EBU

OPERATING EUROVISION AND EURORADIO

EBU response

To the Public consultation on the Lamy Report:
The future use of the UHF TV broadcasting band

1 Respondents' profile

I am responding as:

- ☐ *An individual in my personal capacity*
- ☒ *The representative of an organisation/company.*

Please enter your full name: Darko Ratkaj

Please enter your organisation /company name: European Broadcasting Union (EBU)

Please explain who the organisation represents and, where applicable, how the views of members were assembled.

The European Broadcasting Union is a professional association of public service media organisations with 73 active members in 56 countries and 35 associate members from a further 21 country. This response has been developed through consultation with the EBU Members and approved by a committee of their elected representatives.

Please enter your organisation/company address

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2 Confidentiality

Your contribution will be considered public and will be published unless you mark it as confidential. In this case your contribution will be used to provide a summary of the consultation results but will not be published individually.

- ☐ *Please consider my contribution as confidential*

Your name will be linked to your contribution unless you mark it as anonymous. In this case your contribution will be published without your name.

- ☐ *I prefer to remain anonymous.*

3 The citizen's dimension

The questions in this section are addressed to individuals and, therefore, the EBU does not provide individual answers. Nevertheless, we take this opportunity to point out that the market data on audience behaviour, service penetration, and the equipment replacement cycles is available from specialised agencies, for example Eurobarometer 414[1]. The advantage of using data from the reference sources is that they are supported by a robust methodology and therefore more representative of the audience behaviour in reality than the information that is solely based on responses to this consultation.

[1] Special Eurobarometer 414 - *E-Communications and Telecom Single Market Household Survey* http://ec.europa.eu/public_opinion/archives/ebs/ebs_414_en.pdf

EBU members are interested in distributing their content in ways which are convenient for the public to access. We recognise that there is interest in accessing content in a non-linear fashion, and that broadband services are the appropriate way to achieve that. However, linear distribution is still hugely pre-eminent in TV consumption, and premature disruption of that is unnecessary and avoidable.

In general, the EBU is concerned that this consultation reframes Lamy's conclusions in such a way as to imply recommendations which are absent from Lamy's report. Some questions are presented as clear binary choices where, in fact, more nuanced consideration is required.

Three of the questions in Section 3 of this consultation address a possible spectrum re-allocation from DTT to wireless broadband services. These questions prompt the following concerns:

1. These questions imply that the suggested reallocation of the TV spectrum to wireless broadband is a pre-requisite for better coverage and higher speed of wireless broadband and that there are no alternatives. This implication is incorrect as better wireless broadband can be provided without further reallocation of the UHF spectrum i.e. by improving mobile network topology, making use of the already available but underused spectrum for wireless broadband, and implementing the most spectrally efficient mobile broadband technologies.
2. From the way in which the questions are formulated it may also be understood that such spectrum reallocation would inevitably result in consumer benefit in wireless broadband coverage and speed. However, there are no guarantees that the benefits of spectrum reallocation, if any, would be passed on to the consumers, as this largely depends on the operators' business decisions.
3. Some questions are ambiguously worded as it is unclear what is meant by e.g. *'the gradual shift from TV to 'wireless broadband',* or *'temporary degradation of DTT services'*.
4. Neither the questions nor the background document address the broader implications of spectrum reallocation from DTT to wireless broadband, in particular a possible adverse impact of such a reallocation on the future viability of DTT, on market competition, on free-to-air and public service TV, and on the content production value chain.

The EBU is therefore of the view that this section of the consultation document related to a possible reallocation of the UHF spectrum from DTT to wireless broadband has not been formulated appropriately.

Furthermore, the issues related to UHF spectrum allocations are complex. Without sufficient background material, and it will be difficult for the members of the public to provide informed responses.

It is important that the Commission understands that the growing demand for services on mobile devices is largely satisfied by Wi-Fi as has been demonstrated e.g. by a study[2] for the European Commission which states that *'"the surprising and little recognized reality is that, according to credible data captured from a range of sources, the visible growth in macro cellular mobile network traffic appears to be only the tip of a much larger iceberg. The volume of traffic that is already being off-loaded, chiefly to Wi-Fi in the home, already exceeds that of the mobile network, and can be expected to grow even faster as well*".

