

The logo for the Radio Spectrum Policy Group (RSPG) features the acronym 'RSPG' in a bold, orange, sans-serif font. The letters are contained within a white, rounded rectangular shape that has a subtle gradient and a slight shadow, giving it a three-dimensional appearance. This logo is positioned in the upper left corner of the slide, overlapping a decorative background of horizontal lines in shades of blue and white.

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RSPG Third Stakeholder Workshop: Update on the Work Programme for 2016 and beyond

Paris, 31 March 2017

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Gilles Brégant
Director General, ANFR

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Philip Marnick

Chair, Radio Spectrum Policy Group

What is RSPG?

The Radio Spectrum Policy Group brings together all Europe's national spectrum managers

It has been Europe's expert on spectrum policy for over ten years

Purpose of today's event

To update on RSPG's current Work Programme

- Aims to address issues of current and future concern at a crucial time when spectrum policy is increasingly important to society

With this workshop, we are seeking to increase visibility of RSPG's work and to get stakeholder input into our process

RSPG42 Plenary Outcomes: EECC

RSPG supports efforts to simplify framework but with least restrictive measures and an appropriate balance of competencies

Concerns around mandatory processes and requirements (e.g. peer review, implementing acts)

Much can be achieved by working together and promoting regulatory best practice

RSPG42 Plenary Outcomes: IoT and ITS

Diverse spectrum needs for IoT and diverse solutions already available, even more underway

Current designations / harmonised arrangements for road and rail remain important

- Technological innovation is already enabled by diverse spectrum solutions, without needing to centralise spectrum management

Work areas and rapporteurs

| | |
|--|---|
| Framework Review | Emília Ulelay (Hungary) Didier Chauveau (France) |
| Digital Single Market: (inc. Peer Review, Coverage) | Christiane Seifert (Germany) Aleksander Sołtysik (Poland) Chris Woolford (UK) |
| 5G | Bo Andersson (Sweden) Tassos Lyratzis (Greece) |
| Intelligent Transport Systems | Erika Forsberg (UK) |
| Internet of Things | Oli Bird (UK) Fokko Bos (NL) |
| PMSE | Franz Ziegelwanger (Austria) |
| WRC-19 | Alexander Kühn (Germany) |
| Good Offices | Eric Fournier (France) Mindaugas Zilinskas (Lithuania) |

Agenda

1. Recent RSPG outputs
2. 5G Second Opinion and next steps
3. Strategic vision for PMSE
4. Good Offices and 700 MHz clearance
5. Peer Review Platform
6. Collaboration with BEREC

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Recent RSPG outputs

Agreed at RSPG #42 Plenary

- Common Vision on EECC
- Opinion on IoT
- Opinion on ITS
- Interim Opinion on WRC-19

Common Vision on EECC

Emília Ulelay

RSPG co-rapporteur (Hungary)

Didier Chauveau

RSPG co-rapporteur (France)

Common Vision on EECC

RSPG Opinion published in February:

- Simplification and scope
- Sharing of best practices (Awards)
- Possible improvements on the top of technical harmonisation under spectrum Decision
- A need for national flexibility
- Shared use: no need for extra regulatory layer
- Maintaining a balance of competencies
- Institutional arrangements

Common Vision on EECC

Spectrum issues in the proposed EECC are subject to on-going negotiation at Council and in European Parliament

RSPG is ready to assist if needed

Next WG meeting 10 May (tbc)

A Spectrum Roadmap for IoT

Oli Bird

RSPG co-rapporteur (UK)

