

Small Cell SIG

'Does Cloud RAN/Network Virtualisation mean the end for Small Cells?'

24th September 2015

This SIG is championed by David Chambers of **ThinkSmallCell**, Simon Fletcher of **NEC Telecom MODUS**, Paul Kenworthy and Simon Saunders of **Real Wireless**.

Venue: Emmanuel College, St Andrews Street, Cambridge CB2 3AP

AGENDA

14:00 Registration and networking with refreshments

14:30 Introduction to Small Cell SIG from **Simon Saunders, Real Wireless**

Session chaired by SIG Champion, Simon Saunders, Real Wireless

14:40 **'Business drivers and trade-offs between Small Cells and RAN Virtualisation'**
David Chambers, Founder and Senior Analyst, **ThinkSmallCell**

Various RAN Virtualisation architectures have been proposed which balance benefits between spectral efficiency, backhaul/fronthaul and hardware platforms. David recaps the technical alternatives and shares insights into some of the deeper commercial drivers (and consequences) between them. Will virtualisation open up competition throughout the RAN or reinforce lock-in to mainstream vendors? What capabilities would be needed from backhaul/fronthaul technologies in support?

15:00 Q&A

15:05 **'Wireless fronthaul as a C-RAN enabler'**
Gael Derven, VP Partnership and Business Development, **EBlink**

The high throughput/low latency requirements for Cloud RAN would surely rule out most wireless fronthaul options. Gael dispels that myth and discusses how both Small Cells and Remote Radio Heads have a contribution to make in the context of Cloud RAN. He'll also investigate the Total Cost of Ownership equation comparing wireless with wireline alternatives.

15:25 Q&A

15:30 **Title To Be Confirmed**
Xinjie Yang, Product Manager, **NEC Europe Ltd.**

15:50 Q&A

15:55 **Refreshments and networking**

Session chaired by SIG Champion, David Chambers, ThinkSmallCell

16:25 **'How can fixed network services evolve to support RAN Virtualisation?'**
Adrian Sharples, Group Strategy, **British Telecommunications**

Fixed network operators have long provided backhaul connections for mobile network operators, with many city centre sites now connected through Gigabit Ethernet. What services could (and should) they offer to MNOs in support of RAN Virtualisation, and why would these be more attractive the wireless or dark fibre alternatives?

16:45 Q&A

16:50 **'Connecting the urban metropolis with self-organising multipoint-to-multipoint wireless backhaul'**
Eric Wilson, Head of Business Development, **Cambridge Communication Systems Ltd**

Many wireless architectures and technologies have been proposed for urban small cell deployment. Steve explains why a more resilient and adaptable topology fits practical requirements, shares real-world experience from early deployments and discusses which of the RAN Virtualisation proposals are feasible with this technology.

17:10 Q&A

17:15 Panel session with all speakers chaired by SIG Champion, **Simon Fletcher, NEC Telecom MODUS**

17:45 **Event closes**

Delegates are invited to attend the Founders' Dinner pre-dinner drinks, taking place at Emmanuel College in the Old Library

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 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 the annual Future of Wireless International Conference and Discovering Start-Ups competition 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. For more information, please visit www.cambridgewireless.co.uk

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. For more information please visit www.thinksmallcell.com

Simon Fletcher, NEC Telecom MODUS

Simon leads development of emerging global market product strategies and portfolio alignment, including innovation programmes within the NEC Corporation group of companies. His primary system focus is infrastructure and network edge technologies. In CW he is a Small Cell SIG Champion. He has represented NEC in two global product oriented joint venture enterprises developing 3G and 4G radio access products; working in various systems consulting and development project management roles. He represented NEC Corporation in the LSTI (LTE SAE Trials Initiative) steering board and manages co-ordination of 3GPP RAN1 and associated interdependence across 3GPP, CPRI, other standards bodies and industry forum. As acting CEO and a Director of mVCE (a UK research forum leveraging the assets of leading UK communications research groups) he is a Director of the ICT-KTN and works with the University of Surrey business school. At present Simon's focus is leading developments in the migration of 4G towards 5G, SDN (including virtualisation), entrepreneurial society, and ICT for city and wider society benefit. For more information please visit uk.nec.com

Paul Kenworthy

Paul Kenworthy has twenty years of experience in wireless communications and international business. Most recently Paul was the sales & marketing manager for Ranplan Wireless Network Design where he spearheaded the generation of major new business and global brand awareness for the company. Previously he founded Apoideas, who developed an ultralow power wireless communications platform for telemetry applications. And prior to this Paul was in business development, account management and product management & engineering roles at Motorola/TTPCom and NEC. Paul holds an MBA from the University of Cambridge and BEng (Honours) degree in electrical & electronics engineering from Monash University (Australia).

Simon Saunders, Real Wireless

Simon is an independent 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). As co-founder of Real Wireless, he is responsible for overall technical capability and direction. He is an author of over 140 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. 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, Visiting Professor to the University of Surrey, member of the industrial advisory board at University College London and was founding chairman of Small Cell Forum (formerly Femto Forum), which he chaired from 2007-12. He is a member of the Ofcom Spectrum Advisory Board. For more information please visit www.realwireless.biz

Profile of speakers

David Chambers, ThinkSmallCell

Please see SIG champion profile above.

Gael Derven, EBlink

Gael Derven is VP partnership and business development at EBlink. He is responsible for establishing and managing partnerships with OEM vendors, aiming at expanding E-Blink reach and business worldwide. Gael has over 20 years' experience in sales, marketing and business management with international experience from companies such as the French Space Agency, wireless operator Orange and equipment suppliers Nortel and Comverse Netcentrex. For more information please visit e-blink.com

Adrian Sharples, British Telecommunications

Adrian Sharples joined the Radio Division of then BT Research Laboratories in 1989, working on antenna design and radio propagation prediction for the satellite, fixed microwave and mobile network services. Adrian subsequently focused on mobile radio network design, involving TACS, TETRA, GSM, WCDMA and LTE for BT and Cellnet, culminating in him leading the 3G radio design team at O2 UK. During this period he also contributed to spectrum auction preparation in several countries. In 2008 Adrian re-joined the Technology Strategy team in BT Group where he is involved with the definition and rollout of BT's fixed and mobile access products. For more information please visit www.openreach.co.uk

Eric Wilson, Cambridge Communication Systems Ltd

Eric joined CCS in 2012 to lead the growth of the company's international sales and business development. He brings more than 25 years' worldwide experience in telecommunications, which includes several senior roles at Lucent Technologies. He served as VP Sales & Chief Operations Officer for Lucent Europe, VP Sales for Mobility Europe, Mobility Segment leader for the North America region, and various roles in strategy, business development and M&A.

In recent years, Eric has engaged in consultancy and interim management roles, including SVP Business Development and Head of Global Sales & Marketing for Cambridge Broadband Networks, where he led the successful market entry for small cell mobile backhaul solutions into global mobile operators. Eric is also an advisor to Impact Broadband and Indigo Telecom, who are launching rural broadband networks in emerging market regions with limited or no telecom or electricity infrastructure. For more information please visit www.ccsl.com

Xinjie Yang, NEC Europe Ltd.

A recognized 3G/LTE specialist with more than 15 years background in GSM, WiMAX, UMTS, HSPA, LTE and beyond systems with unique combination of technical marketing, product management and research experience. Most recent working focus on 3G and LTE small cell product management. For more information please visit uk.nec.com