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Rohde & Schwarz response to the "Draft RSPG Opinion on the ITU-R World Radiocommunication Conference 2023 (ch. 4.3 WRC-23 Agenda Item 1.5 (UHF Review))"

Rohde & Schwarz welcomes the opportunity to provide its comments on the **"Draft RSPG Opinion on the ITU-R World Radiocommunication Conference 2023"**, specifically to the topic **4.3 WRC-23 Agenda Item 1.5 (UHF Review)** and invites RSPG to consider below proposal.

Rohde & Schwarz, as worldwide leading broadcast technology vendor, considers terrestrial broadcast networks as highly efficient means for audio-visual content distribution. With new technologies like 5G Broadcast energy efficient distribution can be enabled not only for fixed reception but also for mobile users.
The 5G Broadcast system is natively designed for high spectrum efficiency, low deployment costs, quick time to market and reuse of broadcasting infrastructure (including high power high tower).

As per ETSI TS103 720 standard, 5G Broadcast is tailored for broadcasters and supports free-to-air services, receive only mode reception, downlink only distribution, and delivery in dedicated broadcast spectrum to cover functionalities of existing digital TV services. The IP-based service layer allows deployments of apps and IP-centric service layers on top of 5G Broadcast and seamlessly integrate with unicast. Hence it offers a highly efficient way for audio-visual content distribution, especially when it comes to mass attractive live events, combining traditional broadcast deployments with mobility use cases.

An additional use case and potential application is the implementation of a public warning system (PWS) via 5G Broadcast. With the advent of the climate change natural disasters get more likely. It is of utmost importance to make warning systems as robust and resilient as possible and to ensure the reach to the public – anytime and everywhere. As being part of the 3GPP standard 5G Broadcast is the future-oriented technology to provide the public warning functionality in using

the fail-safe architecture of the broadcast topology. A variety of user devices like mobile phones, TV sets, cars, public transport vehicles and others can be simultaneously reached with 5G Broadcast networks.
Either as a standalone system or as an enhancement to classical mobile cell broadcast the new terrestrial broadcast technology can take the reliability of public warning systems to a next level. Even after the warning as a pre-phase in a natural catastrophe terrestrial broadcast is a channel for public information in areas that suffer from damage of communication networks (e.g. rescue recommendations, maps, guidelines how to react). As an important advantage this information can be provided barrier free.

Moreover, since 5G Broadcast is building the bridge between terrestrial broadcast and mobile communication networks under the same 3GPP specifications, the support of such feature in some of the existing and upcoming smartphones and tablets models is just a matter of software and middleware adjustment and upgrades. In other terms, there will be no need for additional silicon or any hardware changes within the same mobile devices or even vehicles.

In summary it can be stated that digital terrestrial broadcast is the least electricity-intensive distribution platform that with 5G Broadcast technology can be expanded to the mobile end user and gives a solid perspective for broadcasting deployments beyond 2030.

Comment to RSPG opinion
As outlined above novel broadcast technologies ensure a continuation of existing terrestrial broadcast services and the opportunity to expand their reach to mobile devices via new applications.
This is in accordance with the existing BROADCAST allocation and does not require a co-primary mobile allocation. Following this perception, for WRC-23 agenda item 1.5 the method "no change" would be satisfactory to ensure future-oriented, safe and reliable public services. and to ensure a European harmonised approach for the frequency band 470 – 694 MHz.

Best regards,

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i.V.

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