

Response to the public consultation on the Draft RSPG Opinion on Strategy on the future use of the frequency band 470-694 MHz beyond 2030 in the EU

The Association of Mobile Network Operators (APMS) has been uniting all mobile network operators in the Czech Republic since 2003. The mission of APMS is to create optimal conditions for the development of telecommunications infrastructure in the Czech Republic. We perceive a high quality and widely available telecommunications infrastructure as a necessary basis for the successful development of the Czech economy and the competitiveness of the Czech Republic and, consequently, the European Union. We welcome the opportunity to comment on the RSPG's draft opinion on Strategy on the future use of the frequency band 470-694 MHz beyond 2030 in the EU and we submit below our comments and specific suggestions for modifying or supplementing the RSPG's opinion.

The RSPG's draft opinion, which should include an EU strategy for the future use of the UHF band, sounds very conservative. Although it addresses a horizon of at least 10 years for such a valuable resource as the 470-694 MHz band, **it contains surprisingly little real background data and findings. Moreover, it does not provide a sufficient assessment of future developments** (the protection of terrestrial broadcasting after 2030 is given more weight than alternative uses and the opinion is therefore not impartial). **The RSPG recommendations adopted on this basis therefore do not allow the European Commission to take an informed position for future decisions on the effective use of the 470-694 MHz band from 2030.**

The RSPG's opinion lacks a **more detailed description of the evolution of TV reception platforms and video content consumption over the last decade and the forecast of this evolution in the next decade**. We believe that the opinion should take into account and discuss the fact that already today the vast majority of European countries have a DVB-T share of TV broadcasting below 20%¹ and, on the contrary, mobile data consumption continues to grow exponentially, while the widespread release of higher bands compared to lower bands is increasing the quality gap of mobile services between urban and rural areas, where the use of higher frequency bands is less or not profitable, which may in turn promote negative consequences of the movement of people from rural to urban areas.

¹ <https://dataxis.com/researches-highlights/780050/dvb-t2-in-80-of-european-terrestrial-homes-how-resilient-is-dtt-distribution/>

Share of terrestrial TV in TV reception in each European country



Source: Omdia

The trend to date and the forecasts of analysts clearly show that this trend will continue and that the share of terrestrial broadcasting will decline at an average rate of around 1 p.p./year², with the rate of decline likely to be higher in countries with a higher share of terrestrial TV. With the rapidly growing number of IPTV services in the Czech Republic and the still relatively high share of terrestrial TV in the Czech Republic, at least a similar convergent trend can be expected here. APMS has commissioned a relevant survey on the consumption of television broadcasting and video content in general in the Czech Republic. It showed that even in the Czech Republic, which ranks among the countries with a relatively high share of terrestrial broadcasting, this platform is no longer the strongest in terms of video content consumption.³ As we have already stated in our opinion on the future use of the 600 MHz band in February 2023⁴, **APMS fully supports conducting a similar survey, either at the national level or at the European Union level.** Such a survey should take into account not only the reception capability of each technology but also the current and future expected primary use of each technology and platform and viewers' preferences for consuming video content, in particular with regard to linear and non-linear viewing, in order to analyse the long-term premise of terrestrial broadcasters on the share and importance of terrestrial usage.⁵

² dtto

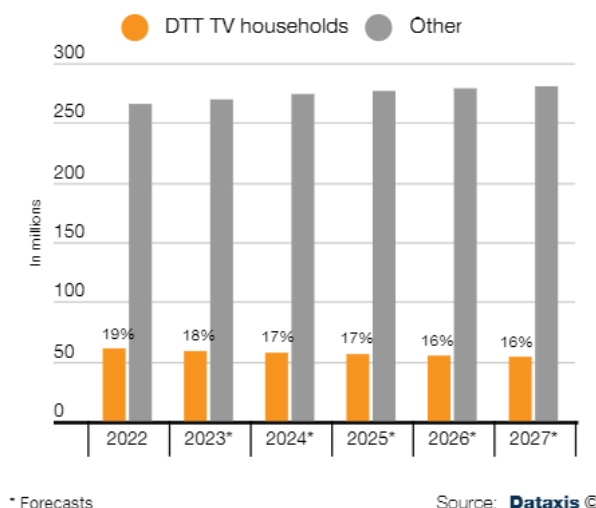
³ <https://apms.cz/internet-dominuje-sledovani-poradu-v-domacich-tv/>

⁴ <https://apms.cz/pozice-apms-k-vyuziti-pasma-600-mhz/>

⁵ For example, in the sense of being able to receive/connect to TV vs. the actual primary mode of consumption of TV. See, for example, data from Broadcast Networks Europe, which itself states that terrestrial broadcasting is "*actually being received by at least one TV set in 42% of European households*", implying that at least one receiver in the home enables terrestrial reception, rather than that this reception is the primary use. <https://broadcast-networks.eu/dtt/>

