CAMBRIDGE WIRELESS

HUAWEI

Small Cell SIG

'DAS and Enterprise Small Cells - Competition or Collaboration?'

7th December 2017

Hosted and sponsored by Huawei

This SIG is championed by David Chambers of **ThinkSmallCell**, Simon Fletcher of **Real Wireless**, Neil Piercy of **ip.access** and Simon Saunders of **Google**

Venue: Huawei Technologies (UK) Co., Ltd, 300 South Oak Way, Green Park, Reading RG2 6UF

AGENDA

12:30	Registration and networking with lunch
13:30	Introduction to Small Cell SIG from **Bob Driver, CW**
13:40	Welcome from event host, **Khurram Qayam, Manager - Wireless Solution Sales – UK&I, Huawei Technologies (UK) Co., Ltd**
	Session chaired by SIG Champion, Simon Fletcher, Real Wireless
13:45	**'The evolution of indoor cellular networks'** **Ray Williamson, Director of Product Management, Huawei** Looking at the increasing demands of consumers and businesses and the demands these place on indoor wireless solutions. The market and the eco-system is ready to embrace the digital revolution and vendors such as Huawei is ready to serve these market and consumer demands with innovative products and by supporting new business models.
14:00	Q&A
	Session chaired by SIG Champion, David Chambers, ThinkSmallCell
14:05	**'Co-life: DAS vs Small Cells'** **Graham Payne, CEO, Opencell** 'Co-life' is about the growth in co-working and co-living which is increasing rapidly at present. Where will this lead to, what are the needs of this change in living and working environment and how can we best support it? Graham Payne offers his opinion on DAS vs Small Cells in the context of 'co-life'.
14:25	Q&A
	Session chaired by SIG Champion, Simon Saunders, Google
14:30	**Bob Slorach, CTO, Wireless Infrastructure Group**
14:50	Q&A
14:55	**Refreshments and networking**
	Session chaired by SIG Champion, Simon Saunders, Google
15:15	**Adis Omeragic, Special Projects Manager, EE**
15:35	Q&A
15:40	**Panel session with all speakers chaired by SIG Champion, Neil Piercy, ip.access**
16:10	**End of session followed by refreshments and networking**
17:00	**Event closes**

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 20 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 host & sponsor

Huawei Technologies (UK) Co., Ltd
Huawei is a leading global information and communications technology (ICT) solutions provider headquartered in Shenzhen, China. Our ICT solutions, products, and services are used in more than 170 countries and regions, serving over one-third of the world's population. With 180,000 employees, Huawei is committed to enabling the future information society, and building a Better Connected World. With 15 offices around the UK, Huawei employs more than 1,400 people who are helping to build a more prosperous, more productive and more connected future for the UK. We are proud to have achieved our £1.3 billion five-year investment and procurement target for the UK which was announced in 2012, thereby becoming one of Britain's largest sources of investment from China. Since 2012 we have acquired Neul, the Cambridge based Internet of Things company, opened a Narrowband IoT Open Lab with Vodafone, helped roll out 4G and broadband networks around the UK for customers including EE, BT, Vodafone, and begun pioneering the development of 5G technologies. In 2016 we celebrated our first 15 years in the UK, launched the Huawei P9, which we co-engineered with LEICA, entered a partnership with BT to research network slicing, and signed a three year MoU with UKTI (now Department of International Trade), which demonstrates our commitment to even higher standards of corporate governance as a springboard for further growth and success in the UK and beyond. **www.huawei.com**

Profile of SIG Champions

David Chambers, ThinkSmallCell
David Chambers is Founder and Senior Analyst at ThinkSmallCell.com, an independent website which has tracked the evolution of small cells from their early femtocell origins. With both an engineering and marketing background, and a career spanning product management and marketing for several large telecom vendors, he has gained insight and experience by meeting with mobile operators worldwide. Well known throughout the small cell industry, David writes articles, white papers and presents at conferences on all aspects of the subject. Based in a firm belief that the only technical solution to meet strong data demand is rapid deployment of large numbers of small cells, David continues to be a strong advocate of their adoption whilst pointing out their technical and commercial constraints. **www.thinksmallcell.com**

Simon Fletcher, Real Wireless
Simon joined Real Wireless in January 2016 as Chief Technology Officer, taking overall technical responsibility across the company. Recognised as a regular speaker at industry events and currently acting as chairman of the CW Future of Wireless Conference Organising Committee and Small Cell SIG Champion, Simon brings an enviable network of contacts to Real Wireless alongside a proven ability to lead teams in delivering technical projects while identifying and meeting new strategic goals for the wider business. His long-standing association with the UK innovation eco-system as a director of mVCE and the Innovate-UK ICT-KTN brings a wealth of knowledge on the application of strategic research through open innovation to accelerate product and services delivery. In recent times his focus has been on future cities, the application 5G and IoT in industry verticals with an event horizon towards 2030.Simon spent the past 20 years working in the design and development of technical telecoms infrastructure. Beginning his career in technology demonstrators at Racal Radar Defence Systems, he moved to Telecoms Modus in 1999 to play

a key role in the development of 3G products and in 2006 he established a core architecture team that helped develop the first-generation of technology for 4G systems culminating in a Steering Board position in the LTE SAE Trials Initiative (LSTI), a global forum with a mission to assure the early adoption of LTE. His long participation in Common Public Radio Interface (CPRI) defining early C-RAN concepts brings great foresight on an important architectural element of emerging 5G architectures. **www.realwireless.biz**

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 Head of Research he is responsible for ip.access future products and technologies. He is an active member of the Small Cell Forum, a Champion for their work on the Virtualisation of small cells. He is currently a representative for the EU project SESAME on the 5GPPP Architecture group. **www.ipaccess.com**

Simon Saunders, Google
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 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.google.co.uk**

Profile of speakers

Ray Williamson, Huawei Technologies (UK) Co., Ltd @Huawei
Ray leads the Product Management team responsible for strategy and solution definition for current 2G, 3G and 4G networks, how these evolve to 5G and how these network enable new services such as IoT, WTTx and AR/VR. He has over twenty years of experience in the wireless communications field in Engineering and Business Development roles and has held leadership positions in Product Management. Ray has been involved in the study, design and launch of small cell solutions for over 15 years and conducted early field trials of the microcellular algorithms which we became the enabler for GSM's first "layered networks". Ray joined Huawei in 2013 having previously worked at Motorola and NSN. He holds a BSC (Hons) in Telecommunications and a PGDBA (Finance). **www.huawei.com**

Adis Omeragic, EE @EE
Profile to follow. **www.ee.co.uk**

Graham Payne, Opencell @youvegotnetwork
Advisor to global mobile connectivity groups including Executive level support to Vodafone on the Beacon project with Telefonica and CTIL, former MD of MBNL, planning and deployment director of T-Mobile, Graham co-founded Opencell. Opencell is the first legal, indoor mobile signal solution provider in the UK able to deliver all 4 Operator networks using small cells. Influencer of International groups investing in the future of infrastructure connectivity and mobile networks, Opencell's managed signal solutions include all major operators, ensuring everyone indoors has got network. Graham said: "Having worked in the Telecoms industry providing macro coverage, I realised that the only way to enable great, multi-operator, mobile signal indoors is by providing a solution within the building itself hence founding Opencell." **www.opencell.co.uk**

Bob Slorach, Wireless Infrastructure Group
Profile to follow. **www.wirelessinfrastructure.co.uk**