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RADIO SPECTRUM POLICY GROUP

RSPG Opinion

on Spectrum issues in the Proposal for a Directive of the European Parliament and of the Council establishing the European Electronic Communications Framework

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The Radio Spectrum Policy Group (RSPG) is a high-level advisory group that assists the Commission, and at their request the European Parliament and Council, in the development of radio spectrum policy within the EU. The RSPG¹ offers strategic advice on policy issues, the coordination of policy approaches and, where appropriate, harmonised conditions with regard to the availability and efficient use of radio spectrum necessary for the functioning of the single market².

The RSPG fully supports the importance European coordination to enable spectrum harmonisation to deliver economies of scale and interoperability and we have long seen benefits from cooperation around spectrum management, including the contribution it makes to the Single Market. Spectrum harmonisation and coordination already happens on numerous levels and is an intricate balance of competence and responsibility between Member States, regional groups³, the European level⁴ and the ITU. The RSPG provides strategic and policy recommendations in its deliverables on actions, where needed and appropriate, to support EU policy objectives requiring access to spectrum.

Spectrum Management Framework

The RSPG supports efforts to simplify the Framework – bringing the Directives together in one measure is sensible – and welcomes the Commission’s commitment to building on the successful mechanisms and principles embedded in the existing framework, such as technology and service neutrality, which have worked well and continue to do so. It also supports also improvements in line with its recommendations, in particular on national variations.

Nevertheless, the proposed simplification of the current Framework should not undermine the clarity of the provisions, particularly on the scope of the articles. The RSPG considers that the proposals on additional measures on spectrum issues are

¹ See RSPG “manifesto”

² See Annex 1: RSPG deliverables supporting EU public policies

³ CEPT, Sectorial groups, bilateral and multi-lateral groups (WEDDIP, SEDDIP, NEDDIP) on cross-border co-ordinations (see [RSPG report on results of public consultation](#) on the review of the EU Telecommunications Framework)

⁴ Spectrum Policy (RSPG Decision [243/2012/EU](#) of the European Parliament and the Council, RSPG (Decision [2002/622/EC](#) the Commission), Technical harmonisation (The Radio Spectrum Decision, No [676/2002/EC](#) of the European Parliament and of the Council) including European harmonisation

ambiguous and their scope is unclear. Furthermore the RSPG recommends fully recognising the right of the Member States, individually or collectively, to organise and use their spectrum for public order and public security purposes and for defence.

The RSPG shares the Commission's vision for full connectivity and the path towards the Gigabit society. The RSPG has contributed effectively to the aim of the 5G⁵ and will continue its effort to support EU Policy initiatives⁶.

The RSPG reiterates that the Radio Spectrum Decision, the RSPG and the RSPP are key pillars of spectrum management in Europe, offering the possibility for both top-down and bottom up approaches. The RSPG supports a stable framework for technical harmonisation under the Radio Spectrum Decision and the Commission's aim to strengthen the RSPG. Additionally, the RSPG calls for the RSPP to be further developed⁷.

The RSPG believes considerable benefits can be derived from the continued and increased sharing of best practices across the Member States (in particular with regard to spectrum awards, national variations and common methodology), striving to deliver consistency and uniformity of approach without unnecessarily fettering the discretion of Member States to adapt to national circumstances, squeezing innovation and flexibility. The coherence of Member States' national spectrum policies can be further strengthened through closer high level cooperation within the RSPG.

The RSPG recommends that any improvement of the European Framework should focus on spectrum bands subject to technical harmonisation under the Radio Spectrum Decision and, where appropriate, should support investment, innovation and development in Europe and focus on the benefits of European interests. Any enhanced European harmonisation should nevertheless recognise the necessary national variations including the situation from Member States bordering with, or near to, non-EU countries, in particular their needs related to cross-border coordination, when developing a binding measure.

With its "Good Offices" process, the RSPG remains ready to assist, at the request of Member States, in resolving issues of cross-border coordination. Furthermore, the RSPG "Good Offices" will be able to flag, proactively, any difficulties to the RSPG and to recommend actions to overcome these difficulties in advance.

When there is a lack of demand for the usage of a harmonised frequency band under the Radio Spectrum Decision, RSPG welcomes a measure allowing Member States to manage, according to the evolution of market demand, the use of the spectrum for

⁵ See RSPG [Opinion on 5G](#)

⁶ See RSPG [Opinions on IoT and ITS](#)

⁷ See RSPG [Opinion on RSPP](#)

networks and services that fulfils national needs as long as it does not constrain the use of services in those Member States who implement harmonised technical conditions and certainty for investment of this national alternative usage.

