



EUROPEAN COMMISSION
Directorate-General for Communications Networks, Content and Technology
Electronic Communications Networks and Services
Radio Spectrum Policy Group
RSPG Secretariat

Brussels, 3 October 2018

RSPG18-036 FINAL

DRAFT FOR PUBLIC CONSULTATION

RADIO SPECTRUM POLICY GROUP

STRATEGIC SPECTRUM ROADMAP TOWARDS 5G FOR EUROPE

RSPG Opinion on 5G implementation challenges (RSPG 3rd opinion on 5G)

Introduction

In November 2016 a strategic roadmap for 5G was first established when the RSPG adopted and published its first “Opinion on spectrum related aspects for next-generation wireless systems (5G) ¹”, where it was outlined what spectrum will be needed for next-generation wireless systems.

An opinion was sought in order to build on RSPG’s efforts and contribute actively to the development of Europe’s spectrum policy strategy regarding 5G.

The work in 2016 focused on identifying the building blocks needed for a rapid launch of new wireless services in the next generation wireless systems:

- 3.6 GHz (3400-3800 MHz) will be the first primary band for 5G and bring the necessary capacity for new 5G services;
- 26 GHz (24,25-27,5 GHz) will be the pioneer band in Europe above 24 GHz to give ultra-high capacity for innovative new services, enabling new business models and sectors of the economy to benefit from 5G;
- 5G can be launched over the existing EU harmonised mobile bands, including in particular bands below 1 GHz which can enable 5G coverage to all areas (e.g. 700 MHz) ensuring that everyone benefits, while enabling the transition from the current to the next generation of networks.

For 2017 the RSPG worked on spectrum strategic questions and recommendations and issued a supplementary opinion focusing on areas set out in the first Opinion, relevant issues brought up in the public consultation² and other relevant areas from an RSPG perspective.

The RSPG, in its second Opinion (February 2018)³, adopted further recommendations for policymakers on strategic issues related to 5G:

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

For 2018 the RSPG, following the feedback received from the stakeholders during Workshops and building on the work of CEPT, presents an analysis with a view on how to defragment the 3.5 GHz band in EU. Furthermore, the RPSG 5G working group invited experts from verticals associations to exchange views about the possible verticals requirements regarding spectrum use in other areas than mobile broadband (internet of things, intelligent transportation and other verticals) and presents a proposal for a categorization of verticals engagement in 5G spectrum.

¹ http://rspg-spectrum.eu/wp-content/uploads/2013/05/RPSG16-032-Opinion_5G.pdf

² https://circabc.europa.eu/d/a/workspace/SpacesStore/4ed94c29-182f-418a-b202-6861f69a4f3a/Responses_5G.pdf

³ https://circabc.europa.eu/sd/a/fe1a3338-b751-43e3-9ed8-a5632f051d1f/RSPG18-005final-2nd_opinion_on_5G.pdf

The RSPG Third Opinion on 5G implementation issues

I. Concerning the Defragmentation of the 3.4-3.8 GHz frequency band:

1. The RSPG 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. The RSPG notes that national awards processes may result in various spectrum blocks sizes due to market players strategies and that trading/leasing of rights of use (“spectrum trading”) could also be considered as part of the national defragmentation tools/policy.
2. The RSPG notes that, taking into account different national legacy situations and competitive landscape, Member States may need different approaches at national level in order to achieve the above defragmentation objectives. In this regard, the RSPG recommends that Member States consider the guidance on defragmenting the band that has been developed by the CEPT (ECC Report 287).
3. The RSPG recommends that, in order to facilitate 5G use in this primary band⁴ and subject to national situation, Member States phase out, as soon as possible, legacy ECS use in the band, which is not compatible with the 5G harmonised technical conditions.

II. In order to ensure connectivity for vertical industries:

4. The RSPG notes that 5G will play a significant role in providing a communications service that meets the specific requirements for verticals alongside others technologies.
5. The RSPG notes that connectivity for vertical industries could be provided by mobile operator’s solutions, third-party providers and directly by verticals themselves in EU harmonised ECS bands or in dedicated spectrum for verticals.
6. The RSPG 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. Such solutions could take advantage from economies of scale and ecosystem availability in spectrum bands with EU harmonised technical conditions.
7. The RSPG notes that, in addition to the above, in order to respond to some targeted EU public policy objectives requiring, for example pan European services for specific verticals, there may be need for technology neutral dedicated EU harmonised spectrum. RSPG recommends assessing these needs on a case by case basis and is ready to give its view when/where appropriate.

⁴ See first RSPG Opinion on 5G (RSPG 16-032)

8. The RSPG recognizes that, in order to support implementation of EECC⁵, the European Commission might consider additional recommendations on spectrum use for verticals and in this case, it should seek advice from the RSPG.

~ . ~

DRAFT

⁵ See EECC article 45