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## **RSPG Stakeholder Briefing: Update on the Work Programme for 2018 and beyond**

Budapest, 10 December 2018

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**Jonas Wessel**

Chair RSPG 2018-2019

## Agenda

1. Welcome and Introduction
2. European Spectrum Strategy
3. European Electronic Communications Code
4. 5G Implementation Challenges
5. WRC-19
6. Peer Review Platform
7. Good Offices
8. Summary

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## **European Spectrum Strategy**

**Philip Marnick**

RSPG co-rapporteur (UK)

## Background

- **RSPG established this working group at beginning 2018**
- **Objective is to develop a long term spectrum strategy for Europe**
- **Recognised need to look beyond immediate challenges in order to ensure an enabling regulatory environment 10-20 years ahead**
- **Due to report findings at end of 2019**
- **3 Working Group meetings and one Stakeholder Workshop to date**
- **WG meetings predominately 'brainstorming'**

## Introduction

Main topics being considered;

- Innovation
- Sharing
- Meeting the needs of all spectrum users
- Harmonisation
- Role of market mechanisms
- Receivers and equipment standards

## How we are framing our discussions?

What are the main drivers of change? How will these impact spectrum management?

What are we trying to achieve through spectrum management?

- Changes in society;
  - Digitisation of society
  - Aging society
  - Migration
  - Security (physical and cyber)
  - Environmental protection / climate change
  
- Changes in technology;
  - Advancements in spectrum usage / efficiency
  - How we process data, capabilities, storage
  - Artificial Intelligence (AI)

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## **RSPG WG European Spectrum Strategy**

**Innovation**



## Innovation

### 1. Making spectrum available

- How to make enough spectrum available to meet all needs and to enable innovation in all sectors?
- How to decide / prioritise different needs?

### 2. How is spectrum made available?

- What is the Spectrum Manager's role in innovation? To promote? Remove barriers? Facilitate? Incentivise?
- Do Spectrum Managers need new approaches in terms of how they make spectrum available?
- Do exclusive licences hinder innovation? Does flexibility to innovate impact harmonisation?

### 3. Incentives to innovate?

- Could conditions be put in licences that encourage licence holders to innovate?
- Facilitating 2 types (or more) of innovation – those current spectrum users that Spectrum Managers know and those that regulators don't know who need spectrum for entirely new uses

## Some themes from Stakeholder Workshop

- Approaches to spectrum management need to innovate and evolve
- Understanding the role of the spectrum manager to promote innovation
- ‘New’ innovation and ‘Evolving’ innovation
- Promoting both investment and innovation (and the need to support harmonisation)
- The role of Standards
- Different dynamics of different sectors

## **RSPG WG European Spectrum Strategy**

**Sharing**

## Sharing – some questions to start.....

Sharing takes place today, but likely to need to become more prevalent

- What are the main barriers to sharing?
- Is lack of confidence the biggest barrier to more sharing?
- Is a change of mindset required? And if so, how do we do it?
- How do we address concerns that sharing may prohibit future evolution?
- What can spectrum managers do to make spectrum sharing more attractive?
- What are the incentives to promote more sharing?

## Sharing – current realities: from static to dynamic

- Demand for spectrum continues to grow significantly, driven by both existing and new services and applications
- Greater and more intense spectrum sharing is becoming possible because of more sophisticated technology and new authorisation approaches
- There is not a single solution, judgements will be required to identify barriers, tools and enablers dependant on the spectrum options and characteristics
- Many of the solutions will, invariably, need to be done on a national level – what can be done multilaterally

## Sharing – what are the barriers and what can be done?

- **Lack of information about spectrum use and spectrum demand is widely cited as a barrier – including information about public sector use**
- **Authorisation constraints, including differing models, may be a barrier**
- **Some previous sharing models could be revisited (White Spaces, LSA) as both a learning opportunity and potentially a loose framework / model**
- **Coexistence can add complexity and therefore cost: however, potential for technology to assist with complexity and therefore lower cost.**
- **Risk appetite (in terms of interference) varies and possible impact on QoS can be a major concern - incentives are needed to ameliorate risk**
- **Appropriate enforcement mechanisms highlighted as key**

