

**All Speakers are now confirmed**

## **The 10<sup>th</sup> Annual European Spectrum Management Conference**

**Management Centre Europe, Brussels  
15 & 16 June 2015**

### **DAY 1**

#### **Session 1: Keynote Session**

Moderator: **Gerard Pogorel**, Professor of Economics and Management-Emeritus, Telecom ParisTech (**confirmed**)

#### **09:00 – 09:05 Introductory Presentation**

**Andreas Geiss**, Head of Spectrum Policy Unit, European Commission (**confirmed**)

#### **09:05 – 09:25 Keynote Presentation**

**Gunnar Hökmark**, MEP. European Parliament (**confirmed**)

#### **09:25 – 09:45 Keynote Presentation**

**Gilles Brégant**, Chair, RSPG (**confirmed**)

#### **09:45 – 10:05 Keynote Presentation**

**Lidia Kozłowska**, Vice Chair, BEREC (**confirmed**)

#### **10:05 – 10:25 In conversation with the policymakers...**

*What are the key strategic spectrum considerations for policymakers in Europe as we move towards the development of the internal digital market, and the expected release of the telecoms review in 2016?*

#### **10:25 – 10:50 Morning Coffee Break**

#### **Session 2: The future of the 700MHz band – developing a blueprint for the benefit of users and consumers in Europe**

Following the Commission's UHF High Level Group setting a transition path and roadmap for shifting the 700 MHz band to mobile users across Europe, member states are now looking at reallocating the spectrum with the aim of meeting the deadline set of 2020 (plus/minus 2 years). This session will look at the allocation and coordination issues that are arising and as part of the transition phase, as well as looking forward to the future shape of the 700MHz band, the technologies and services that it can enable and the way forward to maximize its benefit for the digital economy and consumers everywhere.

*What is the state of allocation in different countries across the EU and what dates are being proposed for the release of the 700 MHz band for mobile broadband?*

*What co-ordination issues are arising and what work is being done to help in this area?*

*What can be done to manage interference and how can it be best ensured that there is no disruption to TV services, especially in countries where DTT is the main TV platform?*

*What are the long-term advantages and disadvantages in using the 700 MHz band for wireless broadband services in the EU?*

*What new technologies and business-use cases can the 700Mz band be used to enable, and*

*how can its potential be maximised for the benefit of all?*

*What effect can the use of the 700Mhz band have on connectivity in rural areas - is it going to increase downlink speed or simply provide an extension of capacity?*

*What potential does the 700Mz band offer to meet the broadband needs of Public Safety Users?*

Moderator: **Eric Fournier**, Chairman, CEPT's Electronic Communications Committee **(confirmed)**

**10:50 – 11:00** **Introductory presentation from moderator**

**11:00 – 12:25** **Panel Discussion:**

**Vincenzo Lobianco**, Chief Technology and Innovation Officer, AGCOM **(confirmed)**

**Rüdiger Hahn**, Head of Department - Legal Aspects of Telecommunications Regulation, Frequency Regulation, BNetzA **(confirmed)**

**Simon Fell**, Director of Technology and Innovation, EBU **(confirmed)**

**Tor-Helge Lyngstøl**, Director General, Directorate for Emergency Communication - DNK **(confirmed)**

**Wladimir Bocquet**, Head of Policy Planning, Government & Regulatory Affairs, GSMA **(confirmed)**

**Mark Colville**, Principal, Analysys Mason **(confirmed)**

**12:25 – 13:45** **Lunch**

**13:45 – 14:05** **Keynote Presentation – Spectrum Management and the Digital Single Market**

**Kamila Kloc**, Deputy Head of Cabinet for Vice President Ansip, European Commission **(confirmed)**

**Session 3: Offloading and beyond – creating an environment to support the explosive growth in data and deliver wireless innovation**

Although small cells have long been on the roadmap of policymakers and operators, until now they have often been seen as more of a 'next year' scenario. However, the role of WiFi and small cell devices in both traffic offloading and other areas is becoming increasingly important, and many are predicting that the time is now right for the technology to go mainstream. This session will look at the potential of small cell and WiFi technologies both in offloading and also other areas, and at how this can be achieved. Taking things a step further, it will also look at innovations in other wireless technologies (e.g. satellite), and the role that they can also play in offloading traffic and reducing demand for traditional mobile spectrum.

