



EUROPEAN COMMISSION

MEMO

Brussels, 1st September 2014

Frequently asked questions: radio spectrum and UHF band

[IP/14/957](#)

Why was this report on the future of the UHF band commissioned?

The Commission convened a group of industrial stakeholders on reviewing the future use of spectrum in the UHF broadcasting band in the light of the fact that the ITU World Radiocommunications Conference in 2012 decided to co-allocate the upper portion of the UHF broadcasting band (the 700 MHz band) also to mobile use in the EU. Such a decision has a major impact on the future business case both for terrestrial broadcasting and mobile broadband. For the first time, industrial stakeholders from the mobile and broadcasting communities could meet at EU level for a constructive and holistic dialogue on the future use of the whole UHF broadcasting band.

It has long been clear that extra spectrum will eventually be needed for broadband (increasing consumer demand for video on tablets, smartphones and the like, at home and on the move). The 700 MHz band would offer extra advantages in that respect (economies of scale and international consistency, as third countries are using it).

The report by Pascal Lamy notes there is no immediate need for wireless broadband of the 700 MHz band in Europe; it sets a deadline for its assignment to mobile around 2020, which leaves time for a proper transition roadmap likely to bring down transition costs for broadcasters and consumers alike.

Why does the Commission get involved in this issue?

Spectrum knows no borders. Different attributions of spectrum bands among neighbouring countries can lead to interference along borders or more complicated roaming due it being across multiple bands; they even increase the cost of building mobile devices (as these devices have to adapt to the requirements of different bands).

However, several Member States (e.g. Finland, Germany, Sweden) have already stated they will use the 700 MHz band (694-790 MHz, currently used by terrestrial broadcasting networks and wireless microphones throughout Europe) for wireless broadband. If this is done piecemeal, it could lead to fragmentation in Europe.

The Commission has [already asked](#) the [European Conference of Postal and Telecommunications Administrations \(CEPT\)](#) to examine alternative harmonised technical conditions for wireless broadband in the 700 MHz band¹ in order to ensure a consistent

European approach and to avoid interference to broadcasting service. Final results are expected in early 2016. Consequently, a political decision is required to clarify the situation for the future.

Who was in the high level group and how were they selected?

High level group members represented businesses and associations from the mobile and broadcasting sectors, including the PMSE sector, as well as the community of network equipment and device manufacturers. When selecting the 19 members, the Commission aimed to ensure a balance across EU Member States and business areas (public or commercial broadcasters, large or small mobile operators).

Why did they not agree on the final report?

A lot of common ground was found within the high level group, in particular there was consensus on annex 2 and annex 3 to the report, and a number of issues reflected in annex 1. Nevertheless some pertinent differences remained between the mobile and broadcasting communities on the two key issues:

- flexibility around the target date for repurposing of the 700 MHz band for mobile services in the EU;
- duration of the period during which the 470-694 MHz band should remain allocated exclusively to broadcasting in the EU by virtue of the ITU Radio Regulations.

The Chairman Pascal Lamy aimed at achieving a comprehensive compromise package which ensures a win-win solution. As such a package of agreed points could not be achieved as a whole, he prepared the report under his sole responsibility.

What will be the impact on broadcasters of Lamy's suggestion to dedicate the 700MHz band to wireless broadband by 2020?

Terrestrial broadcasters would lose 30% of their current spectrum assets. They would, therefore have to develop within the remaining spectrum through the deployment of new more spectrum-efficient compression and transmission technologies such as DVB-T2 or High Efficiency Video Coding (HEVC).

What are the cost implications for broadcasters, and for the customer/viewer?

The financial implications on broadcasting would depend on the situation in each Member State, in particular with regard to the level of DTT penetration (the higher the market share of DTT vis à vis cable and satellite, the higher the cost of any change) and the current way of using spectrum in the 700 MHz band (how many DTT transmitters utilise the 700 MHz band). In any case, the transition to new technology would need costly network upgrade and, for consumers, progressive change of TV sets as well as aerial adaptation. However, the timing of 700 MHz release would have a major impact on the scale of incurred costs since it could alleviate the pressure on the speed of upgrading network and consumer equipment as well as on cross-border coordination.

Why can't we continue as we are now?

Consumer demand for audiovisual content on tablets, smartphones, etc. is driving the need for higher data rates, i.e. wireless broadband. More spectrum, but also more efficient technologies and networks are crucial to satisfy demand. Moreover, as the harmonisation

of the 700 MHz band is planned at international level, the EU needs to have a smart and forward-looking strategy. This is not possible so long as the situation across the EU remains diverse and some Member States are already announcing their unilateral plans to make changes.

How is stimulating investment in the broadcasting sector the answer to co-primary allocation of 700MHz?

Stimulating investment in DTT will allow a move to more efficient technologies such as DVB-T2. More efficient technologies allow transmission of the same programme channels using less spectrum. New technologies are the key to accommodating both wireless broadband in the 700 MHz band and continuing existing programme offerings using terrestrial TV in the remaining spectrum.