A Spectrum Roadmap for IoT

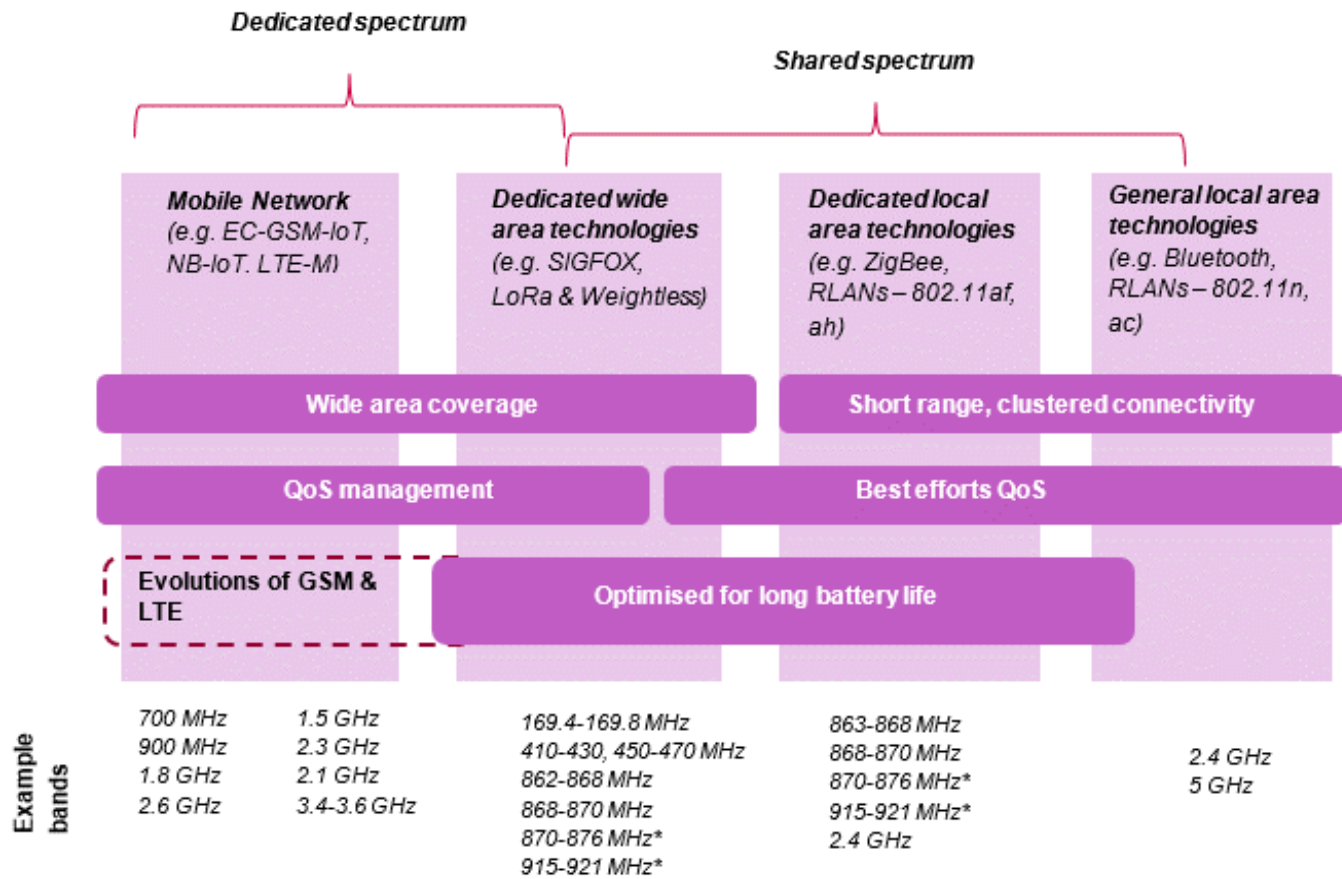
IoT is heterogeneous and has diverse spectrum needs going beyond ECS spectrum:

- different bands, different authorisation models

A range of bands accessible to IoT, no need to allocate spectrum exclusively. Spectrum availability has not yet constrained the growth of IoT.

But increasing demand for access. This may mean harmonisation and standards; authorisation models; or co-ordination to enable economies of scale

A Spectrum Roadmap for IoT



Note*. Example bands marked with * are available on a national basis.

Intelligent transport: Road

30 MHz (5875-5905 MHz) designated for safety-related ITS remains important

Designation is technology neutral. But EC could consider interoperability / coexistence

Keep option open for ITS in adjacent 2x20 MHz and take account of ITS when considering new services in adjacent bands

Intelligent transport: Rail

Support existing harmonised GSM-R band

Wide range of options for the future, but suitability varies across Member States

Full extended GSM-R band unlikely to be available across Europe, given demand from IoT/SRDs

Recognise benefits of common approach as interoperability will be important

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Thomas Ewers
on behalf of Alexander Kühn
Rapporteur, WRC-19

Interim Opinion on WRC-19

Develop early common policy objectives by:

- Analysis of the WRC-19 Agenda
- Identification of 6 Agenda items, with relation to EU policies (left)
- Identification of one Agenda item with relation to EU harmonisation measures (RLAN 5GHz)

Electronic
communications
connectivity

Space

Transport

Science

Single Market

Security and
defence

WRC-19 Working Group next steps

- EC – CEPT Workshop on WRC-19 (11 May)
- Work on Common policy objectives for the identified Agenda items
- Public consultation on final Opinion (Q1 2018)
- Final Opinion on WRC-19 (Q2 2018)

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5G Second Opinion and next steps

Bo Andersson

RSPG co-rapporteur (Sweden)

Tassos Lyratzis

RSPG co-rapporteur (Greece)

5G: scope of activity

Develop a strategic roadmap towards 5G for Europe, focused on the services and goals.

