
Ola Martin Lykkja, Q-Free ASA, Norway

TP77 - ROADSIDE ITS INFRASTRUCTURE

FRIDAY 14 OCTOBER 2016, 0830 – 1000 HOURS **MEETING ROOM 218**

Smart Cities and New Urban Mobility

AP-TP0198 **Degree of Saturation by the traffic-monitoring camera sensor system**
Yoshihiro Sakamoto, OMRON Social Solutions Co., Ltd., Japan

AP-TP0281 **Design and Evaluation of Automatic Road Surface Mapping System using Kinect Sensor**
Yuki Chin, Tokyo University of Science, Japan

AN-TP0316 **Transitioning to Full Colour Variable Message Signs**
Peter Bathgate, Resolvegroup, New Zealand

AN-TP0446 **Renewing existing Variable Message Signs in an emerging connected vehicle technology era**
Andrew Causley, Queensland Department of Transport and Main Roads, Australia

AN-TP0566 **FDS Test Site development**
Robin Marston, VicRoads, Australia

EU-TP0720 **Digital Management Dashboard - Managing the Scottish Road Network**
Graeme Scott, IBI Group, United Kingdom

TP78 - POLICY, STANDARDS AND HARMONIZATION -GOVERNMENT ROLE IN REALIZING SUSTAINABLE OUTCOMES 2

FRIDAY 14 OCTOBER 2016, 0830 – 1000 HOURS **MEETING ROOM 102**

Policy, Standards and Harmonisation

Moderator: Takaaki Sugiura, Mitsubishi Research Institute, Inc., Japan

AP-TP0097 **Transport Engineering into the future – ripe for disruption?**
Philip Blake, Department of Planning, Transport and Infrastructure, South Australia, Australia

AN-TP0174 **Better Business Outcomes through ITS**
Stephen Griffith, Resolve Group, New Zealand

AM-TP0516 **Advanced technologies & challenges to public transportation agencies**
Navin Nageli, Navjoy Consulting Services, Inc, United States

AN-TP0523 **Public Resistance to innovation — behavioural reasoning perspective for road charging**
John Opiola, D'Artagnan Consulting. LLP, United States

AM-TP0527 **The Policy Imperative: A Comparison of Distance-Based Charging in California and Oregon**
Travis Dunn, D'Artagnan Consulting, United States

TP79 - V2I FOR AUTOMATED DRIVING

FRIDAY 14 OCTOBER 2016, 1030 – 1200 HOURS　　　　MEETING ROOM 207

Automated Vehicles and Cooperative ITS

Moderator:　Tim Leinmueller, DENSO AUTOMOTIVE Deutschland GmbH, Germany

AM-TP0413　**Development of Vehicle-to-Infrastructure Safety Applications in the United States**
Carl Andersen, U.S. Department of Transportation / FHWA, United States

AM-TP0556　**Using communications to improve the performance of road vehicle automation systems: automated merging**
Steven Shladover, University of California, Berkeley, United States

EU-TP0639　**Cooperative infrastructure in closed test track for traffic monitoring and safety enhancement**
Marcos Pillado, Applus+ IDIADA, Spain

AN-TP0657　**Soft Vehicles, Soft Roads, Soft Transport**
Scott Benjamin, WSP | Parsons Brinckerhoff, Austroads, Australia

AM-TP0701　**Large-scale Evaluation of CV Applications using Analysis, Modeling and Simulation Testbed**
Raj Kamalanathsharma, Booz Allen Hamilton, Inc., United States

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TP80 - VEHICLE LOCALIZATION AND NAVIGATION

FRIDAY 14 OCTOBER 2016, 1030 – 1200 HOURS　　　　MEETING ROOM 208

Automated Vehicles and Cooperative ITS

Moderator:　John Funny, Grice Consulting Group, LLC, United States

AP-TP0063　**A simple Car Navigation algorithm (Case study Tehran city, a Comparative Study)**
Ehsan Barjasteh Askari, Iran University of Science and Technology, Iran

AP-TP0387　**Cooperative Relative Positioning Scheme for V2X Safety Application**
Lei Du, Research Institue of Highway, Ministry of Transport, P.R.C., China

AP-TP0507　**Evaluation of accuracy and availability of GNSS Satellite-Based Augmentation Services in Thailand**
Monsak Socharoentum, National Electronics and Computer Technology Center, Thailand

AP-TP0522　**Vehicular Localization Using Traffic Sign Information and GNSS**
Tomotaka Nagaosa, Kanto Gakuin University, Japan

AP-TP0536　**Road network management – moving towards road capacity management**
Hany Eldaly, Mobility as a Service | Australia, Australia

TP81 - TRANSIT RIDERS AND BICYCLES, ENHANCING THEIR EXPERIENCE USING DATA

FRIDAY 14 OCTOBER 2016, 1030 – 1200 HOURS　　　　MEETING ROOM 209

Challenges and Opportunities of Big Open Data

Moderator:　Mads Gaml, City of Copenhagen, Denmark

AM-TP0320　**Fully Convolutional Neural Detector for Real-time Pedestrian Detection using Deep learning**
Min Young Kim, Panasonic Corporation, United States

AP-TP0404　**Application of Wireless Power Transfer System for Sensor Devices on a Bicycle**
Osamu Maeshima, Iwate Prefectural University, Japan

EU-TP0612　**Passengers' data to measure perceived impact of schedule deviation in public transit**
Frédéric Roulland, Xerox Research Centre Europe, France

AP-TP0658　**Seamless, personalised transport notifications: machine learning for disruption notifications**
Matt Low, Arup, Australia

TP82 - OPTIMAL NETWORK MANAGEMENT 1

FRIDAY 14 OCTOBER 2016, 1030 – 1200 HOURS　　　　MEETING ROOM 216

Vehicle Network and Safety

Moderator:　Trevor Platt, Nicander, United Kingdom

AP-TP0078　**Development of Traffic Management System Using Uplink Data**
Shinya Adachi, Vehicle Information and Communication System Center, Japan

AP-TP0127　**Next service with WIM for the sustainable expressway operations**
Akifumi Shintaku, Central Nippon Expressway Company Limited, Japan

EU-TP0247　**Creating a national framework for traffic management aid system**
Jeremie Bossu, Cerema/DTecITM, France

AP-TP0331　**The effective control method for over-weight heavy trucks using toll charging devices**
Hideki Takahashi, Central Nippon Highway Engineering Nagoya Co., Ltd., Japan

TP83 - ROAD USER CHARGING 3

FRIDAY 14 OCTOBER 2016, 1030 – 1200 HOURS   **MEETING ROOM 217**

Smart Cities and New Urban Mobility

Moderator: Eddie Lim, NCS Pte. Ltd., Singapore

AN-TP0203   **Implementing an electronic road user charges solution**
Nina Elter, EROAD, New Zealand

AM-TP0449   **Untangling environmental and roadway revenue policy**
Matthew Dorfman, D'Artagnan Consulting, United States

EU-TP0531   **Open RUC systems - are PPPs for the past?**
LeighFisher, Scott Wilson, United Kingdom

AN-TP0547   **The Road Pricing Solution: Turning Theory into Practice**
Michele Huey, Transurban, Australia

AP-TP0550   **Build a configurable, extendible, scalable and cloud based Road User Charging System**
Miao Guo, IBM, Singapore

TP84 - NETWORK TRAVEL MANAGEMENT

FRIDAY 14 OCTOBER 2016, 1030 – 1200 HOURS   **MEETING ROOM 218**

Smart Cities and New Urban Mobility

AP-TP0016   **Data Feature Selection and Data Clustering Methods for Travel Time Prediction**
Chi-Hua Chen, Chunghwa Telecom Co., Ltd., Chinese-Taipei

AP-TP0070   **Merging FCD and detector data: testing and improving the new VICS algorithm**
Thomas Riedel, Adaptive Traffic Control AG and Verkehrs-Systeme AG, Switzerland

AP-TP0282   **The Study of Long Distance Travel Time Prediction**
Jinyuan Wang, Natioinal Chiao Tung University, Chinese-Taipei

AP-TP0295   **Traffic Information Provision for Route Choice between Toll and Non-toll Roads**
Ricardo Sigua, Institute of Civil Engineering, University of the Philippines, Philippines

AN-TP0438   **Modelling Travel Time Reliability for Cost-Benefit Analysis of an ITS Initiative**
David Shteinman, Industrial Sciences Group, Australia

TP85 - GENERATING TRAVEL INFORMATION VIA BLUETOOTH, ETC AND OTHER CROWD SOURCED DATA

FRIDAY 14 OCTOBER 2016, 1030 – 1200 HOURS   **MEETING ROOM 104**

Mobile Applications

Moderator: Richard Young, Beca, New Zealand

AP-TP0077   **Wake-on-demand push notification system through Bluetooth low energy using an edge server**
Tsuyoshi Takahashi, Iwate Prefectural University, Japan

AM-TP0091   **Using Bluetooth Low Energy Technology to Trigger In-Vehicle Messages at Workzones**
Chen-Fu Liao, University of Minnesota, United States

AP-TP0184   **Arterial travel time estimation system using electronic toll collection transponders**
Pei - Jung Lu, Chunghwa Telecom Laboratories, Chinese-Taipei

AP-TP0330   **Delivery of travel time information by using Bluetooth technology**
Hisanaga Sato, Central Nippon Highway Engineering Tokyo Company Limited, Japan

AN-TP0554   **Real-time travel time information using crowdsourced data**
Manish Gupta, NSW Roads and Maritime Services, Australia

TP86 - POLICY, STANDARDS AND HARMONIZATION -ITS POLICY ROADMAP, GOVERNMENT AND INDUSTRY PERSPECTIVE

FRIDAY 14 OCTOBER 2016, 1030 – 1200 HOURS   MEETING ROOM 102

Policy, Standards and Harmonisation

Moderator: Gummada Murthy, AASHTO

AM-TP0163 How Local Government Can Plan for Driverless Vehicles
Lauren Isaac, WSP | Parsons Brinckerhoff, United States

AN-TP0314 VicRoads ITS RoadMap - FIT in TIME by 2020
Kelly Dang, VicRoads, Australia

AP-TP0364 Review of National Urban Transport Policy (2006)
Sonia Arora, Institute of Urban Transport (India), India

AN-TP0395 Australia's National Telematics Framework
Gavin Hill, Transport Certification Australia (TCA), Australia

EU-TP0667 Updating and new perspectives for the design of Interoperable Transport Systems
Herve Philippe, Ministry of Ecology, France

EU-TP0698 A harmonized approach towards National Access Points for Information Services in Europe
Ronald Jorna, Mobycon, The Netherlands

TP87 - V2X ENABLED AUTOMATED VEHICLE APPLICATIONS

FRIDAY 14 OCTOBER 2016, 1300 – 1430 HOURS   MEETING ROOM 207

Automated Vehicles and Cooperative ITS

Moderator: Sue Bai, Honda R&D Americas, Inc., United States

EU-TP0043 Environmental Impact Assessment of Automated Driving
Adrian Zlocki, ADAS, Germany

EU-TP0426 Performance simulations versus field trials at Bordeaux test site for COMPASS4D project
Louahdi Khoudour, CEREMA DTerSO, France

EU-TP0250 Sensor Safety for the European Truck Platooning Challenge
Bastiaan Krosse, TNO, The Netherlands

TP88 - AUTOMATED TRUCK PLATOONING

FRIDAY 14 OCTOBER 2016, 1300 – 1430 HOURS   MEETING ROOM 208

Automated Vehicles and Cooperative ITS

Moderator: Kimihiko Nakano, The University of Tokyo, Japan

EU-TP0394 The EcoTwin 2016 EU Truck Platooning Challenge Demonstrator
Gerardo Daalderop, NXP Semiconductors, The Netherlands

AM-TP0465 Evaluation and Testing of Driver Assistive Truck Platooning: Final Project Results
Richard Bishop, Bishop Consulting, United States

EU-TP0490 In-Vehicle Architectures for Truck Platooning: The Challenges to reach SAE Automation Level3
Tjerk Bijlsma, TNO, The Netherlands

EU-TP0515 Applying V2V for operational safety within cooperative adaptive cruise control
Ellen van Nunen, TNO, The Netherlands

EU-TP0594 Functional validation and performance assessment of automated truck platoons in controlled environment
Marcos Pillado, Applus+ IDIADA, Spain

TP89 - USING BIG DATA TO BETTER ASSESS AN AGENCY'S INFRASTRUCTURE AND ASSETS

FRIDAY 14 OCTOBER 2016, 1300 – 1430 HOURS   MEETING ROOM 209

Challenges and Opportunities of Big Open Data

Moderator: Mohit Sindhwani, Quantum Inventions Pte Ltd, Singapore

AM-TP0090 Data Collection and remote monitoring at remote intesections
Bill Sowell, Eberle De, United States

AP-TP0202 An approach for efficient inspection and repair-planning of ITS-facilities using mobile devices
Atsushi Edahiro, West Nippon Expressway Company Limited, Japan

AM-TP0504 Analysis of Sign Visual Condition from Mobile LiDAR Imaging and Digital Photologs
Kevin Heaslip, Virginia Tech, United States

AP-TP0678 Design of acoustic vehicle count system using DTW
Shigemi Ishida, Kyushu University, Japan

TP90 - OPTIMAL NETWORK MANAGEMENT 2

FRIDAY 14 OCTOBER 2016, 1300 – 1430 HOURS **MEETING ROOM 216**

Vehicle Network and Safety

Moderator: Glenn Geers, ARRB, Australia

AP-TP0424 **Ensure Nonstop IP Surveillance with an Optimized Industrial Ethernet Network**
Ning-Chien Hsu, Moxa, Chinese-Taipei

AP-TP0439 **Traffic Accident Hotspots Identification Based on Clustering Ensemble Model**
Tao Gang, China

EU-TP0457 **Dynamic trigger speed for vehicle activated signs**
Diala Jomaa, Department of Computer Engineering, Dalarna University, Sweden

EU-TP0518 **Smartsensor: A noticeable technology gap in highway management in Nigeria**
Joshua Odeleye, Nigerian Institute of Transport Technology (NITT),Zaria, Nigeria

AP-TP0596 **Smart Junction System for Safe & Smooth Driving with Connected Vehicles**
Hiroki Saito, IHI ASIA PACIFIC PTE. LTD., Singapore

TP91 - ROAD USER CHARGING 4

FRIDAY 14 OCTOBER 2016, 1300 – 1430 HOURS **MEETING ROOM 217**

Smart Cities and New Urban Mobility

Moderator: Takakazu Tsuji, Mitsubishi Heavy Industries, Ltd., Japan

AP-TP0050 **Factors and Strategies for Successful Taiwan Freeway Electronic Toll Collection System Implementation**
Edmond Chang, EDCPC, Inc., United States

AP-TP0055 **A new approach to keeping a high-quality ETC service**
Yotaro Nagai, West Nippon Expressway Company Limited, Japan

AP-TP0137 **The current situation and development of Beijing's traffic management**
Hongji Du, Beijing University of Technology, China

EU-TP0391 **Road User Charging: Improving Customer Services**
Tim Gammons, Arup, United Kingdom

AN-TP0180 **Considerations related to road pricing**
John Gardiner, Transurban Queensland, Australia

TP92 - SAFETY THROUGH ITS AND QUEUE MANAGEMENT

FRIDAY 14 OCTOBER 2016, 1300 – 1430 HOURS **MEETING ROOM 218**

Smart Cities and New Urban Mobility

Moderator: Akihisa Kawasaki, Panasonic Corporation, Japan

AN-TP0328 **Queue Detection and Queue Protection algorithms - Automating motorway queue management**
William Lee, Queensland Department of Transport and Main Roads, Australia

AN-TP0417 **Can Significant investment in Managed Motorways be Justified?**
John Gaffney, VicRoads, Australia

TP93 - KEEPING DRIVERS BETTER INFORMED USING MOBILE APPLICATIONS

FRIDAY 14 OCTOBER 2016, 1300 – 1430 HOURS **MEETING ROOM 104**

Mobile Applications

Moderator: Pino Porciello, TrustPoint Innovation, Canada

AP-TP0368 **Provision of traffic and supporting information together affects tourist travel behavior**
Masatoshi Sugita, Japan Road Traffic Informatiou Center, Japan

