

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, stylized shape that resembles a signal or a speech bubble, with a gradient from white to light orange. This shape is set against a background of a blue and white wavy pattern that transitions into a red and orange abstract graphic at the top of the slide.

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RSPG Stakeholders Workshop

The Opinion on Spectrum Sharing

Online event, 6th December 2021

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The RSPG work

- **Work Programme 2020-2021**
- **Mandate of the Spectrum Sharing Sub-Group**
 - Investigation of the means to improve sharing and to implement innovative sharing solutions, including promoting trials (sandboxes), pioneer scenarios and bands, new forms of licensing and new methods relying on databases or assisted by Artificial Intelligence
- **Two deliverables: a Report and an Opinion**
- **Opinion divided into three main parts**
 - Options for promoting Spectrum Sharing
 - Identification of key pioneer initiatives and bands
 - Roadmap for increased Spectrum Sharing

The accompanying Report

- Document RSPG21-016 Final: «Report on Spectrum Sharing: a forward-looking survey»
- Background work supporting the Opinion
- Relations and boundaries with
 - Infrastructure sharing (passive, active, MOCN, pooling, etc.)
 - Authorisation regimes
 - Leasing
 - Information availability
- Description and analysis of the various *state-of-the-art* approaches and technologies for spectrum sharing
- The survey provides a «toolbox» of solutions enabling different paradigms of spectrum sharing (both in licensed and unlicensed bands)
- The Annexes address, inter alia, background work from RSPG, relevant cases from worldwide regulators, and, particularly, EU national experiences and best practices on implementing sharing solutions (e.g. LSA, club use, LAL, SAL, SAS, etc.)

The Opinion Recommendations (1/3)

- **RSPG21-022 Final: «RSPG Opinion on Spectrum Sharing: Pioneer initiatives and bands»**
- **Options for promoting Spectrum Sharing**
 - Consider and apply the technologies, approaches and best practices, investigated and described in the accompanying Report
 - Guiding principle for spectrum regulators and policy makers: *use-it-or-share-it*
 - Spectrum sharing can be developed in bands both with licensed and with unlicensed users, and combination thereof, and both in intra-service mode (i.e. between “peer” users providing the same service) and in inter-service mode (i.e. between incumbents and new users providing different services)
 - Roaming, network slicing, in general access, and to some extent leasing, can be considered complementary elements of spectrum sharing
 - Not every spectrum sharing approach suited for every band; when designing a sharing framework, due considerations should be given to the propagation characteristics of the frequencies, the current and planned technological developments and the essential requirements of the services involved in the sharing approach
 - Work of standard and regulatory bodies, i.e. ETSI and CEPT, for sharing solutions is fundamental and should be promoted, including in developing essential requirements and test specifications. Innovative transmitter and receivers should be developed; industry should play its role in developing more tolerant receivers
 - Building trust and confidence among users, including by strengthening market surveillance, is a key means to increase spectrum sharing

The Opinion Recommendations (2/3)

- **Identification of key pioneer initiatives and bands**
 - **Already today radio spectrum is widely used on a shared basis**
 - **Innovative sharing solutions are at the moment mainly based on improving the authorisation process (e.g. by automating it or by using DB) or on implementing advanced technical sharing conditions (e.g. by using a multi-tier approach)**
 - **All spectrum bands are in some way candidates for introducing innovative spectrum sharing solutions**
 - **In particular short term action can be taken in bands currently under consideration in CEPT for harmonisation**

The Opinion

Recommendations (3/3)

- **Roadmap for increased Spectrum Sharing**
 - Base sharing conditions on more realistic scenarios than worst case
 - Update technologies to more spectrally efficient ones, including by incentivising users, particularly when radio technology is embedded in equipment with long lifetime
 - Encourage the development of *proof-of-concept* systems with advanced sharing solution such as those based on CR or ICT assisted system
 - Issue temporary *innovation&trial* / *test&trial* licences to foster innovation and allow non traditional users the possibility to get access to spectrum
 - Develop trials employing AI technologies in order to pave the way to their commercial use and build trust amongst users
 - Try to innovate authorisation processes by exploiting and developing examples of light licensing regimes based on automated platforms
 - Coordinated actions, in particular in multi-country/cross border projects and in R&D, and in developing trials and market surveillance/spectrum monitoring experiences

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Thank you for your attention