Including:

- Making the benefits of 5G available to all
- System architecture and technologies
- Spectrum related challenges (e.g. sharing)
- Assessing frequency bands for 5G

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

Early Opinion on 5G adopted in late 2016

An early opinion to guide European Commission and industry on 5G bands:

- 3.4-3.8 GHz the first primary band for 5G (capacity for new services in urban areas)
- 5G can use existing EU harmonised mobile bands, in particular 700 MHz (enabling coverage)
- 26 GHz the pioneer mm band in Europe (enabling innovative new services)

Opinion on strategic regulatory issues

Supplementary Opinion will focus on strategic issues related to spectrum regulation of 5G networks. We considered:

- Areas set out in first Opinion
- Relevant issues brought up in the public consultation
- Other relevant areas from an RSPG perspective

Opinion on strategic regulatory issues

- Authorisation models
- The challenge of 5G coverage
- Sharing issues
- The relationship between 5G and IoT, ITS
- Policy and regulatory challenges relating to long term 5G mm-wave frequency bands

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Coffee break!

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Strategic vision for PMSE

Franz Ziegelwanger
RSPG rapporteur (Austria)

PMSE: scope

Long-term strategy with regard to future PMSE spectrum requirements

Scope:

- evolution of existing use
- growing need for sharing of spectrum
- strategic options
- audio and video PMSE

PMSE: audio and video general

- Wide range of tuning range bands
- PMSE generally is a sharer
- Harmonised baseline in EU defined by 2014/641/EU and 2016/339/EU
- In addition tuning ranges for PMSE in CEPT in REC 25-10 and REC 70-03
- Key topics: Meeting peak demand, Quality of Service

PMSE: general audio topics

Mass market equipment also uses frequency bands defined for ISM, SRD and RLAN/WAS

Number of events and used devices grows – but not necessarily growth of spectrum demand

Changes in UHF band:

- loss partly by introduction of 700 MHz ECS
- DTT re-planning and resulting usability
- further review and change after/by 2025?

PMSE: general video topics

Number of events and used devices grows –
but also technology improves

Televised Sport events and new formats of
entertainment shows are the main drivers

UHD, 4k, or higher are required within the
foreseeable timeframe

PMSE: specific to audio and video

Tuning range concept – reflects different requirements and national solutions: Efforts on CEPT website, EFIS to promote usable frequency bands

Technological advances:

- Increase spectral efficiency and effective use of available spectrum
- Incentivize migration to more advanced technologies

PMSE: specific to audio and video

Improvement in working practices:

- Meeting peak demand events often needs solutions for on-site coordination at national/geographical basis
- Sharing best practices on CEPT level

Cognitive PMSE:

- Could help in pre-coordination, visibility of usable spectrum and effective use

PMSE: specific to audio and video

Greater utilization of alternative bands
(like VHF, 1800 MHz, mobile guard bands, ...)

PMSE in 5G:

- Technical possibilities (QoS, low latency)
- Realistic business case?
- Standardisation should reflect the development to create possibilities

PMSE: specific to audio

More spectrum efficiency through:

- Digitalization and improvement of analogue use cases (i.e. IEM)
- New harmonised standards (like WMAS)

UHF today a global band – if changes result in further loss then, if justified, identification of new bands with a potential for:

- Widespread adoption
- not in focus for IMT (ECN)
- block of shared spectrum below 2 GHz

PMSE: specific to video

Core bands today around 2 GHz

Peak demand (especially in future) may also require sharing (borrowing) of non PMSE spectrum in special cases

Increasing spectral efficiency and wider tuning ranges

Highest instances of peak demand go towards utilisation of higher frequency bands (up to 8 – 12 GHz)

PMSE: work plan

Draft Interim Opinion foreseen June 2017 for public consultation

Draft Final Opinion November 2017

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Good Offices

Eric Fournier

RSPG co-rapporteur (France)

Mindaugas Zilinskas

RSPG co-rapporteur (Lithuania)

Interference from Italy

Switch-off of the interfering transmitters on 30/11/2016 (Marche region 16/01/2017)

Next steps

- A few remaining interference cases
- Protection of GE-06 rights not actually in operation (related to replanning for 700 MHz)
- FM Broadcasting: Letter from the RPSG Chairman to the Undersecretary with responsibility for Communications