AN-TP0414 **Smart real time advisory and journey planning**
David Scott, Wave Digital, Australia

AN-TP0577 **Learnings from providing Traffic Information Services**
Edward Beak, Department of Transport and Main Roads, Queensland, Australia

AP-TP0580 **Development of Structural Equation Modeling for Media Preference Depending on Traffic Conditions**
Hangeom Ko, Ajou Transportation Research Institute, Republic of Korea

EU-TP0719 **The Traffic Scotland Information Service – Past, Present and Future**
Graeme Scott, IBI Group, United Kingdom

COMMERCIAL SESSIONS

CP01 - ENVIRONMENTAL SUSTAINABILITY AND LOGISTICS

WEDNESDAY 12 OCTOBER 2016, 1100 – 1230 HOURS | **MEETING ROOM 101**

Environmental Sustainability

EU-CP0248 **The new 1Watt Technology to significantly reduce carbon footprint of traffic signals**
Denis Philipp Hahn, Siemens AG, Germany

AP-CP0307 **Study of Shanghai's EV Parc Forecasting and Market Features Analysis**
Xiaohua Ding, Shanghai Electric Vehicle Public Data Collecting Monitoring and Research Center, China

AN-CP0324 **Managing City Logistics with MobileDOCK**
Russell Thompson, The University of Melbourne, Australia

AN-CP0345 **Electro-Mobility:_It's more than just the car; the big picture.**
Lance Douglass, Visionstream, Australia

CP02 - SENSING AND HUMAN MACHINE INTERFACE

WEDNESDAY 12 OCTOBER 2016, 1600 – 1730 HOURS | **MEETING ROOM 101**

Smart Cities and New Urban Mobility

Moderator: Glenn Geers, ARRB, Australia

AN-CP0058 **Bluetooth Intelligence informs High-Value Decisions in the ITS and Investment Environment**
Richard Young, Beca Ltd, New Zealand

EU-CP0385 **HD-Maps as enabler for HAD**
Oliver-Patrick Berger, Ibeo Automotive Systems GmbH, Germany

EU-CP0437 **MARWIS takes off a load from drivers' shoulders**
Helena Wingert, Lufft, Germany

AP-CP0610 **Application of COM Technology in Metro ISCS Development**
Yong Yao Yang, Zhe Jiang Supcon Information Co.,Ltd., China

AP-CP0614 **Evaluation and testing of diversity antenna with Bi-Directional Amplifier**
Vaclav Mecerod, Alps Electric Co., LTD, Japan

EU-CP0704 **Leveraging probe data to build and maintain up-to-date and accurate maps**
Pieter Gillegt-Vergauwen, TomTom Maps, Belgium

CP03 - MOBILITY AS A SERVICE AND CONNECTED ITS

THURSDAY 13 OCTOBER 2016, 1100 – 1230 HOURS | **MEETING ROOM 101**

Smart Cities and New Urban Mobility

Moderator: Hany Eldany, Mobility as a Service, Australia

EU-CP0154 **Aurora - the intelligent Arctic transport test ecosystem in Finland**
Reija Viinanen, Fell Lapland Business Services, Finland

AM-CP0285 **A Personal Autonomous Chair for Independent Mobility.**
David Bruemmer, 5D Robotics, United States

AN-CP0560 **A Thirty Year Journey - Carnegie Mellon University and Autonomous Vehicles**
Emil Bolongaita, Carnegie Mellon University Australia, Australia

EU-CP0589 **Developing Mobility as a Service model in Seinäjoki, Finland**
Noora Salonen, Sito Oy, Finland

EU-CP0668 **NAVYA**
Christophe Sapet, Navya Technology, Villeurbanne, France

EU-CP0671 **Ylläs Mobility as a Service (MaaS) Project**
Antti Vehvilainen, Finnish Transport Agency, Finland

CP04 - SAFETY 1

THURSDAY 13 OCTOBER 2016, 1400 – 1530 HOURS　　　　MEETING ROOM 101

Vehicle Network and Safety

Moderator: Yu Sun, Sunsky International Ltd., Chinese Taipei

EU-CP0042 **Real-time safety alerts for severe weather and queue ends**
Nick Cohn, TomTom, The Netherlands

AM-CP0110 **Helios – A New Tool for Road Weather Awareness in Smart Cities**
Sheldon Drobot, Harris Corporation, United States

AN-CP0473 **Incident Detection and Virtual Variable Messaging using Bluetooth**
James Cox, Department of Planning, Transport and Infrastructure, South Australia, Australia

EU-CP0725 **A cost effective & proven traffic collision warning system**
Mark Schwartz, Global Traffic Technologies, United Kingdom

AM-TP0734 **What is Transportation Tech?**
Valerie Lefler, IGD, United States

CP05 - SAFETY 2

THURSDAY 13 OCTOBER 2016, 1600 – 1730 HOURS　　　　MEETING ROOM 101

Vehicle Network and Safety

Moderator: Takeki Ogitsu, Gunma University, Japan

EU-CP0402 **Highways England Action Applications**
Graeme Scott, IBI Group, United Kingdom

AP-CP0471 **FleetRisk™ - The How and Why of Driver Behaviour™ Beyond GPS**
Michael Graham, Mercurien, Australia

EU-CP0575 **Smart Enforcement in Smart Cities**
David Montgomery, Siemens, United Kingdom

EU-CP0600 **Multi-Mode Traffic Enforcement**
Richard Middelmann, Vitronic Machine Vision Australia Pty Ltd, Australia

EU-CP0726 **EVP System Operating in a SCATs Based Traffic Regime in Doha Qatar**
Timothy Hall, Global Traffic Technologies, United Kingdom

CP06 - PUBLIC TRANSPORT

FRIDAY 14 OCTOBER 2016, 0830 – 1000 HOURS　　　　MEETING ROOM 101

Smart Cities and New Urban Mobility

AN-CP0188 **The connected bus shelter – smart collaboration for a complex problem**
Murray Robertson, Downer, New Zealand

AN-CP0309 **Towards implementation of on-demand, multimodal, off-peak public transport**
Philip Kilby, NICTA and ANU, Australia

EU-CP0484 **Long range RFID for hands-free access to public transport**
Mahdi Mekic, NXP Semiconductors, Austria

AN-CP0709 **Enhancing urban productivity and liveability through integrated transport**
Sandrine Gaubert, Keolis Downer, Australia

CP07 - TOLLING AND EPAYMENT

FRIDAY 14 OCTOBER 2016, 1030 – 1200 HOURS **MEETING ROOM 101**

Smart Cities and New Urban Mobility

AN-CP0140 **Achieving accuracy in a high volume environment**
Jean-Marc Genesi, Transurban, Australia

EU-CP0217 **Mobile tolling services**
Thomas Siegl, Kapsch TrafficCom AG, Austria

AP-CP0244 **The New Parking Mobile APP "ParkPay"**
Ling Yu Wu, YDT Technology International Co. Ltd., Chinese-Taipei

AM-CP0245 **UTP ElecTraCop as a New Concept for ITS**
Mikhail Molchanov, Matsur & Co., Inc., United States

AM-CP0590 **Advanced Toll Back Office Using A Service Orientated Architecture**
Bob Deiter, Cubic Transportation Systems (Australia) Pty Limited, Australia

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CP08 - TRAFFIC MANAGEMENT

FRIDAY 14 OCTOBER 2016, 1300 – 1430 HOURS **MEETING ROOM 101**

Smart Cities and New Urban Mobility

Moderator: Mohsen Fadaee Nejad, Kapsch, Australia

AN-CP0027 **THE ROLE OF ITS IN A MATURING TRANSPORT ENVIRONMENT**
Gino Dompietro, Jacobs Group (Australia) Ltd, Australia

EU-CP0085 **Traffic Management 3.0 – Progress towards Utopia?**
Jeroen Brouwer, TomTom, The Netherlands

EU-CP0275 **REAL TIME TRAFFIC MODELS AND SMART CITIES : VIENNA**
Luca Paone, PTV Group, Italy

AN-CP0310 **Upgrading Managed Motorways in a live environment**
Hawkins John, Visionstream Pty Ltd, Australia

AN-CP0487 **Enterprise Cloud Hosting cost model for Surface Transport Management**
Kevin Moat, Cubic Transportation Systems, United Kingdom

AN-CP0731 **ITS System Integration in congested Urban Environments**
Timothy Scott, SICE PTY Ltd, Australia

INTERACTIVE SESSIONS

ISO1 – ITS TECHNICAL INTERACTIVE SESSION 1

TUESDAY 11 OCTOBER 2016, 1100 – 1230 HOURS   **LEVEL 1 FOYER**

Moderator: Mohit Sindhwani, Quantum Inventions Pte Ltd, Singapore

EU-TP0084 **Privacy in a fast evolving Location Technology Industry**
Jeroen Brouwer, TomTom, The Netherlands

AP-TP0321 **Definition and Use of Autonomous ITS**
Choi Yoon-Hyuk, Korean Expressway Corporation, Republic of Korea

AP-TP0323 **Roles of the Road System in Assisting Autonomous Driving**
Choi Yoon-Hyuk, Korean Expressway Corporation, Republic of Korea

AP-TP0405 **Intelligent in-vehicle air quality management dealing with traffic air pollution**
Wei Sun, IBM Research, China

AP-TP0428 **A study on post-trip multi-modal information provision**
Shinji Tanaka, Yokohama National University, Japan

EU-TP0583 **Traffic Lab Finland - Creating PPP-ecosystem for Digital Mobility Services**
Anders Granfelt, Tafi of Finland, Finland

EU-TP0613 **Dynamic scheduling through mobile based location advisory services of African informal transportation**
Obakeng Morapeli Matlhoko, Afta Robot Platform Systems, South Africa

AP-TP0655 **Characteristics of travel time variability in congested traffic**
Hyungjoo Kim, Korea Advanced Institute of Science and Technology (KAIST), Republic of Korea

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ISO2 – ITS SCIENTIFIC INTERACTIVE SESSION 2

TUESDAY 11 OCTOBER 2016, 1400 – 1530 HOURS   **LEVEL 1 FOYER**

Moderator: Tim Gammons, Arup, United Kingdom

AN-SP0093 **Estimating delay reduction associated with bus priority measures using kinematic wave theory**
Long Truong, Institute of Transport Studies, Monash University, Australia

AP-SP0100 **Genetic Algorithm for Functional Areas Layout in Logistics Park Combining Traffic Organization**
Yuanfa Gao, Tongji University, China

AP-SP0101 **An Investigation and Analysis on Actual Performance of Old RSE for DSRC**
Byung Hwa Kim, Korea Institute of Civil Engineering and Building Technology (KICT), Republic of Korea

AP-SP0182 **Design of Microscopic Traffic Stimulation System for Highway Toll Station**
Ning Chen, Beijing University of Technology, China

AP-SP0238 **Intersections' level of service evaluation using smart card data in Singapore**
Xiaodong Liu, Tum Create Ltd., Singapore

AM-SP0266 **Artificial intelligence based station-level rail transit ridership forecasting using smart card data**
Yue Liu, University of Wisconsin-Milwaukee, United States

AP-SP0294 **A Model for Hotspot Identification Based on Citizen Participation and Its Assessment**
Younshik Chung, The Korea Transport Institute (KOTI), Republic of Korea

AP-SP0602 **A Complete Public Transport Route Choice Model from Origin to Destination**
Rui Tan, National University of Singapore, Singapore

AN-SP0605 **Multi-sensor detection of pedestrian position and behaviour**
Stewart Worrall, ACFR, Australia

ISO3 – ITS TECHNICAL INTERACTIVE SESSION 3

Moderator: Marianne.Robertson, VicRoads, Australia

EU-TP0079 **Case-based Reasoning for Alpine Road Operation Support**
Jo Skjermo, SINTEF, Norway

AN-TP0132 **Autonomous Vehicles: past, present and future implications**
Saeed Asadi Bagloee, Melbourne University, Australia

AN-TP0171 **Creating smart drivers for New Zealand's first smart motorway**
Philippa Ross-James, Fletcher Construction, New Zealand

AP-TP0183 **Design of Pedestrian Stimulation System for the Metro Junctions by Cellular Automaton**
Wang Han, Beijing University of Technology, China

AP-TP0199 **Improved Traffic Simulation Method for Congestion Reproducibility**
Hiroko Mori, Aichi Shukutoku University, Japan

AM-TP0267 **The Critical Importance of Infrastructure in the Connected Vehicle World**
Timothy O'Leary, Iteris, Inc., United States

AP-TP0288 **Development of design guidance of highway intelligent transportation system of Taiwan**
Tien-Pen hsu, National Taiwan University, Chinese-Taipei

AP-TP0322 **Geo-registration of Aerial Images for Grasping Road Situation**
Rei Kojima, Shizuoka University, Japan

AP-TP0339 **Registration of oblique aerial images in mountainous areas using DEM**
Kota Suzuki, Shizuoka University, Japan

EU-TP0526 **Automation control and acceptance on construction and maintenance works of highways constructions**
Sadykov Ayrat, Ministry of transport and road economy of the Republic of Tatarstan, Russia

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ISO4 – ITS TECHNICAL INTERACTIVE SESSION 4

Moderator: Jeff Sharp, Downer Group, Australia

AP-TP0131 **A detection and analysis of elderly's street-crossing behaviour for walking safety at non-signalized crosswalks**
Jeong Ah Jang, Ajou University, Republic of Korea

AP-TP0186 **A framework to forecast long-term bus travel time in urban areas**
Eunmo Gu, Korea Advanced Institute of Science and Technology(KAIST), Republic of Korea

AP-TP0215 **A study on roadside antenna of three lanes MLFF-ETC using single frequency**
Masashi Takeda, Aoyama Gakuin University, Japan

EU-TP0401 **A user centric development of a handheld DSRC transceiver**
Øyvind Standal, Q-Free ASA, Norway

AP-TP0403 **Channel Measurement of Infrastructure-to-Vehicle Image Sensor Communication**
Masayuki Kinoshita, Nagoya University, Japan

AN-TP0467 **Software-in-the-loop simulation as testing and visualisation framework for ITS algorithms**
Johan Philips, KU Leuven, Belgium

AP-TP0478 **Developing the Traffic Data Acquisition Technology Based on Multi-Output Traffic Axle Sensors**
Sang Hyup Lee, Korea Institute of Construction Technology, Republic of Korea

AP-TP0592 **Motorcycle Crash and Management System in Korea**
Jisun Lee, The Korea Transport Institute (KOTI), Republic of Korea

AP-TP0601 **Analysis of Elderly Cyclists at Intersections and Proposal for Enhancing Traffic Safety**
Koji Suzuki, Nagoya Institute of Technology, Japan

ENHANCING THE WORLD'S
MOST LIVEABLE CITY

Rated the world's most liveable city for an unprecedented six years in a row, Victoria's capital Melbourne is the ideal location to explore the 23rd ITS World Congress theme *ITS – Enhancing Liveable Cities and Communities.*

Victoria offers diverse and innovative transport technology solutions from traffic software and communications, to route planning and scheduling, supply chain management, telecommunications infrastructure and smart car technology.

To learn more, please visit the
Victorian Government Networking Function

TIME: 4pm-5.30 pm
DATE: Wednesday 12 October 2016
VENUE: Melbourne Convention and Exhibition Centre, Victorian Government Pavilion (Stand No. 1316 P)

VICTORIA
State
Government

MELBOURNE CONVERSATIONS ON ITS

A selection of informative community sessions, open to the public – FREE TO ATTEND

Admittance: These sessions are free and open to the public and anyone interested in intelligent transport systems. All registered congress participants, including exhibitors, are also welcome to attend but bookings are required.

MELBOURNE CONVERSATIONS
Getting Melbourne talking

Ever wanted to hear more on a particular issue, or to have your say? Melbourne Conversations is a series of free discussions in the city exploring issues and topics of interest to all Melburnians, presented and supported by the City of Melbourne.

