



## **Broadcast Networks Europe response on the public consultation on the draft RSPG opinion on common policy objectives for WRC12**

### **1. Introduction**

BNE welcomes the opportunity of expressing its view on the draft RSPG opinion on common policy objectives for WRC12. BNE is the association of broadcast network operators in Europe. The association includes among its 14 member companies all the major operators in Europe serving 25 European countries. More information about BNE can be found on [www.broadcast-networks.eu](http://www.broadcast-networks.eu).

### **2. Comments related to agenda item 8.2**

In principle BNE agrees that it may be necessary to address, at WRC16, the issue of spectrum allocations with a view to reach the goals set in the Digital Agenda. However, the opinion of BNE is that this does not automatically translate in the position that the optimal solution would be the allocation of spectrum in the band 470-790 MHz to mobile services. Such a solution would be incompatible with the provisions related to the migration of the DTT (Digital Terrestrial Television) services currently allocated within the band 790-862 to channels below 790 MHz, leaving apart the need to find new spectral resources for services ancillary to broadcasting (PMSE or SAB/SAP services) in the same sub-band.

Further, there is a need for additional frequencies for a number of enhanced services such as HDTV, Digital cinema formats, interactive TV, 3DTV, etc in the sub-band 470-790 MHz, to respond to commercial, cultural and societal demands, which is in line with the Telecom Package and with the criteria expressed in the EU Telecom Better Regulation Directive. BNE does not believe that the principles expressed in the draft RSPG opinion cover all the issues that should be considered in defining the European Policy.

#### **2.1 Guiding principles for allocation of new spectrum to IMT**

##### **2.1.1 Harmonization as the main driver: criticalities of such approach**

The opinion of RSPG is that harmonization should be a guiding principle. Harmonization/rationalisation of allocations between Region 1 and Region 2 is often

invoked as a key measure to make possible economies of scale, thus reducing the cost of equipment. This argument is overrated and not evident per se. It is well known from the basic economic theory of supply, that the cost per unit of output does not decrease indefinitely when the output size is increased, but reaches a minimum when the so called minimum efficient scale is reached. Beyond that value, the cost per unit of output does not decrease any more. Therefore, harmonization between Region 1 and Region 2 would have an impact on the cost of equipment only if the market in Region 1 is less than the minimum efficient scale. BNE believes that the market in Europe is large enough to reach the minimum efficient scale. To conclude, the claim that harmonization of allocations between Region 1 and Region 2 would be economically beneficial should be backed-up with solid economic data.

In accordance with the Resolutions of the WRC-07 Conference related to the spectrum to be allocated to IMT systems a number of alternatives should be taken into account to satisfy the needs of Mobile Broadband Services. Already available spectrum for Mobile Broadband include a substantial amount of spectrum in the 800 MHz, 900 MHz, 1800 MHz, 2000 MHz, 2600 MHz and 3400 MHz bands. These bands are already harmonized and also suitable for deployment of Mobile Broadband Services in Europe.

When discussing wireless broadband systems, other options than LTE should also be addressed as commercial solutions while at the same time preserving the principles of “technology neutrality”; examples are WiMAX, WiFi, Satellite, HBBTV, Fixed Wireless Services. The appraisal of the future demands of spectrum for wireless broadband should take account of the competition from Fixed Wired Broadband Systems which realistically are going to serve the bulk part of the total Broadband Market: Optical Fiber, ADSL, Cable TV, PLC, etc.

## **2.1.2 Other principles that need to be considered**

### **2.1.2.1 Competition between TV platforms**

The allocation of spectrum to mobile services need to be analysed in the wider context of allocations for other services. For instance, Europe today basically relies on 4 platforms for delivering high quality TV: cable, IP, DTT and satellite. Considering that the penetration of IP TV is still very low (see data below) and increasing broadband networks requires enormous investments and also that cable TV is not available everywhere, high quality video in many European countries today can be brought to the vast public via only two platforms (see for instance the case of Italy where only terrestrial TV (98%) and satellite (26%) have a relevant penetration). This means that many Member States may feel the need for preventing one platform (terrestrial TV) to become less competitive (higher costs and reduced capacity that would result from a second digital dividend), in order to preserve a healthy competition between platforms (healthy in terms of economic benefits for the customers but also in terms of pluralism and cultural diversity).

