

## EU spectrum policy

### The issue

The terrestrial broadcasting platform is a unique way of delivering content to European audiences. A delivery platform offering universal access, it is technically and cost efficient, with wide support across the industry as well as from the general public.

Spectrum is crucial for vibrant and innovative terrestrial broadcasting. Terrestrial television is transmitted on the UHF frequency band (470–862 MHz). The UHF band is the only band for widespread development of digital terrestrial television services.

Digital TV does not require as much spectrum as analogue TV transmission for the same type of services. As a result, some spectrum can be freed up and this is referred to as the 'digital dividend'.

Public service media organizations have been the driving force of the switchover to digital broadcasting. They have invested heavily in digital radio and television technology and digital programming. Without the success of digital terrestrial television, analogue switch-off would not be possible, and there would be no digital dividend.

Following the advent of digitization, Europe has shown a growing interest in spectrum policy and the use of the digital dividend. In particular, the EU Telecom Package has highlighted the social, cultural and economic values of spectrum and the importance of a balanced approach to spectrum management.

As part of the European Digital Agenda, the European Commission's proposed Radio Spectrum Policy Programme (RSPP) aims to establish "the strategic planning and harmonization of the use of spectrum to ensure the functioning of the internal market". The RSPP should provide regulatory clarity and certainty for future spectrum management and lay the foundations for effective coexistence between spectrum users, including terrestrial broadcasting. Among other decisions, the RSPP requires Member States to make the 800 MHz band available for electronic communication services other than broadcasting.



### Our key messages

#### ■ Spectrum is a crucial resource for traditional and new terrestrial broadcasting services

*Terrestrial broadcasting fulfils the universal coverage obligation of EBU Members. DTT needs to have sufficient spectrum to continue to be a competitive platform and innovate.*

#### ■ DTT quality must be guaranteed

*There should not be any disruptions or service gaps for broadcasters and consumers when mobile applications or services are introduced in the broadcasting spectrum.*

#### ■ Harmonization needs time and must respect Member States' competence

*It is very difficult to harmonize the freeing-up of the 800 MHz band at the European level owing to the variety of different situations in different countries with regard to media policies and digital switch-over strategies across the EU. Any further reduction of available spectrum beyond the 800 MHz band might jeopardize the future of terrestrial broadcasting.*

#### ■ Spectrum management policies should be guided by long-term public interest rather than short-term profit

*Spectrum is a scarce public good, essential not only for important economic objectives but also for achieving social and cultural goals. The use of this spectrum for various platforms should be subject to such conditions that will protect and promote the public interest.*

## Spectrum is a crucial resource for terrestrial broadcasting services

### DTT is a mass-market platform

The terrestrial broadcasting platform is, in many countries, the primary means of delivering broadcasting services. Consumers throughout Europe have embraced it: in France DTT penetration has reached 78% of households; in the UK 72%; in Spain 81%; and in Italy 65%. The total number of channels on the DTT networks is now almost 1500. This includes a very large number of local channels. In 2010, the number of national and international channels available to DTT households in the 27 EU Member States along with Croatia and Turkey has increased to more than 760 (compared to 500 in April 2009).

The terrestrial platform is a unique combination of elements such as technical excellence and efficiency, quality of signal, favourable coverage, and has wide support across the industry as well as by the public across Europe.

DTT is therefore a successful business model with a steadily growing number of viewers across Europe and a rapid increase in the number of available channels.

### DTT guarantees universal coverage

DTT has an important role to play in fulfilling EBU Members' universal coverage obligation, which often requires that 98% or more of the population are provided with access to services. It is still the main way to guarantee universal access to television content, at a very low cost, and it will continue to play this role.

