

C-V2X Interoperability and Deployment

Wednesday, 4 December 2019, 09:00 - 13:00

ProMalaga Excelencia Building, Calle Steve Jobs, 27, Malaga, Spain

08:30

Registration & Welcome Coffee

Welcome to DEKRA Malaga

Thomas Jaeger, Head of Technology Technical Service Management, Senior Vice President, Service Division Product Testing, DEKRA

09:00 **Welcome to Plugtests Event**

Ultan Mulligan, Director, ETSI Centre for Testing and Interoperability (CTI)

Welcome to 5GAA and agenda

Bob Banks, 5GAA Working Group 3 Chair (Vodafone)

First session

Driving Europe forward: "JRC Activities on Cooperative Intelligent Transport Systems (C-ITS)"

Pravir Chawdhry, Senior Expert - Spectrum Expert, European Commission Joint Research

09:40 Centre

- *Followed by Q&A*

10:20

Road Operator Perspective: "Dutch perspective on C-ITS deployment"

Wim Vandenberghe, Senior Advisor Intelligent Transport Systems (ITS), Dutch Ministry of Infrastructure and Water Management

Followed by Q&A

Coffee Break (10:20 – 10:50)

Second session

3GPP: "Evolution of C-V2X in 3GPP R15, R16 & R17"

Liwei Qiu, 3GPP Standards Delegate, Huawei Technologies

Followed by Q&A

10:55

ETSI TC ITS: "ETSI TC ITS Standards Update"

Ralf Weber, Standards & Industry Organizations Lead, Qualcomm Inc.

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Followed by Q&A

12:45

Conformance/Compliance & Certification: "5G Automotive Certification"

Chris Hogg, Programme Manager, GCF

Followed by Q&A

Panel Debate: “How can C-V2X foster deployment of C-ITS?”

Pravir Chawdhry, Senior Expert - Spectrum Expert, European Commission Joint Research Centre

Wim Vandenberghe, Senior Advisor Intelligent Transport Systems (ITS), Dutch Ministry of Infrastructure and Water Management

Ralf Weber, Standards & Industry Organizations Lead, Qualcomm Inc.

Chris Hogg, Programme Manager, GCF

Moderated by Bob Banks, 5GAA Working Group 3 Chair (Vodafone)

Closing remarks

Closing Keynote Speeches

12:45 Saurav Arora, Technical Project Manager, Plugtests™ Event
Bob Banks, 5GAA Working Group 3 Chair (Vodafone)

Lunch (13:00 – 14:00)

14:15

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15:15

Testing Facility Visit:
“Interoperability Demonstration”

Speakers' biographies

Thomas JÄGER

Senior Vice President and Head of Technology Technical Service Management for Automotive and Connectivity Testing, DEKRA



Thomas is the Head of the Technology Technical Service Management in the Service Division of Product Testing.

He is especially in charge of the Business Lines Connectivity and Automotive. Thomas is a pioneer in Mobile Communication and Wireless Testing with a professional career of more than 29 years.

He has extensive experience in mobile, wireless and automotive products.

Thomas has worked in leading global testing organizations with strong focus on connectivity and automotive supplier support.

Ultan MULLIGAN

Director, ETSI Centre for Testing and Interoperability (CTI)



Mr. Ultan Mulligan is Director of ETSI's Centre for Testing and Interoperability, leading the team which provides support to ETSI technical committees on test specification development, interoperability, validation of standards, use of formal specification methods and Open Source software development. ETSI's CTI team manages ETSI's Plugtests™ series of interoperability events.

Having started at ETSI as a Permanent Expert (PEX) in ETSI's Protocol and Testing Competence Centre where he has managed specification and testing projects on numerous technologies, he later became responsible for Strategy and New Initiatives, developing new standardisation activities at ETSI including establishing ETSI's first Industry Specification Groups. Until recently he held the positions of Director of Innovation and before that Director of Communications and was also vice-chairman of the Marketing and Communications committee in the oneM2M Partnership Project – a joint collaboration on IOT standards between ETSI and 7 other ICT standards bodies across the globe.

Besides ETSI, he has participated in many standards bodies including oneM2M, 3GPP, ITU-T, CEN, and groups such as Bluetooth SIG and Parlay.

Mr Mulligan has a B. Eng. from Dublin City University and an Executive MBA from the ESCP-EAP in Paris.

Bob BANKS

5GAA Working Group 3 Chair (Vodafone)



Dr Robert (Bob) Banks has worked in the cellular industry for over 30 years. Having obtained his degree qualifications in communication and cellular engineering from Bath University in 1986, he started working for Vodafone UK in the area of radio base station design, development and implementation. After having worked on both analogue (TACS) and digital (2G & 3G) systems, he moved across to Vodafone Group, the parent company of Vodafone local MNOs, where he co-ordinated the design, development and implementation of such services as prepaid roaming, GPRS roaming, location based services, and SIM management. Now, as Technology Development Manager, Bob leads the Vodafone Group R&D activity of Connected & Automated Vehicles and sits on the Steering Committee of the European Automotive & Telecommunications Alliance (EATA) and chairs WG3 (Evaluation, Testbeds & Pilots) of the 5G Automotive Association (5GAA).