### **2.1.2.2 Preservation of pluralism and cultural diversity**

Principles like preservation of pluralism and cultural diversity (that represents one key strength of Europe) and the preservation of a European capacity to produce quality content (at national, regional and local level) should also be considered in the allocation of spectrum and should be more extensively reflected in the RSPG opinion on WRC 12 policy objectives. Broadcast systems are subject to EU regulation to guarantee provision

of European content, while broadband access cannot be regulated like this and is likely to be used for an increased share of information and culture produced outside the European Union. Preservation of broadcast systems, in particular terrestrial platforms, is essential to support European content production also in the future.

Given the increasing demand for capacity over DTT for delivering high quality video, and that video is also the main driver for internet traffic growth, reducing spectrum allocated to broadcast TV will simply mean that video content once offered over DTT will have to be delivered via broadband platforms, possibly using the same spectrum that was taken away from broadcast, but with much higher costs and substantially less efficient use of spectrum and, as stated above, also with an impact on the market of content production in Europe.

One difference between broadcast and mobile broadband is that broadcasting remains the most efficient platform (in terms of cost per bit and in terms of spectral efficiency) to deliver programmes intended to the wide public. For events, like major sport events that by their nature must be delivered in real time to a vast public, it is highly unlikely that an IMT network will be able to cope with or even considered for traffic loads of this magnitude.. In other words, delivering video content of high quality via an IMT platform will have higher costs and will likely shift the business model even more towards pay per view content, in particular with a severe impact for cost of receiving TV especially for the parts of population that may not afford higher bills for media consumption. There is also a risk for adverse effects on the possibility of minorities and small opinion groups to reach the wide public and in turn a detrimental effect on the defence of pluralism and the preservation of cultural diversity.

Also, because of its intrinsically low cost per bit and its ability to reach a vast audience, terrestrial broadcast has proved to be a suitable element of a value chain that fostered the growth of European content providers, especially local and regional. It is far from sure that mobile broadband, with its high costs per bit and its fragmented audience, will achieve the same result.

## **2.2 Current status of the DTT platform**

DTT operating in the band 470-790 MHz is fostering the development of a broadcasting platform that goes beyond the mere transition to digital of previously existing analogue programmes. In particular we see the following new developments:

- A wide range of both new Commercial and new Public Service channels have been able to establish themselves, reaching large audiences through the increased capacity in the terrestrial networks. This has created a vibrant market and a platform creating many new business opportunities in Europe.
- Mobile TV services (currently in Italy there are 2 DVB-H networks, both of them with national coverage).
- Portable TV services
- High Definition TV
- In the near future, 3D TV
- HBBTV, hybrid broadband broadcasting TV

In a recently published report<sup>1</sup> a comparison of the penetration of different platforms in the European Union is provided. The data indicates that analogue terrestrial in December 2009 had a penetration of 34%, while DTT had a penetration of 24% (increasing from 12% in December 2007, DTT is the fastest growing platform in Europe). In total, terrestrial television had a penetration of 57%. In some Member States this figure is considerably higher. TV over telephone line scored only 4%, satellite scored 24 % (22% in December 2007) and cable 30% (34% in December 2007). Complete trends for the years from 2005 to 2009 are given in the report

From the data above, it is straightforward to observe the following facts:

- **Approaching 60% of European households pick their primary TV signal from Terrestrial. Terrestrial is the largest and most preferred TV distribution platform.**
- Kitchen-TVs, Bedroom-TVs, Second Homes, Caravans etc add another share of households having at least one TV set on Terrestrial (73% of households in the UK as example)
- DTT is the fastest growing platform (while others, like cable, are declining).
- DTT will soon totally replace the older analogue transmission networks. The major part of the European countries have established obligations to reach close to 100% DTT population coverage by 2012.
- Projecting the trends, DTT will make terrestrial television remain the primary platform in EU for Free-To-Air TV delivery, which is particularly relevant for offering all citizens the benefits of Information and Cultural values.
- These facts indicate that DTT will need to retain the currently available spectrum between 470 and 790 MHz.

Considering the above, we believe that the RSPG opinion should recognise the contribution that terrestrial broadcasting brings to the European economy and society and reflect this in saying that new allocations for mobile broadband should not be sought in the band 470-790 MHz.

### **3 Considerations on agenda item 1.17**

Agenda item 1.17 has been studied within CEPT under the implicit assumption that the band 790-862 MHz will be used, by 2015 in all Europe, for mobile broadband systems only (IMT). Results of studies were derived under the influence of such an assumption. If European countries will adopt the position that no additional provisions, apart from those contained in the GE06 Agreement, are required to satisfy agenda item 1.17, then the result of agenda item 1.17 will not be applicable to other bands in the future (namely in the case, from 2016 on, where parts of the band 470-790 MHz were allocated in some countries also to the MS and in others to the BS). The main reason is that GE06 provision, crafted when the allocation to MS was still to come, does not cover the case of aggregate interference from multiple MS interferers.

