

# WRC-15 & SPECTRUM

Access to radiofrequency spectrum for free-to-air content delivery is central to the success of most EBU Members. Terrestrial broadcasting has been the backbone of public service media delivery for decades; this continues with the widespread successful take-off of DTT services. Facing increased pressure on spectrum through successive ITU WRCs, the EBU is helping its Members to retain access to spectrum, hence securing the future of the terrestrial delivery platform.

## BACKGROUND

The most recent ITU World Radiocommunication Conference, WRC-12, opened the door for an allocation of the 700 MHz band (694-790 MHz, see figure below) to the mobile service, as of the end of 2015 in ITU Region 1 (WRC-15 agenda item 1.2). It also agreed to identify frequency bands to satisfy additional spectrum requirements for the mobile service (WRC-15 agenda item 1.1).

WRC-07 made a previous allocation of the 800 MHz band (790-862 MHz, see figure below) to the mobile service. It is in the process of being released from broadcasting in Europe. If more spectrum is to be released from broadcasting then this would call into question the long term viability of the terrestrial television broadcasting platform.

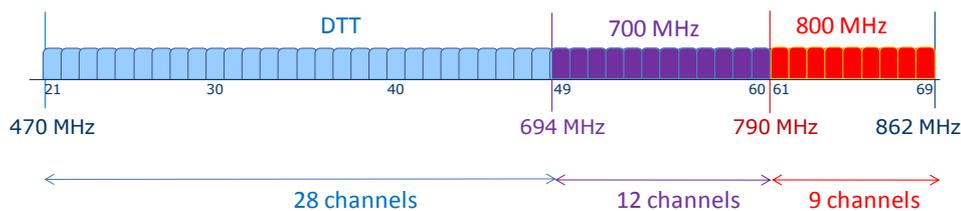


Illustration of UHF spectrum showing the bands affected by WRC-07 and WRC-12 decisions

## THE CHALLENGE FOR PUBLIC SERVICE MEDIA

The challenge for EBU Members is to continue providing their content free-to-air to the widest possible audience with an easy to access means, like the terrestrial broadcasting platform. This platform combines technical quality, reach, cost efficiency, and the ability to deliver services free-to-air. Reducing the spectrum available for terrestrial broadcast delivery will affect one or more of these criteria and may result, ultimately, in the fading out of this delivery platform.

Investments made so far by broadcasters in DTT (Digital Terrestrial Television) networks and by consumers in DTT receiving equipment need to be preserved for a sufficiently long time. Moreover, sufficient spectrum resources for upgrading to High Definition and, eventually, Ultra High Definition TV services are needed.

Furthermore, such new technologies need to be introduced in parallel with the existing ones to allow consumers to invest in new equipment according to their wishes, while the existing services are maintained during a transition period with simulcast transmissions. DTT technology and services can be expected to further develop in the future, thus creating recurrent needs for upgrades and simulcast of existing services.

Guaranteed access to this spectrum is needed to provide certainty to broadcasters and the industry alike and encourage further standardization work and investments in enhanced technologies for service delivery.

Keeping full and exclusive access to the current broadcasting bands would be the best outcome. However, regional and national decisions might result in a release of the 700 MHz band by broadcasting after a certain period of time.

In many European countries, broadcasters, including EBU Members, intensively use the whole UHF band for DTT and would face technical and cost problems, if they had to release the band. In other countries, broadcasters are still deploying their DTT services and will need adequate access to spectrum for this.

### **WHAT IS THE EBU DOING?**

Immediately after WRC-12, the EBU organized a workshop gathering all stakeholders concerned by the issue to discuss the consequences of the new allocation to mobile in the 700 MHz band and define the required actions.

The EBU has participated actively in ITU activities related to the assessment of spectrum requirements for broadcasting. In particular the EBU contributed to the achievement of important results from an ITU questionnaire, showing that a large majority of countries in the ITU Region 1 (including Europe, Africa, Middle East and parts of Asia) require at least the band 470 to 694 MHz for broadcasting in the future.

The EBU also contributes detailed technical studies to the CEPT and the ITU on the technical and operational characteristics of the mobile systems that may be implemented in the 700 MHz band in a compatible way with the broadcasting services in the UHF band.

In the preparation of WRC-15, several EBU project groups continue working on the following topics:

- spectrum requirements for broadcasting;
- implementing more efficient broadcasting systems, e.g. DVB-T2 using SFN;
- interference, compatibility and sharing with Digital Terrestrial Television;
- spectrum usage by PMSE (Programme Making and Special Events);
- longer term future of broadcast content delivery.

In doing so the EBU continues its collaboration with DigiTAG (Digital Terrestrial Action Group), BNE (Broadcast Networks Europe) and ACT (Association of Commercial Television in Europe), to coordinate actions in European (EC, CEPT) and international (ITU) forums. Coordination is also sought with sister broadcasting unions in other parts of the world.

### **FIND OUT MORE**

EBU Spectrum Management and Regulation group

[tech.ebu.ch/groups/sm](http://tech.ebu.ch/groups/sm)