



Critical Communications for all professional users

TCCA's response to the Draft RSPG Work Programme for 2022 and beyond

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TCCA

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About TCCA

The Critical Communications Association (TCCA) is a not-for-profit organisation, whose aim is to continually enhance critical communications through the development of open standards and interoperable technology. TCCA's goal is to ensure that critical users everywhere have the most reliable and trusted communications in order to carry out their crucial work effectively. TCCA works closely with ETSI and 3GPP to ensure the most efficient progress in standards and technology for critical communications. TCCA's members come from all across the critical communications ecosystem and include users, operators, industry and other stakeholders from all around the world.

Introduction - Spectrum for Critical Communications

Vertical industries, which require critical communications, such as Public Protection and Disaster Relief (PPDR), transport and utilities currently rely mainly on narrowband technologies for delivering mission-critical services. Mission-critical narrowband technologies are specifically designed to meet the high availability, reliability and security requirements that the critical communications sector demands. However, they are limited in bandwidth and thus deliver voice and very limited data services. The great challenge of the critical communications sector is the introduction of and migration to mission-critical broadband solutions to meet the increasing demand of critical users for a greater range of data services. As an example, early adopters of mission-critical broadband in the PPDR sector will start operation in the early 2020s with many others to follow towards the end of the decade. Different deployment models combining dedicated and/or hardened commercial mobile infrastructure will be implemented in Europe according to national conditions and requirements. The lack of adequate spectrum for critical communications is, in some countries, delaying the adoption of broadband for critical services and, in other countries, driving critical network operators to rely on commercial mobile infrastructure for the migration to broadband. Regardless of the deployment models, the critical communications sector requires adequate resources. Hence, enough harmonised spectrum for critical communications is an enabler for mission-critical broadband.

1. WRC-23

TCCA emphasises the importance of spectrum availability for critical communications and its dependency on national spectrum policies. TCCA's members are involved worldwide in the preparation of WRC-23. The need for adequate harmonised spectrum for critical communications is as diverse as the critical vertical industries TCCA represents. Thus, many agenda items of the WRC-23 are vital for the critical communications sector.

Agenda item 1.5

The implementation of the Decision (EU) 2016/687¹ on the harmonisation of the 700 MHz did not allocate enough and adequate spectrum for PPDR. This created a fragmented landscape in Europe for

¹ Commission Implementing Decision (EU) 2016/687 of 28 April 2016 on the harmonisation of the 694-790 MHz frequency band for terrestrial systems capable of providing wireless broadband electronic communications services and for flexible national use in the Union.

<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016D0687&from=EN>



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PPDR that is causing difficulties in creating a truly single market and cross-border interoperability. The introduction of more data-centric applications as well as, for example, mobile and body-worn video in the modernization of the work of PPDR agencies is driving the need for more bandwidth and hence more spectrum resources. Therefore, many European PPDR operators require additional harmonised spectrum. The WRC-23 agenda item 1.5 and the possible regulatory measures in the frequency band 470-694 MHz are of great importance to future mission-critical communications. Due to the good propagation characteristics it is the only band that could potentially provide enough spectrum for geographical coverage and good indoor penetration that many European PPDR operators require for their national mission-critical broadband networks. TCCA is of the view that allocating part of the 470-694 MHz frequency band to mobile service on a primary basis at ITU level and identifying parts thereof for PPDR applications is a good choice to flexibly meet the national spectrum requirements for future broadband PPDR systems.

Agenda item 1.3

The studies under this agenda item are likely to result in a co-primary allocation of the band 3 600-3 800 MHz to mobile service in all of Region 1 with International Mobile Telecommunications (IMT) identification. In the European Union (EU), this band is already allocated to Mobile/Fixed Communication Networks (MFCN) and has been already identified as one of the primary pioneer bands for 5G as per the EU Electronic Communication and Connectivity policy in relation to 5G.

TCCA supports reducing the barriers to access this band especially the upper 100 MHz for local licensing including for critical verticals. The national decisions by a number of Member States (MS) to enable local licensing suited for verticals and community broadband is very important for members of TCCA as they seek wider bandwidth and more control over their networks especially for localized deployments. As the work continues on this agenda item, TCCA supports that it brings 200 MHz of mid band spectrum to market in Region 1 and that it presents an opportunity for critical verticals and localized licensing of spectrum. This is essential to secure rural connectivity, vertical market needs and enable digital transformation of industrial enterprise and critical sectors.