Pravir CHAWDHRY

Senior Expert & Head of Sector of Wireless Communications, Radio Spectrum and Applications (CORSA), European Commission Joint Research Centre



Pravir Chawdhry is Senior Expert and Head of Sector of Wireless Communications, Radio Spectrum and Applications (CORSA) in the European Commission's Joint Research Centre. The objective is to support EU Radio Spectrum Policy and Future Networks in the Digital Single Market. The team specializes in coexistence studies and spectrum sharing, contributing to CEPT and ETSI through tests and measurements in its laboratories. The project is currently developing a mobile communications testbed at JRC Ispra for application to C-ITS and to study EMF exposure in active antenna systems. In its Radio Spectrum Laboratory, the team has implemented novel features of 5G NR on software defined radio as well as protocols for C-ITS services. JRC has collaborated with national regulators in the UK and Italy on spectrum sharing pilots in London and Rome. In 2016, the JRC won the EU Horizon Prize on Collaborative Spectrum Sharing, jointly with partners from the UK and Finland.

Wim VANDENBERGHE

Senior ITS Advisor, Dutch Ministry of Infrastructure and Water Management



Dr. Wim Vandenberghe, senior ITS advisor at the Dutch Ministry of Infrastructure and Water Management. Wim is part of the program team at the Ministry that manages the Talking Traffic Innovation Partnership, focusing on the more technical aspects. He is also involved in the activities of the Ministry in the Data Task Force and C-Roads projects. He is also part of the team that strengthened the contacts between the ministry and 5GAA and leads the team's activities in the domain of 5G and Connected and Automated Mobility. Before joining the ministry, he gained C-ITS experience both in an academic context (at Ghent University with his PhD dissertation "Advanced Network Solutions for Intelligent Transport Systems), and in a commercial context (at Be-Mobile, as project manager of the Spookfiles A58 and CITRUS projects).

Liwei QIU

3GPP Standards Delegate, Huawei Technologies



Liwei Qiu is currently a standardization expert at Huawei Technologies Co. Ltd, in Shanghai, China. She has been engaged in the research and development of mobile radio communication technologies since 2011. Her expertise lies in 5G radio access technologies and integration with industry. She has been the specification rapporteur for several standards and rapporteur for work and study items in 3GPP. In 2001, after graduation from Fudan University, she started to be involved in the research work at the Nanyang Technological University for modeling of wireless networks. After that, she had worked in Agilent Technologies Singapore on development of signaling analyzer.

Ralf WEBER**Principal Engineer, Qualcomm Standards and Industry Organizations (QSIO)**

Dr. Ralf Weber is currently working as Principal Engineer for Qualcomm Standards and Industry Organizations (QSIO) on 5G and Vehicular-to-Everything (V2X) communication topics, with special focus on standardization, testing and certification of communication systems for automotive applications. Ralf has more than 20 years professional experience in mobile communications and held several engineering and management positions at Qualcomm.

In his capacity, he is Qualcomm's lead representative in different organizations, namely 5GAA, ERTICO, CEN, GSMA, as well as ETSI/3GPP. At 5GAA, Ralf is currently Vice Chair of WG3. Furthermore, Ralf is the Qualcomm technical project lead for eCall systems in Europe and Russia. As part of his role, Ralf is supporting regulatory initiatives on EU and UN level, as well as measurement campaigns, conformity and interoperability tests. In addition, he is acting as technical advisor for different R&D and deployment activities on 5G, V2X and eCall.

Chris HOGG**Programme Manager, Global Certification Forum (GCF)**

As GCF Programme Manager, Chris advises on the operational and strategic development of GCF's Certification Programme working with GCF's members and partner organizations to define and maintain GCF's Certification Criteria. He also advises on how to identify and deal with changes in the market that impact the demand for GCF Certified devices. Prior to GCF, Chris was a standards manager in Nortel actively negotiating standards for IMS and VoLTE in a wide range of international groups including ITU-T, ETSI and 3GPP. Chris runs his own consultancy – Kensington Communication Consultants – advising clients in the mobile and IoT industry. As a member of Dot Matrix Group Investment Syndicate, he regularly reviews UK tech start-up business plans and questions Boards on their strategic priorities. Chris holds an MBA from Imperial College, London (2014) and he is a Professional Engineer (UK CEng) with a Master's degree in Electronics and Electrical Engineering from University of Strathclyde (2000).

Saurav ARORA**Technical Project Manager (Plugtests™ Event), ETSI**

Saurav Arora is a Project Manager with technical proficiency and intensive experience of 9 years in Wireless Domain with reputed Technical Major NVIDIA, HCL Technologies/Keysight and ST-Ericsson. He holds an engineering degree from the U.P.T.U University (India).

His first exposure with Wireless domain was at HCL Technologies / Keysight for developing and maintaining the conformance TCs in 2G/3G/LTE. After gaining good experience at the network side, he moved to mobile phone vendors and was working for NVIDIA & ST-Ericsson as a Modem Validation Engineer with new features like SRVCC / VoLTE / CA. He has been working in a Multicultural environment considering his past experiences in India, UK, Sweden and France. He joined ETSI Secretariat in September 2015, for providing technical support to the 3GPP working group CT3. He is currently managing Mission Critical Communication Plugtests Event as part of ETSI Center of Testing and Interoperability.