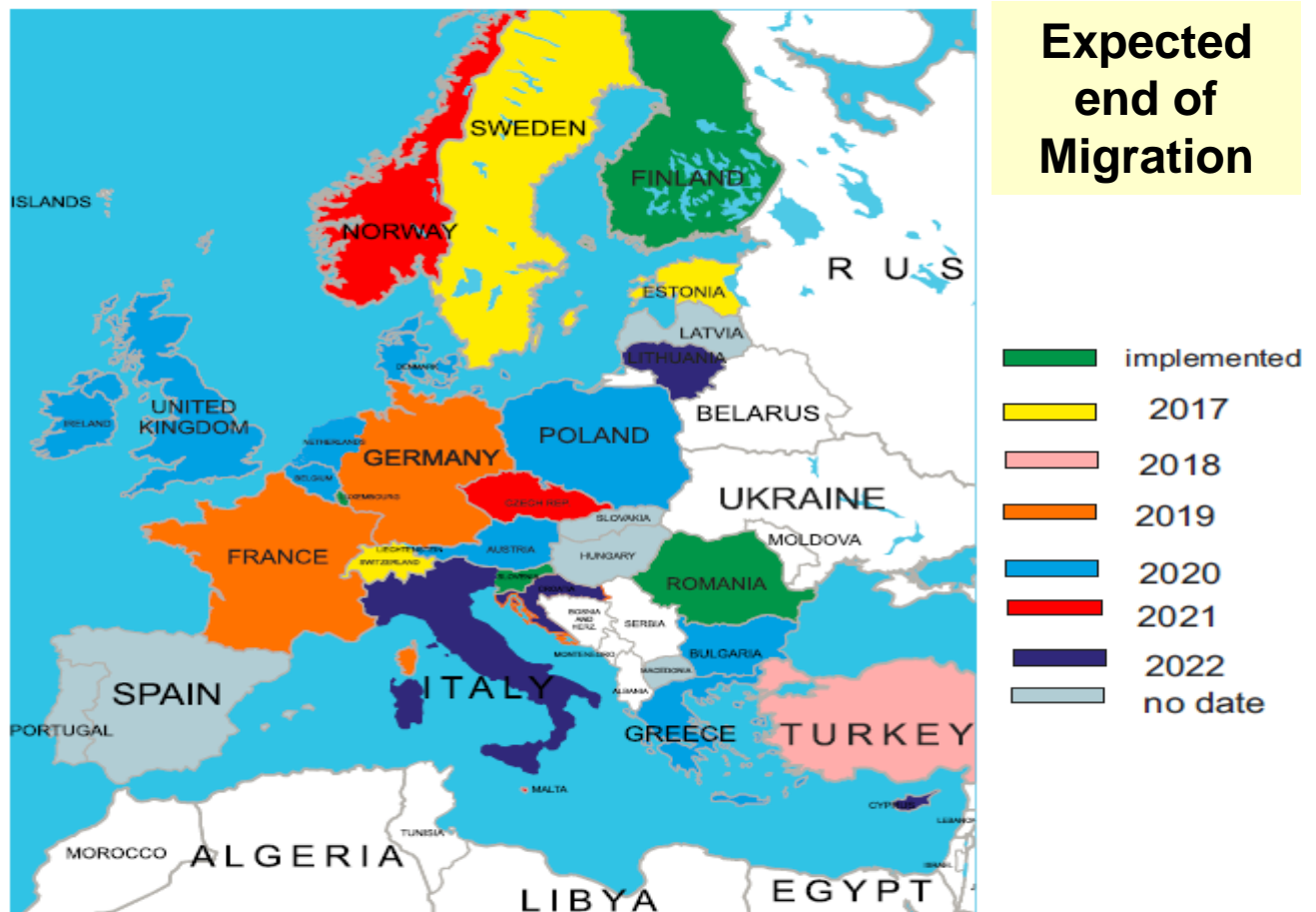
Good offices for the 700 MHz band

Survey of national plans and cross-border coordination shows good progress overall

Next steps:

- Some Member States to clarify target date for migrations
- Specific “hot areas” require attention
- Need in some cases for a transition plan to reduce interference
- Commission to provide assistance to Cyprus regarding coordination with Turkey
- Questionnaire re-issued to measure progress

Monitoring the national plan for 700 MHz



Proactive identification of coordination issues



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Peer Review Platform (DSM Strategy WG)

Aleksander Sołtysik

RSPG co-rapporteur: Poland

Chris Woolford

RSPG co-rapporteur: UK

Chris Seifert

RSPG co-rapporteur: Germany

Peer Review Platform

RSPG has now launched the peer review platform and it is in use by members.

- peer review function to facilitate collaboration between experts
- library mechanism allowing Member States to post and share relevant information
- contact point(s)

Next steps...

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Cooperation with BEREC

RSPG input into BEREC workshop on IoT

Joint RSPG/BEREC Report on mobile connectivity in ‘challenge areas’

Contributions to the development of BEREC’s Common Position on monitoring of mobile network coverage

RSPG/BEREC joint workshop on Spectrum needs to foster innovation

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Wrap up

Philip Marnick

Chair, Radio Spectrum Policy Group

Thank you for coming today

Next steps:

Rapporteurs to reflect on today's input

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

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