

**Deutsche Telekom response to RSPG
Consultation on the
“Strategy on the future use of the
frequency band
470-694 MHz beyond 2030 in the EU”**

25 August 2023

Introduction

Deutsche Telekom (hereafter “Telekom”) welcomes the opportunity to provide comments to the Draft RSPG Opinion on “Strategy on the future use of the frequency band 470-694 MHz beyond 2030 in the EU”.

Europe has taken the decision to prioritize the range 470–694 MHz for Digital Terrestrial Broadcasting until 2030 together with the recommendation to discuss on the most efficient use of the band after 2030. A respective review is foreseen for 2025. This review should consider efficient spectrum usage, changes in customer behavior and foster growth and innovation.

Telekom appreciates that RSPG recognizes the need for flexibility to serve the diverging interests of the Member States to enable an efficient spectrum use in 470-694 MHz beyond 2030. However, Telekom is of the view that the recommendations presented are not suitable to provide the European Commission with sufficient guidance for a future-proof decision on the efficient use of the 470-694 MHz band from 2030 onwards.

Telekom requests European politicians and regulators to support a sustainable development of the European mobile markets by ensuring that the decisions on how to efficiently use the band 470-694 MHz for the benefit of the Europeans are based on profound analysis of the economical and societal benefit of different options. Furthermore they have to provide flexibility to accommodate the diverging needs of the customers not only in the Member States but in all European countries.

Beside the following comments Telekom supports the comments from ETNO and GSMA.

General remarks

Additional low-band spectrum for the mobile service supports satisfying the demand for higher broadband speed and capacity in sparsely populated areas in an economical sustainable way. It enables the provision of more equal mobile service in those areas compared to sub-urban and urban areas and thus, supporting targets for digital inclusion and equal digital opportunities, including healthcare, education but also media.

Currently Telekom uses the 700, 800 and 900 MHz bands to provide high quality mobile services to the customers in particular in sparsely populated areas. Whereas the 700 and 800 MHz bands are completely deployed with broadband technologies while parts of the 900 MHz band still needs to serve GSM services according to market demand or other obligations. In 2030 we expect to use all bands <1 GHz for mobile broadband. The demand for mobile broadband services is constantly increasing and can not only be satisfied by technical measures or network densification.

Sufficient low-band spectrum (<1 GHz) is necessary for satisfying the customer demand in rural areas but also indoor. Low-band spectrum is key for digital equality and the only sustainable way to enable customers in sparsely populated to use high quality mobile broadband service is the availability of additional low-band spectrum.

The EU UHF decision (2017/899) prioritizes the band 470-694 MHz for Digital Terrestrial Broadcasting until 2030 but also requests an efficient spectrum use of that band. When developing options to fulfill this request a profound market analysis has to be conducted considering both the DTT market development and the increasing demand from other stakeholders.

When considering the TV market situation it has to be noted that in many European countries Digital Terrestrial TV (DTT) is no longer the most popular broadcasting platforms. In some countries, the DTT market share is clearly below 10% while the popularity of other platforms (e.g., cable, IPTV, satellite)

is increasing. Beside this, there is ongoing change in media consumption. The usage of on-demand video content is steadily growing, and customers increasingly use more streaming services with mobile equipment and but also with “TV screen” instead of traditional linear TV. According to the EU broadband targets in 2030 the customers will have a high-quality broadband access being able to also access linear video content in a flexible demand driven manner. This reduces the need for DTT services but increases data in broadband, including mobile broadband.

Taking into account the different development in DTT and mobile broadband Telekom is of the view, that a careful and timely review of the current usage and the development of suitable scenarios for an efficient usage of 470–694 MHz is the most beneficial way to create regulatory clarity and to provide the required flexibility for an efficient future use of this frequency range.

Telekom invites RSPG to further develop this Opinion by considering the socio-economic benefits of envisaged usage scenarios.

Existing flexibility

Telekom would like to provide several comments to Section 3 of the Opinion.

Geneva 2006 Agreement

The GE-06 agreement has been designed to provide flexibility for broadcasting, however, it is not suited to support nationwide mobile communication. Furthermore, the limitation of GE-06 to primary services would definitely require a primary mobile allocation to be applicable for mobile broadband and to provide the needed regulatory clarity to operators to encourage respective investments.

Supplementary Downlink implementation (SDL)

SDL in interleaved spectrum is not suitable to be a harmonized approach for Europe. Such an approach would result in fragmentation in spectrum use since the available channels will vary between the Member States. It will not allow for a common eco-system and does not provide incentives for mobile operators to invest. Technically this approach creates unsolvable interference cases between DTT and mobile.

In principle SDL in a harmonized block of spectrum could be manageable but is limited to downlink-only service. It ignores the stated demand for bidirectional communication.