*How can we best take advantage of the fact that every day, millions of consumers are making calls and using mobile data within easy reach of a broadband connection?*

*What potential do WiFi and small cell devices offer both in terms of offloading and in the wider infrastructure (e.g. smart meters, Internet of Things), and what needs to be done to remove barriers relating to their deployment?*

*What potential benefits does licensed assisted access (LAA) offer, and can the technology be complementary and co-exist in the unlicensed 5Ghz band with WiFi, or do the 2 technologies provide a competitive threat to each other?*

*What changes in LTE air interface may be necessary to facilitate this?*

*What technology mix provides the most efficient method of traffic offloading?*

*What will the spectrum requirements of these technologies be, and what bands can be used?*

*With video content estimated by some to be responsible for upto 80% of the increase in data traffic, what can be done to reduce the risk of these data-heavy services causing infrastructure congestion?*

Moderator: **Andreas Geiss**, Head of Spectrum Policy, European Commission **(confirmed)**

**14:05 – 14:15** **Introductory presentation from moderator**

**14:15 – 15:40** **Panel Discussion**

**Luis Lucatero**, Independent Spectrum Expert & Former Head of the Telecommunications Regulation Research Unit, IFT Mexico **(confirmed)**

**Scott Blue**, Technology Policy Group, Microsoft **(confirmed)**

**Jussi Kähtävä**, Managing Director, Allied Spectrum Associates **(confirmed)**

**Ethan Lavan**, Member, Regulatory Working Group, ESOA **(confirmed)**

**Javier Domínguez Lacasa**, Head of Spectrum Policy, Telefónica S.A. **(confirmed)**

**15:40 – 16:00** **Afternoon Coffee Break**

**Session 4: Breakout Sessions**

*Delegates have the option of attending one of the following two parallel sessions:*

**Breakout 1: Backhaul - meeting the high bandwidth demands at the edge of the network**

As mobile networks are evolving to respond to an increased broadband usage, the backhaul link connecting access points to the wider network is also having to deal with ever increasing bandwidth demand. With the introduction of 5G and the growth in new technologies such as small cells and IoT also inevitably leading to an increase in the number of wireless backhaul links, this has led to some now discussing this aspect as possibly having the potential to create a bottleneck. This session will look at the extent to which this is a realistic problem in the short term and long term, and the role of both wireless microwave solutions and fibre solutions in creating a backhaul technology strategy to avoid this.

*Is there a real potential for a bottleneck to develop in the backhaul link, and what can be done to avoid this?*

*What additional pressure will be placed on backhaul links by 5G and the huge growth that is expected to be seen in the number of connected devices?*

*What can realistically be achieved with wireless technologies in the area of backhaul, and to what extent can wireless backhaul be used as part of a solution?*

*To what extent will fibre remain a critical technology for backhaul, and how can it be ensured that all users receive fair access to this at reasonable prices?*

*What are the respective advantages and disadvantages of wireless backhaul solutions as opposed to using fibre or copper lines in terms of capacity, distance, flexibility and total cost of ownership (TCO)?*

*What spectrum is required to deliver the microwave solutions necessary for wireless backhaul, and what implications may this have for spectrum management policies at the EU level?*

Moderator:

**Philippe Defraigne**, Director, Cullen International **(confirmed)**

**16:00 – 17:30 Panel Discussion**

**Peter Gál**, Rapporteur of the WG on Spectrum issues on Wireless backhaul, RSPG (**confirmed**)

**Renato Lombardi**, Chairman of ETSI ISG mWT, Huawei (**confirmed**)

**Steve Blythe**, Director of Spectrum Strategy, Orange (**confirmed**)

**Steve Greaves**, CEO, CCS (**confirmed**)

**Breakout 2: Auctions and spectrum awards – can "best practice" be coordinated or mandated?**

After the wave of 4G awards across Europe from 2010-2014, a new wave of spectrum awards is on its way. Starting this year with Germany and France, a new digital dividend band at 700 MHz will be auctioned. Meanwhile, new mobile bands at 1.4 GHz, 2.3 GHz and 3.4 GHz are also planned for release. This spectrum will be used to provide additional capacity for roll out of advanced LTE services with exceptional speeds.

For the 4G awards, member states took widely different approaches to awards of spectrum, for example with respect to renewal of existing holdings, reserve prices, auction formats, spectrum caps and transparency. The RSPG is currently working on a report based on experiences of member states that may provide guidelines for future award planning, and will consider whether there is a case for greater European co-ordination. Meanwhile, the Commission may be minded to propose more formal obligations on members. In this session, we'll look ahead to future awards, discuss what a European blueprint for successful awards might look like, and whether some actions should be mandated or coordinated.