Promoting consistency and predictability on Spectrum awards for electronic communications networks

The RSPG is a sum of its parts. As a Group it brings together a multitude of experience and expertise in all aspects of spectrum management, accrued through practical experience of operational implementation of policies, regulations and processes. Its collective knowledge is an indispensable tool for its Members, the Commission and the European Council and European Parliament.

The RSPG recognises that there could be benefits from enhanced European cooperation in the award of spectrum for commercial Mobile Broadband and future 5G networks. Regarding those networks, there may be a need for strategic cooperation and coordination of timing, where appropriate, for issuing the spectrum rights of use. However, this must be balanced with the need to maintain the ability of Member States to react to national spectrum demand in a timely manner.

Through its work on Spectrum Awards⁸ the RSPG demonstrated the benefits of sharing best practice and of working with peers to provide a framework for approaching spectrum award design, based on the experiences gained of awards previously conducted for granting individual authorisations for electronic communications networks in harmonised bands under the Radio Spectrum Decision. Building on this experience the RSPG now provides a voluntary “Peer Review” platform allowing Member States to share documents and experiences and to seek advice from their Peers during the award design process.

The RSPG shares the Commission’s aim of fostering exchange of best practices and preventing fragmentation. Nevertheless, we believe that the proposal of a mandatory peer review process is in contradiction with the aim of deregulation, could increase legal uncertainty and bureaucracy, potentially introduces delays to awards, opening the possibility of increased litigation and risks stifling the award design innovation without achieving the intended benefits.

The RSPG believes that a voluntary mechanism, executed through the RSPG and drawing on its wealth of knowledge, provides the benefits without the risks inherent in the Commission’s proposals.

⁸ See RSPG [Report Efficient Awards](#) 2016

Granting individual rights of spectrum use for electronic communications networks

The RSPG recognises the Commission's objectives to create market certainty and security of investment for spectrum rights holders in harmonised bands for electronic communications. Europe benefits greatly from the availability of existing and future harmonised spectrum. However it is important to recognise that due to geographical differences in the nature of demand, variations are likely to exist also in the future. RSPG recalls its previous analysis⁹ on the need to assess on a case by case basis the need for deadlines for making a harmonised band available. RSPG recommends pursuing technical harmonisation while having a more tailored approach to the setting of deadlines for making new bands available, so that national implementation may differ due to variations in demand and in spectrum availability. In some circumstances, there is a benefit for a coordinated timing¹⁰.

The RSPG considers it essential that a licence period is of sufficient duration to provide legal certainty and to promote investment. Licence durations should be clearly defined and articulated during the award preparation. However, Member States should have the discretion to set and adapt, where needed, the duration of rights to national market conditions, given national market dynamics, in order to foster competition and innovation.

With regard to the renewal of spectrum rights of use, RSPG believes that it is appropriate to leave flexibility to the Member States to assess the market demand and any competition issues. The RSPG recognises that rights holders need transparency, predictability and clarity regarding licence expiry and renewal. The RSPG considers that, in particular, sharing of best practice in this area could promote a more stable and predictable environment for mobile operators.

Concerning a possible voluntary joint authorisation process between Member States, on the basis of the current framework, cooperation between Member States is already in place and should be promoted to respond to this need if it emerges. There is no need for additional measures.

The RSPG is of the opinion that Member States should have the choice to adopt a 'use it or lose it' approach to spectrum rights of use.

Key challenges for a shared uses of spectrum

⁹ See RSPG [Report Efficient Awards](#) 2016 and RSPG [Opinion on RSPP](#)

¹⁰ See RSPG Opinions [on RSPP](#) and on [DSM](#)

Member States are already deeply involved in developing national sharing and coexistence solutions which support the implementation of the internal market by ensuring a more efficient usage of spectrum, and which provide a confident framework for all spectrum users. The usage of spectrum is largely, if not mainly, based on a sharing approach which goes beyond general authorisation. We note an increasing trend towards sharing and it could become the norm in the future. As this happens, national trials and efforts are expected to increase in size and number.

