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Radio Spectrum Policy Group

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RADIO SPECTRUM POLICY GROUP

Progress Report of the RSPG Working Group

**on spectrum aspects of Intelligent Transport Systems and spectrum
requirements for a next generation rail communication and traffic
management system**

I- RSPG work item: update to Plenary	
II- Work item	Spectrum aspects of Intelligent Transport Systems and spectrum requirements for a next generation rail communication and traffic management system
Rapporteur/s	Erika Forsberg, Ofcom, UK
Rationale	<p>ITS means systems in which information and communication technologies are applied in the field of transport and traffic telematics including infrastructure, vehicles and users, traffic management and mobility management. Many areas within this sector are still at the research stage, but may have a potential to play a significant role in the area of road safety and traffic management. Within the EU Commission Decision 2008/671/EC “on the harmonised use of radio spectrum in the 5875-5905 MHz frequency band for safety-related applications of Intelligent Transport Systems (ITS)” harmonises the conditions for the availability and efficient usage of this frequency band for safety-related ITS. In addition, the frequency band 5855-5875 MHz is available in some countries for non-safety related ITS applications.</p> <p>Spectrum requirements for transport are evolving rapidly due to the growing need for mobility as well as the increasing level of automation, but it should also be considered in the context of 5G.</p> <p>In consequence, transport-focussed legislation could benefit from a spectrum strategy that shows coherence across various EU public policy objectives related to spectrum for transport.</p> <ul style="list-style-type: none"> • With the advancements in automated driving, vehicle connectivity and C-ITS (cooperative intelligent transport systems) the landscape in the automotive sector is changing towards “connected and automated driving”. This will raise new consumer demands, new services, new players and new business models, just to name a few of the most obvious changes. Relevant spectrum resources in coherence with standardisation will be a core element to support European competitiveness in the global market. RSPG has already concluded, in its previous Report on Strategic Sectorial Spectrum Needs, that the ITS-sector should forward its spectrum needs via the ETSI-CEPT process. • In the railway sector, the RSPG notes the coexistence issues between mobile networks and the railways communications system (GSM-R). In the recent years, ETSI and CEPT contributed actively to the process to clarify the solutions to be implemented at national level (coordination between GSM-R and public mobile systems) and by the standardisation (improved GSM-R receivers). Efforts are ongoing also at national level. Strategic consideration is needed on the next generation of Railway communication systems to avoid a repetition of this situation. There may also be some broader spectrum considerations for the railway sector, going beyond GSM-R and its replacement.
Scope	<p>Taking into account the RSPG report on “sectoral needs”, the RSPG plans to develop a spectrum strategy including:</p> <ul style="list-style-type: none"> • A review of “state of the art”, regulatory issues, the provision of access to spectrum and, as appropriate, to address spectrum and connectivity needs for Intelligent Transport Systems, also covering various forms of usage as medium/long term Transport and Traffic Telematics (TTT) applications like remote enforcing and road tolling,

	<p>car 2 car, “connected/automated car” and various connectivity applications and especially the impact on the sector from 5G.</p> <ul style="list-style-type: none"> Assessing requirements for a next generation rail communication and traffic management system including spectrum issues; <i>Note: this is a future-looking work item and issues related to the current operation of GSM-R, eg interference, are not in scope.</i> <p>RSPG will cooperate with relevant entities, e.g. the European Railway Agency, in developing this strategy, recognising that there is a broader set of stakeholders for transport issues.</p> <p>Representatives from the car-to-car industry group and the European Railway Agency will be invited to speak (separately) to the RSPG working group.</p>
Planned deliverables and timing	<p>RSPG Opinion (if needed accompanied by a report)</p> <p>Time schedule</p> <ul style="list-style-type: none"> Draft Opinion in November 2016 Final Opinion in February 2017
Analytical approach	<p>There are two distinct aspects to the work item – Intelligent Transport Systems for road / road vehicles, and the next generation rail communication and traffic management system.</p> <p>For road ITS, we plan to:</p> <ul style="list-style-type: none"> Note the spectrum already available and used for ITS. Our working assumption is that ITS for road vehicles is (and will be) delivered by range of applications, using a number of different spectrum bands and technologies, including 5G Consider what ITS applications and services European consumers will want to have access to in the medium to longer term Assess whether availability of spectrum could be a constraint on ITS development <p>For next-generation rail communications, we plan to:</p> <ul style="list-style-type: none"> Consider the spectrum options for a future rail communications system to replace GSM-R and Consider whether there are broader spectrum considerations for the railway sector (beyond GSM-R and its replacement)
Project plan	<p>Phase 1 – Information gathering, including briefings from key stakeholders</p> <p>Phase 2 – Analysis and initial assessment</p> <p>Phase 3 – Test/review initial conclusions (including stakeholder engagement)</p> <p>Phase 4 – Conclude and report</p>
Dependencies	<p>This work is closely linked to the RSPG work item on <i>Spectrum aspects of the Internet of Things</i>. The two working groups have agreed to work closely together, with shared group membership and meetings scheduled to take place on the same day.</p> <p>The work is also closely related to the RSPG work item on <i>Spectrum related aspects for next-generation wireless systems (5G)</i>. We plan to</p>

