

20/12/2024

Reply of ARD and Deutschlandradio on the

Draft RSPG Report on 6G Strategic vision

ARD¹ and Deutschlandradio thank the RSPG for the opportunity to reply on the draft “*RSPG Report on 6G Strategic vision*”.

Public and private broadcasting create the public space for broad and reliable information for the population and social cohesion, especially in times of crisis. In times of fragmented information landscapes, increasing disinformation and hate speech, quality media make an indispensable contribution to political discourse by producing, verifying, and distributing reliable information. They are a central factor in the democratic decision-making process. ARD and Deutschlandradio produce and distribute media content every day for millions of viewers and listeners thereby creating public value for society. One important means for this is the use of radio spectrum in multiple frequency bands for a plethora of applications like FM and DAB radio, terrestrial television, wireless microphones, cordless cameras, fixed links, or satellite up- and downlinks. The use of spectrum for wireless media production as well as for content distribution creates social and cultural values and is essential for social cohesion, fostering cultural and linguistic diversity as well as supporting media freedom and pluralism in Europe.

[Specific role of audio-visual media for society](#)

Already the Radio Spectrum Decision of 2002² recognizes that “Radio spectrum policy in the Community should contribute to freedom of expression, including freedom of opinion and freedom to receive and disseminate information and ideas, irrespective of borders, as well as freedom and plurality of the media.” (Recital 3). These principles and aims are continuously reiterated e.g. in the European Electronic Communications Code (especially in article 4, 45 and 48). The specific role audio-visual media play for society is also the basis of the Audiovisual Media Services Directive. In addition, since May 2024 the European Media Freedom Act is put into force thereby taking great effort to protect and promote Media freedom and pluralism in the EU as it recognizes the essential importance of the media for a functioning democracy and the rule of law. Thus, any development in the field of spectrum policy has to take into account the role of media for society, including its production and its means of distribution.

[ARD and Deutschlandradio are open for new technologies](#)

ARD and Deutschlandradio constantly supported the introduction of new modern, economic, sustainable, and compatible technologies (e.g. DVB-X, state of the art video codecs, immersive audio-visual media AI, drones, satellite applications etc.) to fulfil our remit to reach a broad audience by providing an appealing content at minimal cost. We always actively contribute to regulatory and standardisation bodies like CEPT, ITU, ETSI, 3GPP and others to make new technologies applicable for broadcasting.

¹ ARD: Arbeitsgemeinschaft der öffentlich-rechtlichen Rundfunkanstalten in Deutschland; Transparency Register ARD-6774178922-55

² Decision No 676/2002/EC of the European Parliament and of the Council of 7 March 2002 on a regulatory framework for radio spectrum policy in the European Community (Radio Spectrum Decision)

Therefore, 6G applications are of high interest for ARD and Deutschlandradio, be it for mobile media production via mobile and satellite networks (e.g. direct to device) or be it for the cost-effective receiving of on-demand content via IP streaming from our Mediathek on the move.

Number of parallel technology generations in use

ARD and Deutschlandradio welcome RSPG's observation that research results indicate there is no longer enough available spectrum for each individual mobile network operator to build their own vertical system.

Mobile networks have evolved through five generations: 1G, 2G, 3G, 4G, and 5G. Each generation brought technological advancements and was introduced in new frequency bands. However, the parallel use of multiple technology generations leads to inefficiencies. The maintenance and operation of multiple generations simultaneously require significant spectrum resources, resulting in suboptimal use of the scarce frequency spectrum. Consolidating technology generations can improve spectrum efficiency significantly. First 2G and 3G network shutdowns by the mobile network operators are already showing initial successes. Hence, reducing the number of technology generations operated in parallel is necessary to minimize additional spectrum requirements at the expense of other radio services. Not least because some of these IMT frequencies are not only used for legacy technologies but, to a certain extent, are little or even unused.

It is worth noting that broadcasting adopted very quickly each generational leap in the course of the development of terrestrial television, although television receivers have a much longer lifespan compared to smartphones and other mobile devices.

Spectrum sharing

In the terrestrial broadcasting environment, spectrum sharing with other radio services such as radio astronomy, weather radars, and wireless microphones has long been successfully practiced. In particular, horizontal spectrum sharing between applications with the same regulatory status (e.g. two secondary radio services) requires clear and fair regulatory rules, otherwise there is no planning and investment security for the affected services. Horizontal sharing between secondary services does not exist on the international ITU level. Consequentially, this is a task for national and EU regulatory entities.

In any case, existing services must be protected so that they can continue to operate without suffering from undue interferences within their designated coverage areas. Against that backdrop, we welcome that the referring WRC-27 agenda item 1.7 and the corresponding resolution 253 resolve that the protection of incumbent services need to be ensured in accordance with the Radio Regulations. ARD is potentially affected as we operate numerous terrestrial fixed links in the frequency bands 7.125 - 7.250 MHz, 7250 - 7.750 MHz and 14.8 – 15.35 GHz under investigation.

Additionally, RSPG identified further frequency ranges potentially suitable for 6G in the “mid bands”, like 1.800 MHz, 2 GHz, and 2.6 GHz. We would like to remind that ARD and Deutschlandradio operate radio services like audio PMSE and cordless cameras in these spectrum bands.

These radio services are indispensable to produce and distribute media content. As already mentioned above, according to the Audiovisual Media Services Directive, the European Electronic Communications Code and the recent European Media Freedom Act it is essential to ensure European linguistic and cultural diversity throughout the European Union by particularly protecting the media sector.

Rapid spectrum access

The improvement of "Rapid Spectrum Access" mentioned by the RSPG is also seen by ARD and Deutschlandradio as a reasonable approach. We welcome the consideration that nomadic local non-public networks respective campus networks for media production can reliably be realized with short lead times. Especially in cases of breaking news or times of crisis it is important to get access to spectrum on a short notice for production at a certain location to gather rapidly information for a broad audience via a fully connected local network. The current regulatory regime does not cover this use case.

Other industries, such as construction, agriculture, and fire departments, have also expressed interest in nomadic non-public networks to cover their distinct use cases.

TV-UHF is not available for the introduction of 6G

Furthermore, the TV UHF band 470 – 694 MHz cannot be a resource for the introduction of 6G. The WRC-23 has confirmed broadcasting as the sole primary user in Europe. Only secondary applications are possible. Additionally, the resubmission of the topic at WRC-31 is limited to regulatory measures in the 600 MHz band in an open-ended manner. Encouragingly, we noted that the RSPG explicitly stated that the current EU framework in the UHF band remains applicable for the time being, in accordance with the EU decision 2017/899 on the use of the 470 – 790 MHz frequency band in the Union.