However, the RSPG recommends avoiding an extra layer of regulatory complexity to a European framework which has demonstrated its robustness, its flexibility and its ability to respond to innovation. The RSPG recalls that the main task remains at Member States' level: the drafting of national sharing conditions between mobile systems and others radio systems, commercial or governmental, using adjacent spectrum or the same spectrum.

Maintaining a balance of competencies

A theme we see throughout the provisions, particularly prevalent in the articles dealing with authorisation, is the introduction by the European Commission of a series of additional tasks and requirements on the Member States, which in isolation seem to be sensible spectrum management tools but which collectively create contradictions and ambiguities which are likely to lead to regulatory and legal uncertainty.

Additionally, in a number of cases the Commission proposes to issue implementing acts to stipulate how the Member States interpret, balance and implement the new tasks and requirements, therefore removing national freedom of action or innovation and calling into question the value and legal certainty of rights issued.

The areas where the Commission is proposing to have the possibility to intervene are manifold and include cross border coordination; decisions on authorisation regime; conditions attached to general authorisation and to rights of use for radio spectrum including coverage, quality of service, specific technology or service, technical and operational conditions; maximum duration; transfer or leasing; any commitment undertaken in the authorisation process; pooling & sharing and sharing of passive or active infrastructure or of spectrum; commercial roaming agreements; coordinated timing of assignments; scope of individual authorisations; coordination in implementation of limitation of right of uses; and technical specification of small cells.

The RSPG therefore expresses the need to maintain an appropriate balance of competencies.

Institutional arrangements

Decisions on the domestic administrative arrangements for implementing both European and national spectrum policy, and how best to manage that resource, taking into account national circumstances, interests and policy objectives, should remain at the Member States' discretion.

RSPG recognises the importance of the cooperation between RSPG and BEREC, where there are complementary areas of expertise, to foster competition and innovation. However, the RSPG highlights that at European level, the RSPG, given its recognised expertise, is the entity that provides radio spectrum policy advice to the European Commission, Council and European Parliament.

Conclusions

The Radio Spectrum Policy Group (RSPG) has considered the Commission's proposal on Directive of the European Parliament and of the Council establishing the "*European Electronic Communications Code*", and finds as follows:

- The RSPG remains committed to the principle of applying the least restrictive measures in spectrum regulation in order to avoid stifling spectrum use.
- The RSPG supports the efforts to simplify the Framework and to bring the Directives together. The Commission's commitment to build on the successful mechanisms and principles embedded in the existing framework, such as technology and service neutrality, is welcomed.
- The EU must work together to ensure a flexible and an enabling environment that balances regulatory and legal certainty with the ability to innovate and grow.
- As spectrum management involves other domains (e.g. civil aviation, maritime, science) and several services within the communications sector, the RSPG believes that there is a need to clarify the scope of the new framework on spectrum issues.
- The RSPG considers that an improvement of the spectrum provisions of the framework should focus on spectrum bands subject to technical harmonisation under the Radio Spectrum Decision.
- The RSPG acknowledges that there may be circumstances where enhanced European cooperation in the award of spectrum for commercial Mobile Broadband and future 5G networks may be beneficial (strategic cooperation, coordination of timing).
- The RSPG believes that the proposal for a mandatory peer review process is in contradiction with the aim of deregulation, could increase legal uncertainty and bureaucracy and would not effectively achieve the intended benefits.
- The RSPG considers it essential that a licence period is of sufficient duration to provide legal certainty and for the promotion of investment. This should be clearly defined and articulated as part of the award preparation.
- The RSPG expresses the need to maintain an appropriate balance of competencies. Effective spectrum management is an intricate balance of competencies and responsibilities and any attempts to change such balance have to be closely scrutinised to ensure full respect of subsidiarity.
- The RSPG believes it should remain at the Member States discretion how best to manage spectrum resources taking into account various national situation or interests.