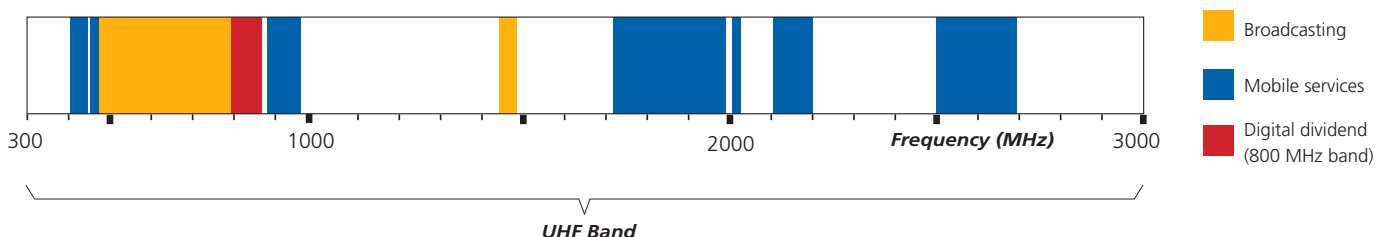
Universality is vital for national security. The terrestrial platform is in fact an essential and reliable channel for authorities to inform the public in the event of emergencies and natural disasters.

It is therefore in the long-term interest of Europe's citizens to continue to receive universal TV and radio programmes. They should not be forced to subscribe to satellite or cable services should terrestrial TV be unable to continue offering high-quality programming, sufficient information and good access services.

### DTT is an innovative platform

Terrestrial broadcasting needs to have sufficient spectrum to innovate. Broadcasters are currently reinventing the media experience through HDTV, 3DTV, and hybrid broadcast broadband TV (HBB TV). The digital platform must remain competitive in terms of choice of services and quality.

Sufficient spectrum must be available now and in the future to accommodate the evolving needs of terrestrial broadcasting and to protect the investments made by broadcasters, network operators and the public. In particular, in many countries digital terrestrial distribution has been financed by the licence-fee payer. Consumers should not receive lower quality and less content for the money invested in this network.



*The 470–862 MHz UHF band is the only spectrum available for the evolution of DTT services, whereas there are other frequency bands in which mobile telecommunications services, including wireless broadband services can be deployed. The digital dividend band (800MHz) has been allocated to mobile services which already have a large amount of spectrum, and some of this spectrum is essentially under-used or is used inefficiently.*

## DTT increases national competition among platforms

Terrestrial broadcasting is important even on those markets that are dominated by other delivery platforms. It stimulates competition among delivery platforms while also being complementary to other platforms. It is therefore in the interest of both the broadcasting industry and society as a whole that the terrestrial broadcasting platform remains attractive for viewers and listeners and a viable alternative to other delivery platforms.

## DTT quality must be guaranteed

### Interference

Deploying two-way mobile communications and wireless broadband services alongside broadcasting could result in unacceptable interference to broadcasting and consumers from mobile terminals. Interference becomes a problem in particular when broadcasting services are transmitted in frequencies near to those used by mobile services. In particular, where channels 61 to 69 (i.e. 790–862 MHz) are used by mobile services, broadcasting services using adjacent channels (i.e. channels 60 and below) will experience interference unless specific technical limitations are imposed on mobile services (power limitations, restrictive spectrum masks, guard bands).

Interference has an impact on the whole audiovisual distribution chain, including DTT reception, cable TV reception, and in-house installations.

New users 'have the responsibility' to ensure optimal co-existence between new and existing services, as well as guaranteeing the quality of broadcasting signals.

While interference to analogue TV services typically appears as more or less obtrusive patterns on the picture, interference to digital TV services usually results in a blank screen, i.e. a very rapid transition from near-perfect reception to no reception at all. It is difficult or impossible to identify and remedy the problem when this happens. There is a risk that viewers and listeners who have invested in digital equipment will not receive their programmes uninterrupted and in high quality.

### Protection measures

National administrations should apply technical and regulatory measures to avoid interference. These measures should facilitate long-term co-existence between services that share the same spectrum or operate in adjacent frequency bands.

