

## The Virtual Networks Group

### What does “true 5G” mean?

20<sup>th</sup> April 2021

This SIG is championed by **Julie Bradford** of **Real Wireless**, **Mark England** of **Cambridge Consultants**, **Andrew Palmer** of **CGI** and **Justin Paul** of **Ericsson Digital Services**

#### AGENDA

**14:00** CW and UK5G welcome by **Simon Mead, CEO, CW (Cambridge Wireless)**

**14:05** Introduction to **Virtual Networks SIG** series, ‘**Realising the “true 5G” dream**’, by **Andrew Palmer, Virtual Networks SIG Champion** and **Consulting Director, CGI**

**14:10** **Session chaired by SIG champion, Andrew Palmer**

#### ‘Building the 5G ecosystem’

**Julie Snell, Chair and Paul Coffey, CEO, The Scotland 5G Centre**

A lot of money has been spent on building a plethora of testbeds, trials and ecosystems; money has been given to academia as well as to public sector bodies and public/private consortiums in the hope of stimulating the take up and deployment of 5G, the UK Government assigned £200 million for investment in trials and testbeds, but has it been successful? There are not many live production deployments supporting sustainable business models, why is this? What has been the main problem to overcome – is it technical, commercial, operational or a combination of all three? Is the 5G story more complicated than “just another G”, does it require a new model for funding, building and operating communications networks and the ecosystems that surround them?

The question of “what does good look like?” still appears to be unanswered, so what is it that actually needs to be done to produce sustainable 5G business models and the regional and national ecosystems we are told are essential for 5G to be a success? We will explore how the S5GC are approaching the question of how to make 5G a nationwide success and the elements needed for a successful 5G ecosystem to flourish.

**14:25** ‘**Transforming Telco’s architecture - open standards and orchestration for virtualised networks**’  
**W. George Glass, Chief Technology Officer, TM Forum**

With the roll out of 5G and the implementation of SDN and NfV we are seeing the arrival of cloud native network components into architectures as networks becoming software, however there are valuable lessons to be learnt from the world of IT, which has been building cloud native components for some time, to ensure that we can maximise the benefit and flexibility that these products and technologies have to offer. I will explore concepts such as pattern matching and abstraction, exposure of business capabilities via industry standard Open APIs, legacy encapsulation to manage network transformation and rules driven orchestration to deliver concepts such as intent based operations, closed loop controls and self-healing network domains.

**14:40** ‘**How do we separate 5G hype and reality?**’

**Dean Bubleby, Director, Disruptive Analysis, Mobile Technology & Futurism Analyst / Consultant**

The truth is that 5G will arrive in phases, driven by continued evolution of standards, as well as complex dynamics among both suppliers and users – especially in enterprise sectors. It’s unclear how many “pure” 5G networks we will actually see – especially with the much-promised millisecond latency and fine-grained slicing. Can “true 5G” exist as a hybrid with other technologies, especially when deployed by MNOs?

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**14:55 '5G rollout – the DCMS challenge'****Tony Sceales, Head of Programme Development, 5G Testbeds and Trials Programme – Department for Digital, Culture, Media & Sport (DCMS)**

DCMS set out to stimulate the market, with a £200 million investment budget. How is this working and what still needs to be done? The Barrier Busting Task Force has been running since the end of 2017- what has it helped to deliver in the 5G domain? What does DCMS need to consider for the next phase of 5G market stimulation? There is a need for greater collaboration in the public sector – BEIS, DCMS, NHCLG, DHSC all working together to deliver cross-sector benefits, such as the project to treat asset mapping as a national initiative and toolset, to stimulate the National Digital Twin programme.