It can be reasonably assumed Wi-Fi will remain the consumer's technology of choice for wireless broadband services wherever possible, especially as it is substantially less expensive than mobile broadband provided over cellular networks.

4 Potential repurposing of the 694-790 ('700') MHz band

What long-term advantages and disadvantages do you see in using the 700 MHz band for wireless broadband services in the Union?

The UHF band is the core frequency band for digital terrestrial TV (DTT) and PMSE services in Europe and beyond. DTT is essential to EBU Members as it is the only TV platform that provides free-to-air services in all Member States and has the potential to reach everyone, and thereby enables EBU Members to fulfil their public service obligations. In addition, the right to use UHF frequencies has been and is still often associated with general interest obligations, including the provision of large coverage and investments in national and European content production.

[2] *Study on impact of traffic off-loading and related technological trends on the demand for wireless broadband spectrum* (http://bookshop.europa.eu/en/study-on-impact-of-traffic-off-loading-and-related-technological-trends-on-the-demand-for-wireless-broadband-spectrum-pbKK0113239/

As it was correctly noted in the RSPG Opinion on the future use of the UHF band '*the 700MHz frequency band, based on the allocation to the broadcasting service on a primary basis, is currently used in Europe for terrestrial television and in many countries also for PMSE on secondary basis and represents approximately 30% of the total remaining UHF spectrum used by the television broadcasting. It was also indicated that the impact of an exclusive reallocation of this spectrum to wireless broadband will therefore be significantly more important for the broadcasting service than in the case of the 800 MHz band.*'[3].

The EBU would like to stress that future spectrum needs for DTT should be assessed on the basis, inter alia, of the current use of the UHF frequencies and the duration of the existing usage rights assigned to broadcasters. The reallocation of the 700 MHz band to wireless broadband will have greater negative consequence for DTT audiences and broadcasters than in the case of the 800 MHz band. After the release of the 700 MHz band, the total achievable DTT transmission capacity will be significantly lower than at present, even if more efficient coding and modulation standards are adopted.

Notwithstanding the increase of efficiency of more advanced transmission standards (e.g. DVB-T2) and of coding (e.g. HEVC), a transfer of the UHF spectrum from broadcasting to IMT would hinder the technological evolution of DTT (i.e. introduction of new transmission technologies, transition to high definition and UHD) because any such transition requires additional spectrum during the simulcast period. This is particularly relevant in those Member States where UHF band is intensively used for broadcasting (e.g. Italy, Poland, or Spain).

Likewise, the release of the 700 MHz band is likely to have negative impact on PMSE, whose demand for spectrum is increasing, unless alternative spectrum is provided to accommodate that.

A negative impact on consumers could occur if they have to bear the costs incurred in the transition of DTT out of the 700 MHz band or the costs of mitigating the interference from the mobile services into DTT. Furthermore, the re-purposing of the 700 MHz band is likely to diminish market competition for the provision of TV services.

What merits do you see in a coordinated EU approach for changing the use of the 700 MHz band in the Union from broadcasting to wireless broadband services?

A coordinated EU approach could facilitate the transition in such a way that a disruption of DTT services and to the public is minimised. As pointed out in the Lamy Report '*Noting the recent assignments in the 800 MHz band, the 700 MHz band is not immediately needed for mobile services. This is an opportunity for a planned transition path (detailed in Annex 2) that would benefit from a coordinated approach at the European level (in order to manage the cross-border implications of radio interference caused by high-power transmitters) and from a common European deadline (in order to give a signal to industry to undertake appropriate and timely adaptations on the equipment side to ease financial impacts on operators and citizens alike).*'[4]

As the studies submitted to the relevant CEPT and ITU working groups have shown, it may be difficult to ensure cross-border compatibility in cases where one country uses the 700 MHz band for DTT and the other for LTE. A coordinated EU approach would help to minimize such difficulties. In that respect bilateral and multilateral cross-border frequency coordination will be essential.

Furthermore, the Member States should be encouraged to provide full compensation of the costs incurred by broadcasting and PMSE sectors, and the viewers. The EBU agrees with Mr. Lamy's recommendation that EU guidance should be considered to address from the outset any concerns regarding compatibility with state aid rules.

In your opinion what should a potential EU coordination cover?