*What objectives should regulators be looking to achieve when awarding spectrum, and how can these best be met?*

*How can regulators ensure that the prices paid by operators for spectrum is fair, and that operators are incentivised to innovate and invest in new networks?*

*What does "best practice" mean in the context of a spectrum auction?*

*Were the differences in approach to 4G auctions justified by local conditions? Have such differences enhanced or hindered competition in mobile?*

*What spectrum awards are currently planned across Europe, and what format and rules will be used? Is there any evidence that regulators are responding to observed best practice across Europe?*

*Are there areas in which greater co-ordination at a European level is needed and, if so, what form should this take?*

Moderator: **Dr Soren Sorensen**, Associate Director, NERA (**confirmed**)

**16:00 – 17:30 Panel Discussion**

**Chris Woolford**, Rapporteur, RSPG Working Group looking at spectrum awards, best practices and award conditions (**confirmed**)

**Dr Robert Leese**, CEO, Smith Institute (**confirmed**)

**Stephen Pentland**, Head of Spectrum Policy, Vodafone Group (**confirmed**)

**Dr Georg Serentschy**, Senior Advisor to SPECURE GmbH (**confirmed**)

**Erlend Fanebust**, SVP, Head of Spectrum and Analytical Decision Support, Telenor (**confirmed**)

**17:30 – 19:00 Networking Cocktail Reception – Kindly sponsored by BNE**

## **Session 5: WRC15 – common ground, areas of disagreement and likely outcomes**

With the Conference Preparatory Meeting (CPM15-2) having now taken place, we are moving into the final stretch of preparation for the key WRC-15 meeting in November, and the majority of regional positions have now started to become clear. This session will look at the positions that have emerged both in Europe and elsewhere, at where there is consensus, and where there are differences. Moving forward, it will look at what this is likely to mean for discussions at WRC, and at the likely outcomes across the key agenda items.

*What positions have Europe and other regions taken on the key agenda items?*

*Are there any surprises in the positions put forward, or are there any areas in which further changes or surprises are likely?*

*Where is there consensus and where are there differences?*

*What are the main crunch points and in which areas are European positions likely to come under the most pressure?*

*What do European policymakers need to do to best ensure that decisions taken at WRC are in the best interests of European spectrum users and consumers?*

*What are the likely outcomes?*

Moderator: **François Rancy**, Director, Radiocommunication Bureau, ITU (**confirmed**)

### **09:00 – 09:15 Introductory presentation from moderator**

#### **09:15 – 09:30 Current thinking in Africa on the key agenda items**

**Kezias Mwale**, Technical Coordinator, African Telecommunication Union (ATU) (**confirmed**)

#### **09:30 – 10:45 Panel discussion**

**Alexander Kühn**, Chairman, WRC-15 Conference Preparatory Group, CEPT (**confirmed**)

**Lasse Wieweg**, Director, Government and Industry Relations, Ericsson (**confirmed**)

**Lars Backlund**, Secretary General, Broadcast Networks Europe (BNE) (**confirmed**)

**Daniela Genta**, Chair, WRC-15 Working Group, EMEA Satellite Operators Association (ESOA) (**confirmed**)

**Hans Borgonjen**, International Coordinator, vts Police Netherlands (**confirmed**)

### **10:45 – 11:05 Morning Coffee Break**

## **Session 6: Post WRC-15: Building the future spectrum environment**

With many key bandplan and reallocation decisions set to be made at WRC-15, we are currently seeing a big push from various stakeholders looking to secure more spectrum. Once these decisions have been made however, it is unlikely that there will be an opportunity for additional bands for at least a few years, so focus will likely switch to what can be done to increase the efficiency of existing spectrum, and at building and standardizing the networks that are required to deliver 5G and future technologies and services. The next 2 sessions will look at what the shape of the post WRC-15 spectrum ecosystem may be, at what needs to be done to encourage the required investment in infrastructure and standards and at the technological and policy options that are available to enable all spectrum users to get more out of their existing bandwidth.

## **Session 6.i: Integrity, innovation, investment: Delivering a world-leading mobile ecosystem in Europe**

*What is the shape of the mobile ecosystem likely to be in Europe post WRC-15, and which are likely to be the key frequency bands?*

*How does investment in networks and future standards in Europe compare with that in the US and other regions, and does Europe risk falling behind in the development of next generation telecoms technology?*

*What is the true value of LTE spectrum, and are recent prices that have been seen justified?*

*What needs to be done to foster the required investment in networks and standards to both deliver on the digital single market and ensure Europe is at the forefront of building the IoT and 5G vision?*

*What is the role of both the private and public sectors in achieving this?*

*How can it be ensured that mobile networks can efficiently accommodate the increased number of connected devices and services that are forecasted as a result of the rapid growth of IoT?*

*What role can new technologies such as carrier aggregation and supplementary downlink play in increasing spectrum efficiency and driving forward innovation in the region?*

*How efficient is current spectrum usage in the lower-C band (3.4GHz – 3.8Ghz), and can this provide an option for small cells and TDD?*

*What can be done to ensure wireless networks meet the requirements of vertical connectivity?*