Forecast of the share of terrestrial broadcasting in Europe for 2023-2027

Number of DTT households Europe, 2022-27



In such a situation, the RSPG's position seems to us to be too cautious, conservative and in denial of existing trends. **We believe that the opinion should reflect more closely the fact that, if Scenario 1 were to be implemented, only a minority of the EU population would use over 200 MHz of such valuable spectrum, while mobile service (which is already used by the vast majority of the population) would remain significantly reduced compared to Scenario 3.** This could mean that a small percentage of the population using terrestrial broadcasting, despite other existing alternatives, would effectively block the use of the mobile band, which is already used by the majority of the European population, over a large part of Europe. This would also contradict the spirit of Decision 2017/899 of the European Parliament and of the Council (on the use of the 470-790 frequency band), which envisages efficient use of spectrum.

The question is also how substantially terrestrial broadcasting would be restricted if the 600 MHz band were released across the board. In the Czech Republic, the range of programming is undoubtedly one of the highest in the EU. However, the viewership of individual TV channels varies widely and the question arises whether channels with a viewership of <1% (occupying the same range of frequencies as channels with a viewership in the tens of %) are an efficient use of spectrum. We believe that not only terrestrial broadcasting as a technology, but also in terms of content (e.g. spectrum efficiency relative to channel viewership) should be examined and discussed when considering the use of the UHF band.

As the RSPG itself states in its opinion, solutions to the differences in spectrum use between countries are very problematic due to the need for significant geographical distances between services. The RSPG's opinion should reflect more explicitly that if the European Commission does not decide to release the band (as it has done in the past in the 700 and 800 MHz bands), **the determination of**

primary use should take into account not only the continuity of existing use, but above all the existing and expected future use across the EU at that time. If the current primary use of this band is already showing signs of decline, and there are relevant and more efficient alternatives for the distribution of video content, and the opposite is true for the mobile services under consideration, it is easy to abandon conservative attitudes and open up to a possible change in the primary use of the 600 MHz band if the share and efficiency criteria are met.

Regarding SDL, we consider a spectrum block (i.e. not "interleaved") as the only possible option for possible discussion to address interference with DTT. Other alternatives, such as Dynamic Spectrum Access in the sense of covering unproblematic sites with low power devices, are unlikely to find wider use due to the significant fixed costs and lack of economies of scale. **Conversely, we do not believe that the RSPG's position has presented sufficient reasons to continue to reject the solution of a harmonized approach to clearing the 600 MHz band across Europe after 2030, which has worked well in the 700 and 800 MHz bands.** We do not believe that, given the existence of TV reception alternatives, a limitation in the scope (= number of programme channels) of terrestrial broadcasting would pose a significant problem, even for countries where the share of terrestrial reception is currently high.

In addition, the 600 MHz band is already used by mobile networks in North America and some countries in South America. In March last year, the identification of this band was also approved in the Asia-Pacific region. Telecom vendors can already provide mobile access network facilities for this band, so for the speed of implementation and deployment of mobile networks in this band, the larger market also makes the inclusion of this band significantly cheaper. If Europe continues with the status quo beyond 2030, there may be a loss of competitiveness resulting from the limited capabilities of mobile networks and hence of applications connected to these networks.

Range of allocated frequencies and impact on mobile speeds by region

Figure 3: Region 1 (EMEA)

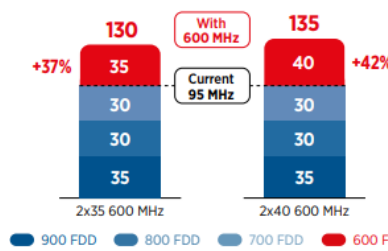


Figure 4: Region 2 (LatAm) and Region 3 (APAC)

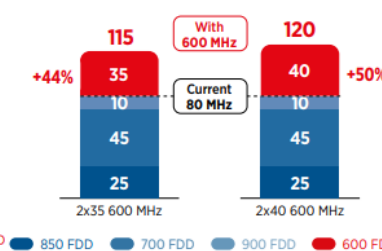
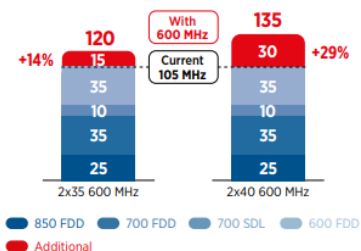


Figure 5: Region 2 (North America)



Source: <https://www.gsma.com/spectrum/wp-content/uploads/2022/07/5G-Low-Band-Spectrum-1.pdf>

The opinion also completely misses the link with the European Commission's gigabit strategy, which sets the goal of covering all households and socio-economic entities with gigabit networks and all populated areas with 5G networks by 2030. This has at least 2 consequences. Firstly, it is clear that the European Commission recognizes the importance of connectivity for the future of Europe and the strategy for the future use of the band with the best signal propagation from the bands allocated to mobile networks so far should clearly take this into account today, and secondly, it is clear if the European Commission's target is even close to being met, this would mean that after 2030 no

household or socio-economic entity will have a problem with quality and reliable TV reception over the internet in addition to other alternatives that are also available today. The implication of the widespread existence of superior TV reception technology (IPTV), which will exist in any case, may also be that terrestrial broadcasting, at least at its current scale, is a waste of energy and frequency resources.