In particular, in its Radio Spectrum Policy Programme (RSPP), the EU Commission should encourage national administrations to take appropriate measures to avoid interference to broadcasting services below 790 MHz from electronic communications services in the 800 MHz band.

Finally, consumers have to be properly informed about the interference issues while adequate mechanisms should be implemented for detecting, reporting and swiftly resolving interference incidents. The Commission could provide Member States with the necessary guidance.

### Costs

Any migration of broadcasting services to other frequency bands will give rise to costs for broadcasters, network operators and consumers, who have invested in digital equipment (purchase and installation of DVB-T receivers and reception antennas). The migration costs may vary greatly depending on the local situations. For example, the number of frequencies to be moved, and transmitters to be modified. The costs of migration to free up the 800 MHz band should not be borne by viewers or by broadcasters.

Compensation to viewers and broadcasters should be foreseen in the event that broadcasting services are degraded. The EU institutions should encourage national administrations to ensure sufficient funds are available in good time to cover these costs.

While the EBU supports an efficient use of spectrum, any change in policy should take full account of the impact on EU citizens in terms of interference and costs together with the quality of their enjoyment of DTT.

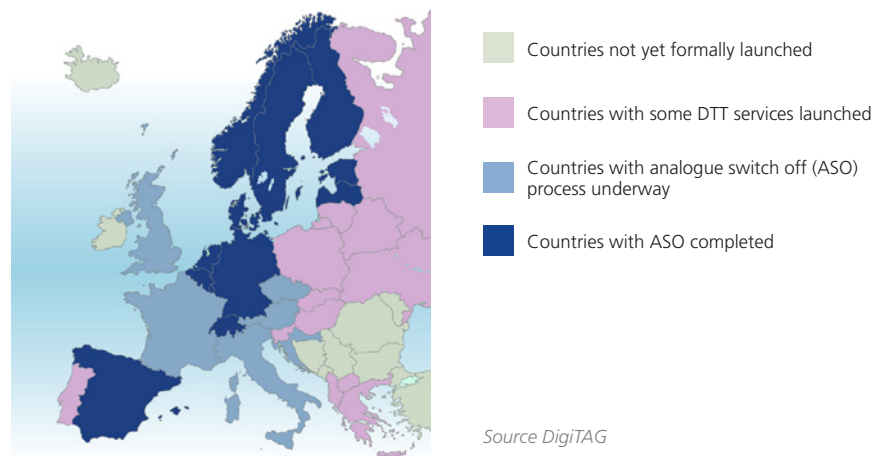
## Harmonization needs time and must respect Member States' competence

### Different national situations

The status of analogue switch-off varies across the EU: while some countries have already completed the process (Sweden, Finland, Germany, Spain, Belgium, the Netherlands, Luxemburg Denmark, Latvia and Estonia), some have not yet formally launched DTT (Ireland, Bulgaria, Cyprus, Romania) or have not even issued a plan for analogue switch-off (Hungary, Lithuania and Portugal).

Based on currently available evidence, it can be generally assumed that the digital switchover process will take between 14 years (as in the United Kingdom) and 3 years (as in the Netherlands) from the time DTT services are first launched to time the last analogue services are switched off. Factors that will influence the process include the number of viewers relying on the terrestrial television platform, spectrum availability, and the penetration of DTT services.

### Analogue switch-off status across the EU:



### Member States' competence

The EU Telecom Package as revised in 2009 establishes the principles for spectrum management. It recognizes Member States' competence with respect to cultural and audiovisual policies and generally leaves them the necessary scope for action. It also grants broad discretion to Member States to provide for the necessary exceptions to satisfy their cultural and media policy objectives. This applies in particular to exceptions from the principles of service neutrality and technological neutrality, i.e. given frequencies can be used for any service and any technology.

Although, the EBU welcomes the RSP as it gives a certain degree of regulatory clarity and certainty in future spectrum management, it should not go beyond the general principles of the revised Telecom Package.

