

Small Cell SIG

'Spectrum: from scarcity to abundance in one WRC... but does that work for small cells?'
17th November 2020

This SIG is championed by Simon Fletcher of **Real Wireless**,
Caroline Gabriel of **Rethink Technology Research**, Neil Piercy of **ip.access** and Simon Saunders of **Ofcom**

Online event**AGENDA**

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|--------------|--|
| 14:00 | CW welcome by Simon Mead, CEO, CW (Cambridge Wireless) |
| 14:05 | Introduction to Small Cell SIG by Simon Fletcher, Small Cell SIG Champion |
| 14:10 | Session to be chaired by Simon Fletcher, Small Cell SIG Champion
'5G/IMT Spectrum post WRC-19'
Martin Fenton, Director of Spectrum Analysis, Ofcom |
| 14:20 | Panel discussion |
| 14:25 | 'Expanding 5G NR mmWave to indoor deployments'
Puneet Sethi, Senior Director, Product Management, Qualcomm
With more than 80% of mobile data traffic originating or terminating indoors, one enormous opportunity for mobile operators and service providers is to bring mmWave services to indoor venues, enterprises, and transportation hubs. This session will cover the technology innovations that have mobilized mmWave, the new use cases made possible with 5G NR mmWave, and the best practices for deploying indoor mmWave networks with small cells. |
| 14:35 | Panel discussion |
| 14:40 | 'mmWave use cases and deployment considerations'
David Turner, Head of Product, CCS |
| 14:50 | Panel discussion |
| 14:55 | '5G mmWave for Transport and Smart City Applications'
Mark Barrett, Chief Marketing Officer, Blu Wireless |
| 15:05 | Panel discussion |
| 15:10 | Wrap-up by Simon Fletcher, Small Cell SIG Champion |
| 15:15 | End of session followed by networking on Remo |
| 15:45 | Event close |

With the permission of the speakers, presentations will be loaded to the CW website on the day 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

Profile of sponsor

UK5G

UK5G is the national innovation network dedicated to the promotion of research, collaboration and the commercial application of 5G in the UK. It is a 'network of networks' designed to encourage coordination between all organisations working on 5G activities across the UK. It enhances links between the public sector, academic research, development activities undertaken by organisations across telecoms and vertical sectors, and the UK Government's 5G Testbeds and Trials Programme. UK5G is independent and impartial. Its senior national advisory board advises the Government's 5G Testbeds and Trials Programme, providing expert feedback from industry, identifying priorities and advising on future areas of focus. UK5G is a focal point for international engagement into the UK's 5G ecosystem, encouraging international participation and investment. www.uk5g.org

Profile of SIG Champions

Simon Fletcher, Real Wireless

Simon joined Real Wireless in January 2016 as Chief Technology Officer, taking overall technical and technical strategy responsibility across the company. He has chaired various conference committees including the Cambridge Wireless Annual International Conference and is recognised as a regular speaker at industry events. He is a Small Cell SIG Champion. His long-standing association with the UK innovation eco-system through roles such as Director of mVCE and the Innovate-UK ICT-KTN brings a wealth of practical knowledge on open innovation to accelerate product and services delivery. Simon spent the past 20 years working in telecoms infrastructure systems and product development. In NEC Corporation he played a key role in the formation of Joint Ventures for development of 3G and 4G products and established a core team that developed the first-generation of technology for 4G systems culminating in a Steering Board position in the LTE SAE Trials Initiative (LSTI). In recent times he has directed projects on future cities, the application 5G and IoT in industry verticals with an event horizon towards 2030. His long participation in Common Public Radio Interface (CPRI) and then directing Real Wireless engagement in H2020 5G-NORMA, 5G-MoNArch and the 2016 NIC study on Future Comms infrastructure brings great foresight on a range of architectural evolutions underway in 5G architectures. www.real-wireless.com

Caroline Gabriel, Rethink Technology Research

Caroline has been engaged in technology analysis, research and consulting for 30 years and since 2002, has been focused entirely on mobile and wireless. As co-founder and research director of Rethink Technology Research, Caroline has developed a significant research base and forecast methodology, based around deep contacts with mobile and converged operators round the world. This addresses critical issues and trends in mobile and wireless infrastructure, and particularly operator deployment intentions for 4G, 5G, small cells, Cloud-RAN and other technologies. She is also a senior contributor to Analysys Mason's Next Generation Wireless research programme. She has led research and consulting projects with a wide range of clients, including mobile infrastructure vendors, large and start-up operators, regulators, trade bodies, government agencies and financial institutions. Her advice and forecasts have helped inform strategic decisions at a wide range of vendors, operators, start-ups and finance houses. Prior to setting up Rethink, Caroline held various executive positions at VNU Business Publishing BV, then Europe's largest producer of technology related B2B reports and publications. She was the European content and research director, and was a member of the leadership team for VNU's online business. She holds an MA from the University of Oxford.

