



## EUROPEAN COMMISSION

DIRECTORATE-GENERAL FOR COMMUNICATIONS NETWORKS, CONTENT AND TECHNOLOGY

Digital Decade and Connectivity  
**Radio Spectrum Policy Group**  
RSPG Secretariat

Brussels, 25 October 2023

**RSPG23-039 FINAL**

## **RADIO SPECTRUM POLICY GROUP**

### **Progress Report of the work item on the development of 6G and possible implications for spectrum needs and guidance on the rollout of future wireless broadband networks**

<b>RSPG work item: update to Plenary</b>	
<b>Work item</b>	The development of 6G and possible implications for spectrum needs and guidance on the rollout of future wireless broadband networks
<b>Rapporteur/s</b>	Heidi Himmanen, Traficom, Finland, Bo Andersson, PTS, Sweden (until January 2023), Tassos Lyratzis, EETT, Greece
<b>Rationale</b>	<p>5G is at present the most important evolution of wireless broadband. Over time the RSPG has developed three Opinions as its strategic roadmap towards 5G for Europe, in which it has identified 5G pioneer bands and addressed implementation challenges for 5G.</p> <p>The evolution of the next generation of wireless broadband is well underway. Although the commercial launch of 6G is not expected until around 2030 the start of the standardisation work is expected to have started by 2025. There are many development activities ongoing in Europe as well as in other parts of the world. Especially the 6G part of the European partnership program Smart Networks and Services is expected to develop results that are of importance for RSPG in this area. The technical developments are expected to bring new possibilities broadening the scope of wireless broadband to various areas, possibly including mitigating negative environmental impact and climate change as well as satisfying new operational needs and new services addressed to consumers and verticals. Some research initiatives are starting to consider spectrum issues and relevant needs in sub-THz spectrum but also in spectrum bands targeted for 5G including low and mid bands.</p> <p>Within this work item, the RSPG will follow and investigate the research and development of 6G and study European 6G test plans and trials. The RSPG will further investigate and identify early indications of additional spectrum and harmonisation needs and/or potential implications on spectrum regulation in order to be prepared for the development of 6G roadmaps later on (beyond 2023).</p>
<b>Scope</b>	<p>The RSPG will conduct an evaluation of 5G in Europe (licensing strategies, auction design, deployment progress, etc.) with the aim to gain knowledge around what has been successful and what still needs to be addressed, thus providing valuable input when designing future 6G strategies.</p> <p>Regarding the pivotal role of wireless broadband, the RSPG will consider early signals of demand for additional spectrum as well as the necessity to make a certain amount of harmonised spectrum available in a timely manner including in spectrum bands targeted for 5G including low and mid bands. This may involve continuing the move further up to higher bands, thus enabling early exploratory work in the sub-THz bands.</p> <p>RSPG will continue to engage in the sharing of information and experience in support of a successful development and future roll-out of 6G in the EU, and will provide targeted guidance on authorisation and implementation issues, if such a need is identified.</p> <p>This work may form the basis for and may lead to future 6G spectrum roadmaps of the RSPG later on (beyond 2023). This activity will not address WRC-23 agenda item 10 which remains to be addressed solely under the activity regarding the preparation of EU position for WRC-23.</p>

<b>Planned deliverables and timing</b>	<p>RSPG Opinion</p> <p>High-level workshops addressing the entire industry including verticals are also envisaged.</p> <p>Strategic stakeholder workshops RSPG Opinion</p> <p><u>Time schedule</u></p> <ul style="list-style-type: none"> <li>• Questionnaire to countries spring 2022</li> <li>• Stakeholder workshop September 2022</li> <li>• Draft Opinion for Public consultation: February 2023</li> <li>• Final Opinion: June 2023</li> </ul>
<b>Analytical approach</b>	RSPG will continue to engage in the sharing of information and experience in support of a successful development and future roll-out of 6G in the EU.
<b>Project plan</b>	<p>Phase 1 – Information gathering (including stakeholder engagement)</p> <p>Phase 2 – Analysis and assessment</p> <p>Phase 3 – Review conclusions (including stakeholder engagement)</p> <p>Phase 4 – Conclude and report</p>
<b>Dependencies</b>	We plan to have regular discussions with the rapporteurs for other relevant work items and possibly joint meetings / workshops to ensure we share information and align the work as appropriate.