Please see the response to the previous question.

Should there be a common EU deadline for making the 700 MHz band available for use for wireless broadband services across the EU?

- ☐ *Yes*
- ☒ *No*

[3] RSPG Opinion, page 12, second paragraph
[4] The Lamy Report, section 3, page 5, third paragraph.

Please provide justification of your answer on a common EU deadline including cost assessment.

The EBU is not in favour of any binding deadline for making the 700 MHz band available for use for wireless broadband. A common EU deadline, if any, should take into account the different national circumstances across the EU, in particular with regard to the importance and extent of use of the terrestrial broadcasting platform and the duration of the existing DTT licenses. Sufficient time should be provided for the transition of DTT out of the 700 MHz band with minimum disruptions of services and to the public.

A key prerequisite for such a transition is a successful completion of the cross-border frequency coordination. Both the Lamy Report and the RSPG have indicated that no less than 3 years would be required to complete the coordination process for the 700 MHz band. Indeed, the Lamy Report explicitly recommends that *'sufficient time must be foreseen to complete the cross-border coordination before the changes are implemented in the networks'.*[5]

In order to minimize the negative impact on the PMSE sector, the timeframe for the release of the 700 MHz band for wireless broadband should be defined in such a way as to allow alternative PMSE spectrum to be identified and made available. In addition, PMSE users should retain access to the duplex gap within the 700 MHz band and the guard band between IMT and DTT services.

As the situation differs considerably between different Member States it is likely that a realistic time for the transition of DTT out of the 700 MHz band would also be significantly different in different countries. A common EU deadline may introduce unnecessary constraints.

Which date would you propose for such a deadline [The Lamy report proposes a deadline of 2020 +/- 2 years]?

Given the issues outlined above, the EBU is of the opinion that the proposed deadline for completing the release of the 700 MHz band (i.e. 2020 +/- 2 years) would not allow for both the frequency coordination and the transition process to be completed by all Member States. Notwithstanding the possibility for an earlier release in some Member States, 2025 should be considered to be a more realistic time frame for an EU-wide release of the 700 MHz band.

Furthermore, in order to ensure the future viability of DTT it would be necessary to maximise its transmission capacity within the remaining spectrum below 694 MHz and allow sufficient time for adoption of new technologies such as DVB-T2 or HEVC. This would allow broadcasters to provide their DTT services with comparable quality as on other TV platforms. Such an evolution of the DTT platform may require additional spectrum resources in particular during a simulcast period.

Should there be measures at EU level mandating use of the latest, most spectrum-efficient technologies for DTT equipment (such as DVB-T2, HEVC etc.)?

- ☐ *Yes*
- ☒ *No*

Please specify which measures you would propose to mandate.

The EBU supports the efficient use of broadcasting spectrum, including the rollout of more advanced technologies. It is, however, necessary that suitable receivers have reached sufficient market penetration before any mandated changes to transmission standards can be considered.

For this reason, the EBU would support consideration of a harmonised minimum technical standard for DTT receivers. We note that in some Member States, this has already started with adoption of national standards for DTT receivers. For the EU to mandate EU-wide receiver standards, it will need to ensure that there is no contradiction between these various national standards and any proposed EU standard.

Adoption of an appropriate minimum receiver specification would lead to benefits of scale for consumers as well as facilitating any eventual move to more advanced transmission technologies by minimising any future legacy problems.

However, until such receivers are in widespread use throughout the EU, it would be inappropriate to mandate the use of any more advanced transmission standards.

It is the EBU's view that the objective of introducing new DTT technologies should be to allow improvements in services to viewers e.g. by introducing new services, including HDTV and eventually UHDTV, rather than further spectrum release.

[5] The Lamy Report, Annex 2 (Transition roadmap), page 17, International frequency coordination, 4th paragraph

Which date would you propose to mandate such spectrum-efficient technologies?

Taking into account current activities at the national level in some Member States, the EU should move quickly to consult on the introduction of mandatory minimal requirements for DTT receiving equipment.

We do not propose to mandate any particular technology for DTT transmission equipment.

5 Ensuring regulatory certainty for current users of spectrum

Should there be a common EU deadline for safeguarding primary use of the 470-694 MHz band for DTT and further use for wireless microphones and other wireless audio equipment?

