

SMALL CELLS WORLD SUMMIT 2019

21–22 May 2019, London

V11 16 May 19

WWW.SMALLCELLS.WORLD

AGENDA

The state of the art and the art of the possible for network densification with small cells: Markets, solutions, roadmaps, business cases and commercial models, ecosystem, case studies, spectrum, planning & deployment, regulation and legislation.

The two-day agenda is based around the following eight sessions. Each will hear different perspectives on a common theme, followed by healthy panel debate and Q&A to conclude what is needed to move the industry forward.

Tues 21 May

AT&T
BT Wholesale
Turkcell
Rethink Research
Real Wireless

State of the Industry Keynotes

SK Telecom
Huawei
Qualcomm Atheros
ZTE
Nokia

Indoor Solutions, 5G readiness, mmWave

TowerXchange
Wireless Infra Grp
DenseAir
Colt
Commscope

Neutral Hosting

Digital Colony
BT Wholesale
Crown Castle
JMA Wireless

Weds 22 May

5G Smart Cities & Policy to enable them

City of London Corp
City of Amsterdam
London Boroughs
Smart Docklands Dublin
DCMS
Prof. William Webb

Disaggregated Architectures: Virtualisation, Open Source & Transport/Sync

BT Research and TIP
SCF and Intel
Reliance Jio
ADVA
NodeH
SCF AT&T

IOT & critical comms with Private LTE/5G & Edge computing

Customer
Druid Software
TIA
MuLTEfire Alliance
Real Wireless

Spectrum for 5G Era Applications and Services

Crown Castle
DCMS
Ofcom
DenseAir
UK Spectrum Policy Forum

**SCF Small Cell Awards
and Gala Dinner 2019**

Event details and registration: WWW.SMALLCELLS.WORLD

SMALL CELLS WORLD SUMMIT 2019

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Tuesday 21 May Morning

09:00-10:30 – State of the Market 2019: Keynotes & Analyst Update

The small cell ecosystem is very much in a state of flux, with new players and technologies gaining traction and establishing market share. The purpose of this conference is to take stock of these changes and decide what further action is needed to move our industry onwards. It provides a platform to share recent successes, recommend best practice as well as identifying and removing the barriers to ongoing growth.

- What's the latest market progress for densification with small cells and adjacent technologies?
- What are the densification implications of 5G? What is being done to ensure 5G readiness?
- How will factors like spectrum, silicon and device penetration dictate 5G rollout?
- Is today's densification predominantly indoor or outdoor or both? Will that change?
- Who's currently deploying small cells: MNOs? Neutral hosts, system Integrators, IT consultants? end users?
- Which technologies are set to be the next game changers? What would make the industry grow faster?
- **Moderator:** Julius Robson, Chief Strategy Officer, SCF
- **Speakers and Panellists**
 - Keynote: "*Network Densification in the 5G Era*", David Orloff, AT&T and Chair SCF
 - Keynote: "*The Deployment of Small Cells for the Network of the Future*", Gavin Jones, MD Mobile Operator, Media and Broadcast Divisions, BT Wholesale
 - Turkcell's small cell deployment case studies, Ali Burak Gocer, Senior Radio Network Planning & Optimization Engineer, Turkcell
 - "*State of the Market for Densification*": Caroline Gabriel, Rethink Research
 - Simon Fletcher, CTO, Real Wireless
 - Dean Bubley, Disruptive Analysis

11:00-13:00 Indoor Coverage Solutions and 5G Readiness

- Where's the hard evidence that good mobile signal benefits property value?
- What are enterprise's different options to get indoor coverage? What are the channels to market?
- How should we split the bill for indoor deployment between MNO and Enterprise?
- What are the different technical and commercial solutions available?
- How can indoor deployments be future-proofed to be 5G ready?
- Will mmWave be used indoors? How does that change our deployment thinking ?
- What is the message to enterprise regarding 5G or 4G?
- **Moderator:** Caroline Gabriel, Rethink Research
- **Speakers and Panellists**
 - "*5G Inbuilding Solution Commercialization*", Ki Seok Yang, Access Network Development, SK Telecom
 - "*Digital Indoor System Leads Indoor 5G Commercialization*", Marvin Chen, President of Digital Indoor System Product Line, Huawei
 - "*Breaking the wireless barriers to mobilize 5G NR mmWave*", Puneet Sethi, Sr. Director, Product Management. Qualcomm Atheros, Inc.
 - Randy Cox, Senior Director, Product Management, Small Cells and mmWave , Nokia
 - Summer, Chen Zhiping, Director of Wireless Solution, ZTE Corporation

