

05 January 2018

EBU Response to RSPG Strategic Spectrum Roadmap towards 5G for Europe - DRAFT RSPG Second Opinion on 5G networks

The EBU¹ welcomes the opportunity to contribute to RSPG's discussion of the appropriate spectrum framework for the future use of 5G in Europe and in particular to this consultation on the RSPG's Second Opinion on 5G networks.

Broadly, the EBU supports RSPG's efforts to establish a clear framework for the future deployment of 5G networks. Adopting a harmonised approach across the EU will maximise the opportunities to benefit consumers and businesses. EBU members expect that 5G technologies will play a part in their distribution and programme making activities in the future, and the EBU has been engaging with the ITU-R and 3GPP, as well as in 5G-PPP research to ensure that the technologies are suitable for its members' needs. For some broadcasting applications, enhancements of 4G technologies may be sufficient to address the expected requirements; whereas for others, the expected 5G "New Radio" technologies will be required to deliver the best experience to audiences.

5G coverage obligations

The RSPG is of the Opinion that service performance and availability requirements for some 5G services will be relevant, and these will need to be defined by the relevant "vertical" industries (e.g. the media and entertainment sector) in a timely manner. 5G technologies are promising for future broadcaster's distribution and programme making activities. Public Service Media generally have near-universal service obligations, and it may therefore be appropriate for 5G networks to have coverage obligations put into place.

We therefore support RSPG's Opinion that coverage obligations to 5G networks, where appropriate, will need to be defined. These may be more appropriate for networks using lower frequency bands where universal coverage is practically achievable, whereas other mechanisms may be needed for making higher frequency bands suitable for broadcasters' use (such as non-exclusive licensing – see comments below on Annex A2). Furthermore, we propose that RSPG should put adequate mechanisms into place for the vertical industries to submit their service requirements to form the basis for 5G network coverage and performance obligations.

5G Services/5G technologies and related band use

Annex A.1 of the draft Opinion sets out the rationale for 5G to have access to multiple frequency bands, with some bands giving advantages in terms of coverage and others in terms of capacity. Integrated networks, working across multiple frequency bands, will allow,

¹ The European Broadcasting Union (EBU) is the world's leading alliance of public service media (PSM). We have 73 Members in 56 countries in Europe, and an additional 33 Associates in Asia, Africa and the Americas. Our Members operate almost 2,000 television, radio and online channels and services, and offer a wealth of content across other platforms. Together they reach an audience of more than one billion people around the world, broadcasting in more than 120 languages. The EBU operates Eurovision and Euroradio services.

for example, a seamless experience for users as they move between environments, such as moving from outdoors to indoors.

The EBU notes that in Annex A1, RSPG discusses the future transition of the 800 and 900 MHz bands to 5G and the benefits that would bring to the efficient use of spectrum. In that respect, the EBU notes and supports the principle behind the recent report² published by Digital UK in which they look at how the 694-960 MHz bands could be used more efficiently, delivering a “defragmentation dividend” and making the whole range, spanning the 700 MHz, the 800 MHz and the 900 MHz bands, better suited for 5G i.e. by allowing wider frequency channels than is currently possible. The EBU would encourage RSPG to consider such approaches to spectrum management in their considerations as they undertake the important work of mapping out the future of spectrum for 5G.

We would also like to note that the technical conditions for the use of the 700 and 800 MHz bands by mobile services were defined to protect broadcasting services below 694 MHz and below 790 MHz, respectively, based on 4G/LTE technology. It is important that future 5G technology will still meet the protection requirements of broadcasting services below 700 MHz, and we welcome the recognition that further studies will be needed on this.

Sharing options and Authorisation models

Annex A.2 discusses various approaches to sharing spectrum and different authorisation models that regulators may consider employing.

The EBU notes, at A2.1.4, that RPSG is of the opinion that “Administrations should ensure the proper balance” between 5G use of the 3.6 GHz band, and continuing to allow satellite operators access to this band. The EBU strongly supports this approach, but notes that in some Member States, Administrations have taken a different approach by removing satellite operators’ access to this band completely, contrary to the balanced approach put forward by RSPG. The EBU notes that broadcasters internationally rely on FSS spectrum use in this band for programme contribution, monitoring and distribution. ECC Report 254 acknowledges that “most of the receive-only FSS usage within Europe falls under licence exempt authorisation”. Given that few countries have regulatory measures in place to license the receive-only terminals typically used by broadcasters, EBU hopes that Administrations will consider the value provided to EU citizens by this use and follow advice given in Report 254 to consider how to handle existing non-registered stations and offer protection.

In A2.2, RSPG discusses that “Member States will require flexibility in the mix of authorisation approaches to use.” The EBU notes that the obligation placed on its members in many countries to ensure universal or near-universal service availability may not be achievable by relying solely on commercial mobile networks, especially for networks in frequency bands above 6 GHz. There will therefore be a need to ensure access to the 5G bands by other operators either by individual authorisation or on a dynamic shared access basis. This is why the EBU supports flexibility in the mix of authorisation approaches to use.

In A2.4.2, RSPG discusses the coverage challenges that future 5G networks will need to address. The EBU would like to note that 5G mobile networks are unlikely to be able to achieve on their own the ubiquitous coverage, high throughput, and low latency to meet the service requirements of various verticals, including the audiovisual media sector. However, as all existing infrastructure, including mobile and fixed broadband networks, satellite platforms, and terrestrial broadcast networks continue to evolve, 5G may facilitate their interconnection and integration to achieve the desired ubiquitous coverage and connectivity.

² http://www.digitaluk.co.uk/_data/assets/pdf_file/0016/93400/Aetha_Consulting_-_The_Defragmentation_Dividend_15_November_2017.pdf