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RSPG Secretariat

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## RADIO SPECTRUM POLICY GROUP

### Opinion

on

*“How to master Europe's digital infrastructure needs?”*

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## I. Introduction

The Radio Spectrum Policy Group (RSPG) gathers high-level governmental experts of EU Member States. The RSPG provides the European Commission, Parliament and the Council with strategic advice on high-level policy matters in relation to spectrum. The RSPG is also a forum for fruitful exchange on effective and efficient management and use of radio spectrum of electronic communications networks and services<sup>1</sup>.

Since 2003, the RSPG has provided timely and relevant advice on strategic policy issues to policymakers supporting implementation of EU policy in order to reap the full potential of spectrum for the sustainable development of Europe's economy and society. The RSPG stands on a solid base of cooperation between the national experts on spectrum policy, management, harmonisation and licensing. The RSPG triggers spectrum harmonisation initiatives and develops spectrum policy further to interactions with relevant stakeholders (through workshops, public consultation, etc.).

On February 21, 2024 the European Commission launched a broad consultation on the "*White Paper: How to master Europe's digital infrastructure needs?*"<sup>2</sup>. This whitepaper followed the European Commission 2023 consultation on "*The future of the electronic communications sectors and its infrastructure*". These consultations could also be seen in the light of "*The targeted consultation on the 2030 Digital Compass: The European way for Digital Decade*" carried out in 2021.

The RSPG sees great value in contributing to these consultation processes. It is the understanding of the RSPG that, on the topics dealing with spectrum issues, these consultations all point in the direction of a new Radio Spectrum Policy Program (RSPP).

The RSPG responded to the 2021<sup>3</sup> and 2023<sup>4</sup> consultations and has also published an Opinion on the RSPP in 2021<sup>5</sup>. In this current Opinion, the RSPG refers back to these previous relevant Opinions as well as adding elements to respond to issues raised in the current 2024 consultation. The contents of these previous Opinions are still highly valid. The recommendations put forward in these three Opinions shall be seen as an integral part of this Opinion.

In developing this Opinion, the RSPG has taken due consideration of the Electronic Communications Code (EECC), the relevant national legislation, the geopolitical context, the need to support EU interests and digital sovereignty, development of investments, European competition policy and European economic growth.

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<sup>1</sup> Art. 2 (4) of Commission Decision 2019/196/EC on setting up the Radio Spectrum Policy Group and repealing Decision 2002/622/EC

<sup>2</sup> COM(2024) 81 final, <https://digital-strategy.ec.europa.eu/en/library/white-paper-how-master-europes-digital-infrastructure-needs>

<sup>3</sup> RSPG Opinion on "*the targeted consultation on the 2030 Digital Compass*", RSPG21-037

<sup>4</sup> RSPG Opinion on "*the future of electronic communications sectors and its infrastructure*", RSPG23-016 and its addendum RSPG23-044

<sup>5</sup> RSPG Opinion on "*a Radio Spectrum Policy Programme (RSPP)*", RSPG21-033

Furthermore, RSPG would like to emphasize the close relationship<sup>6</sup> with the Body of European Regulators (BEREC) regarding the development of the internal market on electronic communication services and the necessity to ensure consistency.

The RSPG will also continue to work collaboratively with BEREC as appropriate to help the EC design and implement policies for the most efficient use of spectrum in the Union, so elements of this response should be read as a reflection of the fact that where radio spectrum is concerned, new strategies will ultimately have to be designed having regard to the fact that Member States will need to continue to play a pivotal role in spectrum management in order to properly address the national circumstances.

With the understanding that future potential policy or legislative proposals (e.g. for an RSPP) can be stemming from the current White Paper, the RSPG emphasizes that the relevant RSPG Opinions need to be taken into utmost account by the European Commission when submitting legislative proposals to the European Parliament and Council for the purpose of reviewing the Code, establishing a multiannual radio spectrum policy programme or establishing other legislative acts in relation to spectrum matters.

The RSPG notes that under the principle of subsidiarity, in areas which do not fall within its exclusive competence, the Union shall act only if and in so far as the objectives of the proposed action cannot be sufficiently achieved by the Member States, either at central level or at regional and local levels, but can rather, by reason of the scale or effects of the proposed action, be better achieved at Union level. The reasons for concluding that a Union objective can be better achieved at Union level shall be substantiated by qualitative and, wherever possible, quantitative indicators.