The RSP should continue to endorse a dynamic approach to spectrum management, which recognizes Member States' competence in this field and respects the cultural, audiovisual and media policies of each Member State. Sufficient flexibility is needed to accommodate specific national requirements.

### Mandatory release of the 800 MHz band

The Radio Spectrum Policy Programme (RSP) requires Member States to make the 800 MHz band available for mobile services other than broadcasting, including for wireless broadband, by 1 January 2013.

The EU Commission's initiative foresees the harmonized use of this spectrum for electronic communications services, in particular wireless broadband. However, since the status of analogue switch-off varies across the EU, it is highly unlikely that a harmonized European approach can be applied by 1 January 2013 without derogations.

To take account of the various situations with regard to media policies and digital switch-over strategies in different countries across the EU, the EBU suggests setting a date in 2015 – instead of 2013 – as mandatory for the release of the 800 MHz band. This is in line with the date set in the ITU GE06 Agreement.

## Spectrum management policies should be guided by long-term public interest rather than short-term profit

### Spectrum is a scarce public good

The EU Telecom Package qualifies radio spectrum as a public good that has an important social, cultural and economic value. It also recognizes the importance of spectrum policy for the promotion of cultural and linguistic diversity as well as media pluralism.

As spectrum is a scarce public good it must be managed with 'special attention', striking a balance between economic, cultural and social values in the public interest.

Spectrum is vital for DTT today and in the future. Public service broadcasters need adequate spectrum to evolve with new technology, drive innovation, and meet audience expectations. Any further reduction of available spectrum beyond the 800MHz band might jeopardize the future of terrestrial broadcasting.

The digital dividend is a result of broadcasters' innovation driving the development of DTT. It should be used for public benefit, respecting efficiency, coverage and service obligations.

### Broadcasting and Broadband

Broadband, including rural broadband, is a prerequisite for the development of modern societies. It will drive innovation. Broadband is an important platform for many services, including broadcasting. Broadcasters already exploit broadband networks in new and innovative ways, for example through hybrid broadband broadcast TV (HBB TV).

However, in order to be suitable for broadcasting services and meet public expectations, broadband networks need to fulfil the same requirements as broadcast networks with respect to spectrum efficiency, coverage and service obligations.

Digital dividend spectrum is scarce. Access to this spectrum should therefore be associated with coverage and service obligations, as well as with spectrum efficiency requirements. The public interest must be protected and promoted.

EU spectrum policy should encourage monitoring activities to make sure that users of both platforms (broadcasting and broadband) respect the public value of the spectrum.

## The EBU

The **European Broadcasting Union** (EBU) is the leading association of national media organizations in the world, bringing together 86 national media organizations in 56 countries in and around Europe.

The EBU represents its Members and promotes the values and distinctiveness of public service media in Europe and around the world. The Eurovision and Euroradio networks deliver news, sports, events and music to EBU Members and other media organizations.

Services to Members range from legal advice, technical standardization and development to coproduction and exchange of quality European content.

For more information about the EBU: <http://www.ebu.ch>

### Did you know?

- EBU Members reach a total audience of **650 million** people weekly.
- **75% of EU citizens** regularly watch EBU Members' main channels.
- EBU Members' invest in genres and programmes – documentaries, culture and social cohesion programmes – that would otherwise be underserved. Audiences turn to public service media for accurate and trustworthy news and information.
- Members invest **EUR 10 billion** annually in new European TV productions.
- EBU Members play a key role in bringing Europe into the digital age by adopting groundbreaking developments and being at the forefront of new media technologies from the take-up of DTT, to hybrid broadcast/broadband and television beyond HDTV.



**European Broadcasting Union**

Nicola Frank, Head of European Affairs

Avenue des Arts 56, 1000 Brussels, Belgium

brussels@ebu.ch; Tel.: +32 (0)2 286 9115; Fax: +32 (0)2 286 9110

[www.ebu.ch](http://www.ebu.ch)