## Sharing – some questions to finish (post workshop)

- **Authorisation issues**
  - Should sharing be the norm and exclusive licences the exception?
  - Are there existing models we could revisit (eg LSA, White Space) or import from other regions (eg tiered authorisation models)?
  - What role can trading and leasing be expected to play?
  - Will new technologies enable more efficient ways of sharing?
  - Do Spectrum Managers need to do more?
- **How to build incentives to share**
  - How to build trust and confidence?
  - To what extent are concerns over enforcement a barrier to sharing?
  - To what extent is receiver sensitivity a barrier to sharing in adjacent bands?
  - Can we identify any quick wins?
- **Information issues**
  - Is lack of reliable, accessible data about spectrum use a barrier to sharing?
  - Could better information remove some of the perceived risks to sharing?
  - What role can technology play to improve availability of information?

## Next steps

- Strategy framework being developed
- Initial focus on innovation and (in particular) sharing
- Next discussion at Plenary in Jan 2019
- Stakeholder input identified as key



## **European Electronic Communications Code**

**Emilia Ulelay**

Co-rapporteur (HU)

**Sören Nübel**

Co-rapporteur (DE)

**Didier Chauveau**

Co-rapporteur (FR)

## **EECC enters into force soon**

- To assess impact of EECC
  - RSPG's role
  - RSPP
  - Co-operation with BEREC
- To make proposals on
  - EC Decision establishing RSPG
  - Rules of Procedure

## **Enhanced Co-operation and co-ordination**

- Contributing on strategic planning, co-ordination and harmonisation of the use of radio spectrum
- Best practices on spectrum related matters
- Good Offices
- Peer review

## **International**

- To recommend EU positions for WRC
- To help in international co-operations
- Cross-border coordination with third countries