The Melbourne Conversations on Intelligent Transport Systems (ITS) will provide the community access to national and international ITS professionals, to learn about ITS, gain better understanding of how ITS is being integrated into their cities and what other cities overseas are doing. These sessions are an opportunity to raise community awareness on the economic and environmental sustainability benefits capable with ITS integration, understand new employment and career pathway opportunities and learn how all levels of government are working with partners to engage ITS opportunities. Speakers will discuss the nature of intelligent transport systems and what their development and integration into Melbourne might mean for Melburnians.

MCO1 - MELBOURNE CONVERSATION I - DRIVERLESS CARS AND ROAD SAFETY: WHAT WILL THIS MEAN FOR YOU?

WEDNESDAY 12 OCTOBER 2016, 1730 – 1930 HOURS (FOR 1800 START) **CLARENDON AUDITORIUM**

No longer a science fiction movie stunt, driverless cars are now a reality. Companies like Google, Tesla, Audi and Mercedes-Benz have been testing driverless cars overseas for years. In November 2015, trials of driverless cars were conducted in South Australia. Within the next 5 years all new cars will have some ability to drive themselves. Join this informative discussion and find out exactly what this means for you, your city, and what's ahead for the next generation of drivers.

How to Register:

Pre-registration via the City of Melbourne website is required. **www.thatsmelbourne.com.au**

MCO2 - MELBOURNE CONVERSATION II - SMART TRANSPORT – SMART CITY: MAKING STREETS BETTER PLACES FOR PEOPLE

THURSDAY 13 OCTOBER 2016, 1200 – 1330 HOURS (FOR 1230 START) **EXHIBITION HALL AUDITORIUM**

An increasing majority of us live, work and enjoy the city every day, putting pressure on infrastructure and resources. Much of this pressure comes from our transport requirements. How might intelligent transport systems contribute to a smarter city of the future, and help make our streets better places for people?

How to Register:

Included with existing ITS2016 delegate/exhibitor registration. Open to Public registration – is available on the congress website

MCO3 - MELBOURNE CONVERSATION III - END OF CAR OWNERSHIP: HOW WILL WE GET AROUND?

FRIDAY 14 OCTOBER 2016, 1130 – 1300 HOURS (FOR 1200 START) **EXHIBITION HALL AUDITORIUM**

We've all heard of the likes of Uber, Lyft, RideScout and MyTaxi apps – corporations investing billions in this exploding global transport service market. This shift from people owning cars to accessing different forms of mobility will be disruptive, even in scenarios where many of us choose to continue to own a car. Speakers will comment on the future of mobility and how companies and transport services can thrive in a changing market, suggest what the future of mobility, as a form of service, might look like and speculate on how will get around in a future Melbourne.

How to Register:

Included with existing ITS2016 delegate / exhibitor registration. Open to Public registration – is available on the congress website

TECHNICAL TOURS AND DEMONSTRATIONS

Option to attend the Technical Tours and Demonstrations programs are available to Full-Time and Day Registered Delegates. Bookings for the demonstrations is available via the congress app.

If you wish to book to go on a technical tour please visit the registration desk to purchase tickets for available tours.

BOOKING FEE:

Technical Tours: AUD50 per tour
Demonstration: included with Full-Time or Day Registration

TECHNICAL TOURS

Buses will depart from the Clarendon Street end of the MCEC, unless otherwise indicated. Please arrive at this entrance 15 minutes prior to departure and wait inside by the designated signage for your escort to your bus.

Safety Precaution: Closed shoes must be worn for all tours.

Who Can Attend: Full-Time and Day Registered Delegates, pre-bookings and payment required. Tickets would have been provided with your name badge. Please have these ready as you board your bus.

Demonstrations and Technical Tour Lounge: Located in the exhibition hall near Door 10, here you can find the tour listing and bus schedule, as well as make any demonstration bookings. You should see staff at the Registration Desk in the main foyer to place new technical tour bookings and make a payment or cancellation.

Technical tours and demonstrations are subject to change and for the most update to date information and schedules please download the congress app or visit the official congress website.

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1 CityLink: Go behind-the-scenes at one of the world's first fully electronic toll roads

Join Transurban road managers to take an up close look at the workings of CityLink, one of Melbourne's most sophisticated, fully managed motorways. Opened in 1999, CityLink was one of the world's first fully electronic toll roads. Today, millions of trips are made across the 22 kilometre (14 mile) motorway each year. This tour will provide a unique opportunity to see first-hand the ITS systems and equipment in place across CityLink's roadside network, operations, maintenance and in the Operations Centre.

Organisation: Transurban

Schedule:
Wednesday 12 October 2016   1330 – 1700 hours
Thursday 13 October 2016   1330 – 1700 hours

Cost: AUD50 incl GST

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2 EastLink is Melbourne's Newest and Safest Fully Electronic Tollway: Operations, Traffic Control and Maintenance Facilities

Opened in 2008, EastLink is Melbourne's most recent fully electronic tollway. EastLink is 39km long and carries approximately 250,000 vehicles per day, with its design and operations making it the safest freeway in Melbourne. EastLink is also renowned for: twin 1.6km tunnels to protect an environmentally sensitive valley; 480 hectares of landscaping with 4 million native trees, shrubs and plants; wetlands that treat road run-off rainwater; distinctive architecture; public artworks and the EastLink Trail shared use path. This tour will include a drive on EastLink and through an EastLink tunnel, and a visit to the EastLink Operations Centre.

Organisation: EastLink

Schedule:
Wednesday 12 October 2016:   0830 – 1200 hours
Thursday 13 October 2016:   0830 – 1200 hours

Cost: AUD50 incl GST

3 Smart Work Zones and the Construction of Managed Motorways

This tour will provide an on road tour of Smart Work Zones in practice and presentation on the future direction of Smart Work Zones in the form of temporary ITS devices to manage traffic during roadworks and inform road users of travel conditions. Participants will also view a demonstration of the VicRoads Project Traffic Events Centre used to remotely manage major traffic events during roadworks construction, inspect temporary ITS devices and be provided a presentation on the construction of Managed Motorway works from development to commissioning.

Organisation: VicRoads

Schedule:
Tuesday 11 October 2016:   1330 – 1700 hours
Wednesday 12 October 2016:   1330 – 1700 hours
Thursday 13 October 2016:   0830 – 1200 hours
Friday 14 October 2016:   0830 – 1200 hours

Cost: AUD50 incl GST

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4 Managed Motorway Operation: Largest managed motorway network in Australia

Melbourne operates 100km of managed motorways consisting of 76 metered ramps and is the largest managed motorway network in Australia carrying approximately 220,000 vehicles per day. This tour involves a trip along the Monash Managed Motorway experiencing the operation of Melbourne's longest Managed Motorway. During the trip participants will be given the opportunity to experience and monitor the ramp metering operation using a customised tablet in real time, the opportunity to understand the University of Crete ramp metering algorithm parameters and operational functionality, including integration with the STREAMS freeway management system, freeway data stations, and the lane use management system, plus an overview of the dynamic speed limit algorithm used to control vehicle speeds along the managed motorway network to minimise flow traffic break down.

Organisation: VicRoads

Schedule:
Wednesday 12 October 2016:   0900 – 1230 hours
Thursday 13 October 2016:   0900 – 1230 hours

Cost: AUD50 incl GST

5 **VicRoads Traffic Management Centre and using SmartRoads to Achieve Improved Network Performance**

VicRoads is the state's primary Road Authority and is responsible for the operation of approximately 22,000 km of declared roads in Victoria. The Melbourne metropolitan road network has around 3,500 km of arterial roads and approximately 3800 set of traffic signals, also 100km of managed motorways. VicRoads Traffic Management Centre (TMC) monitors the declared road network and handles over 250,000 calls each year. This tour will provide insight into its operation, monitoring techniques, and various tools available to operators. VicRoads has also developed a smarter way to manage the increasing number of trips on roads so that Victoria remains a great place to live. 'SmartRoads' is an approach that manages competing interests for limited road space by giving priority use of the road to different transport modes at particular times of the day. By deciding which modes have priority on which roads, Melbourne's road network can work better for everyone. This tour will demonstrate how this works.

Organisation: VicRoads

Schedule:
Wednesday 12 October 2016: 1330 – 1630 hours
Thursday 13 October 2016:   1330 – 1630 hours

Cost: AUD 50 incl GST

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6 **Public Transport Control Centres – Yarra Trams and Metro Trains**

Get an insight into Melbourne's key metropolitan public transport control centres for metro trains and the world's largest tram network. Yarra Trams Operations Centre is based at Tram Hub, a 'depot for people' in the heart of the CBD. It brings the power and operations centres into the same room for the first time in 110 years of Melbourne's electric trams. Controllers monitor 250 kilometres of double track – 75% of which is shared with motor vehicles – as more than 400 trams deliver 35,000 services each week. Trams operate 20 hours a day, with 24-hour services on six lines on weekends as part of the city's Night Network. To improve customer service, a customer information team is based in the Operations Centre to provide real-time updates through digital and on-network channels. The centre handles over 300,000 calls per year as Yarra Trams enables half a million passenger trips each day.

Organisation: Public Transport Victoria

Schedule:
Tuesday 11 October 2016:   1400 – 1700 hours
Wednesday 12 October 2016: 0930 – 1230 hours
Thursday 13 October 2016:   1400 – 1700 hours
Friday 14 October 2016:   0930 – 1230 hours

Cost: AUD50 incl GST

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7 **Port of Melbourne: Operations Control Centre and Hydrographic Survey Boat**

Visit the Port Operations Control Centre which provides Melbourne Vessel Traffic Services (VTS). Melbourne VTS manages and coordinates safe and efficient movement of 3,000 vessel visits per year through the southern part of Port Phillip and the Heads. It also acts as a key focal point for incident and emergency responses management. Tour will take delegates onboard the survey boat to showcase the Dynamic Under Keel Clearance (DUKC) movements and demonstrate enhanced navigation safety and mitigate groundings risks within port channels. The hydrographic survey is important for anchoring, dredging, structure construction, pipeline and cable routing and fisheries habitat. Featured will be the multi-beam echo sounder technology in hydrographic survey to enhance navigation safety.

Organisation: Port of Melbourne Corporation

Schedule:
Tuesday 11 October 2016:   0930 – 1200 hours

Cost: AUD50 incl GST

8 **Melbourne Port System Tour: Enhancing Future Freight Productivity with ContainerChain**

Visit the Port of Melbourne's Port Education Centre, located on the bank of Melbourne's Yarra River. The purpose-built facility is one of the vantage points where visitors can experience a passing ship up close as backdrop during the overview briefing with regards to the application of Containerchain, a web-based software to manage park operations, enhance gate access efficiency and yard processes, eliminate vehicle congestion. See the recently launched the 'eGate' app for smartphones and tablets, connecting the container truck drivers with empty container parks and other parts of container logistics supply chain operators. The site visit will demonstrate how future freight technology innovation developed by Melbourne companies, is providing the logistics efficiency solutions through online truck bookings, paperless gate control, automated truck arrival processing, automated container surveys, real-time container status management and forklift work allocation. Tour will also include an onsite visit to Melbourne's newest container terminal site.

Organisation: Port of Melbourne Corporation

Schedule:
Tuesday 11 October 2016:   1400 – 1630 hours

Cost: AUD50 incl GST

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9 **Managing Traffic in an Airport Environment**

With almost 33 million passengers a year, Melbourne Airport is the gateway for international and domestic air travel and is Australia's second busiest passenger airport and leading air freight exporter. In order to meet the growing demand for air travel, AUD10 Billion will be invested over the next 20 years to expand and enhance the airport's infrastructure. Melbourne Airport owns, maintains, and operates 32 km of road network, accessing two key freeways, in addition to operating 24,000 bay car parks. The ITS infrastructure and deployment at the airport is the solution to ensure the road network operates efficiently for over 65,000 vehicles accessing the various passenger and freight cargo terminals each day, providing a key priority for the Parking and Ground Transport team. This tour will provide participants with a site visit of recent infrastructure developments at Melbourne Airport and discuss ways in which this airport is deploying the use of ITS solutions to improve the traffic flow within the airport environment.

Organisation: Melbourne Airport

Thursday 13 October 2016:   1330 – 1630 hours

Cost: AUD50 incl GST

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10 **Aerospace, Automotive and Manufacturing Laboratory Showcase at Royal Melbourne Institute of Technology (RMIT)**

RMIT University is a global university of technology and design, focused on creating solutions that transform the future for the benefit of people and their environments. This tour will include a visit to cutting edge laboratory facilities, research and technology in Aerospace, Automotive and Manufacturing field at RMIT University. The Wackett Aerospace Research Centre is internationally renowned in aerospace related science and technology research and has a vast range of world class facilities including airspace and flight simulators, unmanned aircraft and wind tunnels, whilst the Automotive and Green Engines Research Facility supports leading-edge experiments on propulsion and engine performance management and alternative fuels for advanced and more efficient internal combustion engines.

Organisation: RMIT University, Bundoora Campus

Schedule:
Tuesday 11 October 2016   0830 – 1230 hours

Cost: AUD50 incl GST

11 **Factory of the Future, Smart Structures and Research-Led Innovation at Swinburne University of Technology**

Swinburne University of Technology supports innovative, leading-edge research with outstanding research facilities. This tailored tour will give you a behind the scenes look at Swinburne's technology labs, including the only Smart Structures Research facility in the southern hemisphere, the Electric Vehicles development facility, the award-winning advanced manufacturing research facility, as well as the Aviation Lab and Flight Simulator.

Organisation: Swinburne University of Technology, Hawthorn Campus

Schedule:
Thursday 13 October 2016   0830 – 1230 hours

Cost: AUD50 incl GST

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12 **Future Immersive Digital Environments for Transport and Collaboration, including the CAVE2, Woodside Innovations Centre and Institute of Rail Technology**

This tour explores the future of immersive digital environments for Transport and Collaboration. Includes visit to The Monash CAVE2, an immersive hybrid 2D and 3D virtual reality environment, showcasing Monash's leadership in the data visualisation domain, accelerating research across a range of disciplines including engineering, science and medicine. A visit to the Woodside Innovations Centre, focused on researching industry-wide technology innovation will demonstrate how big data, immersive analytics and rapid proto-typing are changing the industry. The tour also includes a visit to the Institute of Railway Technology (IRT), the premier track and vehicle railway research centre in Australia, and one of the main technology service providers to heavy haul railway operations.

Organisation: Monash University

Schedule:
Tuesday 11 October 2016   0830 – 1300 hours

Cost: AUD50 incl GST

13 **Telstra Customer Insight Centre – Gain, share and develop insights**

Telstra is Australia's largest telecommunications provider and the Telstra Customer Insight Centre is where you can gain, share and develop insights and experience a new way to engage customers, leading to more rewarding relationships. From the moment you enter the new Customer Insight Centre, you'll find yourself immersed in an environment that takes collaboration to a completely new level, combining interactive spaces with the latest trends in innovation such as mobility trends, Internet of Things, Telstra Health, Connected Transport, Smart Home and Smart Cities. This tour will provide delegates with a deeper and more consultative understanding of how Telstra's technology extends far beyond products and services.

Organisation: Telstra

Schedule:
Thursday 13 October 2016   1430 – 1630 hours

Cost: AUD50 incl GST

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14 **Telstra Global Operations Centre - Central management of Telstra's network across Australia**

Telstra is Australia's largest telecommunications provider. Officially opened in August 1999 and globally recognised as the first centre of its type, Telstra's leading edge Global Operations Centre now manages the operation of Telstra's fixed and mobile telecommunications networks, high speed internet options and broadcast television to support Telstra's and customers' diverse range of products and services, both domestically and internationally. Telstra's Australian and international customers have access to more than 230 countries and territories via a network of interconnected digital gateway exchanges and major satellite earth station complexes. This tour will provide a unique opportunity to showcase the integration of future technologies.