ANNEX 1

RSPG Deliverables supporting Policy Objectives

RSPG Doc No.	RSPG deliverables	Strategic recommendations on EU spectrum policy	Impact on EU (and beyond) spectrum policy
UHF band			
04-55 06-143	Opinion on Spectrum Implications of Switchover to Digital Broadcasting. Document RSPG04-55 Opinion on the Introduction of Multimedia Services Document RSPG06-143	The RSPG recommended that the work in preparation for the second session of the RRC in 2006 should, among others, be aimed at creating maximum flexibility in order to allow future technological and commercial developments. The work should be aimed at reaching a decision on a plan that that is flexible enough to allow the introduction of both digital broadcasting services and other ECS. The later Opinion in 2006 (post-GE06) reviewed the regulatory landscape with the objective of facilitating the introduction of multimedia services. The Opinion identified and addressed various ways in which the introduction of multimedia services could be facilitated, in particular in the frequency bands allocated to the broadcasting services. The RSPG also identified various constraints applying to those bands and possible means of alleviating them. This was a precursor to the creation of the Digital Dividend in the 800 MHz band	GE06 facilitates flexibility in use of the UHF broadcasting band.
09-291	Opinion on the Digital Dividend Document RSPG09-291	A series of recommendations focused on facilitating release of the 800 MHz band (790-862 MHz) in Member States in a timely manner.	The RSPG 2011-15 requested Member States to carry out authorisation process in order to allow the use of the 800 MHz band for electronic communications services (art 6-4)
15-593final	Opinion on a long-term strategy on the future use of the UHF band (470-790 MHz) in the European Union Document RSPG15-593 FINAL	This Opinion provides strategic recommendations on the future use of the UHF band including the 700 MHz, in particular 694-790 MHz <ul style="list-style-type: none"> MS to reallocate the 700 MHz for WBB as early as possible ; RSPG supports end of 2020 for the availability of the band for ECS; MS may decide for duly justified reasons and without the need for derogation to delay the availability of the band by up to two years. Cross border coordination to be completed by 2017 470-694 MHz <ul style="list-style-type: none"> The 470-694 MHz band shall remain available for DTT in the foreseeable 	European Commission announced its intention to start discussion on harmonisation of ECS under spectrum Decision during Q3/Q4 2015 – possible harmonisation measures in S1 2016

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RSPG Doc No.	RSPG deliverables	Strategic recommendations on EU spectrum policy	Impact on EU (and beyond) spectrum policy
		<p>future, i.e. 2030</p> <ul style="list-style-type: none"> MS should have the flexibility to use the 470-694 MHz band for WBB downlink, if compatible with DTT needs and do not create constraints on neighbouring countries <p>European Commission</p> <ul style="list-style-type: none"> to allow national measures supporting the inclusion of more efficient DVB technologies in TV receivers to clarify the status of possible national compensation with respect to State aid rules 	
WRC Issues			
05-103 09-294 09-295 10-350 15-595final	<p>Opinion on WRC-07. Document RSPG05-103</p> <p>Opinion on the preparation of ITU World Radiocommunication conferences. Document RSPG09-294</p> <p>Opinion on the main themes of WRC-12 of interest for EU-wide support. Document RSPG09-295</p> <p>Opinion on common policy objectives for WRC-12 Document RSPG10-350</p> <p>Opinion on Common Policy Objectives for WRC-15 Document RSPG15-595 FINAL</p>	<p>A series of RSPG Opinions prepared in the run-up to WRCs have established common EU-wide objectives for WRCs on relevant policy areas. These are used to identify actions for the European Commission in order to provide political support to those objectives. Policy areas impacted include information society, the internal market, environment, transport, space policy, audiovisual policy and research and development. They are paving the way for proposals submitted to the Council of the European Union</p> <p>Since the RR relates to the right of individual administrations to access spectrum and not to harmonised technical conditions within EU, the modifications of the RR cannot affect the EU common rules on spectrum. Therefore, the common policy objectives have to be established in accordance with the requirements of the principle of sincere cooperation, as pointed out in the RSPP, Art. 10.1 (b).</p>	<p>See Conclusions of the Council of the European Union on the Communication from the European Commission on "The ITU World Radiocommunication Conference 2007 (WRC-07)" 21 September 2011</p> <p>See Conclusions of the Council of the European Union on the World Radiocommunication Conference 2012 (WRC-12) of the International Telecommunication Union (ITU) – Brussels – 27 may 2011</p>
15-616	Position Paper	RSPG views on defining European positions and negotiating at WRC-15	
16-017	Report on the result of the ITU-R World Radiocommunication Conference 2015 Document RSPG16-017 FINAL	RSPG views on the result of the ITU-R WRC 2015	to assist the Commission in its task to report to the European Parliament and the Council on the results of WRC-15 and to allow further enhancement of the RSPG preparation on WRC-19,
RSPP 2010-15			
10-330	Opinion on Radio Spectrum Policy Programme Document RSPG10-330	<p>Described key spectrum policy objectives for consideration in developing the RSPP, including:</p> <ul style="list-style-type: none"> Ensuring that sufficient spectrum for coverage and capacity purposes is allocated within the EU so that all citizens could have 	see RSPP (Decision 243/2012/UE) and recital 40

