

Automotive & Transport SIG

‘Connected and autonomous vehicles – safe, cyber-secure, private? How confident are you?’

1st October 2015

Hosted by Transport Systems Catapult and sponsored by Rohde & Schwarz

This SIG is championed by Andrew Ashby, **Plextek Consulting**, Tom Blackie, **RealVNC**,
John Okas, **Real Wireless** and Nigel Wall, **Climate Associates**

Venue: Transport Systems Catapult, 170 Midsummer Boulevard, Milton Keynes, MK9 1BP

AGENDA

12:00 Registration over lunch and refreshments

13:00 Introduction to Automotive & Transport SIG from **Andrew Ashby, Plextek Consulting**

13:10 Welcome from event sponsor, **Steven Edwards, Rohde & Schwarz**

13:20 Welcome from event host, **Neil Fulton, Transport Systems Catapult**

Session chaired by SIG Champion, John Okas, Real Wireless

13:30 ‘Quantifying the risk of the connected and autonomous vehicle’

Andrew Miller, Chief Technical Officer, **Thatcham**

Motor insurers have historically played a proactive part in improving vehicle security in the UK, which is now widely regarded to be the most secure in the world. The new connected vehicle landscape provides new threats and Thatcham Research will be charged with understanding and quantifying this. We examine the potential threats and timescales for these, and suggest a strategy for managing these in the UK.

13:50 Q&A

13:55 ‘Cyber security – hype, myths and an engineering approach’

Mike Parris, Head of Secure Car Division, **SBD**

Mike Parris will review some recent claims and reported ‘hacks’, separating the noise from reality. He will then explore some of the issues facing OEMs and their suppliers in addressing the growing threat of cyber security attacks and suggest a pragmatic way forward to meet the demands of the automotive industry.

14:15 Q&A

14:20 Refreshments and networking

Session chaired by SIG Champion, Tom Blackie, RealVNC

14:50 ‘Laying the foundation for connected vehicle security: digital trust & identity’

Nick Cook, CIO, **Intercede**

Nick explores the need for digital trust as a cornerstone of connected vehicle cyber security and discusses how, with proper lifecycle management of strong digital identities, it is possible to establish digital trust and then maintain it throughout the life of the vehicle.

15:10 Q&A

15:15 ‘Application specific cyber security the way ahead in distributed automotive systems’

Peter Davies, Technical Director, **Thales e-Security**

Automotive systems are made up of components supplied by multiple vendors with a legal obligation not to lock suppliers out of the supply chain. Furthermore, these systems are increasingly integrated with global information and management networks. In the face of cyber-attacks it must be possible to understand how remediation may be rapidly applied. This talk will argue that there is no option to do this by seeking to control the global attack surface and that many of the techniques being discussed will in fact worsen the ability of distributed systems to defend themselves. Understanding what is reasonable, or semantically sensible, for a component of a certain type to be doing offers most promise in defending in a quantifiable way automotive security systems.

15:35 Q&A

15:40 Panel session with all speakers chaired by **SIG Champion, Nigel Wall, Climate Associates**

16:30 **Event closes**

Profile of organisers

Cambridge Wireless (CW)

CW is the leading international community for companies involved in the research, development and application of wireless and mobile, internet, semiconductor and software technologies. With 400 members from major network operators and device manufacturers to innovative start-ups and universities, CW stimulates debate and collaboration, harnesses and shares knowledge, and helps to build connections between academia and industry. CW's 19 Special Interest Groups (SIGs) provide its members with a dynamic forum where they can network with their peers, track the latest technology trends and business developments and position their organisations in key market sectors. CW also organises the annual Future of Wireless International Conference and Discovering Start-Ups competition along with other high-quality industry networking events and dinners. With headquarters at the heart of Cambridge, UK, CW partners with other international industry clusters and organisations to extend its reach and remain at the forefront of global developments and business opportunities. For more information, please visit www.cambridgewireless.co.uk

Profile of sponsor

Rohde & Schwarz UK

Rohde & Schwarz UK Ltd has been the UK subsidiary of Rohde & Schwarz GmbH for 40 years. Based in Fleet, RSUK employs 105 people to provide dedicated sales, services and support to customers across the UK and Ireland. Rohde & Schwarz has designed and manufactured the highest-quality specialist products in Germany for 77 years across a wide range of technologies and industries, including wireless, broadcast, aerospace, defence and security markets. For more information please visit www.rohde-schwarz.co.uk

Profile of host

Transport Systems Catapult

The Transport Systems Catapult is one of seven elite technology and innovation centres established and overseen by the UK's innovation agency, Innovate UK. We were created to drive and promote Intelligent Mobility – using new and emerging technologies to transport people and goods more smartly and efficiently. We are helping UK businesses create products and services that meet the needs of the world's transport systems as they respond to ever-stretching demands. We help sell UK capability on the global stage, while also promoting the UK as a superb test bed for the transportation industry. With a clear emphasis on collaboration, we are bringing together diverse organisations across different modes of transport, breaking down barriers and providing a unique platform for meeting the world's most pressing transport challenges. For more information please visit ts.catapult.org.uk

Profile of SIG Champions

Andrew Ashby, Plextek Consulting

Graduated in Electronic Engineering, Andrew Ashby has spent over 20 years in blue chip major semiconductor manufacturers in Field Applications, Account Management, Global Sales and Business Development roles. Since then he has held the sales director role in a Cambridge based technology start-up company and now heads up strategic accounts and new business development activities in the automotive and transport sectors for Cambridge based Plextek Consulting. In this role Andrew is responsible for bringing together innovators, T1s and OEMs, to deliver both innovative solutions and established methods and capabilities from other industry sectors, into the automotive supply chain. For more information please visit www.plextek.com