	<p>have regular discussions with the rapporteurs for the 5G work item to ensure we share information and align the work as appropriate.</p> <p>We plan to learn from and make good use of the documentation and current work resulting from the CEPT and ETSI activities. We note that there also related work being taken forward by BEREC. It will be important for the working group not to duplicate the work already done by these entities.</p> <p>In addition, the working group will follow current work underway in Europe, in relation to the next-generation rail communications system, by the ERA and other relevant stakeholders.</p>
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Members, stakeholders and resources

Members	<p>Sabrina Stanislas Boumier, Ministry for Industry and Digital Infrastructure, FR</p> <p>Kenneth Concannon, Comreg, IE</p> <p>Florence Erpelding, ANFR, FR</p> <p>Erika Forsberg, Ofcom, UK</p> <p>Walter Guggi, Ministry of Transport and Digital Infrastructure, GE</p> <p>Steve Jones, Ofcom, UK</p> <p>Oliver Keden, BNetzA, GE</p> <p>Rüdiger Martin, DG Connect</p> <p>Giuseppe Rizzo, DG Connect</p> <p>Chris Seifert, BNetzA, GE</p> <p>Pascal Soulé, ARCEP, FR</p> <p>Tom Wikström, Ficora, FI</p>
Key stakeholders	<ul style="list-style-type: none"> • CEPT • ETSI • Rail: European Railway Agency and rail industry • Automotive: Car 2 Car Communication Consortium, European Association of Operators of Toll Road Infrastructures, European Automobile Manufacturers Association, <p>Given the emerging nature of the technology relevant to ITS, there may be additional industry representatives, eg from companies supporting LTE based technology.</p>
Other resources	<ul style="list-style-type: none"> • The Joint Research Center (JRC) - https://ec.europa.eu/jrc/ • Alliance for Internet of Things Innovation (AIOTI)- https://ec.europa.eu/digital-single-market/alliance-internet-things-innovation-aioti <p>Other information sources may be added.</p>

Work flow (internal and external milestones)

III- Date	Action / deliverable	Internal Work group only	External Plenary, Publication
Year 2016			
3 May	First meeting of work group – discuss scope and plan	Work group	n/a
8 June	Update to Plenary	Rapporteur	Plenary
29 June	Second meeting of work group – discuss feedback from Plenary and emerging hypotheses	Work group	Road ITS and Rail stakeholder representative invited to present to the group

III- Date	Action / deliverable	Internal Work group only	External Plenary, Publication
	Presentations from ITS and rail stakeholders		
September (date TBC)	Stakeholder workshop [tentative – to be decided at second group meeting]	Work group	Stakeholders
October (date TBC)	Third meeting of work group – drafting	Work group	n/a
9 November	Draft Opinion presented to Plenary	Rapporteur	Plenary
December (date TBC)	Public consultation published	Work group	Publication
2017			
January (date TBC)	Fourth meeting of work group – discuss responses and final drafting	Work group	n/a
February (date TBC)	Final Opinion presented to Plenary	Rapporteur	Plenary
March (date TBC)	Publication	Work group	Publication
Future dates and actions to be decided in light of agreed work plan			