The Virtual Networks Group
Virtual Networks 2.0: Cloud-native deployments for 5G
11th December 2018
Hosted by the Bradfield Centre

This SIG is championed by **Phillip Bridge** of **EE/BT, Mark England** of **Cambridge Consultants,**

and **Dirk Trossen** of **InterDigital**

Venue: The Bradfield Centre, 184 Cambridge Science Park, Milton Road, Milton, Cambridge, CB4 0GA

AGENDA	
13:30	Registration and networking with refreshments
14:00	Introduction to UK5G/CW **Simon Mead,** CEO, **CW (Cambridge Wireless)**
14:05	Sponsor welcome, **Dirk Trossen,** Principal Engineer, **InterDigital Europe**
14:10	Introduction to the Virtual Networks Group from **Philip Bridge,** Principal Network Architect, **BT/EE**
14:15	Session chaired by SIG Champion, **Philip Bridge,** Principal Network Architect, **BT/EE** **Turning the cellular system into a distributed cloud** **Dirk Trossen,** Principal Engineer, **InterDigital Europe** This presentation outlines the current activities in 3GPP on the 'enhanced service-based architecture' which is seen by many as enabling a cloud-native environment for future 5G environments, allowing for control and user plane services to be realized as mere 'cloud applications' on top of such SBA. The presentation will cover challenges, requirements and efforts underway for realizing first deployments.
14:35	Q&A
14:50	Session chaired by SIG Champion, **Philip Bridge,** Principal Network Architect, **BT/EE** **Enabling the adoption of key cloud native principles** **Todd Spraggins,** Director of Strategy, **Oracle** The desire for Communications Service Providers to get more agility and savings out of networks has driven them to look beyond just Network Function Virtualization to a more cloud native architecture This talk will explore how 3GPP's recent shift to a Service Based Architecture for the 5G core enables the adoption of key cloud native principles.
15:10	Q&A
15:25	**Refreshments and networking**
16:00	**Session chaired by SIG Champion, Philip Bridge,** Principal Network Architect, **BT/EE** **Orchestration is critical capability for the success of 5G** **Milind Bhagwat, Principal Enterprise Architect, BT** 5G is set to revolutionize many industries like manufacturing, healthcare and transportation. The demanding requirements from a 5G can only be met by a cloud native network deployment. Orchestration is used to plan and coordinate the infrastructure resources like compute, storage and network in order to set up functions and services. This talk will provide an overview of the architecture of this orchestration capability required to successfully deploy and operate this cloud native 5G network.
16:20	Q&A

16:35	Panel session with all speakers chaired by **Philip Bridge,** Principal Network Architect, **BT/EE**
	• **Dirk Trossen, InterDigital Europe**
	• **Milind Bhagwat, BT**
	• **Todd Spraggins, Oracle**
17:05	**Event wrap up**
17:15	**Event closes**

With the permission of the speakers, presentations will be loaded to the CW website the week following the event

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 over 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 major conferences and start-up competitions 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. **www.cambridgewireless.co.uk**

UK5G
UK5G is the new national innovation network dedicated to the promotion of research, collaboration and the commercial application of 5G in the UK. UK5G is a 'network of networks' to facilitate and encourage the engagement and coordination of organisations working on 5G activities across the UK. It will enhance links between ongoing research and development and other activities being undertaken by organisations across telecoms and other sectors, as well as the testbeds and trials that will be funded through the UK Government's 5G Testbeds and Trials Programme. It will facilitate the joining up of businesses, large and small, academic institutions and the public sector throughout the UK. UK5G is independent and impartial. A senior national advisory board will advise the Government's 5G Testbeds and Trials Programme, providing expert feedback from industry, identifying their priorities and advising on future areas of focus. UK5G will be a focal point for international engagement into the UK's 5G eco-system - encouraging international participation and investment. **www.uk5g.org**

Profile of host

The Bradfield Centre and Central Working
The Bradfield Centre is a collaborative entrepreneurial community of technology start-ups and scale-ups at the heart of the Cambridge Science Park. The new Centre is expected to become the gateway and focal point for Cambridge's ever-expanding technology cluster. The Centre is the largest of Central Working's global network of rapidly expanding membership-based communities. **www.centralworking.com/locations/cambridge**

Profile of sponsor

InterDigital Europe
InterDigital develops fundamental wireless technologies that are at the core of mobile devices, networks, and services worldwide. As a long-standing contributor to the evolution of the wireless industry, we solve many of the industry's most critical and complex technical challenges years ahead of market deployment. Our advanced solutions support more efficient wireless networks, a richer multimedia experience, and new mobile broadband capabilities. Accordingly, we have established licenses and partnerships with many of the world's leading wireless companies.

Profile of SIG Champions

Philip Bridge, Principal Network Architect, BT/EE
Phil Bridge has spent over three decades in the telecommunications and networking industries. He has worked in research labs, academia, start-ups, equipment vendors and service providers, in the UK and Switzerland, in technical, marketing and management roles. From 2002 he worked at Orange as a network designer and architect and continues that role at EE since it was formed from the merger of Orange UK and T-Mobile UK. Currently he is concerned with the technical strategy for mobile data in general, and the evolution of the architecture of the mobile data core network in particular. **www.ee.co.uk**

Mark England, Associate Director, Cambridge Consultants
Mark England has spent three decades architecting, designing, and implementing a wide variety of wired and wireless communications products, services, systems and protocols; from short range point to point systems to those which operate on a global scale. Mark joined Cambridge Consultants in 2000, and for the past 17 years he has been providing leading edge design, development and consultancy services to a wide range of clients. **www.cambridgeconsultants.com**

Dirk Trossen, Principal Engineer, InterDigital UK
Dirk Trossen has more than 15 years of experience in network architectures, wireless technology, and context-aware services. He has led numerous research projects in his corporate positions as well as in international collaborations with world-leading universities and institutions like MIT, Cambridge University, GeorgiaTech and Columbia University. Prior to joining InterDigital as a Principal Engineer, Dirk held a position as Senior Researcher at the Computer Laboratory ofthe University of Cambridge. He also held prior positions as Chief Researcher with BT Research and as Principal Scientist with Nokia Research. He is a research affiliate with the Advanced Network Architecture group at MIT CSAIL and one of the co-founders of TecVis LP. **www.interDigital.com**

Profile of speakers

Milind Bhagwat, Principal Enterprise Architect BT
Milind is an Enterprise Architect at BT where he leads the technology strategy for Network Orchestration. Milind has worked in the IT industry for more than 20 years and has a track record of leading architecture and design for multi-million-pound transformation programs. In addition to technical IT skills, Milind is experienced in a variety of domains including Business Architecture, Requirements Management, Capability-based Planning Techniques and Process Design.

Todd Spraggins, Director of Strategy, Oracle
Todd Spraggins is an unapologetic telecom evangelist with an extensive career of deploying leading-edge solutions to many of the world's largest service providers. As Director of Strategy in the Oracle Communications CTO office, he is pushing the boundaries of what Operators can do with SaaS by bringing the mobile core to the web-scale cloud. Prior to Oracle he was the Sr. Director for Standards and Strategy at GENBAND and held multiple senior Architect roles at Nortel, beginning his career at Bell Northern research. He holds a Master of Science in Telecommunications from Southern Methodist University and a Bachelor of Science and Engineering from Tulane University.

Dirk Trossen, InterDigital UK
See above