Organisation: Telstra

Schedule:
Thursday 13 October 2016   1000 – 1200 hours

Cost: AUD50 incl GST

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PRE-CONGRESS:

15

Heavy Vehicle Automation: New research and technologies for Road-Trains, B-Doubles and Prime Movers

Developments in Prime Mover and trailers will be demonstrated on a 4.2-kilometre highway circuit with participants able to travel in the cabin of the vehicles on display. As well as new technologies there will also be Road Trains and B-Doubles operating, as the challenges for these larger vehicles are unique to Australian traffic conditions and pose particular problems for autonomous vehicle operation. New developments by Robert Bosch will be demonstrated with live displays on the 6.2 hectare skid pan of the Dynamic Handling Facility. Military vehicle developments will be demonstrated on the Vehicle Design and Validation area, adjacent to the highway circuit by Rheinnmattell. The Australian Automotive Research Centre (AARC) at Anglesea in Victoria is Australia's largest independently owned proving ground, covering 1,000 hectares and has over 100 kilometres of track of varying grades and surfaces, providing test facilities for many of the world's leading automotive and defence businesses. A tour of the facility will include demonstration of vehicles operating in autonomous and semi-autonomous modes.

Organisation: Australian Automotive Research Centre (AARC)

Schedule:
Monday 10 October 2016   0830 – 1500 hours
The tour will depart and return from the MCEC.

Cost: AUD50 incl GST

POST-CONGRESS:

16

Electronic Lane Control System (ELCS) on Sydney Harbour Bridge

National Heritage Listed Sydney Harbour Bridge, known by the locals as the 'Coathanger', uses the Electronic Lane Changing System (ELCS) to control flow for eight lanes of bridge traffic. With more than 160,000 vehicle movements per day, the bridge is managed remotely from the TMC by dedicated SHB traffic controllers. ELCS integrates the use of electronic overhead signage, automatic movable medians and in-pavement lighting to adjust traffic direction an average of five times per day in four different configurations. Roads and Maritime Services led the design of the ELCS which uses German componentry and programmable logic controller operating on two new fibre optic networks with dual redundant servers. The ELCS system won the 2015 PACE Zenith innovation award for the Transport, Power and Infrastructure category. This tour will include visit and presentation in the Transport Management Centre and guided site visit to the bridge.

Organisation: Roads and Maritime Services NSW

Schedule:
Monday 17 October 2016   1100 – 1500 hours
THIS IS A POST-CONGRESS TOUR IN SYDNEY, NSW

The tour will commence at the RMS Transport Management Centre, 25 Garden Street, Eveleigh (Sydney), New South Wales

Cost: AUD50 incl GST – TOUR ONLY (travel to Sydney, accommodation and other costs are own arrangements and expense)

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17

Multi-Modal ITS in Metropolitan Brisbane

The tour will include visits to key transport research institutions (including the Queensland University of Technology), travel on road, tunnel and public transport networks to see ITS field deployments, and first-hand exposure to the operation of transport management centres in Brisbane. It will conclude with a reception event at Brisbane City Hall with keynote speakers. For half of the day, there will be two separate options to choose from: the traffic management option will include a bus trip around the Brisbane motorway network to see in action the technologies used to actively manage traffic and enable efficient, safe and informed journeys; or the public transport option which will provide a tour of state-of-the-art intermodal facilities at the Roma Street Station bus-rail interchange and the new rail control centre. Delegates will be shown real-time traveller information services and systems, and electronic payment technologies.

Organisations: Hosted by the Queensland Department of Transport and Main Roads and Brisbane City Council on behalf of the ITS16 Queensland Pavilion Consortium

Schedule:
Monday 17 October 2016,   0900 – 1800 hours
THIS IS A POST-CONGRESS TOUR IN BRISBANE, QLD

Optional extra day, one-to-one meetings with local ITS experts: Tuesday 18 October 2016

The tour will commence at Mineral House, 41 George Street, Brisbane, Queensland.

Cost: AUD50 incl GST – TOUR ONLY (travel to Brisbane, accommodation and other costs are own arrangements and expense)

DEMONSTRATIONS

Demo bookings are made via the congress app

Places are strictly limited, and will be offered on 'first come, first served' basis.

There are 4 Demo Groups, which are available to Full-Time and Day Registered Delegates - there is no extra fee to book a demo.

GROUP A

ALBERT PARK PRECINCT DEMONSTRATIONS

Location:
Held at the Albert Park Precinct, accessed via a return bus transfer schedule, departing every 15 minutes from the MCEC bus pick-up point (located Hilton Hotel end of MCEC).

Bookings:
Bookings are required, places are limited. Bookings can be made in advance via the congress app, or onsite at the Demonstration and Technical Tours Lounge located in the exhibition hall.

GROUP C

CAR PARK AT MCEC DEMONSTRATIONS

Location:
Demonstrations that will depart / return from demo vehicles that are located in the undercover MCEC car park. Accessed from Door 10 Exhibition Hall Concourse.

Bookings:
Bookings are required, places are limited. Bookings can be made in advance via the congress app, or onsite at the Demonstration and Technical Tours Lounge located in the exhibition hall.

GROUP B

BUS TRANSFER DEMONSTRATIONS

Location:
These are demonstrations that will be presented on the buses that transfer delegates between the MCEC and Albert Park Precinct.

Bookings:
Bookings are not required, simply hop on the bus displaying the demonstration you are interested in.

GROUP U

UBIQUITOUS DEMONSTRATIONS

Location:
These are demonstrations featuring ubiquitous technology utilising deployed technology at various demonstration sites and other congress venues.

Bookings:
Bookings are not required, simply follow instructions on how to access the demonstration.

HOW TO BOOK A DEMONSTRATION

For Full-Time and Day Registered delegates, demo bookings are made via the congress app. Onsite bookings can also be done from the Demonstration and Technical Tour Lounge located in the exhibition hall. Places are limited.

ALBERT PARK PRECINCT DEMONSTRATIONS

A1 **Remote Parking and Automatic Stop with the Driver Monitor System**

Organization: Aisin Group

Congress Theme:
Cooperative and Automated Vehicles

Category most closely aligns with:
Education, Research and Development

Overview Statement:
Showcasing advancements in Automatic Stop to the Road Shoulder and Remote Braking

AISIN Group will contribute to the practical use of automated driving by driver sensing technology, navigation system technology and brake system technology. In Melbourne, AISIN Group will demonstrate a remote parking and automatic stop with the Driver Monitor System and the Dynamic Map. The linchpin of the 192 companies that make up the AISIN Group, Aisin Seiki produces and sells automotive parts. Building on technical expertise amassed in this field, the company is expanding into other areas such as lifestyle and energy-related products. AISIN AW is the world's number one manufacturer of automatic transmissions. The company also produces car navigation systems and hybrid transmissions, and is committed to delivering cutting-edge products to our customers around the world. As a global supplier of brake systems, ADVICS develops and markets systems tailored to customer needs.

Demo Duration: Approximately 30 minutes

Bookings: This is a bookable demonstration – pre-bookings required. Please refer to the Congress App or the Demonstrations and Technical Tours Lounge located in the exhibition hall.

A2 **Bosch Highly Automated Driving Vehicle Demonstration**

Organization: Robert Bosch Australia

Congress Theme:
Cooperative and Automated Vehicles
Vehicle and Network Safety

Category most closely aligns with:
Education, Research and Development

Overview Statement:
Today, efficient driver assistance systems are already helping drivers reach their destination in a safer, more relaxed manner. In the future, these systems will manage increasingly complex driving situations, assisting the driver and even acting independently. Each innovation brings us a little closer to accident-free, automated driving. Automated driving will change the future of mobility. There will be fewer accidents, fewer traffic jams and lower harmful emissions. The future of mobility will be connected, electrified and automated. Instead of driving the vehicle ourselves, we will gain time for other things, while the car safely transports us with little, or zero input. At the world class venue Albert Park Precinct, the home of the Melbourne F1 Grand Prix, Bosch will demonstrate a Melbourne built, Highly Automated Driving vehicle prepared with a particular focus on the UX (user experience), the benefit to the driver and the occupants. This will demonstrate the next incremental step towards self-driving vehicles becoming reality.

Demo Duration: Approximately 20 minutes

Bookings: This is a bookable demonstration – pre-bookings required. Please refer to the Congress App or the Demonstrations and Technical Tours Lounge located in the exhibition hall.

A3 **Shared Driverless Transportation for the Last Mile**

Organization: EasyMile

Congress Theme:
Smart Cities and New Urban Mobility

Category most closely aligns with:
ICT Enabling Multi-Modal Transportation

Overview Statement:
Shared Driverless Transportation for the Last Mile

EasyMile, a joint venture between Ligier Group, a vehicle manufacturer, and Robosoft, a high tech company specializing in services robotics, provides shared driverless transportation for the last mile in urban environment. By combining the expertise from both companies, EasyMile developed the EZ10, an electric driverless shuttle dedicated to smart mobility that is designed to cover short distances and predefined routes in mixed-use environments.

The EZ10 can transport up to 12 people (6 seating and 6 standing) and can also cater to passengers with reduced mobility. The electric driverless shuttle has no steering wheel and neither a dedicated front nor back. The EZ10 does not require additional infrastructure, and operates autonomously following a virtual line mapped and loaded in the software of the vehicle.

Demo Duration: Approximately 10 minutes

Bookings: This is a bookable demonstration – pre-bookings required. Please refer to the Congress App or the Demonstrations and Technical Tours Lounge located in the exhibition hall.

A4 **NXP's V2X Technology Makes Melbourne's Streets Smarter (Communicating Cars Demo)**

Organization: NXP Semiconductors

Congress Theme:
Smart Cities and New Urban Mobility
Vehicle and Network Safety
Cooperative and Automated Vehicles

Category most closely aligns with:
Education, Research and Development

Overview Statement:
NXP's V2X tech makes streets safer

At Albert Park, NXP - together with Siemens, Marben, Chemtronics, Cohda and NTU - will showcase some of the latest automotive technology which is helping to drive the industry towards more intelligent, safer vehicles. Visitors will get to experience first-hand some of the innovations that will power the connected vehicles of the future. Live demonstrations from NXP and our partners include a number of in car features, such as V2X and green light optimized speed technology, designed to protect drivers, passengers and other vulnerable road users. NXP will demonstrate among all how V2V communications units 'talk' to other vehicles to let drivers know what other traffic is coming around corners as well as information about the type of vehicle and their speed. Furthermore the demo includes use cases to show how drivers can be alerted with up-to-the-minute information about current road situations that could affect their journeys such as road works or accidents.

Demo Duration: Approximately 20 minutes

Bookings: This is a bookable demonstration – pre-bookings required. Please refer to the Congress App or the Demonstrations and Technical Tours Lounge located in the exhibition hall.

GROUP B

BUS TRANSFER DEMONSTRATIONS

B1 **CO-GISTICS Open Roads Demonstration in Melbourne**

Organization: CO-GISTICS

Congress Theme:
Environmental Sustainability
Mobile Applications
Future Freight
Cooperative and Automated Vehicles

Category most closely aligns with:
Public Transport
Ports – Air and Sea

Overview Statement:
CO-GISTICS C-ITS services for logistics demo

CO-GISTICS will present its two services: Speed Advice (GLOSA) and Cargo Transport Optimization. A G5 OBU is installed in the bus transfer shuttle between the congress venue and the Albert Park Precinct demonstration area. The application will be available to the driver and to the passengers through several smartphones. The OBU will recover traffic light information and will permit the display of Green Light Optimal Speed Advice. Four tablets will be available for people seated in the first rows of the bus to follow live the different tools and advices that the driver receives in real-time. The tablets will also display Cargo Transport Optimization services created live through a transport order and a mission order on the Noscifel platform. The goal is to show all the administrative steps for the transport of goods: appointments summary, transport documents, traceability, geofence creation, CO_2 footprint estimation.

Demo Duration: Approximately 20 minutes

Bookings: Pre-bookings are not required for this demonstration. Please refer to the Demo Bus Schedule, Congress App and/or the Demonstrations and Technical Tours Lounge located in the exhibition hall.

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GALILEO, Ready for a Reliable Positioning for ITS

B2 **Organization:** Aerospace Valley

Congress Theme:
Mobile Applications

Category most closely aligns with:
ICT Enabling Multi-Modal Transportation

Overview Statement:
A major breakthrough in ITS positioning techniques with Galileo

A demonstration of new commercial products that use Galileo key capabilities will be carried out during the whole ITS congress. The delegate transfer shuttle bus operating between the congress venue to Albert Park Demo Precinct will be equipped, with several types of ITS-specific GNSS receivers that will show in real conditions the benefits of using Galileo to determine the position of the circulating bus.

In addition to this real conditions demonstration, visitors are kindly invited for a demonstration of the use of innovative Controlled Reception Pattern Antenna (CRPA) that takes a maximum benefit of Galileo new generation signals in order to remove the impact of signal reflections, particularly disturbing GNSS positioning performances in urban environment. These innovative techniques are particularly designed for ITS applications, and will for sure be seen as remarkable innovation in the way of using GNSS signals in the future.

Demo Duration: Approximately 20 minutes

Bookings: Pre-bookings are not required for this demonstration. Please refer to the Demo Bus Schedule, Congress App and/or the Demonstrations and Technical Tours Lounge located in the exhibition hall.

B3 **NXP's V2X Technology Makes Melbourne's Streets Smarter (Bus Demonstration)**

Organization: NXP

Congress Theme:
Smart Cities and New Urban Mobility
Vehicle and Network Safety
Cooperative and Automated Vehicles

Category most closely aligns with:
Roads and Tunnels

Overview Statement:
NXP's V2X tech makes streets safer

On the delegate transfer shuttle bus operating between the congress venue to Albert Park Demo Precinct, NXP together with Marben, Chemtronics, Cohda and NTU, will showcase some of the latest automotive technology which is helping to drive the industry towards more intelligent, safer vehicles. Visitors will get to experience first-hand some of the innovations that will power the connected vehicles of the future. Live demonstrations from NXP and partners include a number of in car features, such as V2X, RFID and green light optimized speed technology, designed to protect drivers, passengers and other vulnerable road users. NXP will demonstrate among all how V2V communications units 'talk' to other vehicles to let drivers know what other traffic is coming around corners as well as information about the type of vehicle and their speed. Furthermore the demo includes use cases to show how drivers can be alerted with up-to-the-minute information about current road situations that could affect their journeys such as road works or accidents.

Demo Duration: Approximately 20 minutes

Bookings: Pre-bookings are not required for this demonstration. Please refer to the Demo Bus Schedule, Congress App and/or the Demonstrations and Technical Tours Lounge located in the exhibition hall.

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B4 **Q-Free ITS Station: Smart applications based on standard ITS messages**

Organization: Q-Free ASA

Congress Theme:
Smart Cities and New Urban Mobility
Vehicle and Network Safety
Environmental Sustainability
Policy, Standards and Harmonization

Category most closely aligns with:
Roads and Tunnels

Overview Statement:
Q-Free ITS station showcase

Visitors to the outdoor demonstration area will be able to learn about the capabilities of Q-Free's Universal ITS Station. This enables two-way vehicle-to-vehicle and vehicle-to-roadside connectivity for Cooperative ITS applications. It is available in roadside and in-vehicle versions, and provides full hybrid, ETSI/ISO-standard communications.

On the delegate transfer shuttle bus operating between the congress venue to Albert Park Demo Precinct, a coach equipped with the Q-Free ITS station will showcase a representative selection of ITS applications, such as travel time, low bridge warning and road works. Q-Free has also equipped the road to the Albert Park demonstration area with roadside ITS stations. These SCATS-connected intersections will be broadcasting standard messages including SPaT/MAP (intersection map and traffic signal status), safety messages and service announcements. The interactive demonstration is live on the Web and accessible by smartphone, tablet or PC.

Demo Duration: Approximately 20 minutes

Bookings: Pre-bookings are not required for this demonstration. Please refer to the Demo Bus Schedule, Congress App and/or the Demonstrations and Technical Tours Lounge located in the exhibition hall.

GROUP C

CAR PARK AT MCEC DEMONSTRATIONS

C1 **GPSless Positioning for V2X**

Organization: Cohda Wireless

Congress Theme:
Smart Cities and New Urban Mobility
Vehicle and Network Safety
Cooperative and Automated Vehicles

Category most closely aligns with:
Roads and Tunnels
Ports – Air and Sea

Overview Statement:
GPSless positioning for V2X

In V2X systems vehicles determine their position using GPS. This information is then shared over 5.9 GHz with surrounding vehicles and infrastructure to deliver safety and mobility applications. In environments such as forests, urban canyons, parking garages and tunnels positioning via GPS is challenged or unavailable. In this Demonstration Cohda shows vehicles being positioned in an underground car park where GPS is not available. The vehicles position themselves and transmit messages containing GPS coordinates as if GPS was available. Only standard V2X hardware deployment and standard messaging over the air are employed. Participants will ride in the vehicles and observe the V2X system performing in GPS occluded environments.