5G broadcast

Telekom is of the view that the implementation of 5G Broadcast will not provide any new usage scenario for 470-694 MHz but is just a new broadcast technology. It is more than questionable whether 5G Broadcast would be suitable to answer on the changing customer behaviour regarding media consumption. This technology itself is part of the 3GPP technology family but is not capable of delivering other capabilities than linear TV. Taking into account the increasing demand for non-linear media consumption the business case is at least questionable. Furthermore, the majority of linear TV content is already today available on mobile devices by streaming technology so 5G Broadcast is not required for this not talking about the costs and long lead time needed for 5G Broadcast implementation both in the field and in the user devices. While dataplans steadily grow and the penetration rate for mobile subscriptions is >100% linear content is already today available in many countries to a much wider extent via mobile communication network than via DTT.

Dedicated FDD band for mobile (600 MHz band plan)

Telekom does not share the view of RSPG that the implementation of FDD 600 MHz could not be a usage scenario for Europe. We think that this conclusion is premature and is based on a lot of assumptions which are not justified in the paper. Taking into account the very diverging DTT acceptance levels in the Member States we are of the view that it is worth to continue to study opportunities to apply this solution. As a precondition it has to be deeper analysed in which countries this FDD plan might be applicable and whether it is possible to geographically cluster those countries to facilitate cross border coordination.

Possible and technically feasible scenarios for post 2030

In general Telekom notes that none of the scenarios introduced in Section 4 covers the case that there is no DTT demand anymore beyond 2030 as it is already the case in some European countries today. Furthermore it seems that the scenarios are not assessed on the same level. This would require to clearly name and justify the underlying assumptions which is not the case for all presented scenarios. In addition an analysis of the socio-economic benefit of the scenarios is required to be able to decide on the most efficient solution to the benefit of the European society.

Scenario 1: Prevalent broadcasting

In some countries there might be still the need to continue DTT also beyond 2030 but when considering the continuous change in the way of media consumption and the declining acceptance for the DTT platform it must not be at the same extent as today. In addition it is questionable whether the provision of nationwide DTT service to just a one-digit percentage of households is energy and resource efficient. Although DTT might be cost efficient for the customer this is not valid for the distribution costs. As an example: The distribution cost for DTT in Germany constitutes 40% of the overall distribution costs for all platforms whereas just 7% of the households is using DTT as primary platform.¹ It has to be noted that these expenses are covered by the customers by special taxes (Rundfunkgebühren) or the general taxation system.

Scenario 2:

Since this scenario is quite similar to scenario 1 the above comments also apply here.

Scenario 3:

There is the assumption for the implementation of a 600 MHz bandplan is that there is very few or even no demand for DTT. This is not really justified. The implementation of this band plan would still leave 140 MHz for the provision of DTT. When looking on the German market there are only a few channels having a daily market share above 2% whereas up to 48 channels are distributed via DTT which is not efficient in terms of spectrum usage, energy consumption and economical value. So there seems to be room for a reduction of DTT offers and thus limiting the required spectrum resource.

Recommendations

Telekom supports the view that there is the need of collaboration between European countries, including Member States, to evaluate the expected market conditions by 2030 and to align on possible scenarios beyond 2030. This might lead to the establishment of clusters of countries having the same objectives which will reduce cross border coordination effort. Telekom believes that clear milestones and a related time plan are needed to be ready to shift to an updated usage regime of 470-694 MHz at 2030.

¹ See also

https://www.bundesnetzagentur.de/SharedDocs/Downloads/DE/Sachgebiete/Telekommunikation/Unternehmen_Institutionen/Frequenzen/Studien/StudieZukunftUHFBand.pdf?__blob=publicationFile&v=2

Telekom request that a scenario for predominant mobile usage in 470-694 MHz needs to be added and analysed to reply the respective demand in a number of countries. We agree with RSPG that successful coordination needs to rely on ITU-R regulation. This requires a primary mobile allocation of 470-694 MHz to the mobile service in particular to provide required precondition when negotiating with countries outside EU/Europe.

RSPG also recognized needs for several mobile usages other than public mobile and PMSE at national level, i.e. PPDR or defense. With regard to PPDR it has to be noted that these demands can be served also by other means than dedicated networks, e.g. within public mobile networks. Some countries have already taken this approach. The current mobile technologies include capabilities to ensure prioritized access. Furthermore, public mobile networks rely on a nationwide network which is available today so that there are no time delay and deployment costs for PPDR.

Finally Telekom would like to encourage RSPG to take a broader view when further discussing the future of UHF in Europe and to be open for a close involvement of all interested stakeholders. We welcome the activities already taken and also the readiness and willingness of RSPG to continue their efforts in this regard.