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**15:10 Panel session with all speakers chaired by SIG champion, Andrew Palmer****15:40 End of session followed by networking****16:00 Event closes**

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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](http://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. [uk5g.org](http://uk5g.org)

## Profile of SIG Champions

### Julie Bradford, Managing Consultant, Real Wireless

Julie has worked in the wireless industry for over 15 years. At Real Wireless, she is a thought leader in 5G business case analysis including understanding 5G use cases, quantifying (in financial terms) the operational and socio-economic benefits of 5G services and understanding network dimensioning and cost implications under 5G virtualised networks. She has most recently led Real Wireless' techno-economic analysis on the EC Horizon 2020 5G-MoNArch project. Inspired by the project's smart sea port testbed constructed by HPA, Nokia and DT in the Port of Hamburg, this analysis included quantifying the operational benefits of 5G to port authorities and other port users and the cost implications of delivering these industrial grade wireless services from existing mobile infrastructure via network slicing supported via the virtualised 5G-MoNArch network architecture. Previously, Julie was Communications Engineer at QinetiQ UK, consultant at PA Consulting UK, and Senior Systems Engineer for Airvana UK. [real-wireless.com](http://real-wireless.com)

### **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.

[cambridgeconsultants.com](http://cambridgeconsultants.com)

### **Andrew Palmer, Consulting Director, CGI**

Andrew has more than 30 years of experience in IT, Telecoms and TV and Media, having worked in various roles for IBM, AT&T, Ericsson, Motorola and Arris. Andrew's present role is to leverage existing CGI capabilities that match the needs of our clients in the Telecoms sector, as well as building new capabilities that will support the emerging and changing needs of our client base. Andrew has proven experience in developing and delivering complex SI and Services solutions that meet both business and technology needs. Andrew has co-authored "UK Telecoms For Dummies", an essential guide to the complicated UK Telecoms sector as well as articles for publications such as the Cambridge Wireless Journal including "How do we build the new world of 5g?". He frequently speaks at conferences and provides media commentary on industry topics like 5G, IoT and Smart Cities, as well as being a member of the Digital Policy Alliance's Smart Society Working Group, techUK Spectrum Policy Forum and the Cambridge Wireless Virtual Networks Special Interest Group. [cgi-group.co.uk](http://cgi-group.co.uk)

### **Justin Paul, Senior Marketing Manager, Ericsson Digital Services**

Justin has over twenty years' experience in technology marketing in the telecoms and software industries. Prior to joining Ericsson Digital Services he worked for Zeetta Networks, Huawei Technologies in NFV/SDN Marketing and Amdocs where he led the launch of their NFV Portfolio which now forms a major part of the ONAP (Open Network Automation Platform). During his career he has been responsible for the launch and go-to-market for a number of leading-edge technologies including 3G, IPTV, LTE, NFV and 5G. A TED-trained conference speaker he has presented at a number of major international conferences including Layer 123 SDN and Openflow Congress, LTE Asia and SCTE. A CIM qualified marketer he runs a Bristol-based Digital Marketing knowledge-sharing group. [www.ericsson.com](http://www.ericsson.com)

## Profile of speakers

### **Dean Bublely, Disruptive Analysis @disruptivedean**

Dean Bublely is the Founder of Disruptive Analysis, an independent technology industry analyst and consulting firm based in London. An outspoken analyst & futurist with over 25 years' experience, he specialises in mobile / telecoms fields, with an eye on the broader technological and societal contexts into which they fit. He is one of the leading market observers and forecasters covering 5G, network infrastructure & software, IoT, telecom business models, voice/video communications and broadband/spectrum policy. He is known as a contrarian and visionary, often with challenging opinions that go against industry consensus. Speaking at over 30 conferences and other events per year, and quoted by publications such as The Economist, FT & Wall Street Journal, he is an authority and provocateur. He regularly appears in technology industry videos, podcasts and blogs. His clients include many of the world's leading telecom operators, vendors, regulators and industry associations, conducting advisory projects & internal workshop exercises. He also acts as associate director in charge of Network Futures research for STL Partners. He provides clients with advice and analytical opinion on topics such as emerging trend "myth-busting", business model validation, technology innovation and go-to-market strategies, "addressable market sizing", planning and due diligence. His present focus is on use-cases and hype/reality for 5G, evolution of Wi-Fi, spectrum policy, smart buildings & cities, eSIM, private & neutral-host cellular networks, the "future of voice and video", mobile broadband, developer platforms, edge-computing and contextual communications. He also advises on wider trends in the evolution of cross-sector technologies like AI, IoT, automation and technology regulation/policy. A recent focus has been on the likely post-pandemic status of telecom, connectivity and building/campus networks. Mr Bublely was formerly an equity analyst, covering communications stocks, with the UK arm of investment bank Robert W. Baird. Prior to that, he spent eight years at UK research firm Datamonitor, where he co-founded the company's Technology business, managed the Internet & Networking area and custom consulting operations, with roles of Chief Analyst & Director of Consulting. He holds a BA in Physics from Keble College, Oxford University. [www.deanbublely.com](http://www.deanbublely.com)