The RSPG also argues in favor of terrestrial broadcasting on the grounds that it is an *"easy-to-access and inexpensive platform for consumers (the most popular model involves a small annual fee)"*. In a situation where there is/will be high capacity (VHCN) internet access or satellite reception in virtually every home, we do not believe that terrestrial broadcasting requiring an aerial or a shared aerial and their management is any easier than an existing internet connection that is managed by the provider right up to the boundary of the house or flat. Regarding price and the free to air debate, we would like to draw attention to the fact that in the Czech Republic IPTV is also automatically included in the internet service from several internet providers (therefore without any additional price) or for a very low fee. This is similar to the case of cable or satellite reception, despite the fact that these technologies (incl. IPTV) are not subsidized by the state.

Regarding the RSPG's belief that *"technological advancements (e.g. DVB-T2/HEVC, 5G Broadcast) plays a role in shaping any timeline post 2030"*, we believe that these technological advancements will make virtually no difference to the status quo or trends to date. DVB-T2/HEVC are already deployed technologies today and in the case of 5G Broadcast, it appears so far that if it finds a place, it will be more likely to be complementary to existing terrestrial digital broadcasting. Moreover, it is also a linear way of consuming content, which is undoubtedly losing relevance at a relatively fast pace.⁶ The terrestrial broadcasters themselves state that DVB-T2 technology is at the limit of its technological development, whereas mobile technology continues to develop intensively and a lot of resources are invested in this development. We consider this argument, as well as others, to be unfounded and apparently made only to support the postponement of a more fundamental RSPG recommendation, potentially changing the status quo. It is amongst other factors listed by the RSPG in its assessment of Scenario 1 and omitted in other scenarios.

According to the GSMA study, the failure to allocate the 600 MHz band to mobile networks after 2030 will result, among other things, in lower average speeds in rural areas of up to 42% and significantly higher costs, both on the part of network operators and, indirectly, on the part of end customers, and environmental impacts due to the need for more transmitters of up to 50%.⁷ According to another GSMA study, the amount of spectrum used by mobile networks also has a significant impact on GDP due to better coverage, across market sectors.⁸

In its opinion, the RSPG also mentions other options for the future use of the 600 MHz band, one of which is PPDR. It correctly mentions that, according to the European Commission decision, spectrum can already be allocated for this purpose in the 700 MHz band. However, it ignores the fact that

⁶ <https://apms.cz/pozice-apms-k-vyuziti-pasma-600-mhz/>

⁷ <https://www.gsma.com/spectrum/wp-content/uploads/2022/07/5G-Low-Band-Spectrum-1.pdf>

⁸ <https://www.gsma.com/spectrum/wp-content/uploads/2023/07/Socio-Economic-Benefits-of-Low-Band-5G-Spectrum.pdf>

another option is to take advantage of the technological possibilities of 5G networks and to separate these services from standard services on commercial nationwide networks. This solution is proving to be the most effective, both in terms of the operation and availability of PPDR services and in economic terms. The Czech Republic is one of the countries which has followed this route not mentioned in the RSPG opinion (see 5G auction conditions).

Specific proposals for modifying the RSPG opinion

- 1. To recommend to the European Commission or Member States the commissioning of an independent study on TV viewing patterns, video content consumption and trends.** This will allow the European Commission to obtain sufficient data to assess the way forward.
- 2. Develop a scenario for pan-European harmonisation of the 600 MHz band,** including implications and timing options.
- 3. Include the goals of the Gigabit Company's strategy** and describe its implications for TV reception capabilities in 2030 (esp. possibility of IPTV on 100 % penetration of gigabit connectivity).
- 4. Develop a SWOT or other similar analysis for all scenarios considered.** Not only for scenario 1.
- 5. To recommend the adoption of a primary (co-)allocation for mobile service in the 600 MHz band at WRC-23 or WRC-27 in accordance with the proposed scenarios.**
- 6. Add that PPDR services can operate efficiently or even more efficiently in addition to dedicated spectrum within the mobile operators' nationwide mobile networks and frequency spectrum.**
- 7. In its entirety, the opinion should be much more focused on assessing future developments.** In particular, it should be a post-2030 strategy, not a conservative description of the current situation.