



Geneva, 22 November 2010 – The DigiTAG Steering Board has today formally issued with the EBU, BNE and ACT, joint recommendations aimed at ensuring that necessary technical safeguards are adopted to protect the television services, delivered by the digital terrestrial TV (DTT) platform, from interference. New technical safeguards have become necessary following the decision by several national administrations to allocate the 790-862 MHz frequency band (800 MHz band), presently used for broadcasting, to fixed and mobile communications networks. These recommendations are also intended as a contribution related to the multi-annual Radio Spectrum Policy Programme (RSPP) presently in discussion in the European Union institutions.

Commenting on these recommendations, Daniel Sauvet-Goichon, chairman of DigiTAG stated: “With many tens of millions of households across Europe relying on the DTT platform, it is essential for national administrations to guarantee that these viewers can continue to access these popular TV services without any technical interference. Measures must be put in place to protect the quality of their viewing experience.”

Bernard Pauchon, chairman of BNE stated: “Considerable efforts are being made by the whole broadcasting industry to rearrange DTT transmission below 790MHz in order to clear the upper frequencies for other uses. The quality of the services offered by Broadcast Network Operators to broadcasters and citizens has to be protected by European and National institutions”.

Lieven Vermaele, EBU Director of Technology and Development stated, “When viewers have problems with receiving TV, they often contact their public service broadcaster to find out if there is something wrong with the service. If mobile communications were to interfere into digital broadcasting, the screen would simply go black, and the broadcaster would have no way of helping the viewer. It is therefore essential that great care is taken in the planning and implementation of mobile communications in the former broadcasting band, so that the risk of such confusion is totally avoided.”

The full text of the recommendations document is attached, and can be found on the DigiTAG website www.digitag.org

ACT, the Association of Commercial Television in Europe, represents the interests of the commercial broadcasting sector in Europe. Formed in 1989, the ACT has thirty-one member companies licensed in 30 different European countries and distributed across 45 European markets and beyond. Our members operate several hundred free-to-air and pay-tv channels and distribute many more channels and new services. The ACT members encompass several business models: free-to-air broadcasters and pay-TV players, digital platform operators and multimedia groups. www.acte.be

BNE, *Broadcast Networks Europe*, is dedicated to maintaining an efficient and fair operational environment for Terrestrial Broadcast Network Operators with a view to ensuring that European citizens continue to receive universal access to a broad range of TV and radio programmes and content as well as other over the air services. www.broadcast-networks.eu

DigiTAG, the Digital Terrestrial TV Action Group, aims to encourage and facilitate the implementation and introduction of digital terrestrial television services using the Digital Video Broadcasting Project's Standards. It has over 50 members from broadcasting, network operators, regulatory, and manufacturing organisations throughout Europe and beyond. www.digitag.org

European Broadcasting Union (EBU) serves 86 national media organizations in 56 countries in and around Europe. It promotes the values and distinctiveness of public service media in Europe and around the world. It brings news, sports, events and music to your home through the Eurovision and Euroradio networks. The EBU develops and shares best practices, media expertise and innovation. It produces and exchanges rich and diverse programmes across all media. www.ebu.ch

Minimising the potential interference to Digital Terrestrial Television (DTT) broadcasting services from Mobile/Fixed Communications Networks (MFCN) operating in the 790-862 MHz frequency band

Joint recommendations from DigiTAG¹, EBU², BNE³ and ACT⁴

Introduction

Terrestrial broadcasting has an important societal role and economic value. The analogue to digital television switchover, which requires considerable investments and commitments from broadcasters, network operators and viewers, will result in releasing a ‘Digital Dividend’ in frequency spectrum.

Several national Administrations have decided to allocate the 790-862 MHz frequency band (the 800 MHz band) to mobile/fixed communications networks (MFCN), following the switch off of analogue terrestrial television services.

The European Commission issued a Decision (2010/267/UE) on harmonized technical conditions of use of this frequency band in the European Union by MFCNs. This decision is based on studies carried out by the CEPT, the results of which are published in CEPT Reports 30 and 31.