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<sup>1</sup> “E-communications Households Survey”, Special Eurobarometer N. 335, paragraph 6, page 28

RSPG should sustain the option to undertake the appropriate arrangements to assess the potential impact of the cumulative effect of interference from the Mobile Base Stations to the Broadcasting service. Additionally, it is fair to include in the WRC-12 draft Resolution regarding the use of the band 790-862 MHz for mobile service and by other services, a “resolves” point to invite ITU-R to develop a Recommendation on the methodology to be applied by the concerned administrations to take into account the cumulative effect of interference when performing bi-lateral or multi-lateral coordination. It is noted that EBU submitted a contribution to CPG PTD following that line.

It is also important to elaborate further on the coordination methods between the countries which are contracting members of the GE06 Agreement and those countries which are not members of the GE06 Agreement. The European Commission might adopt the measures, if appropriate, to build on the ITU-R Recommendations a specific guidance to assist to the EU countries to coordinate with non-GE06 countries, in accordance with the prescriptions of the RSPG, Radio Spectrum Policy Programme, once adopted by the Parliament and Council.

Otherwise, it would be necessary to ask for the completion or the refinement of the sharing studies for the band 790-862 MHz mandated by the Resolution 749(WRC-07) between the mobile services and broadcasting services oriented to protect the current incumbent services. Adjacent band interference, namely below 790 MHz, should be assessed by the interested administrations by means of mutually agreed criteria without discarding the option to adopt the proper ITU-R Recommendations to this end.

#### **4 Considerations on agenda item 1.25**

We would like to highlight the fact that WRC Resolution 231 indicated that the allocation of additional spectrum for the MSS, between 4 and 16 GHz, should be made without additional constraints to existing services. We believe it would be sensible to reflect this principle in the RSPG opinion. For instance, the band 10.5-10.6 GHz in some countries is heavily employed by the FS service.

It must be noted that the band 10.5-10.6 GHz is allocated to the fixed and mobile services with a primary status. Radiolocation service is allocated in the band 10.5-10.6 GHz with a secondary status. That means that additional sharing studies would be necessary before deciding on the allocation of that band for downlink MSS services.

On the other hand, RSPG should require to introduce a global perspective taking into consideration all the bands suitable for MSS systems, downlink or uplink, considering the needs and rights of other concurrent terrestrial services in the band 10.5-10.6 GHz.

#### **5 Considerations on Agenda item 1.19**

Resolution 956(WRC-07) refers to undertake studies oriented to know whether there is a need for regulatory measures concerning the implementation of CRS, cognitive radio systems technologies, as well as those related to SDR, software defined radio technologies. RSPG has launched for consultation a draft Opinion on Cognitive Technologies which would shed light on the main requirements to deploy CRS systems without disturbing the rules and procedures of the ITU Radio Regulations.

One critical feature should be the protection of the incumbent services operating in the candidate bands to apply the CRS techniques. For that purpose a clear definition of the concepts of “unused channel or band” or “eligible white spaces” are in need of a harmonized global understanding.

RSPG should prevent the premature designation of some specific frequencies as white spaces before having accomplished studies to verify the compatibility with incumbent authorized services: i.e. it is not appropriate to point to the UHF band or any other part of the spectrum without making the evaluation of the affected services or before testing the real possibilities to introduce the CRS devices in the band in conformity with the rules of Radio Regulations.

Same approach would be developed on the methods to identify an unused channel to assure that protection of the passive or reception stations is fully assessed, to integrate all the variables shaping any time the changing electromagnetic environment. CRS and SDR must be envisaged as useful tools to ease the sharing of frequencies by more than one service or to perform occasional services with a limited signal power, to avoid applying CRS and SDR techniques as a non regulated means to designate new services within bands previously allocated to other, incumbent services.

## **6 Considerations on Agenda item 1.5**

The harmonization of the spectrum for electronic new gathering, ENG, is very convenient to allow for the operation of the ancillary services to broadcasting. RSPG opinion should consider the future needs of spectrum for ENG as a consequence of the extension of terrestrial digital TV, DTT, and the emergence of new advanced digital services: HDTV, high definition TV, Digital Cinema and Electronic cinema, leading to expanded demands from the contribution, production and distribution functions. To create certainty amongst the manufacturers of the associated equipment would be another reason to harmonise the ENG bands at European and global level.