Demo Duration: Approximately 30 minutes

Bookings: This is a bookable demonstration – pre-bookings required. Please refer to the Congress App or the Demonstrations and Technical Tours Lounge located in the exhibition hall.

C2 **Downtown Melbourne Challenge: Real-time localization and reference generation in urban traffic**

Organization: Ibeo Automotive Systems GmbH

Congress Theme:
Smart Cities and New Urban Mobility
Vehicle and Network Safety
Cooperative and Automated Vehicles

Category most closely aligns with:
Roads and Tunnels
ICT – Enabling Multi-Modal Transportation

Overview Statement:
Real-time Localization and Reference Generation

This demonstration will present real-time localization of a vehicle in challenging urban scenarios where standard GPS localization is not possible. The technology will be mainly based on lidar-based perception that works in combination with digital maps collected a-priori. Online data will be obtained during the drive in addition to the localization results to show the online capabilities of the state-of-the-art perception system. In addition, reference data of the drive will be generated during an offline processing stage for evaluation and assessment purposes. The participants will get on the end of the drive a print out with all relevant information of the drive.

Demo Duration: Approximately 30 minutes

Bookings: This is a bookable demonstration – pre-bookings required. Please refer to the Congress App or the Demonstrations and Technical Tours Lounge located in the exhibition hall.

C3 **Emergency Vehicle Alert**

Organization: Intelematics

Congress Theme:
Vehicle and Network Safety

Category most closely aligns with:
Roads and Tunnels
Education, Research and Development

Overview Statement:
At last, practical Emergency Vehicle Alerts

Safety for all road users is vital when emergency vehicles are attending an emergency. Soundproofing in modern cars, combined with in-car entertainment means a driver's awareness of approaching emergency vehicles can be limited or non-existent, even when sirens and lights are in use. Emergency Vehicle Alert (EVACast) is the solution to that problem. It requires no special equipment in either the emergency vehicle or the car – a requirement that has hindered many previously proposed solutions. Using standard GPS in the emergency vehicle and a connection to their base station, combined with the EVACast geo-processing platform and an embedded app or smartphone in the car, a clear warning can be provided to road users. For such a system to be successful minimising false warnings is critical while ensuring an appropriate warning is provided when required. EVACast can use a number of sophisticated processing algorithms to ensure high reliability of warning messages.

Demo Duration: Approximately 30 minutes

Bookings: This is a bookable demonstration – pre-bookings required. Please refer to the Congress App or the Demonstrations and Technical Tours Lounge located in the exhibition hall.

C4 **Kapsch: Enabling Mobility**

Organization: Kapsch TrafficCom Australia

Congress Theme:
Smart Cities and New Urban Mobility
Cooperative and Automated Vehicles
Mobile Applications

Category most closely aligns with:
Roads and Tunnels

Overview Statement:
Kapsch V2X, C-ITS and mobile tolling

Kapsch TrafficCom is demonstrating its Mobile Tolling application and V2X capabilities. The V2X showcase, on Melbourne's roads and Transurban's Toll Roads, is based on existing ETSI ITS G5 standards including the most recent specifications from the co-operative ITS corridor project ECo-AT (part of the European ITS corridor between Netherland, Germany and Austria). The seamless integration of V2X functionalities in DYNAC ATMS® (Advanced Traffic Management), a proven system environment, shows the easy management of V2I and I2V simultaneously. The demonstration includes the Harbour Esplanade, the CityLink and M1 Freeway). Along this path several Cooperative ITS use cases will be demonstrated, e.g. road works warning (RWW), in-vehicle information – speed limits, weight and dimension warnings, co-existence with 5.8GHz DSRC based Tolling and more.

The Mobile Tolling showcase demonstrates how mobile applications enhance the video toll performance in tolling systems and at the same time improve the journey experience on toll highways by offering an alternative tolling solution that is of particular interest to infrequent users. Along the CityLink toll road, the mobile tolling application informs the road user about entering and exiting the toll road as well as the incurred tolls.

Demo Duration: Approximately 20 minutes

Bookings: This is a bookable demonstration – pre-bookings required. Please refer to the Congress App or the Demonstrations and Technical Tours Lounge located in the exhibition hall.

C5 **GPS Emergency Vehicle Pre-Emption**

Organization: Aldridge Traffic Controllers

Congress Theme:
Smart Cities and New Urban Mobility
Vehicle and Network Safety

Category most closely aligns with:
Roads and Tunnels

Overview Statement:
GPS Emergency Vehicle Pre-emption

Aldridge Traffic Controllers (ATC) in conjunction with Global Traffic Technologies (GTT) will be providing a field demonstration of the latest technology in Emergency Vehicle Pre-emption (EVP). The Opticom GPS EVP system utilizes satellite-derived GPS coordinates combined with a bi-directional radio which allows the vehicle to "handshake" constantly with the intersection to ensure EVP is only activated precisely when required. Legacy Infra-Red (IR) systems using direct line-of-site are subject to aging or degradation and require regular cleaning for optimal performance. All of the factors impacting IR systems are eliminated with GPS. The demonstration will be conducted in a small bus and commence at the intersection of City/Moray/Queensbridge and conclude after the Pedestrian Operated Signals of City near Fanning. The proposed demonstration will involve travelling along City Road twice, once without any Pre-emption activated and then with Pre-emption activated. This will demonstrate the reduced delay and travel time using EVP.

Demo Duration: Approximately 30 minutes

Bookings: This is a bookable demonstration – pre-bookings required. Please refer to the Congress App or the Demonstrations and Technical Tours Lounge located in the exhibition hall.

UBIQUITOUS DEMONSTRATIONS

U1 **HMI Technologies "RouteTIP Bluetooth I2X" Demonstration**

Organization: HMI Technologies Pty Ltd

Congress Theme:
Cooperative and Automated Vehicles
Mobile Applications

Category most closely aligns with:
ICT Enabling Multi-Modal Transportation

Overview Statement:
Bluetooth messaging from infrastructure to delegates

RouteTIP is a world first in intelligent transport systems, a state of the art communication channel for transport agencies, to make safer and more enjoyable journeys. Developed by HMI Technologies, a world leader in Intelligent Transport Solutions, the RouteTIP app is used by road users to receive alerts from beacons on roadside infrastructure such as street lights, bridges, or sign posts.

The innovative aspects of RouteTIP are numerous; beacons send simple, location-specific messages to the RouteTIP app on a smartphone, which works completely hands free, requiring no interaction from users. Messages include alerts about hazards and traffic congestion ahead, reminders of speed restrictions, journey time information and much more. RouteTIP users are able to subscribe to different information streams which ensure that they only receive information that they find relevant. Furthermore, RouteTIP guides consumers in their cars, on public transport, on a bicycle or simply on foot as pedestrians. RouteTIP is also an end to end solution for busy Airport environments; providing users with information such as optimal routes, detailed descriptions of facilities, travel time estimation between gates and flight details.

Unlike a majority of apps, RouteTIP does not rely on cellular data or GPS in its functionalities and is completely free and is operational even without a simcard. HMI designed RouteTIP with the intent of managing traffic after disasters - RouteTIP is compact and solar driven, and can continue to operate up to 9 days without a power source.

For the ITS World Congress in Melbourne, RouteTIP will be deployed at a number of locations, including Melbourne Airport, the Melbourne Convention and Exhibition Centre, Melbourne's Southbank, Federation Square, Botanical Gardens, Arts Centre and Sports and Entertainment district. Messages will be transmitted to delegates' smart phones, provided they have Bluetooth switched on and the app downloaded – see instructions below.

How to experience the HMI Technologies demo:
For instructions on how to access the RouteTIP Demonstration app, please click this link: **www.routetip.com/worldcongress**

This will take you to the HMI RouteTIP webpage for further instructions on how to download the RouteTIP app for Apple and Android users.

Once you have connected via your smartphone and have your bluetooth switched on, you will begin to receive messages from the 31 RouteTIP units deployed for the World Congress.

Please also visit HMI Technologies at Stand #1101 in the Exhibition Centre for a coffee and to discuss RouteTIP and our many other products.

Bookings: There are no bookings required for this demonstration – RouteTIP can be experienced 24/7 at all congress venues and selected locations around Melbourne. To experience the demo, refer to above instructions or visit the HMI Technologies stand in the exhibition hall – Stand #1101.

SOCIAL EVENTS

WELCOME RECEPTION

Held in the Exhibition Hall, a short walk from the plenary auditorium, the welcome reception will be a chance to connect and catch up with colleagues from around the world.

Enjoy a glass of wine and some delicious local food from the region whilst being entertained by iconic Australian performers. Chat to larger than life Australian Football League (AFL) players and cricketers and be rescued by giant lifesavers. Be treated to a self-portrait by a world renowned caricaturist and be dazzled by vibrant lifesize flowers. You might even get the chance to meet Crocodile Dundee!

Date: Monday 10 October 2016

Time: 1730 – 2030 hours

Location: Exhibition Hall (MCEC)

Tickets: Included with Fulltime Registration, Accompanying Person and Exhibition Registration*. Additional tickets can be purchased from the registration desk.
*Not included in Exhibition Visitor and Day Registration passes.

Additional tickets: AUD80 per person (inc. GST)

Dress code: Business casual

GALA DINNER

Join us on a truly immersive dinner experience that will be a celebration of the eclectic and urban style Melbourne is famous for.

The journey will begin as a sit down dinner and as the evening unfolds dazzling spaces will come alive with magical wonder, mesmerizing music and enthralling entertainment.

Guests will be delighted by the humour and quick wit of MC James O'Loghlin. Entertainment will include the soulful sounds of one of Melbourne's best jazz quartets. After dinner, stunning trio The Sapphires will thrill the audience with a sensational show featuring music from the original sisters of swing and soul, to the modern divas of disco and pop.

Coaches depart for the gala dinner from 1800 hours from the Melbourne Convention Centre porte cochere (the entrance near the DFO and Hilton Hotel).

Date: Thursday 13 October 2016

Time: 1830 – 2400 hours

Location: Peninsula at Atlantic
161 Harbour Esplanade, Docklands

Tickets: AUD198 per person (inc. GST)

Dress code: Business

ITS NATIONAL AWARDS PRESENTATION NIGHT DINNER

The National ITS Awards program is a major ITS Australia initiative to recognise professional ITS expertise and to raise awareness across all levels of government and community about the benefits of ITS technologies to our everyday lives. Join the World Congress Board of Directors, ITS Australia and over 250 industry professionals to celebrate achievements. Evening includes optional behind-the-scenes guided tour of special MCG highlights.

Coaches depart for the ITS Australia National Awards dinner from 1800 hours from the Melbourne Convention Centre porte cochere (the entrance near the DFO and Hilton Hotel).

ITS Australia
National Awards
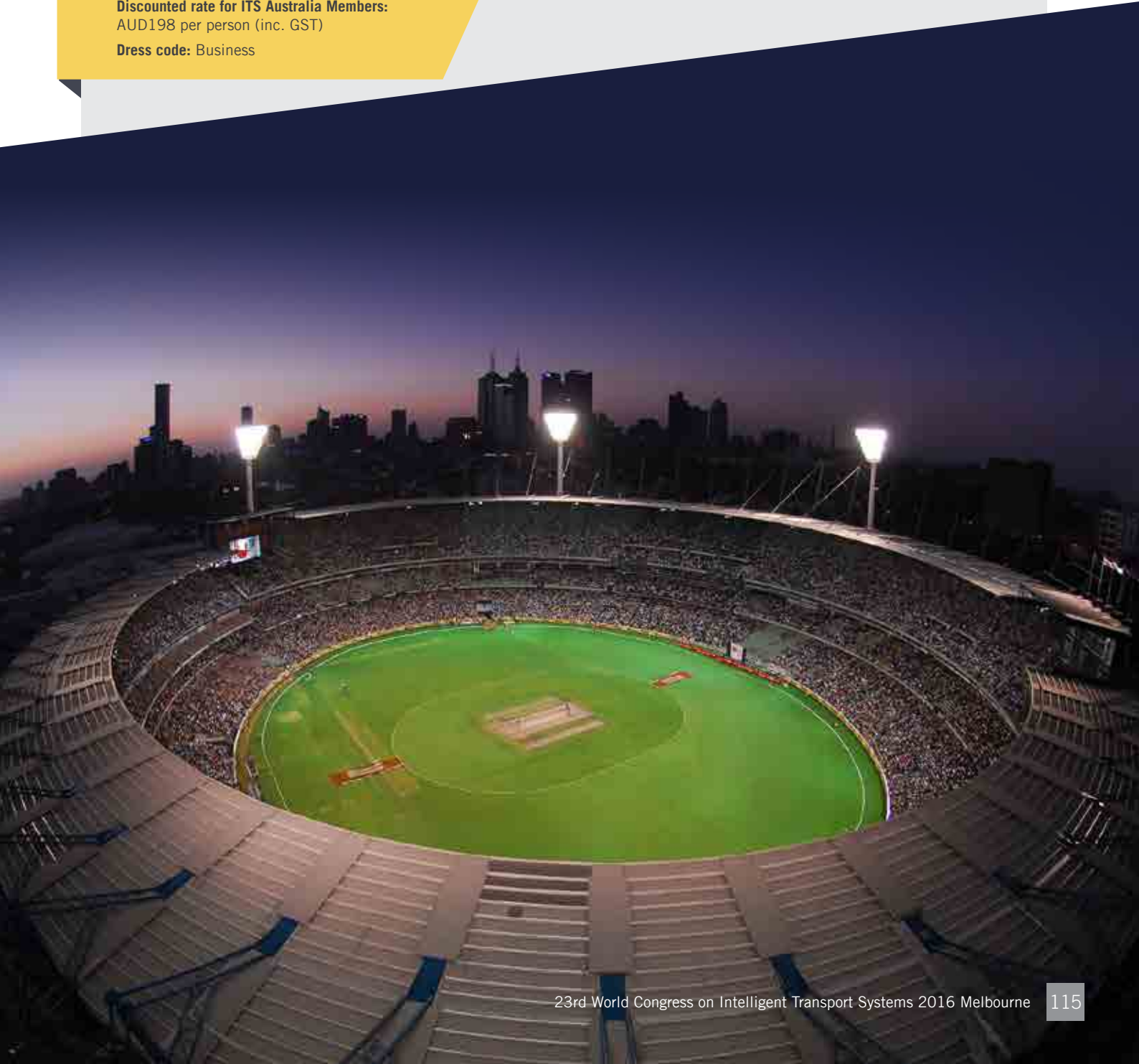**2016**

Date: Friday 14 October 2016

Time: 1830 – 2330 hours

Location: Melbourne Cricket Ground (MCG)
Brunton Ave, Richmond
(Enter via Gate 6A)

Tickets: AUD242 per person (inc. GST)

Discounted rate for ITS Australia Members:
AUD198 per person (inc. GST)

Dress code: Business

AWARDS

WORLD CONGRESS HALL OF FAME AWARDS

The World Congress Hall of Fame Awards recognise the highest standards in achievement across Asia Pacific, the Americas and Europe in intelligent transport systems across Industry, Government and personal Lifetime Achievement. Recipients are selected annually from each region based on their leadership and performance.

The Lifetime Achievement Awards will be presented during the Opening Ceremony.

The Industry Awards will be presented during Plenary 1.

The Local Government Awards will be presented during Plenary 2.

LIFETIME ACHIEVEMENT AWARD

ASIA PACIFIC
2016 Dr Hiroyuki Watanabe, Former Chairman ITS Japan, Japan

With strong background in automobile research and development, Dr Watanabe exercised leadership in product design projects with innovative technologies at Toyota Motor Corporation for more than 40 years, such as electronic stability control, hybrid powertrain and fuel cell batteries. Since early days of Intelligent Transport Systems, he had played crucial roles as a thought-leader at the frontier of technological and social innovations with both precisely structured logic and ambition. Dr Watanabe presented the concept of integrated approach of policy, infrastructure, advanced vehicles, participation of general public and ITS technologies as enabler. He led a number of projects for automated vehicles, low carbon transportation and big data analyses. Dr Watanabe also reached out to global ITS community to share ideas and experiences to create inclusive society, together.