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Tuesday 21 May Afternoon

14:00-15:30 Neutral Hosting

Neutral hosting is an area of great interest within the SCF, with a range of companies from DAS, Tower and fibre/broadband background looking to leverage small cells in their portfolios and deliver services, of and to, multiple operators.

- Are neutral hosts ally or threat to MNOs?
- ...Even if they start acquiring spectrum?
- How strong is the market pull for multi-operator signal?
- What technologies do neutral hosts use?
- How can virtualisation help neutral hosts and multi-operator ?
- Where are efficiencies to be had through sharing? How easy is sharing in practice?
- What makes sense to share and what's best left separate?
- Do indoor and outdoor neutral hosting address entirely separate markets, or are their synergies in doing both?
- Are current neutral hosting models highly region specific?
- What are the barriers?
- What would enable the neutral host market to grow faster?
- **Moderator:** Julius Robson, Chief Strategy Officer, SCF
- **Speakers and Panellists:**
 - "TowerXchange Market Update", Kieron Osmotherly, CEO, TowerXchange
 - "Perspectives on neutral host wireless infrastructure in the UK", Scott Coates, CEO, Wireless Infrastructure Group
 - "Neutral hosting with shared spectrum", Paul Coffey, Head of Strategy, DenseAir
 - "Shared/Neutral Host, Wireless Infrastructure", Mark Reudink, Director Of Product Development , Crown Castle
 - "SDN agile transport for neutral hosting", Mark Gilmour, VP - Mobile Connectivity Solutions, Colt Technology Services

16:00-17:30 Neutral Hosting

- "Shared infrastructure: the future of mobile networks", Graham Payne, UK CEO, Digital Colony
- "A Problem Shared..", Ian Newbury, General Manager Mobile Product Management & Solutions, BT Wholesale
- "Neutral hosting with shared virtualised RAN", Morten Tolstrup, Executive Director, MarCom & Learning Strategy, JMA Wireless
- Stuart Holyoak, Director, Small Cells Business Development -Europe, Commscope

19:30 SCF Small Cell Awards and Gala Dinner 2019

Please make sure you have purchased your ticket for this very special occasion.

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Wednesday 22 May Morning

09:00-10:50 5G Smart Cities & Policy to Enable Them

5G hype has raised wide awareness of the potential societal and economic benefits of connected society, and governments the world over are implementing policies to expedite adoption.

- How are municipalities leveraging connectivity to put themselves ahead in the race to 5G?
- What's the business case for a city to become 'smart'?
- What are the emerging applications for small cells in smart cities and IOT applications?
- What challenges are being faced in deploying infrastructure?
- Several regions are introducing legislation to facilitate small cell deployment and break barriers to rollout - How are small cells defined in legislation?
- What's the expectation from the current EC light deployment regime? What will the UK do?
- Do we expect legal challenges? Which are the most contentious issues?
- How do local authorities feel about this?
- Does article 57 challenge the concession model? What's the alternative?
- **Moderator:** Prof. William Webb, CEO Webb Search
- **Speakers include:**
 - *"From trials to deployment: Europe's 5G cities"*, Burcu Kuzlak, City of Amsterdam
 - *"Preparing for a 5G City - City of London Wireless Concession"*, Steven Bage, Strategic Infrastructure Advisor – City of London Corporation
 - *"The practicalities of building smart cities"*, Mark Lumley, Head of ICT – Royal Borough of Kingston upon Thames and Norm Steel, Digital Programme Manager – Royal Boroughs of Kingston and Sutton
 - *"Smart Docklands in Dublin"*, Michael Guerin, Smart Docklands Dublin
 - *"Government initiatives in Busting Barriers to 5G"*, Louise Lancaster, Joint Head of Barrier Busting Task Force, 5G, Department for Media Culture Media and Sport