## **BEREC**

- Enhanced interactions

## **5G Implementation Challenges**

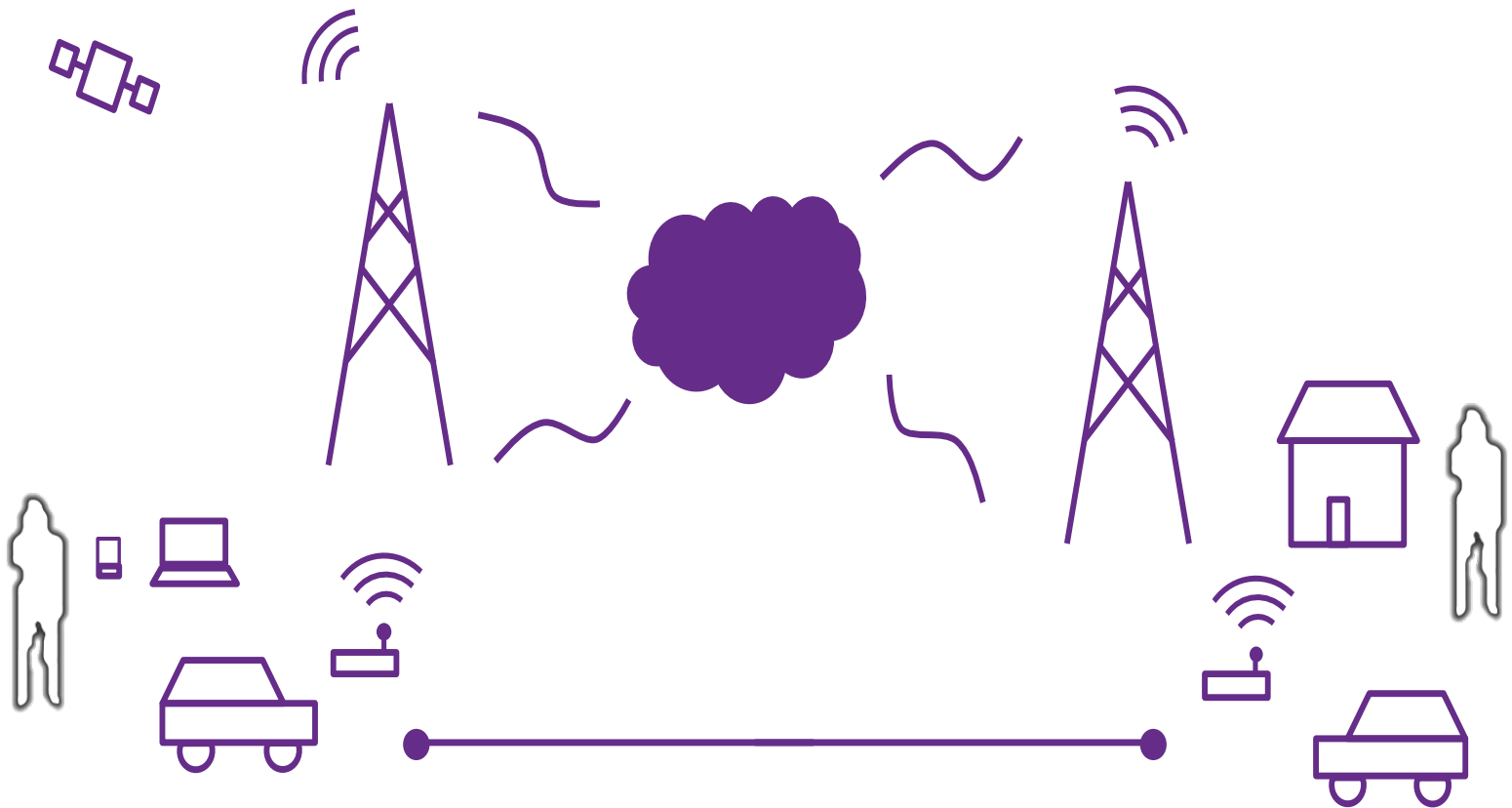
**Bo Andersson**

RSPG co-rapporteur (Sweden)

**Tassos Lyratzis**

RSPG co-rapporteur (Greece)

# All communication wireless



## **A strategic roadmap towards 5G for Europe**

- The strategic roadmap aims to facilitate the launch of 5G on large scale by 2020
- Ensuring that the benefits of 5G-based services are available to all European citizens
- The vision being that 5G will drive industrial and societal transformation and economic growth in Europe from 2020 and beyond

## **RSPG Work on 5G – 2016 Opinion**

- Primary (3.4-3.8 GHz) which will bring the necessary capacity
- Pioneer (26 GHz) to give ultra-high capacity for innovative new services
- Existing bands, including in particular bands below 1 GHz to enable 5G coverage to all areas (e.g. 700 MHz) ensuring that everyone benefits.



## **RSPG Work on 5G – 2018 Opinion**

- Large blocks of 3.4-3.8 GHz by 2020
- Flexible authorisation (for example geography)
- Cross border service performance needs to be defined
- Coverage requirements according to national needs
- Sufficiently large portion (e.g. 1 GHz) of the 26 GHz band available (locally) in response to market demand by 2020
- General authorisation in 66-71 GHz.

## **RSPG current work on 5G - 3rd opinion - Opinion on implementation challenges**

- Concerning the defragmentation of the 3.4-3.8 GHz frequency band
- Recommends that Member States (MS) design spectrum award mechanisms that provide the opportunity to obtain sufficiently large contiguous spectrum blocks to facilitate high throughput multi-Gb/s 5G services such as enhanced mobile broadband

## **RSPG current work on 5G - 3rd opinion - Opinion on implementation challenges**

- In order to ensure connectivity for vertical industries
- Recommends that Member States consider other spectrum solutions including dedicated or shared spectrum for the business/sectoral needs (“verticals needs”) that may not be met by mobile operators

## Now what regarding 5G?

- Policy and direction has been given
  - make it happen – award spectrum
- Spectrum might be the lifeblood
  - we need a heart to pump it – well functioning markets
- Europe is in a very good situation to take the lead

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**WRC-19**

**Alexander Kühn**

RSPG co-rapporteur (DE)

## **Issue 1: Opinion on WRC-19 Advice to EC, EP and the Council**

- Identified items of the Agenda with EU relevance
- Identified need for an EU Position of the Council or a generell common approach
- EU Position:
  - 5G/IMT2020; AMRDs; GADSS; ITS; 5GHz RLAN; New Agenda item on UHF
- Common approach:
  - ESIM; Internation Satellite Regulation in 37-52 GHz; Short duration Missions; GMDSS; HAPS
- RSPG18-038final.

