Small Cell SIG
'Open RAN maturity and interoperability: the emerging story from the labs'
12th October 2021

This SIG is championed by Simon Fletcher of **Real Wireless**, Caroline Gabriel of **Rethink Technology Research**, Neil Piercy of **Mavenir** and Simon Saunders of **King's College London**

Open RAN is a hot topic for driving innovation and diversification in mobile networks, and most Open RAN deployments to date are based on small cells. But there are many questions about the rate of progress for Open RAN before it can provide a widespread deployment option in UK networks, both public and private. Labs around the world are being created to explore these issues with funding from government, regulators and industry, including several in the UK. This event will establish what is being learned from these labs and the remaining barriers for Open RAN to have its vaunted impact.

AGENDA

14:00	**CW & UK5G** welcome. Introduction to Small Cell SIG by **Simon Saunders, Small Cell SIG Champion**
14:10	**Session to be chaired by Simon Saunders, Small Cell SIG Champion** **'Open RAN for Diversification'** **Evie Ioannidi, Senior Policy Advisor, RAN Interoperability and R & D, Department for Digital, Culture, Media & Sport (DCMS)**
14:20	**'Learnings from the SONIC Labs'** **Simon Burley, Programme Director, Emerging Technology, Ofcom** Launching in the Summer of 2021, the SONIC Labs (a joint programme of work between Ofcom and Digital Catapult) provide an environment for suppliers to test the interoperability and integration of open- and software-centric networking solutions. This presentation covers the learnings to date from the 5G Open RAN solutions currently deployed in the SONIC Labs.
14:40	**'A New Approach to Telecom Network Infrastructure: Focus on TIP Community Labs'** **David Hutton, Chief Engineer, Telecom Infra Project (TIP)** TIP operates a global network of Community Labs driving open and disaggregated innovation projects around the world, including in the UK. With examples of TIP's lab activity and partnerships with public entities in Europe, Indonesia, and Brazil, this session will provide an overview for both industry and policymakers on how to leverage local learnings for the benefit of the global community and accelerate the commercial deployment of Open RAN and other open and disaggregated network solutions.
15:00	**'Introduction to NTIA and the US Government's efforts to promote 5G vendor diversity'** **Jaisha Wray, Associate Administrator for International Affairs and Jaydee Griffith, Electronics Engineer, Office of International Affairs** **National Telecommunications and Information Administration (NTIA)** Jaisha Wray and Jaydee Griffith will discuss the U.S. Government's efforts to promote 5G vendor diversity, including through open radio access networks and research and development.
15:20	**Panel discussion to be chaired by Simon Saunders, Small Cell SIG Champion. Speakers include:** • **James Grayling,** Head of Business Development & Solution Innovation, **Vodafone** • **Dritan Kaleshi,** Director of Technology – 5G**, Digital Catapult** • **Evie Ioannidi,** Senior Policy Advisor, RAN Interoperability and R & D**, DCMS** • **Simon Burley,** Programme Director, Emerging Technology, **Ofcom** • **David Hutton,** Chief Engineer, **TIP** • **Jaisha Wray,** Associate Administrator for International Affairs, **NTIA** • **Jaydee Griffith,** Electronics Engineer, Office of International Affairs**, NTIA**
15:55	**Wrap-up by Simon Saunders, Small Cell SIG Champion**
16:00	**Event close**

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. **www.rethinkresearch.biz**

Neil Piercy, Mavenir
Neil has been developing base stations for various communications systems for over 30 years, during which time he has performed roles throughout the whole development lifecycle, as well as management roles. Neil joined Mavenir as part of the ip.access acquisition in Sep 2020, having been with ip.access since it was formed as a spin-off from TTP Com back in 2000. 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 across GSM, UMTS, LTE and now NR small cell RAN equipment and systems. Now as AVP System Engineering he is responsible for the development and delivery of ip.access products, as part of the Mavenir group. **www.mavenir.com**

Simon Saunders, King's College London
Prof. Simon Saunders is an independent advisor and researcher with deep industry and academic background in communication systems technology and a burgeoning interest in the intersection between real and artificial neural systems, communication systems and music. He is a Visiting Professor at King's College London and Trustee of the charity Music for All. Simon is a specialist in the technology of wireless communications, with a technical and commercial background derived from senior appointments in both industry (including Google, Motorola and Philips), academia (University of Surrey, Trinity College Dublin) and regulation (Ofcom). He founded the Small Cell Forum and chaired this industry association from 2007-12, growing membership to 150 companies and working with 3GPP to create the first standards for small cells. He acted as Director of Emerging & Online Technology for Ofcom, leading Ofcom's Emerging Technology programme and creating their Online Tech team. At Google (2015-20), he worked with operators globally to enhance wireless connectivity via a range of advanced technology initiatives, combining wireless networks, artificial intelligence and network virtualisation. As co-founder and Director of Technology for independent wireless strategy advisory firm Real Wireless (2006-15), 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. In 2019 Simon organised the world's first 5G music lesson on behalf of charity Music for All, led by famous musician Jamie Cullum. He is an author of over 150 articles, books and book chapters, including a popular textbook on antennas and propagation. He has invented over 15 patented wireless technologies and served on technical advisory boards of several companies and universities.
www.simonsaunders.com