**Moderator: Graham Louth**, Partner, Aetha Consulting (**confirmed**)

### **11:05 – 11:20 The View of the European Commission**

**Carlota Reyners-Fontana**, Deputy Head of Unit on Spectrum, European Commission (**confirmed**)

### **11:20 – 11:35 Presentation**

**Frédéric Pujol**, Head of Radio Technologies & Spectrum Practice, IDATE (**confirmed**)

### **11:35 – 11:50 Presentation**

**Guangyi Liu**, Chief Technology Officer, Wireless Department, China Mobile (**confirmed**)

### **11:50 – 12:05 What is driving recent increases in prices paid for LTE Spectrum at auction, and what effect could this be having on infrastructure development?**

**Stefan Zehle**, CEO, Coleago Consulting (**confirmed**)

### **12:05– 12:20 Presentation**

**Daniel Pataki**, Vice President, Regulation, Government & Regulatory Affairs, GSMA (**confirmed**)

### **12:20 – 12:50 Panel Discussion**

### **12:50 – 13:50 Lunch**

## **Session 6.ii Innovative Technologies and Policies to improve spectrum efficiency**

*What technological and policy options are available to increase spectrum efficiency? Which new ideas are gaining momentum and have the most potential, and in which areas has thinking possibly moved on?*

*Where does the balance lie in finding the right technology mix? What can be the consequences in spectrum usage and policies? Are there frequency bands characteristics to accommodate specific users' needs that inform us on the right mix?*

*What is the future of spectrum sharing and what potential does this have in reality as a tool to open up access to more spectrum and support innovation?*

*What are the respective advantages of sharing on a licensed, license exempt and dynamic spectrum access basis, and what challenges does each approach provide?*

*What can be done to increase spectrum efficiency in the 5Ghz band and should additional spectrum from 5350-5470 MHz be made available for mobile?*

*Is there scope for the needs of PPDR users to be met by spectrum sharing, and if so, what is the best approach to provide a reliable and solid solution?*

Moderator: **Scott McKenzie**, Director, Coleago Consulting (**confirmed**)

### **13:50 – 15:10 Panel Discussion**

**Ylva Mälarstig**, Head of Spectrum Analysis, Swedish National Post and Telecom Agency (PTS) (**confirmed**)

**Julius Knapp**, Chief, Office of Engineering Technology (OET), FCC (**confirmed**)

**Gerry Oberst**, Senior Vice President, Global Regulatory & Governmental Strategy, SES (**confirmed**)

**Tony Lavender**, CEO, Plum Consulting (**confirmed**)

**Jeppe Jepsen**, Director of International Business Relations, Motorola Solutions (**confirmed**)

### **15:10 – 15:30 Afternoon Coffee Break**

## **Session 7: The changing face of spectrum management 2005 - 2025**

Since this conference was first launched in 2005, a lot of things have changed when it comes to spectrum management in Europe, and yet much also remains consistent. This session will provide the opportunity to look at the spectrum environment, challenges and opportunities that exist now compared to 10 years ago, and then focuses on looking forward to ten years from now and what the situation is likely to be then.

Moderators: **Amit Nagpal**, Partner, Aetha Consulting and **Richard Marsden**, Vice President, NERA Economic Consulting (**confirmed**)

### **15:30 – 15:45 Introductory Presentation: The Changing Face of Spectrum Management 2005 – 2015**

**Ruprecht Niepold**, Independent Expert on Spectrum Management (**confirmed**)

### **15:45 – 16:00 Introductory Presentation: The Changing Face of Spectrum Management 2015 – 2025**

**Dean Bubley**, Founder, Disruptive Analysis (**confirmed**)

*A highly interactive session will follow the introductory presentations, where speakers, panelists and the wider audience (via the use of voting pads and opportunities to contribute from the floor) will be asked for input on 5 key questions:*

- 1. To what extent are we likely to see increased co-ordination of spectrum policy in Europe over the next 10 years, and how will the role of European level bodies likely evolve?*
- 2. What investment in networks and infrastructure will be required over the next 10 years, and how can an environment that encourages this be created?*
- 3. What new technologies are likely to emerge, and how will things like 5G, Cognitive Radios and the IoT change the way in which spectrum is managed?*
- 4. Is the issue of needing more spectrum for mobile still likely to be an issue in 2025?*

*5. Will there be a need for individual spectrum assignments in 2025, or will it all simply be shared? Will the modern day 'spectrum manager' still exist in its current form?*

**16:00 – 17:15 Interactive Panel Discussion**

**Philip Marnick**, Director of Spectrum, Ofcom (**confirmed**)

**Julius Knapp**, Chief, Office of Engineering Technology (OET), FCC (**confirmed**)

**Dean Bublely**, Founder, Disruptive Analysis (**confirmed**)

**Guillaume Lebrun**, Spectrum and Technology Policy, Qualcomm (**confirmed**)