11:10-13:00 Disaggregated Architectures: Virtualisation, Open Source & Transport/Sync

- Is the main benefit of disaggregation in performance or for commercial reasons?
- Is this just a 5G thing, or applicable to 4G too? Is it for indoor or outdoor or both?
- Will one split 'win' and serve all future needs, or will different splits apply to different scenarios?
- How will the availability of silicon impact the choice of split option?
- Are split architectures needed to do NFV?
- Does virtualisation necessarily imply 'cloud native'?
- How is the industry harnessing open source implementations?
- Do we understand the X-haul requirements i.e. speed, latency and reliability?
- What are the synchronization requirements and solutions to enable such architectures?
- What do MNOs think a 5G transport network architecture looks like?
- **Moderator:** Prabhakar Chitrapu, AT&T, Chair SCF Technology and 5G group
 - **Speakers and panellists include:**
 - *"5G and the shape of RANs to come"* Ravi Sinha, Reliance JIO
 - *"Transport Implications of the disaggregated and virtual RAN, sync, latency and high speed connectivity"*, Anthony Magee, Director Business Development – Mobile, Gil Biran, SVP and GM Oscilloquartz BU, ADVA
 - *"Disaggregated RAN architectures"*, Richard MacKenzie, Principal Researcher, BT and TIP
 - *"SCF's 5G PHY API for Small Sells"* Clare Sommerville, Lead SCF FAPI, Intel
 - Mike Cronin, CEO, NodeH

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Wednesday 22 May Afternoon

14:00-15:30 IOT & critical comms with Private LTE/5G & Edge computing

- What are the emerging applications for small cells in smart cities and IOT applications?
- Which situations demand cellular over Wi-Fi?
- What's the role of Edge compute in supporting IOT applications?
- What are the lead verticals in adopting this approach?
- What spectrum is being used?
- How will MNOs monetise Edge compute?
- When will private 5G networks start to be commercially deployed?
- How do we grow this sector... (shared spectrum? See next session)
- **Moderator:** Simon Fletcher, CTO, Real Wireless
- **Speakers and panellists include:**
 - *"Customer experiences with Private LTE"*
 - *"Where Edge has the Edge: Serving Critical Comms and IOT"*, Tadhg Kenny, SVP Business Development & Marketing, Druid Software
 - *"Connecting IoT Devices, Edge Data Centres, and Private Networks to Create Smarter Buildings"*, Harry Smeenk, TIA
 - *"License Exempt LTE with MulteFire and sXGP"*, Nanda Menon, MulteFire Alliance Representative and Business Development for Athonet

1600-17:30 Spectrum for 5G Era Applications and Services

Licensed spectrum for a small number of competing MNOs has got us where we are today, creating the conditions which have built-out high quality national mobile voice and data networks. For everything else, there's license exempt for Wi-Fi, Bluetooth etc.

- Does this remain right spectrum model for the next era: Smart society and the internet of things?
- The FCC have/are trying LSA with their CBRS band for OnGo. What's are the expectations?
- Is there anywhere else in the world that is or will do something similar? What about UK/Europe?
- What are the expected outcomes from the UK's spectrum sharing consultation?
- Would the disruption be healthy competition for mobile networks, or could it undermine national mobile networks?
- Does the listen-before-talk requirement of license exempt fundamentally limit its ability to cope under heavy loading, or can MuLTEfire, 802.11ax BSS colouring fix that?
- **Moderator:** Peter Curnow-Ford, Partner & Co-Chair, Spectrum Access Group - UK Spectrum Policy Forum
- **Speakers and panellists include:**
 - *"Small cells with CBRS"* Mark Reudink, CrownCastle and Chair SCF Business Group
 - *"Coverage and Sharing requirements for Spectrum in the UK"* Anna Cartwright, Head of Mobile and Spectrum Policy – UK Department of Culture, Media and Sport
 - *"Making Spectrum available to support innovation"*, Armelle Boisset, Director of Spectrum Engineering, Ofcom
 - Paul Trubridge, Head of RAN, DenseAir
 - Nanda Menon, MulteFire Alliance Representative and Business Development for Athonet

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