- ☒ *Yes*
- ☐ *No*

The notion of *'a common EU deadline'* in the context of this question is understood to mean a future date until which access to spectrum would be guaranteed for DTT on the basis of an exclusive primary allocation. Wireless microphones and other wireless audio equipment would continue to operate in the interleaved spectrum. The use of the frequency band 470-694 MHz after that date would be decided upon at an appropriate time in the future. Indeed, this frequency band may continue to be used for DTT after the deadline, subject to market demand.

Please provide justification of your answer on a common EU deadline to safeguard existing uses.

The EBU concurs with Mr. Lamy that *'in most EU Member States DTT represents the backbone of the European audiovisual model. Due to its characteristics of delivering high-quality TV programmes (the so-called linear TV services) to mass audiences and ensuring universal and free-to-air access for citizens, it will continue to play an essential role as a major distribution platform for the foreseeable future. … Its sustainable development is dependent on spectrum in the UHF band, which gives it capacity to further innovate and develop and thus to remain viable and competitive*.'[6]

In terms of innovation, as also noted in the RSPG Opinion on the future use of the UHF band, several Member States are planning an increase in the number of programmes, an expansion of HDTV, additional mobility, and the possible introduction of Ultra High Definition TV on their DTT platforms. Without sufficient spectrum and legal certainty, these plans will not be achievable and the inter-platform competition in the EU will be reduced. Therefore, it is essential that DTT retains access to the entire spectrum below 700 MHz (i.e. 470-694 MHz) for the foreseeable future.

Which date would you propose for such a deadline [The Lamy report proposes a deadline of 2030]?

Whilst the current time horizon is 2030 this should not be considered to be an "end-date" for DTT. Indeed, the DTT platform may continue to be relevant and provide important economic and social benefits beyond 2030 in a number of the EU Member States.

6 Flexibility of use of sub-700 MHz (470-694 MHz) spectrum

[The Lamy Report recommends a "flexibility option" in the band 470-694 MHz. This means that broadcasting use would always have priority in this band, yet specific channels or locations not used for terrestrial broadcasting or wireless audio applications (PMSE) could become available for downlink-only wireless broadband applications depending on national circumstances.]

Do you support flexible downlink-only use of the 470-694 MHz band also for wireless broadband services, which safeguards primary use of this band for DTT according to national circumstances?

- ☐ *Yes*
- ☒ *No*

What scenarios and conditions should be studied to allow flexible downlink-only use in the 470-694 MHz band? In particular, should these include primacy for the provision of audiovisual services to mass audiences?

[6] Report to the European Commission on the results of the work of the High level Group on the future use of the UHF band (470-790 MHz), by Pascal Lamy, page 3.

The EBU supports the use of the frequency band 470-694 MHz for downstream distribution of audiovisual services to mass audiences in the long term. This is currently achieved by means of DTT.

We emphasise the need to ensure that a possible introduction of wireless broadband (WBB) downlink in this band neither creates constraints on the current DTT operation, nor hinders the future evolution of the DTT platform. The concept of '*flexibility*' in this context is not yet understood and it requires to be fully studied before it could be considered for practical implementation.

Studies on the 'flexibility option' should address at least the following issues:

- The available options for the introduction of WBB downlink in the UHF band and the associated technical conditions that ensure protection of DTT services from interference, including across national borders and the EU's external borders.
- Regulatory conditions for the introduction of WBB downlink in the UHF band without constraining the evolution of the DTT platform and PMSE services or undermining the certainty of access to spectrum for DTT and PMSE in the long term.
- The market demand that cannot be satisfied in frequency bands already available for the wireless broadband services but would benefit from the introduction of WBB downlink in the UHF band.
- Time frame for a possible introduction of WBB downlink services in the UHF band, taking account of the anticipated market demand and the necessary technological developments.

The EBU further notes the inherent flexibility in the current regulatory environment, in particular the ITU Radio Regulations and the GE06 Agreement, as recognised in the ECC Report 224[7]. The above mentioned studies should take this flexibility into account.

7 Harmonisation of use of sub-700 MHz (470-694 MHz) spectrum in the long-term, the European approach and the International Telecommunication Union (ITU) context.