The RSPG remains available to respond to any request for Opinion from the European Commission, Council and Parliament on radio spectrum policy issues arising from or after the current consultation and more broadly intends to contribute to the lessons learnt on implementation and to possible future improvement of EECC related to spectrum matters.

## **II. RSPG supporting European Commission, the Council and the European Parliament**

With its Opinions and reports, the RSPG is actively engaged in supporting the European Commission, Council and the European Parliament by recommending policy measures related to spectrum and supporting the further implementation of such policy initiatives. Proactive management of radio spectrum and coordination is imperative for enhancing EU competitiveness and fostering innovation. RSPG members are engaging in discussions, development and coordination of policy matters pertaining to spectrum within the RSPG. The RSPG serves as an effective and appropriate forum to achieve this objective.

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<sup>6</sup> [https://radio-spectrum-policy-group.ec.europa.eu/document/download/6f17fd86-2e63-4973-92b1-15823b4c83c5\\_en?filename=Working-Arrangement-BEREC-RSPG\\_signed.pdf](https://radio-spectrum-policy-group.ec.europa.eu/document/download/6f17fd86-2e63-4973-92b1-15823b4c83c5_en?filename=Working-Arrangement-BEREC-RSPG_signed.pdf)

The RSPG recently provided recommendations on the future use of the 2 GHz Mobile Satellite Services frequencies after 2027<sup>7</sup>, responding to a request for Opinion from the European Commission. It is now up to the European Commission together with Member States to reach a view on what scenario to propose and decide on the next procedural steps.

Under its current work program, the RSPG is currently engaged in various strategic issues that include:

- developing a 6G strategic vision
- assessing the future usage of the frequency band 470 – 694 MHz within the European Union
- identifying key EU spectrum policy elements in preparation for the next ITU World Radiocommunications Conference (WRC-27) to the European Commission in a timely manner. The RSPG has published reports on past WRCs<sup>8</sup>, assessing lessons learnt in order to enhance its process and to increase transparency
- developing an Opinion in response to a request from the European Commission on a long-term vision for the upper 6-GHz-band (6 425 – 7 125 MHz)

Other more permanent activities of the RSPG are on-going such as the peer review, facilitating peer learning between Member States on spectrum awards and authorisation and its “good offices” to assist Member States in bilateral cross-border negotiations.

Finally, the implementation of the EECC has strengthened harmonisation and coordination between Member States on spectrum-related matters. This includes strategic spectrum policy planning and coordination, radio spectrum coordination among Member States, peer review process, management of radio spectrum and coordinated timing of assignments<sup>9</sup>. The RSPG intends to engage in the review of the spectrum components of the EECC, to deliver its analysis in a timely manner and, to contribute, as and when appropriate, to any review of EECC foreseen by the end of 2025.

RSPG is ready to present to the European Parliament its role and various strategic recommendations from recent deliverables supporting in particular EU interest and sovereignty, single market including relevance to EFTA/EEA aspects and investment in Europe. Some strategic considerations are recalled in this Opinion.

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<sup>7</sup> RSPG Opinion “*on assessment of different possible scenarios for the use of the frequency bands 1980-2010 MHz and 2170-2200 MHz by the Mobile Satellite Services beyond 2027*”, RSPG24-007

<sup>8</sup> RSPG Reports on the results of the ITU-R World Radiocommunication Conferences (2015, 2019, 2023)

<sup>9</sup> Directive (EU) 2018/1972 of the European Parliament and of the Council establishing the European Electronic Communication Code (EECC) (e.g. articles 4, 28, 35, 45 and 53)

### III. European Spectrum Governance model as a strategic asset serving EU interests

The RSPG recognises that in the European Union, spectrum is harmonised based on a successful European governance model that is unique in the world. This model needs to be considered as a strategic asset serving EU interests well<sup>10</sup>.

The European model provides efficient contributions to international and European harmonisation initiatives. Further, it leverages and acts as a multiplier of EU positions for World Radiocommunication Conferences<sup>11</sup>. In spectrum management, the European Union acts, and is perceived by other regions in the world, as one coherent body, not a bloc of different interests.

A good example of this well-functioning model is the identification and harmonisation of spectrum bands for 5G. The early identification by the RSPG of the need for low (coverage in 700 MHz), mid (capacity in 3.5 GHz) and high (pioneering and innovation in 26 GHz) bands for 5G proved to be the right recipe. This identification has been further replicated globally and provided a sound (global) framework. Thus 700 MHz and 3.5 GHz have been established as the core bands for 5G. Some Member States have also awarded, or by other means made the 26 GHz band available. However, 5G rollout in the 26 GHz band is not developing as anticipated in the EECC<sup>12</sup>.