Neil Piercy, ip.access

Neil has been developing base stations for various communications systems for over 25 years, during which time he has performed roles throughout the whole development lifecycle as well as management roles. He joined ip.access as a small cell System Architect when the company was in its infancy in 2000, and has since designed GSM, UMTS and LTE small cell RAN equipment and systems. His specialist areas include security and networking, as well as a focus on all aspects of protocol design and implementation, and on system performance and simulation. Now as VP Engineering he is responsible for the development and delivery of ip.access products, now part of the Mavenir group. www.ipaccess.com

Simon Saunders, Ofcom

Simon is a specialist in the technology of wireless communications, with a technical and commercial background derived from senior appointments in both industry (including Philips and Motorola) and academia (University of

Surrey). He is an adjunct professor at Trinity College Dublin and was Access Technology Principal at Google. As co-founder and Director of Technology for independent wireless strategy advisory firm Real Wireless, he was responsible for overall technical capability and direction, providing independent wireless expertise and advice to operators, regulators, technology and law firms and wireless users. Customers included Ofcom, Cisco, European Commission, Virgin Media, TalkTalk, Inmarsat and many others. He is an author of over 150 articles, books and book chapters. He has acted as a consultant to companies including BAA, BBC, O2, Ofcom, BT, ntl, Mitsubishi and British Land and was CTO of Red-M and CEO of Cellular Design Services Ltd and has acted as an expert witness in legal proceedings in England and the US. Simon speaks and chairs a wide range of international conferences and training courses and has invented over 15 patented wireless technologies. Particular expertise includes in-building wireless systems, radiowave propagation prediction, smart antenna design and mobile system analysis. He has served on technical advisory boards of several companies, was Visiting Professor to the University of Surrey, member of the industrial advisory board at University College London, founding chairman of Small Cell Forum (formerly Femto Forum), which he chaired from 2007-12 and a member of the Ofcom Spectrum Advisory Board from 2007-14. www.ofcom.org.uk

Profile of speakers

Mark Barrett, Blu Wireless @Blu_Wireless

Mark is a Founder and CMO for Blu Wireless, a leading supplier of millimetre wave wireless technology and products for infrastructure applications. He has over 35 years of experience in the wireless industry in applications including radar, satellite, cellular and consumer electronics. This ranges from FMCW radar at W and X bands, digital beamforming for satellite and mobile communications, SoC for automotive and telecommunications and high-volume Bluetooth and cordless telephones. In 2009 he co-founded Blu Wireless Technology and has played a key role in building the company into a recognised leader in millimetre wave wireless technology. www.bluwireless.com

Martin Fenton, Ofcom

Martin is Director of Spectrum Policy in the of the Spectrum Group of Ofcom (UK). He is also Chairman of ITU-R Study Group 5, the group responsible for all terrestrial radio frequency services. Martin is an expert in international and domestic spectrum regulation; specialising in spectrum policy, interference analysis and RF performance. He has 20 years' experience in spectrum management at the UK communications regulator, Ofcom, and its predecessor, the Radiocommunications Agency. www.ofcom.org.uk

Puneet Sethi, Qualcomm @puneet_sethi

Puneet Sethi is a Senior Director of Product Management at Qualcomm Technologies, where he has the overall responsibility for the small cells business unit. He manages the business unit P&L along with the responsibility for execution, product roadmap and business development. He works with Qualcomm Technologies' global sales organization to market Qualcomm Technologies' portfolio of FSM products to operators and OEMs around the world. He drives 3G/4G/5G baseband SoC, SW and RF roadmap to meet the current and future needs of Qualcomm Technologies' cellular infrastructure customers. Prior to his current role, he held various roles within the small cells business unit such as growing the business in Americas and Asia, and SW product management across the FSM portfolio. Puneet previously also drove the LTE PHY SW development at project at Qualcomm. Prior to Qualcomm Technologies, Puneet held various positions at Ixonos, Radioframe Networks, Comneon and Ubinetics. www.qualcomm.com

David Turner, CCS @ccs_multipoint

David joined CCS in 2013 to lead technical sales and is now responsible for all aspects of technology and strategy for the CCS mmWave product. David has more than 20 years of experience in the telecommunications industry, working in Cambridge based technology start-ups with a focus on new and innovative wireless solutions. Prior to joining CCS, David worked in product management and solutions engineering roles for ip.access, Zinwave, CBNL, and Nortel Networks. David holds a BEng(Hons) degree in Communications Systems Engineering. www.ccs.com