- 2015 Martin Matthews, Ministry of Transport, New Zealand
- 2014 Taro Ishi, Waseda University, Japan
- 2013 Chi-Kuo Mao, Executive Yuan, Chinese-Taipei
- 2012 Xiaojing Wang, National ITS Center, China
- 2011 Keung-Whan Young, Korea Institute of Transportation Systems, Korea
- 2010 Shoichiro Toyoda, Toyota Motor Corporation, Japan

AMERICAS
2016 Mr Kirk Steudle, Director, Michigan Department of Transportation, United States

Under the leadership of Kirk T. Steudle, the State of Michigan has deployed one of the largest Connected Vehicle programs in the United States, allowing researchers and consumers to learn and improve the technology. Steudle, director of the Michigan Department of Transportation (MDOT) since 2006, oversees the state's vast multi-modal network, some 2,500 employees and a more than $4 billion annual budget. Steudle, a national leader in the development of Connected Vehicle Technologies, was the 2014-2015 Chair for the Intelligent Transportation Society of America (ITS America) Board of Directors. Director Steudle showcased Connected Vehicle programs and Michigan's pioneering work by hosting one of the largest and most successful World Congress meetings in 2014, in Detroit. Mr. Steudle has served on the ITS America Board and numerous committees. Few people in the industry have done more toward advancing Intelligent Transportation Systems for the purpose of saving lives and reducing congestions.

- 2015 Mortimer Downey, Deputy Secretary, US Department of Transportation, United States
- 2014 Lyle Saxton, Federal Highway Administration, United States
- 2013 Harry Voccola, NAVTEQ, United States
- 2012 Gerry Conover, PRC Associates, United States
- 2011 William M Spreitzer, General Motors, United States
- 2010 T Russell Shields, Ygomi LLC, United States

EUROPE
2016 Professor Eric Sampson, Newcastle University and ERTICO – ITS Europe

Eric Sampson has consistently demonstrated qualities and achievements to the highest standard. He contributes in five areas: for the UK Government; as Professor at four universities; as the guardian of the context for Europe and World ITS Congresses; as a trusted advisor to 5 countries' Ministers, EC Officials, and the European Parliament; and counselling and guidance for a worldwide network of contacts especially many junior players and students. Eric has made major contributions to the ITS World Congresses and is one of the few who have participated in every one. He continues his ITS mission as an advocate of the ERTICO mission, and the work it is doing.

- 2015 Richard Harris, Xerox, United Kingdom
- 2014 Heinz Sodeikat, AHS Management Consulting, Germany
- 2013 Risto Kulmala, Finnish Transport Agency, Finland
- 2012 Job J Klijnhout, Rijkswaterstaat, The Netherlands
- 2011 Monica Sudström, Swedish Transport Administration, Sweden
- 2010 Fotis Karamitsos, European Commission

INDUSTRY AWARD

ASIA PACIFIC
2016 Taiwan High Speed Rail Corporation (THSRC), Chinese-Taipei

Taiwan High Speed Rail Corporation is the licensed entity with exclusive concession to own and run HSR Taiwan, which has been regarded as the largest BOT project of public transportation infrastructure over the world until now. THSRC has successfully self-developed innovative and created 'the Smart Railway Services system' (THSRC ITS SRS System), with its smart applications into high speed railway operations management, emergency management and passenger services. This Taiwan-style ITS SRS System has generated continual improvement in smart railway services operational efficiency and management, whilst improving passenger services particularly in ticketing systems, and providing innovative 'real time' operational information.

- 2015 Far Eastern Electronic Toll Collection Co Ltd, Chinese-Taipei
- 2014 Korea Expressway Corporation, Korea
- 2013 Transport Certification Australia, Australia

AMERICAS
2016 General Motors, United States

General Motors (GM) is being awarded for its revolutionary commitment to Connected Vehicle Technology Deployment across the United States. In September 2014, Chief Executive Mary Barra announced at the Detroit ITS World Congress the company's commitment to Connected Vehicle (CV) technology, taking many in attendance by firestorm, and igniting the industry to push technology forward at a rapid pace. GM committed to producing vehicles off the assembly line in the 2017

model year equipped with DSRC technology, and that is on track to come true with the Cadillac CTS. GM continues their commitment to Connected Vehicles with active participation in Vehicle Research and Testing, Standards Committee (SAE J2735), active legislation (Michigan Senate Bills 169,663) and active participation with automobile consortiums. The internal expertise in CV technology makes GM a global leader in manufacturing vehicles to meet the needs of 21st century mobility.

- 2015 Qualcomm Technologies Inc and Honda R&D Americas, United States
- 2014 Streetline Inc, United States
- 2013 Econolite, United States

EUROPE
2016 ASFA – Toll Motorways of France, France

ASFA, professional association of motorway concessionaries and operating companies, gathers 23 members operating 9,053 km of toll motorway network. The association is one of the founding members of ERTICO – ITS Europe. ASFA members played a major role for the success of the first ITS World Congress held in Paris in 1994 and contributed also to the success of ITS Bordeaux 2015. They implement advanced technology for the deployment of a European Electronic Toll Service, harmonized ITS services, enhancement of cooperative and connected infrastructures in Europe making the motorway the safest roads. Companies are designing the motorway of the future ready to welcome the autonomous vehicle, and to provide mobility as a service in partnerships with all stakeholders.

- 2015 HERE
- 2014 Swarco, Austria
- 2013 Civitronic, Romania

LOCAL GOVERNMENT AWARD

ASIA PACIFIC
2016 Queensland Department of Transport and Main Roads, Australia

The Queensland Department of Transport and Main Roads vision is to create a single integrated transport network accessible to everyone. In a Queensland first, the Department has deployed a Real-Time Travel Information system (Real-Time) that provides accurate service information for public transport stops and stations across the TransLink South East Queensland network. The system uses on-vehicle 3G/GPS technology to track vehicles and combines timetable data with prediction logic to determine service departure times. This multi-modal service (bus, train and ferry) covers numerous local government jurisdictions and over 18 operators. Combined with the release of the MyTransLink mobile application, the Real-Time system has improved passenger information, allowing customers to make travel choices based on actual, not scheduled, travel times.

- 2015 Queensland Department of Transport and Main Roads, Australia
- 2014 Ministry of Transport, New Zealand
- 2013 Seoul Metropolitan Government - TOPIS, Korea

AMERICAS
2016 Michigan Department of Transportation, United States

Michigan Department of Transportation (MDOT) is being awarded for its mobility efforts, working in partnership with automobile manufacturers and suppliers, universities and local agencies. MDOT has set a vision for a connected vehicle environment encompassing a large segment of southeast Michigan, centered along the freeway and surrounding arterial network in the metropolitan Detroit area. This corridor goes through the heart of Michigan's automotive and technology development area, and links to several other connected

vehicle Pilot deployments, including the USDOT's test bed in Oakland County, a deployment in the City of Detroit, and the Safety Pilot Model Deployment / Ann Arbor Connected Vehicle Test Environment. Over many years of sustained investment, MDOT's long term connected vehicle vision encompasses communities outside of the metropolitan Detroit area, resulting in "connected regions" and a "connected state".

- 2015 British Columbia Ministry of Transportation and Infrastructure, Canada
- 2014 Mississippi Department of Transportation, United States
- 2013 Oregon Department of Transportation, United States

EUROPE
2016 City of Olsztyn, Poland

Olsztyn (175,000 inhabitants) and capital of Warmia and Mazury Region in North Poland implemented a full ITS solution for its citizens. A traffic management centre opened, including 2 video walls and 10 station operators connected to several cameras at intersections. ITS solutions include information boards, 35 stationary ticket machines, 150 mobile machines and the city card. Olsztyn benefits from an ITS system that can be envied by numerous European cities. Knowing the difficulties for medium sized cities to implement holistic ITS solutions, the Polish city of Olsztyn can be regarded as a real ITS Hero.
Website: **www.its.olsztyn.pl**

- 2015 AustriaTech, Austria
- 2014 Transport for London, United Kingdom
- 2013 Grand Lyon, France

ITS AUSTRALIA NATIONAL AWARDS 2016

This year the Awards Presentation Night will be held on the last day of the congress and in conjunction with the World Congress Board of Directors Closing Dinner. Not only will it be a night to celebrate excellence in the Australian ITS industry, but also a night to celebrate the accomplishments of the 2016 ITS World Congress in Melbourne. A double celebration!

The National ITS Awards program is a major ITS Australia initiative.

Winners will be announced at the Awards Presentation Night Dinner, Friday 14 October 2016, to be held at the Melbourne Cricket Ground (MCG) – see staff at the Registration Desk to purchase tickets.

2016 AWARD FOR BEST ACTION FOR SUPPORTING DIVERSITY IN THE ITS WORKFORCE

Award Presentation: Thursday 13 October, 12.30pm at the ITS Australia Networking Lounge

An Award is provided to recognise the best action taken to promote the creation of an ITS workforce which reflects the clients and users of the ITS being supplied and managed. Depending on your location and your organisation, this will involve addressing various ratios including genders, ethnicities, ages, religious and sexual orientations. The Award is open to any organisation or individual anywhere in the world and is coordinated by ITS United Kingdom.

INTERNATIONAL BENEFITS, EVALUATION AND COSTS (IBEC) SESSIONS

INTERNATIONAL BENEFITS EVALUATION COMMUNITY (IBEC) WORKSHOP ON CONNECTED AND AUTOMATED MOBILITY

MONDAY 10 OCTOBER 2016, 1245 – 1545 HOURS	MEETING ROOM 205
MONDAY 10 OCTOBER 2016, 1515 – 1545 HOURS (for the Annual General Meeting)	MEETING ROOM 205

In addition to organising four sessions during the congress, IBEC is pleased to announce an IBEC special event in Melbourne on Monday 10 October. The event will include:

- Keynote Address
- Launch of the book Evaluation of Intelligent Road Transport Systems: Methods and Results, edited and authored by a number of IBEC members.
- Workshop by some of the book's authors, looking at the evaluation of connected and automated vehicle initiatives.

Enquiries to IBEC Co-Chair Andrew Somers andrew.somers@transoptim.com.au

Attendance / Tickets:

Open to ITS professionals, pre-registration required

AUD20 per person (incl GST)

Tickets purchased from the ITS Australia: www.its-australia.com.au

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IBEC SESSION 1: DEVELOPMENTS IN BENEFITS, EVALUATION AND COSTS OF ROAD CHARGING

TUESDAY 11 OCTOBER 2016, 1400 – 1530 HOURS	MEETING ROOM 204

Around the world, states, provinces and countries are examining and evaluating potential policy initiatives to change the way they pay for their transportation infrastructure to mitigate the decline in fuel tax revenues. Road charging is a funding mechanism where drivers pay to maintain roads based on the miles they drive, rather than the amount of fuel their vehicles consume. It sends the right price signals to drivers and directly helps them to first think about their trip and its cost impacts on themselves and others. Road charging recognizes that a city, a state, or indeed a country's road network, is more than a series of individual roads. It is a complex network, where congestion problems (and mobility solutions) are always interlinked. Several recent and planned pilot projects provide participants a variety of manual and technological choices for reporting the miles they travel, as well as a choice for submitting real or simulated payments. This session will comprise speakers who are addressing declining revenues from fuel taxes – a major issue states/provinces/countries are wrestling with – by promoting road charging as a utility-based approach to paying for road usage.

Organiser

Steve Morello, D'Artagnan, United States

Moderator

Steve Morello, D'Artagnan, United States

Speakers

Andrew Hyles, DIIRD, Australia

Steven Newman, EROAD, New Zealand

Malcolm Dougherty, Caltrans, United States

IBEC SESSION 2: POTENTIAL BENEFITS OF MOBILITY AS A SERVICE AND WHAT IS ALREADY PROVEN?

TUESDAY 11 OCTOBER 2016, 1600 – 1730 HOURS	MEETING ROOM 204

In the last couple of years several initiatives on "Mobility as a Service" (MaaS) have been undertaken around the globe. Within the MaaS concept transport services from public and private providers are promoted together as mobility packages for travellers. In this concept no one single mode (e.g. car usage) is the driver for mobility; rather mobility is the driver for single modes (e.g. having a mobility security to come from A to B). This concept would be based on a systematic change through a changed travel behaviour of people – from ownership of a vehicle towards ownership of mobility services. The first results from MaaS demonstrations and pilots are now available and will be discussed in this IBEC session. Questions will be posed such as: Are travellers willing to rely on mobility services instead of car ownership? What does a benefit-cost ratio look like for the single stakeholders – including travellers? Will sharing services promoted via MaaS led to a reduced need for public transport as well as for individual car ownership? Are there different expectations from travellers across the globe?

Organiser

Martin Bohm, AustriaTech - Gesellschaft des Bundes für technologiepolitische Maßnahmen, Austria

Moderator

Anita Curnow, VicRoads, Australia

Speakers

Martin Bohm, AustriaTech - Gesellschaft des Bundes für technologiepolitische Maßnahmen, Austria

Sampo Hietanen, MaaS Finland, Finland

Alexa Delbosc, Monash University, Australia

Jana Sochor, Chalmers University of Technology, Sweden

Richard Harris, Xerox, United Kingdom

IBEC SESSION 3: EVALUATION OF CONNECTED AND INCREASINGLY AUTOMATED VEHICLES

Evaluating the impact of connected vehicles (cooperative ITS) presents unique challenges beyond the already complex world of ITS evaluation. Factors include additional stakeholders, multiple communication technologies and the possibility of implementing services in many different ways. As connected vehicles become increasingly automated the situation changes in ways that may be difficult to predict. Currently, there is a dearth of experimental data but "ex-ante" assessments to help determine investment priorities have been based on relevant data from elsewhere, hypotheses about impacts, and estimates from "expert judgement". Such systems promise to: (i) improve traffic safety by reducing driver workload and minimizing human errors due to driver distraction or reduced vigilance; (ii) increase mobility through reduction of congestion (iii) reduce vehicle emissions and fuel consumption; and (iv) provide individual, organizational and commercial productivity improvements. But, to what extent are these benefits likely to be realized? How will drivers actually behave and react? What new metrics and performance measures do we need to consider in deployment? Limited trials and pilots are now underway but we know that data will often be confounded. The session will explore, through examples and case studies, the challenge of evaluating the potential benefits of connected vehicles.

Organiser

Alan Stevens, TRL, United Kingdom

Moderator

Andrew Somers, Australia

Speakers

Alan Stevens, TRL, United Kingdom

Miranda Blogg, Department of Transport and Main Roads, Australia

James Sayer, University of Michigan Transportation Research Institute, United States

Satu Innamaa, VTT, Finland

IBEC SESSION 4: EFFECTS OF AUTOMATED DRIVING TO REDUCE ACCIDENTS AND FATALITIES - THE COST/BENEFIT PERSPECTIVE

Worldwide, the economic cost of road accidents and fatalities burdens the national budget (public economy cost) by billions of USD every year. In 2010 UN and IRF introduced a Decade of Action initiative with the ambition to half the number by 2025. One aspect with the potential to dramatically reduce fatalities, accidents and increase efficiency is implementation of automated driving (SAE Level 5).

Highly or fully automated cars and trucks require a new approach for evaluating benefits and costs, particularly for SAE Level 5 vehicles (full autonomous in all conditions without any driver). Level 5 vehicles promise to:

(i)   improve traffic safety

(ii) increase mobility through reduction of congestion

(iii) reduce vehicle emissions and fuel consumption and

(iv) provide individual, organizational and commercial productivity improvements.

But to what extent are these benefits likely to be realized and when?