Do you see merits in a common EU position on the UHF band for World Radiocommunication Conference 2015?

☒ *Yes*
☐ *No*

Do you see merits in a common EU position on the UHF band for future World Radiocommunication Conferences?

☒ *Yes*
☐ *No*

What should be the EU position with regard to the 470-694 MHz band for World Radiocommunication Conference 2015?

The EU position with regard to the 470-694 MHz band for the WRC-15 should be against a co-primary allocation to the mobile service in this frequency band (i.e. '*No change'* to the current allocation). This would reflect the growing consensus in Europe and beyond that this frequency band is essential for DTT, and would be consistent with the Lamy Report, the RSPG Opinion on Common Policy Objectives for WRC-15, and the RSPG Opinion on the future use of the UHF band.

What should be the EU position with regard to the 470-694 MHz band for World Radiocommunication Conferences beyond 2015?

The EU position with regard to the 470-694 MHz band for the WRCs beyond 2015 should continue to be against a co-primary mobile allocation in this frequency band (i.e. '*No change'* to the current allocation) until the market review mentioned in Section 8 of this has been carried out. This would also be in line with the Lamy Report.

It is the EBU view that introducing a mobile allocation in this frequency band at any point in time would undermine the certainty required for the investments that are necessary to encourage the adoption of more spectrum-efficient technologies (including the transition of DTT out of the 700 MHz band) and to ensure a long term viability of the DTT platform.

[7] ECC Report 224 on a *Long term Vision for the UHF broadcasting band,* page 4. http://www.erodocdb.dk/Docs/doc98/official/pdf/ECCREP224.PDF

What measures would be needed at national and/or EU and/or ITU level to safeguard flexible downlink-only use in the 470-694 MHz band?

Long term access to the frequency band 470-694 MHz for DTT on the basis of an exclusive primary allocation should be safeguarded in the relevant EU legislation, including the future Radio Spectrum Policy Programme, and the EU policy objectives for the WRC-15 and the subsequent WRCs.

Any measures to facilitate a 'flexibility option' recommended in the Lamy Report cannot be considered until the necessary studies have been completed and shown that the WBB downlink-only use of the band 470-694 MHz would not have an adverse impact on DTT or PMSE. Please see also our reply in Section 6 above.

8 Market review of the state-of-play of broadcasting and wireless broadband services

Should there be a common EU deadline for conducting a review exercise regarding market developments?

☒ *Yes*
☐ *No*

Which date would you propose for such a deadline [The Lamy report proposes a deadline of 2025]?

The EBU agrees that 2025 would be an appropriate date for a market review. Any earlier review could negatively impact the process of clearance of the 700 MHz band and the on-going technological upgrade of the DTT networks.

What objectives, scope and method should such a review exercise pursue?

The objective of the proposed market review should be to assess the user demand and the regulatory requirements for audiovisual services that are delivered over broadcasting and wireless broadband networks, with the view to inform a future decision on the use of the UHF band after 2030.

The market review should take into account all relevant platforms for the delivery of audiovisual services and all frequency bands in which these services are delivered in order to determine their respective relevance.

The review should be based on the relevant market indicators, such as those proposed in the ECC Report 224[8]. We also note Recommendation 1 of the Plum/Farncombe convergence study[9]:

"The Commission and industry should consider how best to develop and implement comprehensive metrics for measurement of video consumption, which are consistent across EU member states over time, so as to inform future policy decisions."

Any subsequent decisions on spectrum allocations should be supported by a prior impact assessment, including a cost/benefit analysis.

9 Other comments

Do you have further comments related to the Lamy Report?

The EBU does not wish to provide any further comments related to the Lamy Report.

Do you have further comments regarding relevant issues in the context of the future use of the UHF band (470-790 MHz)?

The UHF band is the only globally harmonised spectrum for DTT and it is crucial for the provision of free-to-air TV services. It is, therefore, important to provide a long term certainty of spectrum access in order to facilitate investments and end ensure viability of the DTT platform.

[8] ECC Report 224 on a *Long Term Vision for the UHF broadcasting band'*, Chapter 5, http://www.erodocdb.dk/Docs/doc98/official/pdf/ECCREP224.PDF
[9] "Challenges and opportunities of broadcast-broadband convergence", November 2014