Profile of speakers

Simon Burley, Ofcom
With a career spanning more than 20 years working for telecom infrastructure providers and a mobile operator, Simon's expertise covers the architectural vision, design, and deployment of all leading radio access technologies. He now leads the Connectivity Programme within Ofcom's Emerging Technology team which includes the SONIC Labs - a joint programme of work with Digital Catapult. **www.ofcom.org.uk**

James Grayling, Vodafone
James has over 20 years' experience working cross-functionally throughout business. He has extensive experience in the development of new product implementation and product on-boarding. James led on innovative in building solution evolution, 2012 Olympic deployment and 4G launch for VF UK. Now heads up Product integration for ORAN within Vodafone. **www.vodafone.co.uk**

Jaydee Griffith, National Telecommunications and Information Administration (NTIA)
Jaydee Griffith is an Electronics Engineer for the NTIA Office of International Affairs, where he focuses on 5G technology and policy issues, especially relating to Open RAN, and international telecom technical standards. Prior to joining OIA, Jaydee was with the NTIA Institute for Telecommunication Sciences where his work focused primarily on 5G system architecture standards and testing, He also co-leads the buildout of the ITS Communications Research and Innovation Network (CRAIN), NTIA's laboratory for testing communications networks for 5G and beyond. He has worked previously on issues related to the Internet of Things, especially with Smart Rural/Agricultural use cases, and V2X, representing NTIA and USDOT at various international connected vehicle events. Jaydee has received both

a DOC Silver Medal (2015) and a Bronze Medal (2020). He holds a BS in Electrical Engineering from the Colorado School of Mines. **www.ntia.doc.gov**

David Hutton, The Telecom Infra Project (TIP)
David is a technology expert with over 25 years of experience in telecommunications with extensive knowledge of existing and future mobile network technologies. Recent technical focus includes topics such as OpenRAN, 5G, Network Function Virtualisation, Operator Cloud and Edge Computing. As the Chief Engineer at Telecom Infra Project, David is responsible for the Technical Committee and Project Groups as well as providing the technical strategy for the organisation. David also leads the TIP's engagement on industry relations and partnerships. Prior to joining TIP, David held senior roles at GSMA, Vodafone, Nortel Networks, and Symbian on areas of technical strategy, product planning and standardisation of mobile technologies related to 2G/3G/4G Network Design, Fixed Mobile Convergence and Next Generation Networks including the industry adoption of VoLTE. **www.telecominfraproject.com**

Evie Ioannidi, Department for Digital, Culture, Media & Sport (DCMS)
Evie has a keen interest - and an academic background - in how telecoms policy and regulation can be designed in a way that supports both industry and consumers. After doing her MSc dissertation on the UK's 5G Strategy, Evie joined DCMS as a telecoms policy professional. She has had the opportunity to deliver the Shared Rural Network, a joint programme between the Government, Ofcom, and the four mobile operators for extending 4G coverage, and she has done parliamentary handling for the Telecommunications (Security) Bill. Since July 2020, Evie has been leading the Interoperability and R&D team within the Telecoms Diversification Unit - first publishing the 5G Supply Chain Diversification Strategy (Nov 2020), and then designing a programme of work to accelerate the development and deployment of open-interface technologies, like Open RAN.
https://www.gov.uk/government/organisations/department-for-digital-culture-media-sport

Dritan Kaleshi, Digital Catapult
With over 20 year's experience as a technologist and researcher in communication networks, distributed system design and data interoperability in IoT, Dritan is Head of Technology - 5G at Digital Catapult, where he has established and leads the 5G Programme in Future Networks. An acknowledged thought leader in his field Dritan has published over 70 papers, holds three patents and has edited two international standards on interoperability, and is often invited to speak on advanced digital infrastructure. He has represented the UK in international standardization bodies and served on/chaired international conferences and technical committees. He joined Digital Catapult from University of Bristol, where he led a 15-strong research team, strategically combining research with industrial collaboration, making a wide range of contributions and practical implementations in networking, interoperability, smart energy, cities and digital health, including large scale projects like SPHERE and Bristol Is Open demonstrators. His focus is on national 5G coordination and how to best support startup and scaleup innovation and technical advances on new 5G network architectures, network and service orchestration, edge computing and IoT support. **www.digitalcatapult.org.uk**

Jaisha Wray, National Telecommunications and Information Administration (NTIA)
Jaisha Wray is the Associate Administrator for International Affairs at the Department of Commerce's National Telecommunications and Information Administration (NTIA). In this role, she formulates telecommunications and information policies and promotes these policies in international fora. Previously, she was the Director for International Cyber Policy in the Cybersecurity Directorate of the National Security Council where she was responsible for drafting and implementing the U.S. strategy on 5G technology as well as enhancing international cybersecurity cooperation with a wide range of partners and allies. She was also the Acting Deputy Director of the State Department's Office of Emerging Security Challenges where she contributed to the formulation of outer space and cyber stability policies and diplomatic strategies. At the State Department, she served as a Political Officer at U.S. Embassy London and as a Foreign Affairs Officer in the Office of Missile Defense and Space Policy. She began her government career as a Presidential Management Fellow where she completed rotations in the Space and Cyber Policy Directorate of the Office of the Secretary of Defense and in the National Reconnaissance Office. Ms. Wray holds a B.A. in Political Science from the University of California at Los Angeles as well as a M.A. in International Relations and a Master of Public Administration from the Maxwell School at Syracuse University. She has completed the International Space University Space Studies Program and the Harvard Kennedy School's Executive Education course on cybersecurity. **www.ntia.doc.gov**