Tom Blackie, RealVNC

Since joining RealVNC in 2009 Tom has lead the mobile division pioneering integration of phones with in-vehicle systems. Prior to RealVNC Tom held executive positions in a number of technology companies providing revolutionary wireless and software products. Including Head of Operations at the Olivetti and Oracle Research Laboratory; Founder and VP Engineering at NASDAQ listed Adaptive Broadband; Managing Director of Audentify (a division of Autonomy Systems PLC); and COO at AIM listed Ubisense. Tom graduated in Electrical and Electronic Engineering from Napier Edinburgh and holds an MBA from Ashridge Business School. For more information please visit www.realvnc.com

John Okas, Real Wireless

John has worked in wireless and telecommunications throughout his career. Initially with Motorola and Racal in engineering and product marketing roles. He was a founding director of NTL (now Arqiva), initially as Business Development Director building and managing the complete commercial organisation. He also managed the R&D Group which developed one of the first commercially available MPEG video compression systems. Then as Managing Director - Telecommunications he was responsible for growing NTL's wireless business and entering the fixed telecommunications and satellite services markets. Moving to Pell Frischmann the consulting engineers, he started a telecommunications business and was involved in several large transportation projects including the Highways Agency's NRTS Project which updated the motorway communication systems. Currently he operates as an independent consultant covering technical,

commercial and product strategies. He works with other consultancies including Real Wireless, the independent wireless experts, who develop strategy, policy and practical solutions. John has a close interest in the IoT/M2M market within the transport sector; he worked with the Weightless SIG at its formation to help identify market requirements. For more information please visit www.realwireless.biz

Nigel Wall, Climate Associates

Nigel Wall is an independent system engineering consultant and Director of Climate Associates Ltd: CAL helps organisations optimise ICT system design based on understanding the whole life carbon footprint cost of deploying innovative ICT technology compared to using current systems. Climate Associates are leading work with ITU-T SG5 and ETSI in standardising the analysis and in determining best practice. Nigel is also involved with Intelligent Transport Systems – "connected cars" he is the Chair of the ITS UK Communications SIG and the Land Navigation & Location Group at the Royal Institute of Navigation. For more information please visit www.climate-associates.com

Profile of speakers

Nick Cook, Intercede

Nick is responsible for Research and Development for Intercede's mobile and IoT cybersecurity solutions, and is Intercede's Software Engineering process champion. Prior to joining Intercede, he held senior Research and Development positions at Ericsson and was responsible for secure mobile and media processing applications with customers including secure government organisations and global telecommunications providers. Nick is also the primary representative for Intercede's membership of the Cybersecurity for the Connected Vehicle (CCV) Consortium. For more information please visit www.intercede.com/

Peter Davies, Thales e-Security

As a Technical Director of Thales in the UK Peter has been their leading expert on Cryptography in the UK responsible for providing cryptography and information security direction and expertise on a variety of products and projects. Previous work includes the development and certification of flexible and interoperable commercial security solutions that are also widely used by governments; these solutions are available worldwide and support the security of both communications and infomatics in an international, multi grade environment. Peter's specialist knowledge is at the core of the cyber defence and forensics activities that he undertakes combatting existential treats against business. Peter has, interacted on security and products at any level from Prime Minister, through Board to deep technical including Certification Labs and partners developing and sustaining business opportunities worldwide. Peter has generated patents in the area of digital DNA and his research covers aspects of technical security as well as aspects of super-identities and their role in combatting human based cyber-attacks. As well as contributing to standards Peter is a frequent speaker at international conferences and delivers lectures to postgraduate information and cyber security programmes in the UK and worldwide. For more information please visit www.thales-eseurity.com

Neil Fulton, Transport Systems Catapult

Neil Fulton is a Programme Director at the Transport Systems Catapult having joined the organisation in November 2013. He has responsibility for the Automated Transport Systems business unit, focussing on the introduction of automated and connected vehicles into the transport infrastructure and the associated barriers to this huge area of growth and potential. An example of this is the leadership of the LUTZ Pathfinder programme – a trial and test programme of technology readiness and public perception of autonomous Pods onto the pavements of Milton Keynes. Neil began his career with Cummins Engine Company in engine development, customer service and account management. He later joined Millbrook Proving Ground, leading the Powertrain Engineering business unit. For more information please visit ts.catapult.org.uk

Andrew Miller, Thatcham Research

Andrew Miller has executive responsibility at Thatcham Research for the engineering aspects of the centre's work to research and promote vehicle best-practice engineering in vehicle safety, vehicle telematics, security and vehicle repair; working closely with vehicle manufacturers, UK and European Government, NGOs, insurance industry and other trade bodies to ensure that Thatcham's long term research and influence agenda is successful. Andrew is Chairman of the Board of Euro NCAP, is a Steering Committee member of RCAR, is a Council Member of the Road Safety Foundation, a Fellow of the Institute of the Motor Industry, and a member of the Society of Automotive Engineers and of the Institute of Directors. For more information please visit www.thatcham.org

Mike Parris, SBD

Mike Parris is the Head of SBD's Secure Car Division with over 30 years of experience in a variety of technical, management and consulting roles in Europe, Asia and North America. He is a Justice of the Peace, a Chartered Engineer, a Fellow of the Institution of Mechanical Engineers and a Fellow of the Institution of Engineering and Technology. For more information please visit www.sbd.co.uk/