The RSPG is already working towards a 6G strategic vision taking utmost account of this model. This includes evaluation of coverage and capacity needs for 6G use cases and usages scenarios. The RSPG always analyses if spectrum harmonisation needs are well-founded and justified.

In this complex environment and in accordance with the EECC<sup>13</sup>, Member States are engaged in the RSPG in order to support the European Commission including by making recommendations for multiannual RSPPs<sup>14</sup>.

While an RSPP provides high-level policy directions, strategic targets and goals, relevant technical harmonisation measures for the EU have to be developed under the Radio Spectrum Decision in order to support effective implementation of these policy objectives, targets and strategic goals. In consequence, supporting the implementation of an RSPP, the RSPG recommends EU initiatives for such spectrum harmonisation, bridging the gap between spectrum policy and technical harmonisation, where CEPT actively contributes with its

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<sup>10</sup> annex of RSPG23-016

<sup>11</sup> RSPG Opinion on “*the future of electronic communications sectors and its infrastructure*”, RSPG 23-016 and its addendum RSPG23-044

<sup>12</sup> RSPG Opinion on “*5G developments and possible implications for 6G spectrum needs and guidance on the rollout of future wireless broadband networks*”, RSPG23-040

<sup>13</sup> EECC art 4.4

<sup>14</sup> RSPG Opinions on RSPP: RSPG10-330, RSPG16-006, RSPG21-033

technical expertise in response to EC mandates. Moreover, CEPT, with its high level of technical expertise in spectrum management, enables permanent cross fertilisation of experts of a broad range of stakeholders and with EU administrations, assists EEA/EFTA countries in the preparation and adaption of national laws to EU laws according to EEA arrangements and helps candidate countries in their steps towards further integration of EU legislation in their national law. This allows consequently to achieve beneficial spectrum harmonization in non-EU countries at the borders of the EU in terms of avoidance of harmful interference as well as commonly acceptable international positions supporting EU interests.

The influence of EU Member States in CEPT is well recognised and the RSPG invites EU Member States and the European Commission to intensify their efforts to support EU interests in the work done in CEPT<sup>15</sup>.

To conclude, the European spectrum harmonisation model, including the preparation of technical harmonisation of spectrum by CEPT, and the well-established cooperation with ETSI enabling standardisation, should be preserved. Preserving this model benefits EU interests and EU sovereignty and further strengthens free circulation of radio equipment<sup>16</sup> which is a key element for the functioning of the internal market. The RSPG emphasises the positive impact on the European Single Market with significant relevance to EEA/EFTA by standardisation through ETSI.

## **IV. Technical challenges: Benefits of EU spectrum harmonisation and supported by European standardisation**

Spectrum management is faced with a permanent evolution of wireless technologies and increasing use of spectrum beyond electronic communications networks and services, stretching inter alia into governmental and scientific domains. These developments are generating demands for spectrum use at international, European, regional, national and local level from various sectors and stakeholders.

The RSPG recognises that timely response to market demand and making spectrum available in an efficient way are cornerstones of European competitiveness, innovation and growth. Spectrum users highlight the importance of having sufficient amounts of spectrum, with long-term access to spectrum. Geopolitical aspects as well as physical characteristics of specific bands also play an important role in particular for scientific applications.

Technology neutral EU spectrum harmonisation initiatives go well beyond supporting usages of mobile technologies (such as 4G, 5G and 6G) used by operators in a national competitive environment<sup>17</sup>. EU spectrum harmonisation facilitates technology developments and

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<sup>15</sup> relevant EU Spectrum Harmonisation Decisions

<sup>16</sup> RSPG Opinion on " a Radio Spectrum Policy Programme (RSPP), RSPG21-033

<sup>17</sup> relevant EU Spectrum Harmonisation Decisions

favourable investment conditions. It further enables the development of different types of electronic communications networks and services by making harmonised spectrum available in response to various market demands in a timely manner. This allows more intense spectrum sharing in an environment where increased sharing between different radio usages is becoming, where possible, the norm. In this context, RSPG provides recommendations to European Commission and Member States in order to use spectrum more efficiently and increase spectrum sharing<sup>18</sup>.