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			<p>access to ubiquitous high-speed broadband;</p> <ul style="list-style-type: none"> • Achieving coordinated availability of the 800 MHz band for ECS other than broadcasting in all the EU Member States by 2015; and • Identifying developing and potential future significant uses of spectrum taking into account demand and technology trends. 	
16-006		<p>Opinion on the implementation of the current RSPG and its revision to address the next period</p> <p>Document RSPG16-006 FINAL</p>	<p>The Opinion refers to the implementation of the current RSPG and its revision to address the next period and includes recommendations on how to address the future spectrum challenges</p>	<p>A stable framework for technical harmonisation (Radio Spectrum Decision) is maintained. The European Commission proposes to maintain a reference to the RSPG in the future framework Directive for electronic communications networks and services (Connectivity Package).</p>
Review of Spectrum : national inventories / managing demand in the context of RSPG				
12-408		<p>Opinion on review of spectrum use</p> <p>Document RSPG12-408</p>	<p>Provided guidelines to the European Commission and Member States on assessing spectrum demand and potential availability of spectrum in the context of the RSPG.</p>	<p>This Opinion has been published before the adoption of the RSPG and paved the way towards national spectrum inventory, spectrum inventory and its implementing Decision (Decision 2013/195/UE)</p> <p>European Commission granted two mandates to CEPT on Spectrum Inventory and EFIS (2012) – see CEPT reports 45 and 46 in response</p>
Review of Telecom Framework - Digital Single Market				
16-001		<p>Opinion on DSM and Framework Review</p> <p>Document RSPG16-001 FINAL</p>	<p>This Opinion presents a high level contribution as part of the preparatory work reviewing the Framework, rather than seeking to address the specific questions in the consultation launched by EC during Q4 2015.</p>	<p>Proposals from European Commission published 14 September (referring this Opinion in stakeholders consultations). Some recommendations from RSPG have been partly included in the Commission's proposal.</p>
16-022		<p>Report on the results of the public consultation on the Review of the EU Telecommunications Framework</p> <p>Document RSPG16-022 FINAL</p>	<p>RSPG views to the result of public consultation published in Q2 2016</p>	
Cross border issues				
08-232		Opinion on Spectrum Issues	Outlined the issues which needed to	Processes have been used

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	concerning Outer EU Borders Document RSPG08-232	be addressed by the European Commission and Member States in resolving frequency coordination issues with non-EU countries bordering the EU	successfully a number of times to resolve challenging cross-border frequency coordination issues. RSPG "Good Offices" is active
12-409	Opinion on the process for EU assistance in bilateral negotiations with third countries and between EU countries Document RSPG12-409	Described a) a process for assistance from the EU at the political level to support bilateral negotiations in cases where one or more Member States have difficulties in cross-border coordination or from harmful interference with third countries which prevents them reaching the envisaged benefits of the implementation of an EU policy or where there is a strong EU interest; a) a process to assist one or more Member States, with "good offices" from the RSPG, in finding a solution for cases of harmful interference or unresolved coordination issues with other Member States	Both processes have been used successfully a number of times to resolve challenging cross-border frequency coordination issues. RSPG "Good Offices" is active
13-524	Report on proposed spectrum coordination approach for broadcasting in the case of a reallocation of the 700 MHz band Document RSPG13-524	This Report examines the best approach which could be considered in spectrum coordination between EU countries, in case of use of the 700 MHz frequency band for wireless broadband communications, and the related timeline.	It provides visibility to Policy makers – see Lamy Report (Compromise proposal - point 5)
16-046	Report on the results of the RSPG "Good offices" in bilateral negotiations between EU countries Documents RSPG16-046 FINAL	The Radio Spectrum Policy Group (RSPG) has defined the principles for the use of the "good offices" of the RSPG in its Opinion on the process for EU assistance in bilateral negotiations with third countries and between EU countries. This report provides a review of the requests, results and lessons from the applications of the "good offices". Its is proposed to extend the "good offices" programme of work to a new project, focusing on 700 MHz spectrum re-planning and clearance, and particularly to identify at an early stage whether there are potential issues of cross-border co-ordination or harmful interference. The RSPG, at its November 17, confirmed this additional working track of the "good offices" which will have to flag, in a proactive mode, any difficulties to the RSPG and to recommend actions to overcome these difficulties in advance.	
Wireless Broadband			
05-102	Opinion on Wireless Access Policy for Electronic Communication Services (WAPECS)	Established the framework for technology and service neutral designation of spectrum, now a core feature of all ECS related spectrum	EC granted number of mandates to CEPT (2006, 2008, and 2009) to implement the WAPECS