**Members, stakeholders and resources**

Members	<p>Austria, RTR Austria, BMF Croatia, HAKOM Czech Republic, CTU Cyprus, DEC DMRID Denmark, SDFI EU, DG CNECT Finland, Traficom France, ANFR France, ARCEP France, Ministere des finances Germany, BNetza Germany, BMVI BUND Greece, EETT Greece, Ministry of Digital Policy Hungary, NMHH Ireland, DECC Ireland, COMREG Italy, AGCOM Italy, MISE Latvia, VASES Luxembourg, SMC Malta, MCA Norway, NKOM Poland, Ministry of Digital Affairs Portugal, ANACOM Serbia, RATEL Slovenia, AKOS</p>
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	Spain, Minetur Sweden, PTS The Netherlands, Minezk The Netherlands, Radiocommunications Agency Turkey, BTK
Key stakeholders	Telecom operators Vertical industries Equipment suppliers Research organisations
Other resources	
Other work items	

**Work flow (internal and external milestones)**

Date	Action / deliverable	Internal Sub-group only	External Plenary, Publication
<b>Year 2022</b>			
29 March (Webex)	First meeting of sub-group - discuss scope and plan following new <i>RSPG Work Programme</i> and new work item on <i>The development of 6G and possible implications for spectrum needs and guidance on the rollout of future wireless broadband networks</i>	Sub-group	
16 May (Webex)	Second meeting of sub-group - discuss draft questionnaire to member states on development of 6G. - discuss draft plan for workshop.	Sub-group	
7 June	Progress of work presented to Plenary	Rapporteur	Plenary
21 Sept	External stakeholder workshop – Hybrid meeting in Brussels	Sub-group	Stakeholders
22 Sept (Webex)	Third meeting of sub- group - discuss outcome of workshop - discuss steps forward and first draft on report on 6G development	Sub-group	
4 Nov	First draft of Opinion sent to sub-group	Rapporteur	
23 Nov	Progress of work presented to Plenary	Rapporteur	Plenary
25 Nov (Webex)	Sixth meeting of sub-group - discuss on 6G draft opinion document	Sub-group	
20 Dec (Webex)	Seventh meeting of sub-group - discuss on 6G draft opinion document	Sub-group	
<b>Year 2023</b>			
16 Jan (Webex)	Eighth meeting of sub-group - discuss on 6G draft opinion document	Sub-group	
15 Feb	Progress of work and first draft of opinion on 6G presented to Plenary It was decided to move the deadline for the Public Consultation of the draft opinion to June 2023, after the RSPG plenary meeting #61	Rapporteur	Plenary
23 March (Webex)	Ninth meeting of sub-group - discuss on 6G draft opinion document	Sub-group	

Date	Action / deliverable	Internal Sub-group only	External Plenary, Publication
17 April (Webex)	Tenth meeting of sub-group - discuss on 6G draft opinion document - discuss on 6G Annex to opinion	Sub-group	
10 May (Webex)	Eleventh meeting of sub-group - finalise 6G draft opinion document - finalise 6G Annex to opinion	Sub-group	
14 June	Progress of work and final draft of opinion and Annex on 6G presented to Plenary for public consultation	Rapporteur	Plenary
14 June - 26 August	Public Consultation of the draft opinion. The following respondents provided comments: 1. ecta 2. EOLO SpA 3. Wi-Fi Alliance 4. CRTV 5. University of Oulu 6. EUTC 7. ETNO 8. Bitkom 9. Vodafone 10. SCF 11. Multi company (Amazon Inc., Broadcom Inc., Cisco Systems Inc., Hewlett Packard Enterprise (HPE), Meta Platforms Ireland Limited) 12. German Center for Satellite Communications 13. GSA 14. Deutsche Telekom 15. Liberty Global 16. IEEE 802 LANMAN 17. GSOA 18. Cisco 19. GSMA 20. Elisa 21. 6G-NTN 22. Nokia 23. DSA 24. Qualcomm 25. Viasat		
25 September	Draft of the 6G opinion sent to sub-group including modification proposals from co-chairs based on the comment received	Rapporteur	
4 October (Webex)	Final (12th) meeting of the subgroup - edit and agree on final 6G opinion document	Sub-group	
25 October	Progress of work presented to the plenary. Final document of opinion and Annex on 6G presented to Plenary for adoption and publication	Rapporteur	
Future dates and actions to be decided in light of work plan			