Finally, TCCA recognises the important advice and guidance provided by the RSPG to the European Commission in spectrum policy issues and welcomes the timely preparatory work related to the WRC-23. TCCA would like to strengthen the importance of consultations processes especially in complex spectrum issues where multiple stakeholders are involved. Moreover, TCCA acknowledges the need for confidentiality associated with the EU positions and kindly asks RSPG to find a means for TCCA and its interested members to participate in the consultation following the draft final opinion on EU position for WRC-23 in June 2022.

2. “Good offices” to assist in bilateral negotiations between Member States

TCCA welcomes that the RSPG will continue to investigate any coordination issues between MS and third countries brought to its attention, including harmful interference issues, and that it will develop and propose appropriate solutions. This coordination is of special importance for TCCA’s members. TCCA appreciates the work done so far by the RSPG and would like to strengthen the criticality of cross-border coordination and especially about harmful interference impact for MS close to the EU borders.



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3. Digital Decade 2030

TCCA appreciates the work of RSPG in advising the European Commission, the Council and the European Parliament as required, on matters within its areas of competence, in order to support a 2030 policy program “*path to the Digital Decade*”. TCCA is of the view that as the communication of the critical sectors in some countries relies also on the availability of reliable public communication infrastructure; the connectivity targets of the Digital Decade 2030 will positively influence the critical sector, particularly if the connectivity and mobile coverage in remote and rural areas improves. Availability is one of the key requirements for mission-critical communications. Therefore, TCCA strengthens the paramount importance of geographical coverage for mobile networks and the need for policies and mandates to ensure that coverage is not restricted to populated areas.

4. The development of 6G and possible implications for spectrum needs and guidance on the rollout of future wireless broadband networks

In RSPG Opinion on “Additional spectrum needs and guidance on the fast rollout of future wireless broadband networks”² spectrum and harmonisation needs as well as authorisation regimes for successful deployment of 5G including for verticals are being considered in particular in the mid band 3.8-4.2 GHz and the millimetre wave bands 26 GHz and 42 GHz.

TCCA supports the proposal to develop an evaluation focusing on vertical sectors and their spectrum needs, licensing strategies, localized spectrum awards, deployment progress, etc. and is interested in any harmonisation outcomes and policy implications. TCCA recognizes the need to cover not only the bands above but also the ones in use by a number of MS in localized or geographically defined areas for private networks. In bands where sharing and compatibility with other co-primary services or legacy systems would not facilitate an identification for MFCN and nationwide authorizations, TCCA’s view is that local or area-defined licensing should be considered. This kind of local licensing enables higher efficiency and effective use of the spectrum. It also encourages more users to invest in infrastructure especially those verticals or community drive who otherwise have no suitable spectrum for broadband deployments.

5. Strategy on the future use of the frequency band 470-694 MHz beyond 2030 in the EU

TCCA welcomes the initiative of the RSPG to renew its long-term strategy on the future use of the UHF band 470-694 MHz that RSPG last published in 2015. As mentioned previously, TCCA is of the view that an international allocation of the 470-694 MHz frequency band for mobile service with parts thereof identified for PPDR as well as other critical communications verticals could meet the national spectrum requirements. According to the evolution of the critical sector, TCCA also considers that the strategic vision for sub-700 MHz spectrum should become a reality as soon as possible even before 2030 to fully support the migration to mission-critical broadband in those European countries where PPDR operators require additional spectrum. Flexibility at the EU level for MS to introduce Mobile PPDR services earlier than the 2030 date is welcomed.

² https://rspg-spectrum.eu/wp-content/uploads/2021/06/RSPG21-024final_RSPG_Opinion_Additional_Spectrum_Needs.pdf



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TCCA encourages the RSPG to take into account the results of the implementation of the decision on the 700 MHz for PPDR. TCCA considers that a future spectrum harmonisation for PPDR would only be successful if it does not result in a fragmented allocation throughout Europe. Therefore, TCCA kindly asks the RSPG to develop spectrum strategies that achieve to conserve the internal market while enabling cross-border interoperability for PPDR.

6. Role of Radio Spectrum Policy to help combat Climate Change

As climate change results in more natural disasters with devastating effects on power supplies and public communication networks, the need for highly reliable communication systems for critical verticals becomes even more of paramount importance for the society. TCCA kindly asks RSPG to recognise the detrimental effects of climate change for the society, to acknowledge the importance of highly reliable communication systems for the critical sector, and to develop a strategy to address this vulnerability. Additionally, TCCA kindly asks RSPG to consider the views of EUTC in this matter, which have been submitted to the open consultation on the draft RSPG Work Programme for 2022 and beyond.