What happens next? What will the Commission do with the Report?

The Commission is still expecting Member States to deliver a report on this issue by the end of the year (the [Radio Spectrum Policy Group](#) Opinion on the UHF band). No other official consultation with member states has taken place yet, although Mr Lamy has been discussing developments with RSPG representatives informally. Moreover, the Commission is studying the prospects for network convergence between broadcasting and broadband (an ongoing study by Plum and Farncombe, a consultancy). Further comments from stakeholders are going to be collected in a public consultation regarding the future use of the UHF band to be launched this autumn.

Any possible future proposal would be for the next Commission to take forward.

Spectrum inventory

Why is the Commission reporting on the Spectrum Inventory? What is the content?

The [Radio Spectrum Policy Programme \(RSPP\)](#) requires the Commission to report to the European Parliament and the Council on the spectrum inventory by 2015. In particular the Commission should report on results of its analysis of technology trends, future needs and demand for spectrum and whether there is a need for additional spectrum for wireless broadband.

The report contains sections on the state of play concerning collection of data from the Member States, results of the analysis in terms of spectrum demand and supply as well as the Commission's key findings that could lead to actions in coming years.

How was the evidence base gathered?

The inventory is based on several sources; studies contracted by the Commission, opinions of Member States and a data analysis tool collecting data from Member States on actual use. It is important to have several sources of data because difficulties remain in collecting data from Member States in a single database.

Regarding Wireless Broadband, the RSPP set a target of identifying 1200 MHz of spectrum by 2015. What are the key findings of the report?

Firstly, the report outlines the bands currently under technical study, which may result in the Commission proposing harmonised technical conditions for use across Europe. This includes the 700 MHz band, the 1452-1492 MHz band and the 2300-2400 MHz band. Harmonising measures on these bands would achieve the 1200 MHz target.

The report comes to the conclusion that there is currently no need for spectrum harmonisation, beyond the 1200 MHz target, in the range 400 MHz to 6 GHz for licensed wireless broadband.

The report not only contains key findings on wireless broadband. Several other topics (shared use of radar bands, safeguarding growth of satellite services and availability of spectrum for the Internet of Things) are also dealt with.

Several EU Member States are late in assigning the 800 MHz band for wireless broadband. What will the Commission do?

The Commission is closely monitoring the situation in these Member States (Bulgaria, Greece, Cyprus, Hungary, Malta and Poland).

In accordance with the RSPP, several Member States had asked for derogation to the date of assignment by 1 January 2013. In those cases where the derogation has expired and assignment has not taken place, the Commission is considering further action including infringement proceedings, if appropriate, taking into account the prospects of completing the assignments shortly.

What are the next steps for the Inventory report?

Stakeholders, including the European Parliament and Council, are invited to comment on the key findings of the report. Comments will be taken into account in the preparation of specific proposals to the Member States for discussion in the Radio Spectrum Committee in early 2015.

PMSE

What is PMSE?

The acronym PMSE stands for 'programme making and special events' and covers a wide variety of essential audio and video applications used to produce content and document events (such as broadcasted programmes, films, theatre productions) and social events (like sports, educational or community events). Wired and/or wireless PMSE systems can be used locally and for non-professional purposes, but there is also a large professional user community. This implementing decision only covers wireless audio PMSE applications, which includes wireless microphones and associated systems, such as in-ear monitors and audio links.

Why is EU action on PMSE important?

This is a niche market of great importance for supporting cultural diversity in Europe, with many SMEs active in this market, who will profit from spectrum harmonisation at EU level. Changes in the use of spectrum in the UHF band (use by 4G, more efficient use by terrestrial television broadcasters) will put a squeeze on existing use by PMSE.

This is the first spectrum harmonisation decision addressed specifically to the requirements of wireless audio PMSE users within the Union. Wireless audio PMSE equipment vendors now have legal certainty that certain frequency bands will be used in all Member States, which will provide economies of scale for manufacturing, thus reducing costs and encouraging research and innovation, and ultimately more efficient use. Moreover, by harmonising the duplex gaps in the 800 and 1800 MHz bands for wireless audio PMSE users, users will have access to those bands Union-wide, which will strengthen the single market.

This decision mainly covers small cultural events. What about large events, broadcast and film productions?

Wireless audio PMSE spectrum needs for large events or broadcast hotspots are concentrated at discrete geographical locations and have specific and/or temporary requirements. These are best met by case-by-case, flexible solutions at national level.

Is there really a need to act at EU level? Why would Member States not take appropriate action to ensure adequate availability of spectrum for wireless audio PMSE?

While there is pressure to change use in the UHF band in many Member States, the report from Pascal Lamy has highlighted the diversity of situations at national level. Uncoordinated national action is likely to lead to a fragmentation of the market and to frustrated users, reluctant to invest in equipment that could improve efficient use of spectrum. Moreover, harmonisation brings down costs: producing dedicated equipment for every different frequency range available in every individual Member States increases costs for manufacturers (who lack economies of scale) and consumers of equipment. This would in particular affect smaller users.