



Promoting the Shared Use of Radio Spectrum in the European Union

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Policy Context

Maximising the socio-economic and environmental benefits that can be generated through the use of radio spectrum

- Radio Spectrum Policy Programme (RSPP): "... to foster the collective use of spectrum as well as the shared use of spectrum"

Ensuring radio spectrum contributes to broadband targets

- Digital Agenda for Europe (DAE): "... to ensure the coordinated allocation of the spectrum needed to meet the target of 100% coverage of 30 Mbps by 2020"

Fostering wireless innovation in Europe

- RSPP: "... to foster the development of current and new technologies, for example in cognitive radio, including those using white spaces".

Supporting sustainable growth in the internal market

- The Europe 2020 Strategy sets environmental objectives for a sustainable, energy-efficient and competitive economy. Wireless technologies can play a key role in meeting these objectives



Demand for Wireless Data Capacity

Demand is growing faster than expected

- Wireless broadband is the most important internet access medium for European citizens
- More and more young audiences enjoy multimedia content delivered through the internet onto their wireless devices

And there are big challenges ahead to cope with demand

- Mobile networks are faced with declining revenues from voice and SMS leading to a need to cut network operation costs
- Trend in data offloading to smaller cells highlights the growing importance of fixed backhaul infrastructures for wireless services

Meeting Spectrum Demands

- Radio spectrum is a valuable and finite resource.
- But it can be re-used more efficiently with advances in technology.
- By promoting the shared use of spectrum resources, we can take advantage of wireless innovation to realise additional spectrum capacity

if different users can re-use the same frequency band for their specific purposes

- Spectrum sharing technologies dynamically take advantage of the geographical, the frequency and the time dimension of the radio spectrum.
- To foster dynamic spectrum access in the EU, we therefore need a regulatory environment for the internal market that enables shared spectrum access*.

* "Shared spectrum access" is authorised if two or more users or wireless applications are allowed to use the same range of frequencies on the basis of a defined sharing arrangement

Issues to be addressed

- How to incentivise the use of mitigation technologies to ensure quality of service and to enable more shared use?
- How to reassure spectrum holders that they can better exploit their spectrum assets through the use of innovative radio technologies to share spectrum?
- How to provide sharers with legal certainty and predictability about rules and conditions? How to preserve competition?
- Do we have all the regulatory tools in place to enable economies of scale in the internal market?

harmonised licence-exempt bands

vs.

Licensed shared access (LSA) as described by the RSPG*

* [RSPG11-392: Report on collective use of spectrum and other sharing approaches \(November 2011\)](#)



Towards an Innovation Friendly Framework for Spectrum Sharing in Europe

To better exploit opportunities for sharing spectrum resources and to foster wireless innovation in Europe, we need:

- Spectrum access **opportunities for innovative technologies**
- Reassurances to encourage **greater and more efficient sharing** of spectrum
- Incentives to **make better use of existing spectrum resources**

*Under the RSPP the Commission will propose to work towards an internal market in which **innovative technical solutions can underpin the shared use of spectrum resources wherever they allow for a more efficient use.***

Steps forward in EU

Publication of a Commission funded study on “[Perspectives on the value of shared spectrum access](#)” (April 2012)

- Describing different spectrum sharing approaches
- Assessing the socio-economic value of shared spectrum access, including impact on competition, innovation and investments
- Identifying potential sharing opportunities

Commission Communication (September 2012)

- Seeking a common understanding of the economic, technical, and regulatory aspects of different modes of spectrum sharing
- Setting out a strategy to promote shared access to spectrum in the internal market and to foster best practices
- Sending a clear signal to innovators that Europe is moving toward an advanced regulatory environment for wireless innovations that can share spectrum



Thank you for your attention!

Links:

Radio Spectrum Policy Group (RSPG)

http://rspg.ec.europa.eu/index_en.htm

Radio Spectrum Policy Programme (RSPP)

http://ec.europa.eu/information_society/policy/ecomm/radio_spectrum/eu_policy/rspp/index_en.htm

Seventh Framework Programme for Research (FP7)

http://ec.europa.eu/research/fp7/index_en.cfm

Digital Agenda for Europe (DAE)

http://ec.europa.eu/information_society/digital-agenda/index_en.htm

Radio Spectrum Policy unit

http://ec.europa.eu/information_society/policy/ecomm/radio_spectrum/index_en.htm

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