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	Document RSPG05-102	regulations.	approach. Relevant CEPT reports in response served as the basis for EC Decisions 2,6 GHz, 3,4-3,8 GHz, 900-1800 MHz See also RSPG art. 6-2
13-521 rev 1	Opinion on strategic challenges facing Europe in addressing the growing spectrum demand for wireless broadband Document RSPG13-521 rev1	Provides guidance to the European Commission on assessing and dealing with the future demand for spectrum for wireless broadband in meeting the goals of the Digital Agenda. This Opinion focuses on the problems associated with the provisioning of wireless broadband in general and specifically with the spectrum requirements for terrestrial wireless broadband. Sets out a roadmap for making spectrum available for WBB including meeting the interim target of at least 1200 MHz for WBB. Proposes, with guidelines, the development of a long-term strategic policy on the future use of the UHF band (470-790 MHz).	EC granted two EC mandates to CEPT : 1452-1492 MHz and 2,3 – 2, 4 GHz (April 2014)
RSPG15-607	RSPG report on Wireless backhaul Document RSPG15-607	This Report identifies and analyses strategic spectrum issues relative to wireless backhaul for mobile networks(lessons learnt, various types of backhaul, trends, needs, etc.) due to: <ul style="list-style-type: none"> • higher capacity needs for existing macro-cellular sites • the densification of base stations and the small cells approach (trends, foreseen impact on spectrum management, non-line of sight wireless backhaul issues) in mobile networks infrastructures 	Some of the elements of the report, e.g. in relation to 5G, could be the basis for further development in the context a new work item to be discussed in the context of the RSPG work programme for 2016.
10-351rev1	RSPG BEREC report on Mobile transition Document RSPG10-351	Member States are experiencing an increasing usage and demand for mobile data services and broadband applications / services. This report highlights various issues dealing with national mobile transition – the 800 MHz and 2,6 GHz cases are highlighted.	See relevant EC Decisions on ECS bands (800 MHz, 2,6 GHz)
11-393	Report on Improving WBB coverage Document RSPG11-393	This Report sets out some of the key issues facing EU Member States in the challenges they face in providing high speed broadband services to all citizens and consumers The scope of this Report covers the wider context of both wired and wireless approaches to meeting public policy coverage goals before focussing on the role of wireless solutions. It looks at the various different methods that Member States have employed with wireless platforms and summarises the success that these approaches have achieved. Finally, with direct reference to the request for this Report, it considers two discrete issues of concern relating to	The report highlighted various methods that Member States have employed with wireless platforms and summarises the success that these approaches have achieved This report has been published during the negotiation of the RSPG between Council and EP (by end of 2011) EC granted mandates to CEPT March 2012 3,4-3,8 GHz : <i>to undertake</i>