The procedure set out in the Radio Spectrum Decision, with a resilience confirmed by the EECC, is well established and recognised by industry and has proven to be effective and efficient for developing EU harmonisation measures on radio spectrum. In addition, the RSPG recommends, in order to serve EU interests and preserve EU's digital sovereignty, that the European Commission maintains and uses, as appropriate, the procedure established by the Radio Spectrum Decision ensuring that only Member States are entitled to give opinions on mandates to CEPT and on EU harmonisation measures, leaving CEPT fully engaged on drafting proposals for technical components of the EU harmonisation in response to the mandate received.

Even if all components, i.e. spectrum harmonisation decisions and equipment standards are well in place, there might be delays beyond harmonisation and standardisation. Rollout of 5G in the European Union is such a case. In the 26 GHz band there is a well-documented lack of demand in majority of Member States<sup>19</sup>, even though harmonisation is well in place and spectrum is readily available. Another example, beyond spectrum harmonisation, is the slow adoption of 5G standalone (SA) implementation. This slower than expected implementation is primarily due to the fact that operators are still largely focused on the consumer market, specifically on enhanced Mobile Broadband (eMBB) services. For these services, 5G SA does not offer significant advantages over the current 5G non-standalone (NSA) architecture.

## V. Supporting the Single Market

- **National initiatives benefitting national and European economies**

For a well-functioning of the single market, there is, next to European policy initiatives, also a need to build the market bottom up. Demand is local and national policies, such as coverage obligations, are implemented in awards which are well-crafted to fit local and national specificities and context (for example geography and demographics). One other example is in relation to issues concerning national security. Measures to implement national security policy may be implemented in spectrum licensing, and are sometimes included in license conditions.

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<sup>18</sup> RSPG Opinion on "*Spectrum Sharing – Pioneer initiatives and bands*", RSPG21-022

<sup>19</sup> Report on the state of the Digital Decade 2023, SWD(2023) 571 final

Spectrum management and authorisations are national competencies which allow for taking into consideration national security, defence and public order.

Fair competition provides innovation and choice and benefits for consumers. Spectrum allocation in electronic communications is intertwined with competition policy, reiterated by EECC<sup>20</sup>, with conditions which vary across different Member States' markets. Policies to drive market consolidation can hamper market competition and potentially lead to pan-EU oligopolies.

There are currently no obstacles for operators entering national markets, on the contrary many operators are active in multiple Member States, based on different market strategies adding to the competitive landscape in the European Union. EU spectrum harmonisation is the key enabler of the Single Market enabling market entry and proliferation of different market strategies. For instance, through initiatives like the EU Connectivity Toolbox, it strives to streamline the deployment of 5G. This includes measures such as providing guidelines to determine the most suitable reserve prices.

Hence, the efficacy of available tools must undergo comprehensive evaluation to ensure their alignment with specific intervention needs. Prior to implementing alternative measures, it's crucial to thoroughly contemplate initiatives aimed at optimizing these tools.

The level of harmonisation needs to be tailored to each situation not anticipating one size fits all nor too much flexibility.

- **Coordinated timing of assignments**

Member States cooperate within RSPG in order to coordinate the use of harmonised radio spectrum for electronic communications networks and services such as in 5G (RSPG Opinion on 5G) and the EECC ensures a coordinated timing of assignments of spectrum harmonized under the Radio Spectrum Decision. It is recognized by the EECC that a Member State may delay such coordinated timing<sup>21</sup> under different circumstances such as unresolved cross-border coordination issues resulting in harmful interference with third countries, national security and defence, force majeure.

In consequence, when drafting future plans for the rollout of 6G in EU, expected to be launched around 2030, flexibility should be preserved. Due consideration has to be taken to maximise the benefit of the measures. Such measures include assessing and adjusting to national demands, drive competition and align to specificities of national markets such as the geographic and demographic landscape. All while keeping focus on making spectrum available

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<sup>20</sup> EECC Article 52

<sup>21</sup> EECC Article 53.3 and Article 45.5



in due time to meet future needs in the EU and to support the development of European competitiveness.

- **Cooperation between Member States in Authorisations**

It must also be recognised that Article 37 of the Code already foresees the possibility of cooperation between several Member States and with the RSPG, considering any interest expressed by market participants, to jointly establish the common aspects of an authorisation process and, where appropriate, also jointly conduct the selection process to grant individual rights of use for radio spectrum. There has been no demand or initiatives in using Article 37 implementing EECC. However, many discussions between Member States on cooperation in authorisations has been held and discussions continue.