### **Paul Coffey, The Scotland 5G Centre**

Paul became the CEO of the Scotland 5G Centre – the national centre for the acceleration of the deployment and adoption of 5G in Scotland – in May 2020 and has quickly made his mark on the 5G ecosystem. He is passionate about mobile telecommunications and delivering socio-economic benefit to a broad range of stakeholders to enable

digital connectivity. Previously, as founder of his consultancy practice, Paul advised both private and public-sector organisations on major strategic initiatives, taking advantage of the latest wireless capabilities to develop coherent plans to deliver organisational goals and increased business value. Paul began his career on the first graduate training scheme run by Orange, now EE, and rose through the company to become head of strategic development. There, he played a key role in establishing the UK's first deployments of 4G services in rural communities.

[www.scotland5gcentre.org](http://www.scotland5gcentre.org)

#### **W. George Glass, TM Forum**

George is an experienced telecoms professional and business manager with over 33 years' experience in the IT sector in all aspects of software engineering. His specialist skills cover the areas of architecture and business transformation, in particular: architecture operating models, digital transformation, service-oriented architecture and APIs. Having joined the TM Forum in 2018 as VP of Architecture and APIs, George became CTO of the TM Forum in 2020. Through industry collaboration, George is leading the creation of architectural transformation patterns, Open APIs, AI enabled operational models, self-healing autonomous network services and industry standard data models that show digital service providers how to transform their IT and network estate to help them deliver digital efficiency internally and digitally enable them externally to prepare them for the digital revolution that is happening across all industries today. Prior to joining the TM Forum George was the Chief Systems Architect for BT. George led architectural transformations within BT for over 15 years. He was one of the original authors and creators of BT's Service Oriented Architecture, built upon TM Forum standards, which has persisted, and evolved, and has enabled the transformation of BT from a telephone company to the digital service provider that it is today. Whilst at BT George was an active contributor to the TM Forum, having received an outstanding contributor award in 2016 and was appointed a TM Forum Distinguished Fellow in 2018.

[www.tmforum.org](http://www.tmforum.org)

#### **Tony Sceales, Department for Digital, Culture, Media & Sport (DCMS)**

Tony Sceales is Head of Programme Development on the DCMS 5G Testbeds and Trials Programme. The £200m Programme has been central to the funding and development of a wide range of 5G testbeds, creating momentum and accelerating deployment of 5G networks across the UK. Tony has spent over 25 years in the telecoms and technology industries, working on major projects at global firms including BT, IBM, Telstra, KPN, Swisscom, Prudential and China Gas, as well as with growth start-up innovators. He is an Ambassador and former Executive Committee member of the TM Forum and collaborated in producing some of the key thinking around partnership business models and B2B2X trading. His role at DCMS is to drive engagement with key players across industry sectors to encourage successful 5G investment and adoption in the UK.

[www.gov.uk/government/organisations/department-for-digital-culture-media-sport](http://www.gov.uk/government/organisations/department-for-digital-culture-media-sport)

#### **Julie Snell, The Scotland 5G Centre**

Julie Snell has 30 + years' experience as a business leader having successfully established new technology markets and leading technology innovation in telecoms / digital IT. Julie was part of the leadership team that developed BT's first public Wifi project, BT Openzone. She spent five years on the board of the global telco group [Wireless Broadband Alliance](#), two years as Chair. In 2017, Julie was appointed as director and CEO of Bristol's Smart City infrastructure and computer network company [Bristol is Open](#). Currently Chair of [Scotland 5G Centre](#), Non-Executive Director [Worcester Local Enterprise Partnership](#) Vice President of the [Urban Technology Alliance](#), a global community of international smart city players, Non-Executive Director at [Col8](#), and a mentor for [Babbasa](#), to help young people realise their employment or enterprise ambitions. [www.scotland5gcentre.org](http://www.scotland5gcentre.org)