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		<p>competition in the wireless broadband market and the potential for under-utilisation of spectrum bands that are harmonised at a European level.</p> <p>The Report also provides particular focus on the role of coverage obligations on mobile broadband services.</p>	<p><i>studies on amending the technical conditions regarding spectrum harmonisation in the 3400-3800 MHz frequency band</i></p> <p>Paired 2 GHz bands: <i>on the harmonisation of the frequency bands 1920-1980 MHz and 2110-2170 MHz ('paired terrestrial 2 GHz band')</i> for terrestrial systems capable of providing electronic communications services in the European Union</p> <p>July 2012 1900-1920 MHz and 2010-2025 MHz: <i>to undertake studies on the harmonised technical conditions for the 1900-1920 MHz and 2010-2025 MHz frequency bands in the EU primarily in support of uses other than electronic communications services</i></p>
11-374	<p>RSPG BEREC Report on Infrastructure and spectrum sharing in mobile/wireless networks</p> <p>Document RSPG11-374</p>	<p>The report provides definitions based on the types of current sharing agreements in Europe, including the available technical choices, provides a survey of existing agreements and their scope, illustrates the financial implications and key competitive issues, together with an analysis of existing regulation.</p>	
12-410rev2	<p>BEREC RSPG report on competition issues</p> <p>Document RSPG12-410 rev2</p>	<p>This report explored the social value of spectrum (WAPECS bands : 800, 900, 1800 MHz, 2 GHz 2,6 GHz, 3,5 GHz) and highlighted the role of spectrum harmonisation and various national approaches concerning frequency assignment procedure</p>	<p>This report has been referenced in OECD report on "new approaches to Spectrum management" 2013</p>
16-004	<p>Report on Efficient Awards and Efficient Use of Spectrum</p> <p>Document RSPG16-004 FINAL</p>	<p>Within this report, Member States share views and best practices on spectrum award approaches and related conditions of use with a view to promoting efficient use of spectrum. This report analyses the spectrum requirements of future Wireless Broadband Systems (WBB), taking into account different geographical characteristics, market situations, and different usage scenarios, with the aim of ensuring that spectrum is well utilized and that future speed, capacity and coverage requirements are met</p>	<p>RSPG established with the support of the European Commission a "Peer review/[Peer Assistance]" platform on the Circa Web site</p> <p>The platform provides a forum for RSPG members to exchange experiences and views on spectrum awards and national assignment regulations of ECS spectrum.</p>
16-032	<p>Opinion on spectrum related aspects for next-generation wireless systems (5G)</p> <p>Document RSPG16-032 FINAL</p>	<p>This Opinion paves the way for the introduction of 5G in Europe</p> <ul style="list-style-type: none"> • 3.4-3.8 GHz will be the first primary band for 5G and bring the necessary capacity for new 5G services in urban areas; • and 26 GHz will be the pioneer band in Europe above 24 GHz to give ultra-high capacity for innovative 	<p>The European Commission issued a Mandate to CEPT CEPT (January 17) requesting the development of harmonised technical conditions for the usage of 5G in 3,4-3,8 GHz and 26 GHz.</p> <p>The reports from CEPT are requested for Q1-Q2 2018</p>

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		<p>new services, enabling new business models and sectors of the economy to benefit from 5G.</p> <p>In addition, the RSPG has identified the potential of existing EU harmonised mobile bands for 5G, including in particular bands below 1GHz which can enable 5G coverage to all areas (e.g. 700 MHz) ensuring that everyone benefits, enabling the transition from the current to the next generation of networks.</p>	and should be basis for the drafting of binding technical harmonisation measures under the Radio Spectrum Decision.
Sharing Spectrum			
08-244	<p>Opinion on Collective use of Spectrum Document RSPG08-244</p>	<p>This Opinion focused on the Collective Use of Spectrum model to be considered in the context of identifying the right mix between the different licensing models and approaches to spectrum management.</p> <p>The WAPECS focused specifically on Electronic Communications Services (ECS), whereas CUS is broader covering both ECS and non-ECS.</p>	<p>See EC mandates to CEPT under Spectrum Decision and relevant CEPT reports which served as the basis for EC Decisions on SRD, UWB, SRR 24 GHz)</p> <p>See also RSPP art.4</p>
10-306	<p>Report and Opinion on Cognitive radio Document RSPG10-306</p>	<p>This report provided background on Cognitive radio re issues</p>	<p>This Opinion paved the way for a mandate to ETSI on Cognitive radio (mandate M/512) 2013</p> <p>See also RSPP art.4</p> <p>This report has been referenced in OECD report on "new approaches to Spectrum management" 2013</p>
11-392	<p>Report on CUS and other spectrum sharing approaches Document RSPG11-392</p>	<p>This report proposed a set of recommendations to the European Commission in a view to facilitate shared access to spectrum in Europe:</p> <ul style="list-style-type: none"> strengthen cooperation between CEPT and ETSI in the Collective Use of Spectrum domain, in-depth assessment of the concept of LSA so as to explore the viability of this approach and carry out a consultation amongst EU Member States, 	<p>See recent EC mandates to CEPT on SRD (5th update under process), on 5 GHz (2013) under Spectrum Decision</p> <p>See also RSPP art.4</p> <p>This report has been referenced in OECD report on "new approaches to Spectrum management" 2013</p>
13-538	<p>License Shared Access Document RSPG13-538</p>	<p>A RSPG response to the European Commission's Request for an Opinion on spectrum regulatory and economic aspects of Licensed Shared Access</p> <p>This Opinion defines LSA and considers how it could be implemented, in particular focusing primarily on unlocking bands used by incumbents, in which sharing opportunities which could improve the efficiency of the spectrum use are identified for additional licensed users.</p>	<p>This Opinion paved the way for efficient usage of spectrum in some national circumstances</p> <p>See EC report on Spectrum inventory – 1 September 2014</p> <p>This report has been referenced in OECD report on "new approaches to Spectrum management" 2013</p>
Improving the European Framework			
08-246	<p>Opinion on Streamlining the regulatory environment for the use of spectrum Document RSPG08-246</p>	<p>Objective of the Opinion was to assist the EC in identifying solutions to ensure consistency between various regulations affecting spectrum and to improve the cooperation between</p>	<p>See RSPG report on Interference management – section 5 'Analysis and Impact of the current Regulatory Framework</p>