Organiser

Reinhard Pfliegl, Reinhard Pfliegl, A3PS, Austria

Moderator

Reinhard Pfliegl, Reinhard Pfliegl, A3PS, Austria

Speakers

Alan Stevens, United Kingdom

Glenn Geers, ARRB Group, Australia

Marcia Pincus, US DOT, United States

APEC SESSION

SPECIAL SESSION OF ITS-WC 2016 MELBOURNE: CROSS-LINKING APEC INTERNET OF VEHICLES SYMPOSIUM AND MMC 2016 EXHIBITION

Internet of Vehicles (IOV) are advanced applications including sensing, networking, computing and controlling which, without embodying intelligence as such, aim to provide innovative services relating to different modes of vehicles, road infrastructure, transport and traffic management and enable various users to be better connected virtually (V2V, V2R, V2S and V2X) and informed and make safer, more coordinated, and 'smarter' use of transport networks to improve traffic efficiency, reduce road accident. It is defined that IOV is an integrated synergistic system in which information and communication technologies are applied in the field of road transport, holding vast knowledge of road and traffic data to assist in providing routing direction to minimizing the impact of road congestion and maximizing driving safety - all in real time, as well as for interfaces with other modes of transport.

Under the APEC framework, our project focuses on information technology, its broad applications on transport, road and vehicles and will accelerate the digital economy in the Asia-Pacific region as a subsidiary result. It was hoped to cooperate with APEC economies to promote the development of a complete IOV system, as well as a possible harmonized standards/regulations system in the future. This will dramatically promote the application of Intelligent Transport Systems (ITS) for vehicles, roads and infrastructure. The project develops solutions to road safety and transportation efficiency and a framework of measures for applying IOV in APEC economies; and to show the latest commercial and scientific achievements in ITS, ICT applications on vehicles and IOVs in a close collaboration with ITF-OECD, ITS-WC and IEEE. In addition, a number of APEC and non-APEC speakers will join this special session and share their achievement on IOV and ITS, including research agencies and governmental authorities such as: ITS-WC, ITF-OECD, IEEE, ISMG, CVTA, PASC, ISO System, WIPO, etc.

ASSOCIATED MEETINGS

The congress has developed a tradition of providing open informal sessions and workshops at which new or contentious issues can be discussed by anyone with an interest in that topic. These sessions and workshops are arranged by associated organisations, groups and high level partners to the 2016 World Congress.

Delegates with a Full-Time or Day Registration type are invited to attend these open meetings, unless specified otherwise.

ISO/TC 204 INTELLIGENT TRANSPORT SYSTEMS FORUM SECRETARIAT: UNITED STATES (ANSI) INTELLIGENT TRANSPORTATION SOCIETY OF AMERICA

SUNDAY 2 OCTOBER – FRIDAY 7 OCTOBER 2016   **AOTEA CENTRE, AUCKLAND**

The TC204 Forum will take place in Auckland, hosted by ITS New Zealand for the first time, and brings international experts of the technical committee together with the objective to progress recognised international standards for Intelligent Transport Systems.

The scope of ISO/TC204 is standardization of information, communication and control systems in the field of urban and rural surface transportation, including intermodal and multimodal aspects thereof, traveller information, traffic management, public transport, commercial transport, emergency services and commercial services in the intelligent transport systems (ITS) field. [Excluded: in-vehicle transport information and control systems (ISO / TC 22)].

ISO / TC 204 is responsible for the overall system aspects and infrastructure aspects of intelligent transport systems (ITS), as well as the coordination of the overall ISO work programme in this field including the schedule for standards development, taking into account the work of existing international standardization bodies.

Attendance:
Not included with ITS 2016 World Congress registration.

Attendance enquiries to:
cormac.mcbride@itsnz.org

www.itsnz.org/events

ITS NEW ZEALAND SUMMIT 2016

WEDNESDAY 5 OCTOBER 2016   **AOTEA CENTRE, AUCKLAND**

Organisation: ITS New Zealand

Attend this year's summit, an opportunity to gain perspective on ITS and sustainability of transport infrastructure. The ITS NZ Summit features presentations and panel discussions from NZ speakers and key members of the ISO TC204 working group.
The event will attract over 150 ITS leaders and transport technology proponents from Asia Pacific and around the world. The annual one-day summit will feature respected international and local speakers.

To be held at the Aotea Centre in Auckland, the summit will feature updates and results from local and international projects, research findings and benchmarks for Intelligent Transport Systems, transport standards and safety.

Attendance and Registration:
Not included with ITS 2016 World Congress registration.
Click here to book for the Summit:
https://eventdynamics.eventsair.com/its-nz-2016/its-nz-summit/Site/Register

Attendance enquiries to:
cormac.mcbride@itsnz.org

www.itsnz.org/its-new-zealand-summit

FEDERATION OF EUROPEAN HIGHWAYS AND RESEARCH LABORATORIES (FEHRL) GENERAL ASSEMBLY

SUNDAY 9 OCTOBER 2016, 0900 – 1700 HOURS   **CLARENDON ROOM A**

Organisation: FEHRL

This is a coming together of representatives throughout Europe for a general meeting, it is usually held in Europe on conjunction with various conferences. Refreshments and lunch provided.

ITS SAFETY AND SUSTAINABILITY FOCUS GROUP

MONDAY 10 OCTOBER 2016, 0730 –1030 HOURS   **MEETING ROOM 105**

Organisation: ITS New Zealand and ITS Australia

The Sustainability and Safety in ITS Focus Group is an initiative by ITS New Zealand and ITS Australia, started in China during the 2015 ITS Asia Pacific Forum, to establish a new group to collaborate, and share information on sustainability and safety practices and experiences in ITS. The initiative had good support from many members and the following are founding ITS-related regions and organizations:

Inaugural Sustainability and Safety in ITS Focus Group:

1. ITS New Zealand
2. ITS Australia
3. China ITS Industry Alliance
4. ITS Finland
5. ITS Germany
6. ITS Korea/KOTI
7. ITS Norway
8. ITS Singapore
9. South African Bureau of Standards
10. ITS Sweden
11. ITS Taiwan
12. ITS United Kingdom

Goals of the Sustainability and Safety in ITS Focus Group:

* Share information on areas / sectors / use cases where sustainability and safety practices have been used to improve safety and mobility.
* Promote the implementation of sustainable and safety practices to reduce casualties, improve mobility, efficiency and impacts on the environment.
* Share information and experiences in relation to better disaster management and recovery by the use of ITS.
* Share successes with participating nations.
* Reach out to and support new/potential members of the Group.

Invited presenters from across the globe will be present in Melbourne for the World Congress. Please join us by registering and we look forward to seeing you in October 2016. Breakfast provided.

AASHTO INTERNATIONAL DAY

MONDAY 10 OCTOBER 2016, 0800 – 1200 HOURS　　　　　　　**MEETING ROOM 109**

Organisation: American Association of Highway Transportation Officials (AASHTO)

For more than a decade, beginning in Nagoya, Japan in 2004, AASHTO Day has taken place at the outset of the ITS World Congresses, attracting a wide array of outstanding speakers and participants to discuss the challenges and opportunities facing public agencies as they deploy technologies to transform our transportation systems. This year also AASHTO with support from USDOT is planning to hold the AASHTO International Day in conjunction with the 2016 ITSWC and seeking participation from around the world who might benefit from the presentations and subsequent conversations on Transportation Infrastructure readiness and integration of currently in place ITS with upcoming and emerging technologies including Connected Vehicle and Autonomous Vehicle and their associated impacts on Transportation Infrastructure operations. The topics to be covered are expected to pan over key policy, procedures and regulations needs and requirements to achieve this seamless infrastructure integration with technologies to offer a reliable transportation system. This is the 13th AASHTO Annual International Day Event.

FOT-NET DATA INTERNATIONAL WORKSHOP: DATA SHARING AND RE-USE IN FIELD OPERATIONAL TESTS

MONDAY 10 OCTOBER 2016, 0900 – 1530 HOURS　　　　　　　**MEETING ROOM 103**

This workshop is organised in collaboration with the US Department of Transportation (DOT).

FOT-Net is a networking platform open to stakeholders interested in Field Operational Tests (FOTs). It was established in 2008 as a European Commission's support action. FOT-Net meets periodically to tackle common working issues and foster cross-region cooperation. The three regions (Europe, Asia-Pacific and North America) cooperate on common FOT issues, such as data handling and sharing, methodology and deployment. The FOT-Net Data project operates the network activities during 2014–2016. Besides the networking, the main goal of the project is to make data collected in FOTs more widely available to researchers, public authorities and industry. FOT-Net Data therefor develops and promotes a framework for sharing data, including several guidelines, and creates a catalogue of available datasets and tools. It takes into account the pre-requisites necessary in the FOTs, such as legal agreements, to enable future re-use of data.

This workshop will focus practices and initiatives in data sharing and re-use for Field Operation Tests taking. The following points will be discussed:
* Successful stories and lessons learnt from data sharing and re-use (mainly from EU and US)
* FOT-NET Data achievements in supporting data sharing (2014-2016)
* Future challenges and exploitation of the current available platform (Data catalogue – EU; RDE - USA)
    * How to support international collaboration?
    * How the next EC funded H2020 projects (e.g. for automated vehicles) in Europe will tackle the issues of data sharing and reuse?

COMMITTEE FOR MELBOURNE

MONDAY 10 OCTOBER 2016, 1100 –1230 HOURS　　　　　　　**MEETING ROOM 105**

Organisation: Committee for Melbourne

SPATIAL WORKSHOP – LOCATION TECHNOLOGIES FOR ITS

TUESDAY 11 OCTOBER 2016, 1100 –1230 HOURS　　　　　　　**MEETING ROOM 109**

Organisation: Spatial Industries Business Association (SIBA)

SIBA members will run a workshop on Location Technologies and how they are an essential part of Intelligent Transport Systems.

USER-CENTRIC TRANSPORT USING ITS

TUESDAY 11 OCTOBER 2016, 1400 –1530 HOURS   MEETING ROOM 109

Organisation: Forum of European National Highway Research Laboratories (FENHRL)

ITS/ICT have the highest impact on flow of user information. User information originates from the information provider and needs to be delivered to the end user via ITS/ICT infrastructure. It is critical to properly design the communication infrastructure but more importantly to identify critical nodes and interchanges so user information gets delivered in real time. The meeting will discuss the concept of truly user-centric transport (using ITS) that offers integrated door-to-door journeys and seamless flow of information across all modes.

ITS DEVELOPMENT AND DEPLOYMENT IN DEVELOPING COUNTRIES IN THE ASIAN REGION

TUESDAY 11 OCTOBER 2016, 1600 –1730 HOURS   MEETING ROOM 109

Organisation: The Korea Transport Institute (KOTI)

This specific focus session will be a unique opportunity for ITS leaders from the Asian region to gather and explore both the significant opportunities available from the deployment of ITS in developing countries as well some of the complexities and challenges. In some instances developing nations can leap frog to the latest technologies but in other instances limits to existing physical infrastructure can be a serious impediment. Make sure you join these key leaders to better appreciate the opportunities that lie ahead in Asia and strategies to overcome the challenges.

Moderator

Young-Jun Moon, Chief Director, National Transport Technology R&D Center, The Korea Transport Institute (KOTI)

Speakers

Mr Tyrrell Duncan, Technical Advisor (Transport), Asian Development Bank

Dr Li Bin, Deputy Director of China National ITS Research Center, Ministry of Transport, P.R.China

Mr Graham Ackers, Manager, Intelligent Transport Systems, GHD Pty Ltd

PORT OF THE FUTURE

WEDNESDAY 12 OCTOBER 2016, 0700 –1000 HOURS   MEETING ROOM 109

Organisation: ERTICO-ITS Europe

Welcome address, Hermann Meyer, ERTICO-ITS Europe
Session 1: Challenges that Ports are facing around the world
- Introduction to the Port of the Future Initiative, Lina Konstantinopoulou, ERTICO-ITS Europe
- Port of Hamburg, Germany, Sascha Westermann,
- Port of Fremantle, Australia, Michael Pal
- Port of Singapore, Singapore, Nelson Quek
- Port of Montreal, Canada, Daniel Dagenais

Session 2: Port of the Future technology trends
- Automation in containers, Luke Duffy, Container Chain
- Connected to the Digital Infrastructure in Ports, Ralf Willenbrock, T-systems
- Connecting roads to Ports – an example in the Netherlands, Serge Van Dam, RWS
- The role of Automated driving in Ports, Angelos Amditis, ICCS

Working towards a combined vision of the ''Port of the future Initiative''
Technical Tour to the Port of Melbourne

NATIONAL CO-ORDINATION IN AUSTRALIA FOR THE DEPLOYMENT AND MANAGEMENT OF AUTOMATED VEHICLES

WEDNESDAY 12 OCTOBER 2016, 1100 –1230 HOURS   MEETING ROOM 109

Organisation: Roads Australia

Public and private sector organisations across Australia are working to integrate automated vehicles into the nation's transport network to improve mobility choices for all Australians. Regulatory reviews are underway, legislative requirements and options are being assessed, changes in design rules and technical standards are being discussed and a diversity of vehicle trials are being implemented in many different environments. The impact on existing road infrastructure is a priority. This session discusses national co-ordination for the deployment and management of automated vehicles in an Australian context.

THE TRULY INTEGRATED TRANSPORT SYSTEM FOR LOGISTICS

THURSDAY 13 OCTOBER 2016, 1400 –1530 HOURS   MEETING ROOM 109

Organisation: Forum of European National Highway Research Laboratories (FENHRL)

A truly integrated transport system for freight is the one that can operate synchromodally in end to end logistics. Synchromodal means: the optimally flexible and sustainable deployment of different modes of transport in a network so that the customer is offered an integrated and sustainable solution for his (inland) transport. Coordination of logistics chains, transport chains and infrastructure, is made in such a way that, given aggregated transport demand, the right mode is used at every point in time.

AUSTRALASIAN
ROAD SAFETY
CONFERENCE

Crown Perth
10th–12th October 2017
www.australasianroadsafetyconference.com.au

If you haven't seen Australia's spectacular West, this is the ARSC conference for you! The Australasian College of Road Safety (ACRS), Austroads, ARRB Group and Curtin Monash Accident Research Centre (C-MARC) invite you to attend the **largest road safety-dedicated conference in the Southern Hemisphere**. The 2017 Australasian Road Safety Conference (ARSC2017) will be held in Perth at the beautiful Crown complex from Tuesday to Thursday 10-12 October 2017.

With a theme of **"Expanding our horizons"**, ARSC2017 will showcase the regions' outstanding researchers, practitioners, policy-makers and industry spanning the plethora of road safety issues identified in the United Nations Decade of Action for Road Safety: Road Safety Management, Infrastructure, Safe Vehicles, User Behaviour, and Post-Crash Care. ARSC2017 will bring with it a special focus on **engaging all levels of government and community, from the city to the bush, to move Towards Zero**. The comprehensive 3-day scientific program will showcase the latest research; education and policing programs; policies and management strategies; and technological developments in the field, together with national and international keynote speakers, oral and poster presentations, workshops and interactive symposia.

WHO SHOULD ATTEND?

ARSC2017 is **expected to attract over 500 delegates** including researchers, policing and enforcement agencies, practitioners, policymakers, industry representatives, educators, 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, and vehicle safety.

DESTINATION PERTH

Perth is a beautiful contemporary city, set amidst the natural wonder of the picturesque Swan River and the world's largest inner city park, Kings Park. It is also the gateway to the West's iconic Margaret River wineries, white sand beaches, Rottnest Island with its unique quokka population, and bohemian ocean-side Fremantle. Now's the time to plan that long-considered WA holiday!

FOR MORE INFORMATION

For more information on ARSC2017, past conferences, to submit your abstract, or to receive regular conference updates visit **www. australasianroadsafetyconference.com.au** or contact the Conference Secretariat on (08) 9389 1488 or **ARSC2017@eecw.com.au**

ARSC2017 also offers unique branding opportunities for organisations in road safety and injury prevention. See the website for further details.

Online abstract submissions open 14 November 2016

STAKEHOLDER WORKSHOPS

THE FUTURE OF TRANSPORT - WILL WE USE CARROT, STICK OR MACHINE TO ENSURE GOOD BEHAVIOUR?