These harmonised technical conditions have been derived aiming to reduce the risk of disturbance that the implementation of MFCN in the 790-862 MHz frequency band may cause to Digital Terrestrial Television (DTT) broadcasting services in the lower adjacent band. However, as expressed in the CEPT Report 30, the concept of ‘block edge masks’ used to define these conditions does not always provide the required level of protection for victim services and, in order to resolve these cases of interference, additional mitigation techniques would need to be applied.

The EC Decision (Article 2, second paragraph) also states that Member States shall ensure that the new systems in the frequency band 790-862 MHz provide appropriate levels of protection to systems in adjacent bands, e.g. DTT broadcasting services.

¹ Digital Terrestrial Action group, www.digitag.org

² European Broadcasting Union, www.ebu.ch

³ Broadcast Networks Europe, www.broadcast-networks.eu

⁴ Association of Commercial Television in Europe, www.acte.be

Recommendations

In order to provide an appropriate level of protection to DTT services below 790 MHz with respect to emissions from mobile/fixed communications networks (MFCN) operating within the 790-862 MHz band, DigiTAG, EBU, BNE and ACT, recommend that prior to the award of licences for use of the spectrum, the following protection measures be applied:

- a) the most protective level defined in EC decision 2010/267/EC (baseline requirement in case A) should be applied in all cases;
- b) additional mitigation measures are required to be put in place, as necessary, by mobile/fixed communication network licence holders to ensure full protection of DTT broadcasting services. These services include also portable and mobile DTT when these reception modes are part of the national coverage concept. The basis for this protection should be careful network planning by the MFCN operator to avoid situations that may create interference to the reception of DTT. The associated costs of implementing remedies should not be borne by broadcasters, broadcast network operators or viewers. Depending on the actual situation, these measures may include but are not limited to:
 - reducing the power of the MFCN transmitters and adjusting their antenna characteristics to reduce interference problems, taking into account local conditions, especially for the MFCN Base Stations using the first frequency block above 790 MHz;
 - using a Base Station antenna polarisation that is opposite to that of the DTT transmitter, especially for Base Stations using the first frequency block above 790 MHz;
 - use of additional RF filtering at MFCN Base Stations, especially for Base Stations using the first frequency block above 790 MHz;
 - use of on-channel low-power DTT repeaters at the MFCN Base Stations to restore the degradation of signal to noise ratio at affected DTT receivers. Such remedies should be coordinated with the impacted broadcast multiplex operator, since it may not be easily applicable, such as in the case of DTT transmitters operating in a Single Frequency Network (SFN);
- c) It is further recommended that when granting frequencies in the 800 MHz band the following additional measures be considered:
 - to make appropriate information on the licences awarded available, for instance on regulators' websites, so that consumers suffering from interference know why this is happening, to whom they can complain and what action can be taken;
 - setting-up an Entity, independent of the MFCN licence holders, as a point of contact to which cases of interference or loss of DTT service can be reported, to ensure a prompt and effective resolution in a timely manner;
 - ensuring that consumers experiencing loss of DTT service, even after mitigation measures mentioned above have been implemented, are promptly provided with adequate equipment to allow continued reception of DTT services. Such equipment may include filters connected in front of the DTT receiver or receiving

antenna amplifier system to eliminate harmful interference stemming from emissions in the frequency band 790-862 MHz. Such measures must not unduly impair reception of channel 60. The associated costs of these necessary remedies should not be borne by broadcasters, broadcast network operators or the viewers;

- any other actions necessary for circumstances when the above measures have proven ineffective.
- d) It is highly recommended that field trials be organised to observe the ‘real world’ impact of the deployment of mobile/fixed communications services versus the results of theoretical models utilised for prediction purposes. The results should be made available to interested parties in Europe.

The DigiTAG, EBU, BNE and ACT members are fully open for cooperation with Administrations, Regulators, and all parties interested in the use of the 800 MHz band, in the context of the above recommendations.