## **Issue 2: Supplemental Opinion on EU Coordination**

- Basis: Opinion on WRC Preparation - RSPG09-294
  - New: EU Positions according to TFEU Art. 218 9)
  - Common negotiations within CEPT
  - Ad hoc EU Coordination between EU MS
  - EU Rapporteur to monitor the progress
- 
- Timeline: Finalisation at 1st RSPG in 2019.

## **WG Peer Review and Member State Co- operation on Authorisation and Awards**

**Aleksander Sołtysik (Poland)**

Co-Rapporteur

**Claire Lyons (UK)**

Co-Rapporteur



## **RSPG WG Peer Review and Member State Cooperation on Authorisation and Awards**

- Established in 2017 to facilitate peer learning between Member States on spectrum awards and authorisation
- Seeks to collectively raise the standard of spectrum awards across the EU through the sharing of best practice and ‘lessons learnt’
- 2 main functions;
  - Member State hosted Peer Review workshops sharing experience and expertise of awards (either in the planning stage or already completed)
  - Peer Review platform, hosted on the CIRCABC website

## **RSPG Workshops on Spectrum Awards**

- RSPG encouraging more sharing of experience and expertise between Member State experts
- Workshops to date:
  - Joint Czech Republic/Slovak Republic on 3.5 GHz awards
  - Ireland on 3.5GHz
  - Joint 700 MHz workshop (France, Germany, Sweden, Norway)
  - Sweden 700 MHz
  - UK 2.3GHz/3.4GHz
  - Joint 5G Award Workshop (Slovenia, Italy, Hungary) – December 2018
- In planning, together with RSPG WG 5G, joint workshop on 26GHz authorisation challenges.

## Peer Review Platform

- RSPG established the Peer Review Platform for spectrum awards and national assignment regulations of ECS spectrum.
- Hosted on the CIRCABC website. Access granted to Member State experts.
- Two main functions:

Library: repository for relevant information regarding awards

Peer-to-peer messaging - facilitating the swift sharing of information between experts

## Next steps

- Planning forthcoming workshops
- Identifying possible new responsibilities deriving from the European Electronic Communications Code

## **Good Offices**

**Eric Fournier**

RSPG co-rapporteur (France)

**Mindaugas Zilinskas**

RSPG co-rapporteur (Lithuania)

## Interference from Italy

- TV : no more interference except one outstanding issue with Croatia, also in relation with transitioning to below 694 MHz
- FM : pragmatic orientation - discussing priority channels of neighbouring administrations on the basis of real data of transmitters (ie, not just the “rights”)
- DAB : upcoming issue. Italy needs future planning based on GE-06 and cross-border agreements

## Good offices for the 700 MHz band

- All intra-EU coordination agreement signed (under signature process for Belgium with DE)
- All EU countries have now specified the planned authorization date before 2020 (uncertainty for Croatia)
- The date for planned end of migration date is exceeding 2020 for IT, LV and LT(2022) as well as HR and MT (2021)
- Remaining transition issues
- Few difficulties with countries outside EU

## National roadmap for 700 MHz



### Q1 National Roadmap

- adopted and published
- final stage
- under development
- preliminary discussion
- not started

F\* - Former Yugoslav Republic of Macedonia



## Planned authorization date



Q2-3 expected date of authorization of MFCN

- authorized
- 2017
- 2018
- 2019
- 2020
- 2021
- 2022
- no date

F\* - Former Yugoslav Republic of Macedonia

## Planned date for the end of migration



Q2-2  
end of  
migration

- completed
- 2017
- 2018
- 2019
- 2020
- 2021
- 2022
- no date

**F\* - Former Yugoslav  
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## **Summary**

**Jonas Wessel**  
RSPG Chair

**Thank you for coming today**

Further written submissions welcome (but not required) to [cnect-rspg@ec.europa.eu](mailto:cnect-rspg@ec.europa.eu)

RSPG news <http://rspg-spectrum.eu/>