Additionally, Article 35 of the EECC, which pertains to the peer review, also provide that Member States engage in discussions and knowledge-sharing regarding spectrum authorisation mechanism and usage conditions. There is room for enhancing the peer review mechanism further and in evaluating the EECC it is crucial to assess the function of the peer review process.

According to the EECC, the Peer Review Forum is an instrument of peer learning aimed at contributing to a better exchange of best practices between Member States and increasing transparency of the competitive or comparative selection procedures<sup>22</sup>. In this respect, the RSPG recognises that the peer review has proven to be a valuable mechanism to share lessons learned and to engage in discussion between the Member States' experts on awards. It helps understanding specific procedures on the basis of national situations. This also serves as a tool for methodological harmonisation and to increase transparency between peers.

The RSPG is currently working to enhance transparency while maintaining the necessary confidentiality, which allows for an open discussion between peers, as well as to identify further areas where peers can learn from each other by sharing their experiences, such as climate changes/environmental related actions on national level.

The RSPG does not agree to the conclusion by the Commission in the Whitepaper that because of a perceived 'ineffectiveness' of the peer review, a notification procedure similar to the mechanism implemented in Article 32 EECC should be considered. Also, it should be duly noted that the Article 32 procedure is a process to assess compliance to a method, which is not the case for spectrum awards.

The European Commission should, if pursuing this idea, acknowledge the potential challenges posed by (i) extending the deadlines associated with the attribution process, (ii) the ability of NRAs to tailor spectrum allocation processes to the specific characteristics of the markets, and

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<sup>22</sup> EECC Rec. (88)

(iii) the consequent increase in regulatory costs (such as translations and the involvement of national experts and EU resources).

The RSPG recalls that awards are time-critical procedures. Thus, any delay due to additional administration procedures prior to the awards can have a negative impact on time to market. Further, the tailoring to specificities is crucial and costs are of the essence.

One area where further collaboration between Member States could prove beneficial is by establishing an extended cooperation framework for Member States cross-border coordination and corridors (rail, roads, waterways etc.) to enhance efficiency and consumer experience.

## VI. Other strategic areas

- **Increasing investments in satellite services and new challenges**

In the case of satellite networks where coverage can extend well beyond national/EU borders, the thought of a centralised authorisation approach across the EU raises questions. The current legal EU framework is well established and implemented in national legislation. The framework allows for market access, competition and consumer protection, as well as convening legal means to enforce the authorisations granted. The RSPG emphasises the positive role of national authorisations in accordance with the EECC.<sup>23</sup> The MSS 2 GHz band remains an exception where an EU selection is foreseen further to recommendations from RSPG<sup>24</sup> even though there are no foreseen changes in the role of national authorities.

Further, the RSPG is ready to provide strategic advice on challenges triggered by the evolution in satellite networks and new services in the context of electronic communication services.

- **Spectrum Coordination with third countries**

Cross-border coordination challenges, particularly with third countries could introduce a lack of “coordinated timing of spectrum authorisation” as implemented by EECC (Article 53). Addressing these challenges requires the crucial intervention of the existing tools, namely RSPG’s “good offices”.

RSPG highlights again the strategic role of cross-border coordination between Member States and with third countries in particular to facilitate the use of harmonised bands and role of the

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<sup>23</sup> RSPG Opinion on “*the future of electronic communications sectors and its infrastructure*”, RSPG 23-016 and its addendum, RSPG 23-044

<sup>24</sup> RSPG Opinion “*on assessment of different possible scenarios for the use of the frequency bands 1980-2010 MHz and 2170-2200 MHz by the Mobile Satellite Services beyond 2027*”, RSPG24-007

EECC and its Article 28. The role of the RSPG “good offices” in cross-border coordination when requested by an EU Member State is well established and recognised including in its role for MS negotiation with third countries.

The “good offices” also provides support to the European Commission in negotiations between Member States and countries outside the EU. The RSPG strongly recommends the European Commission to define, with the relevant Member States, a work plan, negotiation targets/objectives, timeline and the actions to carry out in coordination and negotiations with third countries<sup>25</sup>.

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<sup>25</sup> RSPG Opinion on “*the future of electronic communications sectors and its infrastructure*”, RSPG 23-016