RSPG Doc No.	RSPG deliverables	Strategic recommendations on EU spectrum policy	Impact on EU (and beyond) spectrum policy
		<p>bodies involved in spectrum policies, in order to facilitate making spectrum available for new applications and improve the efficient use of radio spectrum and the avoidance of harmful interference.</p> <p>The Opinion provided a number of short-term and long-term recommendations to achieve that objective.</p>	<p>of Member States, the CEPT and the EU Institutions on 'Efficient Interference Management' describing concrete follow up actions</p>
13-527 rev 1	<p>Report on Interference management Document RSPG13-527 rev1</p>	<p>The Report mainly focuses on:</p> <ul style="list-style-type: none"> • Identification of the basic principles and approaches of efficient Interference Management as well as Member States' best practices in managing interference taking into account increasingly flexible conditions of use in spectrum rights; <ul style="list-style-type: none"> • Examination through the analysis of best practices, what role EU spectrum policy and specifically the R&TTE and EMC Directives, could play for improved receiver standards; • Ways to improve receiver standards within the current ETSI, CENELEC and EU processes as well as to indicate how the European institutions could facilitate such a breakthrough; <p>This Report has been drafted further to the publication of the European Commission proposals for a Radio Equipment Directive (Directive 2014/53/EU) in October 2012 which is under negotiations at the Council and the European Parliament at the time of writing.</p> <p>It highlights the key role of receivers in spectrum regulation and harmonised standards</p>	<p>The Radio Equipment Directive (Directive 2014/53/EU) has been published in May 2014. Compare to R&TTE Directive, its scope includes receivers as recommended by this report.</p>
Highlighting strategic spectrum issues from various sectors			
06-144	<p>Opinion on Scientific Use of Spectrum Document RSPG06-144</p>	<p>In this Opinion the RSPG urged Member States to respect their obligations under No. 5.340 of the Radio Regulations and recommended that the EC, when preparing spectrum measures, should support the needs of the scientific services in these particular bands. For other bands, the RSPG emphasised the need to assess the impact of a potential decision on both scientific uses and other services when increased levels of sharing are being considered.</p>	See RSPG article 8
09-258	<p>Opinion on Public Use of Spectrum Document RSPG09-258</p>	<p>In this Opinion RSPG identified best practices for a more efficient use of spectrum by public sector bodies in the areas of defence, emergency and public safety and public transport, with a view to assist spectrum management authorities in Member States to ensure that such public sector bodies have sufficient and appropriate spectrum resources to perform their tasks</p>	See RSPG article 8

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		effectively and that scarce radio frequencies are not underutilised.	
13-540rev2	Report on Strategic sectoral needs Document RSPG13-540 (rev2)	<p>This report is focusing on Article 8 of the RSPG which highlights specific EU policies other than electronic communication services (ECS), for which spectrum needs should be studied and protected, in particular:</p> <ul style="list-style-type: none"> • Galileo • Global monitoring for environment and security (GMES) • Intelligent transport management systems (ITS) • Smart energy grids and smart meters • Safety services and public protection and disaster relief (PPDR) • Scientific services • Programme making and special events (PMSE) • The Internet of things (IoT) including RFIDs <p>This report is covering also others sectors such as civil aeronautical and maritime communications and Professional mobile radio (PMR) are also interrelated with Union policies.</p>	See RSPG article 8

ANNEX 2: RSPG consultation with stakeholders

When drafting this Opinion, RSPG examined the information publicly available including those provided by stakeholders in response to the public consultation on the review of the Electronic Communications framework and views expressed at the RSPG stakeholders’ workshops including a presentation made at the working group level.