Ministry of Transport
TE MANATŪ WAKA

TUESDAY 11 OCTOBER 2016, 1100 – 1230 HOURS | **MEETING ROOM 204**

Policy, Standards and Harmonisation

How we regulate all modes of transport has enormous impacts. Regulations need to be forward-looking and responsive. But in times of flux, such as when technologies are rapidly changing and disrupting established customs, it is impossible to plan for a predictable future. Instead we need to plan for different foreseeable, or possible futures. This session will draw on findings from the Ministry's recent project 'Transport Regulation 2025' in which four plausible scenarios have been developed. The scenarios investigated the influence of two major drivers: technologies and social attitudes. There are a wide range of project findings for example; regulatory challenges and opportunities, implications for international reputation, regulatory style, enforcement, road safety and new regulatory objectives. Future 'legislation' has been developed for each scenario. The workshop will be an interactive session, where we will discuss how the scenarios could play out in different jurisdictions, the implications for future regulatory decision-making and possible tools and practices emerging from the findings.

Moderator

Megan Beecroft, Ministry of Transport - Te Manatu Waka, New Zealand

UNLOCKING THE INSIGHTS IN YOUR BIG DATA WITH LOCATION-BASED ANALYTICS

esri Australia

TUESDAY 11 OCTOBER 2016, 1100 – 1230 HOURS | **MEETING ROOM 105**

Challenges and Opportunities of Big Open Data

Big Data and open data systems house the potential to help us more effectively manage our urban transportation systems, however, transportation professionals can be overwhelmed by the sheer volume and complexity of real-time technology and other data systems.

Advanced location-based analytics – when applied to Big Data – can deliver context and reveal insights in transportation patterns, allowing professionals to better plan and manage our transportation systems. This session will discuss how transportation agencies can leverage the power of location intelligence to increase mobility and create more liveable and sustainable smart cities of the future.

Moderator

Evan Quick, Esri Australia, Australia

Speaker

Terry Bills, Esri, United States

INNOVATION IN TRAFFIC AND TRANSPORTATION MANAGEMENT

Microsoft

TUESDAY 11 OCTOBER 2016, 1400 – 1530 HOURS | **MEETING ROOM 219**

Smart Cities and New Urban Mobility

Join Microsoft, MasterCard, Cubic along with the NSW Dept. of Transport to hear how cloud computing, big data and real-time analytics are transforming urban transport in dramatic ways by giving cities the power to:

- gather all transport system information in one place
- map transport data with economic activity to better serve citizens
- draw on external data and passenger experiences

As a result, progressive cities around the globe are using this new technology to create dynamic, efficient and rider-friendly public transport systems.

Two of the biggest questions transport leaders face are:

- How do we get more people out of private cars and on to public transport?
- How can we empower commuters to make better transport decisions and influence their choices through the use of intelligent analytics and data.

In this 90 minute presentation and interactive panel discussion you'll hear from the people behind the success stories and learn:

- how transport organisations from around the world are using traffic management systems, including analytics, predictive maintenance and on time arrival applications for rail, road and transport.
- how Microsoft, Cubic and MasterCard along with global transport organisations are succeeding with connected sensor, cloud and real-time analytics capabilities.

Speakers

Tony Braxton-Smith

Mark Day

Douglas Howe

Boris Karsch

Bill Mitchell

ARCHITECTING INTERNET OF THINGS FOR SMART CITIES

DELL EMC | (intel)

TUESDAY 11 OCTOBER 2016, 1400 – 1530 HOURS ▸ MEETING ROOM 105

Smart Cities and New Urban Mobility

Cities are engines of innovation, prosperity and economic growth. Over the next 15 years, 65% of the global population will be living in cities. Learn how cities can monitor and integrate conditions of its critical infrastructures and better optimize its resources, plan its preventive maintenance activities, and monitor security aspects while maximizing services to its citizens

Moderator

Arpita Somani

Speaker

Mauro Favero

TRANSPORT ANALYTICS FROM THE TRENCHES, UNCOVERING INSIGHT FROM ACROSS THE INDUSTRY

≡Transurban

TUESDAY 11 OCTOBER 2016, 1600 – 1730 HOURS ▸ MEETING ROOM 220

Challenges and Opportunities of Big Open Data

Analytics and automation will be foundation capabilities that support transportation networks in the coming years. Timely use of information will be critical for transport decisions ranging from investments in new infrastructure, the route you or your autonomous vehicle take or when to safely schedule a maintenance activity and how to notify a range of transport consumers. In this workshop we will seek to explore the differences between analytics capabilities developed by a range of Operators, Road Authorities, Transport Service Providers and Telecommunications companies, how these platforms are configured, the use cases they are striving to solve and how can we integrate these platforms to improve insights for a broader transport ecosystem, what obstacles still need to be overcome in order to accelerate innovation and the delivery of benefits into the future.

Discussion areas

- Anatomy of the respective cloud analytics platform (arch overview)
- Data sources and how these are configured for linear or network assets
- Perspectives of the use cases we individually and collectively are trying to solve
- Refining transport analytics for the local context
- What problems do we think we will be able to solve more effectively if we collaborate into the future?
- What are prerequisites and enablers to enable greater information exchange, security, consistency and reliability of data etc into the future?

Moderator

David Hanus, Transurban, Australia

Speakers

Wayne Harvey, VicRoads, Australia

Anthony Stewart, Singtel Optus Limited, Australia

Scott Benjamin, WSP | Parsons Brinckerhoff, Australia

Phil Allen, TomTom, New Zealand

Thor Essman, Versent, Australia

Mark Potter, VicRoads, Australia

REAL WORLD APPLICATION OF ITS STANDARDS

NSW GOVERNMENT | Transport Roads & Maritime Services

TUESDAY 11 OCTOBER 2016, 1600 – 1730 HOURS ▸ MEETING ROOM 105

Policy, Standards and Harmonisation

The development and adoption of standards is key to ensuring the deployment of consistent, quality, cost-effective, interoperable and safe ITS solutions.

In this session the real-world application of ITS Standards will be discussed by leading international and Australian ITS Experts, with a focus on the following topics:

- Cooperative ITS
- Mobility as a Service
- Big Data
- International Standards Harmonisation Efforts

Moderator

Andrew Mehaffey, Roads and Maritime Services, Australia

Speakers

Dick Schnacke, TransCore, United States

Achim Schade, TSE Consulting, Germany

Steven Shaw, Roads and Maritime Services NSW, Australia

Young-Jun Moon, The Korea Transport Institute, Korea

Tim Cooper, Skedgo, Australia

Neil Frost, iSAHA, South Africa

Glenn Geers, ARRB Group, Australia

Peter Girgis, Transport Certification Australia Limited, Australia

SMART TICKETING FOR SMART CITIES CONGRESS

WEDNESDAY 12 OCTOBER 2016, 1100 – 1230 HOURS　　　　**MEETING ROOM 105**

The benefits of mobile & open loop public transport fare collection models

Public transit fare collection in urban areas remains relatively fragmented with an array of cash, paper tickets and transit smart cards used across different towns and cities. For the world's increasingly connected citizens the public transport environment is full of friction – friction that mobile and digital technology has removed from other aspects of their daily lives. For cities promoting positive environments for employment, business, housing and tourism outdated public transport infrastructure is letting them down and costing them money. Increasingly, transit authorities and cities around the globe are looking towards mobile and digital technologies in order to make public transport services quicker and more efficient.

Mobile and contactless payments have transformed the retail environment, natural progression is for the technology to now tackle public transport fare collection. With cities like London, New York and Chicago reaping the benefits of smart ticketing systems and numerous other cities following suit the session will explore how digital technologies and contactless pay-per-ride and mobile pre-purchase fare collection models can benefit cities.

Moderator

Doug Howe

Speakers

Mark Streeting, LEK Consulting

Boris Karsch , Cubic Transportation Systems

Josh Nicklin, Masabi

Garry Duursma

CHALLENGES AND OPPORTUNITIES FACING THE DEPLOYMENT OF AUTOMATED VEHICLES

WEDNESDAY 12 OCTOBER 2016, 1400 – 1530 HOURS　　　　**MEETING ROOM 213**

Automated Vehicles and Cooperative ITS

We all know that the introduction of automated vehicles is just around the corner, but what are the key Challenges and Opportunities that need to be addressed. This workshop will investigate those challenges and opportunities issues in some detail.

Moderator

Dean Zabrieszach, HMI Technologies, Australia

Speakers

T Russell Shields, Ygomi LLC, United States

Martin Matthews, Martin Matthews Consulting, New Zealand

Peter Damen, Australian Driverless Vehicle Initiative, Australia

Peter Sweatman, CAVita, United States

Patrick Walker, Royal Automobile Club Western Australia, Australia

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HOW WILL ARTIFICIAL INTELLIGENCE AND COGNITIVE IMPACT URBAN MOBILITY

WEDNESDAY 12 OCTOBER 2016, 1400 – 1530 HOURS　　　　**MEETING ROOM 109**

By any measure, the past few years have been landmark years for the discussion around artificial intelligence and its potential impact on business and society. Be part of the conversation as we explore a fascinating and diverse set of issues related to the powerful cognitive technologies that are emerging to augment human capacity and understanding how these relate to our Transport ecosystem.

During this session you will learn about IBM Watson and how it's Cognitive capabilities are already changing Urban Mobility.

QUALITY OF TRAFFIC INFORMATION

TISA | Intelematics

WEDNESDAY 12 OCTOBER 2016, 1400 – 1530 HOURS | **MEETING ROOM 105**

Smart Cities and New Urban Mobility

Quality traffic information increases the safety of road users, as improves the efficiency of their travel. Providing appropriate traffic information to road users increasingly is seen as valuable to support the traffic management objectives of road authorities.

Quality improvement requires that the traffic environment needs to become more homogeneous in order to accommodate consistent provision of high quality traffic information, including a closer interaction of traffic management and road users. At current, transport infrastructure and traffic management is very heterogeneous across countries and regions in terms of quality and availability of systems and services such as .e.g. incident management, traffic information, road works, etc., content and data standards for Traffic Information and Traffic Management data and Plans, and iv) processes, e.g. governance and operations, and quality assurance.

In this associated event, public and private stakeholders from around the globe are brought together to discuss the needs and proper pathways for improving the quality of traffic information, with resultant needs for stakeholder harmonization and collaboration. In this event, quality improvement initiatives and successes are presented, and further harmonization needs discussed. The aims are to exchange best practices, and to foster increased collaboration and harmonization between the stakeholders in the traffic information value chain.

This associated event is targeted at public and private stakeholders operating in the traffic information value chain with in an interest in improving quality of traffic information and collaboration between actors in the traffic information value chain.

Moderator

Matthias Unbehaun, TISA, Germany

Speakers

Dan Kelly, Intelematics, Australia

Joanna Robinson, Queensland Department of Transport and Main Roads, Australia

Johanna Tzanidaki, TomTom, The Netherlands

Risto Kulmala, Finnish Transport Agency, Finland

SAFETY CHALLENGES FOR AUTOMATED VEHICLES

BOSCH

WEDNESDAY 12 OCTOBER 2016, 1600 – 1730 HOURS | **MEETING ROOM 105**

Automated Vehicles and Cooperative ITS

Everyone wants to be assured that automated vehicles will be safer than human drivers. This session explores the considerations that feed into the safety of automated vehicles and the work required to achieve this.

Moderator

Carl Liersch, Robert Bosch Australia, Australia

Speakers

Marcus Burke, National Transport Commission (Australia), Australia

Xavier Vagedes, Robert Bosch GmbH, Germany

Samantha Buckis, Transport Accident Commission, Australia

Scott Benjamin, WSP | Parsons Brinckerhoff, Australia

INFORMATION IS THE FOUNDATION OF A SMART CITY

PUBLIC TRANSPORT VICTORIA PT

THURSDAY 13 OCTOBER 2016, 1100 – 1230 HOURS | **MEETING ROOM 105**

Challenges and Opportunities of Big Open Data

The Smart Cities agenda is transforming how cities manage their infrastructure and how they communicate with citizens and local businesses. A prerequisite that underpins this outcome is access, availability and analysis to structured and unstructured data that describes the operational state of a city. This workshop explores the pros and cons of how PTV is using open data, real time data and big data to transform how its customers experience Victoria's public transport network.

Moderator

Alan Fedda

Speakers

Sendur Kathir

Richard Bennell

Kate Gray

AUSTRALIAN EV CASE STUDIES - TRENDS OVER THE LAST 5 YEARS

THURSDAY 13 OCTOBER 2016, 1400 – 1530 HOURS　　**MEETING ROOM 105**

Environmental Sustainability

Charging Infrastructure company, Charge Point, will share key trends, experiences, and implications in EV charging dynamics from a number of Australian sectors including:

- Municipal Government Fleet owners
- Retail property operators
- Energy Networks and explore future opportunities and developments for the Transport industry.

As the Transport and Energy sectors continue to converge, ICT and ITS (themselves evolving) will play an ever more critical role.

Speaker

Lance Douglass, Charge Point, Australia

ROAD CERTIFICATION CRITERIA FOR AUTONOMOUS VEHICLES

FRIDAY 14 OCTOBER 2016, 0830 – 1000 HOURS　　**MEETING ROOM 105**

Vehicle Network and Safety

Discuss the merits of certifying roads for use by vehicles equipped with the various AV levels 2 to 5, which classes of roads should be certified, the certification criteria, who administers the certification and how certification is communicated to vehicles/drivers as they approach and depart certified roads.

Moderator

Ian Oxworth, ConnectEast, Australia

Speaker

Charles Karl, ARRB Group, Australia

THE TFNSW FUTURE TRANSPORT ROADMAP

FRIDAY 14 OCTOBER 2016, 1030 – 1200 HOURS　　**MEETING ROOM 105**

Smart Cities and New Urban Mobility

The Future Transport Program kicked off in April 2016 with the Future Transport Summit, the goal of which was to bring together some of the best, most creative and forward-thinking minds and have them work together to help us create the future for NSW transport. A future where we leverage breakthrough technological solutions to create new ways of doing things, find innovative solutions to old problems and revolutionise the way we plan, build and use transport in the state. Guided by our Technology Leaders Panel, which is co-chaired by David Thodey and Andrew Stevens, we have synthesised the summit outcomes with other work to produce a Future Transport Technology Roadmap. The roadmap is being launched to coincide with the 23rd ITS World Congress and will map out the future role of technology in transport, and will set out how TfNSW will become a world leader in using technology to deliver better customer experiences, as well as more efficient transport services. In developing the roadmap we have engaged with our customers, with industry, and with our own people. The workshop aims to continue this engagement by presenting the roadmap and requesting feedback and input from ITS delegates.

Moderator

Simon Barrett, L.E.K. Consulting, Australia

Speaker

Tim Reardon, Transport for New South Wales, Australia

Clare Gardiner-Barnes, Transport for New South Wales, Australia

Tony Braxton Smith, Transport for New South Wales, Australia

Kate Burleigh, Intel Australia and New Zealand, Australia

Andrew Stevens, Advanced Manufacturing Growth Centre, Australia

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A VISION FOR A SECURE, CONNECTED FUTURE THROUGH COOPERATIVE INTELLIGENT TRANSPORT SYSTEMS (C-ITS)

FRIDAY 14 OCTOBER 2016, 1300 – 1430 HOURS　　**MEETING ROOM 105**

Automated Vehicles and Cooperative ITS

This workshop is intended to inform and provoke discussion, and contribute to the development of a vision for a secure, connected future for connected and automated vehicles. It builds on papers published by TCA with a view to advancing Australia's interests in adopting C-ITS in a manner that delivers safe, secure, and commercially and operationally sustainable results.

Moderator

Ian Webb, Roads Australia, Australia

Speaker

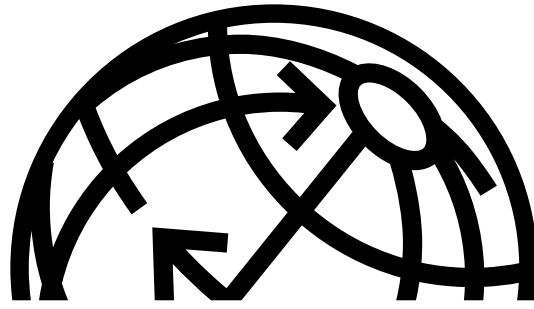Miranda Blogg, Department of Transport and Main Roads, Australia

Peter Girgis, Transport Certification Australia Limited, Australia

Gavin Hill, Transport Certification Australia, Australia

Chris Koniditsiotis, Transport Certification Australia, Australia

NOTES

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