
ARD and ZDF Comments

on the Consultation document Transforming the digital dividend opportunity into social benefits and economic growth in Europe of 10 July 2009

ARD is a registered in the European Commission's Register of interest representatives 6774178922-55

ARD and ZDF welcome the opportunity to present their comments on the Consultation document.

I. Preliminary remarks

ARD und ZDF are public service broadcasters which have a mission that includes encouraging national culture and social cohesion, providing reliable, unbiased information on the basis of varied and balanced programming for all segments of the population. Moreover, ARD und ZDF are called upon to provide full area coverage, which means that public service programmes should be available in principle for every citizen throughout the national territory.

The conclusions drawn in the EC document on the implementation of the digital dividend in Europe are based on the assumption that a prosper development of both broadcasting services and mobile services can be simultaneously achieved by imposing several regulatory and technical measures across Europe aiming at enabling the conflict-free sharing of UHF spectrum. This presumes the harmonized freeing of channels 61 - 69 across Europe for mobile services. It is proposed to finalize the transition to such a state of co-existence by the end of 2012 on a mandatory basis. In order to satisfy the future demand of terrestrial broadcasting for more programs and higher quality it is urged to introduce better compression technologies for broadcasting and HF receiver capabilities.

II. ARD and ZDF welcome the Commissions approach in general and are willing to play an active role in the process

ARD and ZDF welcome the fact that the Consultation document underlines and acknowledges the consumer needs for more and a broader variety of advanced terrestrial broadcasting services. In Germany more than 17 million receivers are in the market, across Europe there are hundreds of millions. Digital terrestrial television is received under fixed, portable and mobile conditions. This proves the attractiveness of the services and the economic, but also the social, cultural and political relevance of the

terrestrial broadcasting.

Against this background ARD und ZDF support all considerations aiming at generating and enabling more digital dividend to fulfil the future needs and expectations of viewers with respect to the variety of programmes, quality of service, mobility and enhanced services (like Dolby 5.1, EPG, audio description). This is in particular true in view of an unavoidable simulcast period during the switch-over from SD to HD television. Only this will guarantee the future development of terrestrial broadcasting in comparison to satellite, cable and IP TV. Furthermore, it is the basis for the preservation of its unique feature – mobility.

As in the past we are willing to play an active role in that process.

III. Following aspects should be taken into consideration

1. Decision on the allocation of the digital dividend should not follow solely economic criteria

ARD and ZDF do not share the position of the consultation document that the decision on the allocation of the digital dividend should comply solely with economic criteria. The secure and interference-free co-existence of mobile and broadcasting services should not be damaged by a general European approach which does not take into account the specific situation in the Member States. But even on the basis of an approach based on economic consideration only, questions are arising in relation to the additional economic value allegedly generated according to page 4 of the Consultation document. Other studies are warning about such a “mobile myth”¹ because predictions of large benefits from allocating more spectrum to mobile are based on aggressive forecasts for growth in demand for mobile broadband. As a consequence, successful business models are still unproven. In the document even the Commission points out that economies of scale have been driving forces for the analogue/digital switchover in terrestrial broadcasting, too. These effects are at risk if mobile services are introduced on the basis of loose compatibility criteria hastily endorsed for the spectrum range above 790 MHz. This will jeopardize the benefits achieved by digital terrestrial broadcasting.

2. Procedural suggestions of the Consultation document are not in line with the revised regulatory framework for electronic communications

ARD und ZDF regret that the Commission did not wait for the conclusion of the Telecom Review process, because in the directives of the regulatory framework – especially in the framework directive - many requirements for procedures and competences can be found as far as decisions on the allocation of the digital dividend are concerned. In this respect some of the statements in the Consultation document are not in line with these requirements. For example, section in 4.3 of the document the Commission is aiming for a “EU-harmonisation” on the basis of binding requirements for the Member States . This clearly goes beyond a mere technical harmonisation. This is clearly evident for two areas:

¹ Oliver and Ohlbaum Associates/DotEcon, Effects of a Market-based Approach to UHF Spectrum Management and the Impact on Broadcasting, 27.02.2008, p. 38 et seq.

1. obligation of the Member States to commit themselves to the EU target date for the effective switch-off of analogue TV broadcasting by 1 January 2012 and confirming the switch-off date in national law,
2. commitment of the Member States to the digital dividend policy at international level by adhering the footnote 5.613 of the ITU Radio Regulations, which allocates the 790 – 862 MHz band to the mobile service on a co-primary basis.

Although the transformation of this requirement are ongoing in Germany, ARD und ZDF would like to recall that the final wording of the Framework directive reiterates the prerogative of the Member States and the European Parliament to decide on further harmonisation on the basis of the Multi-Annual Spectrum Policy Programme. Such a relevant political matter with far reaching social and economical implications should not be left to comitology procedure.

3. Interference problems have to be solved

Digital broadcasting is characterised by a rapid transition from near perfect reception to no reception at all - and thus it is more critical to harmful interference than it is the case for analogue broadcasting. The implementation of other services than broadcasting in the 800 MHz band has to be carried out in a way that no additional constraints are imposed on broadcasting services according to the current GEO6 plan and its evolution. In particular, it has to be ensured that there is no additional interference nor restriction on the of the usage of UHF channel 60. In this respect we would like to recall that the RSPG stated in its opinion on the Digital Dividend that a mobile allocation would be sought after “under conditions that broadcasting services are not adversely impacted“. In many situations, it may be difficult to protect broadcasting services from interference caused by mobile services. Such types of interference may also be difficult to identify, and to remedy rapidly. Especially the results of recent compatibility studies (adjacent band compatibility between broadcast services below 790 MHz and mobile services above 790 MHz) between the broadcasting service and the fixed/mobile services (including uplinks) should be taken into consideration. Results from preliminary compatibility studies between broadcasting and mobile services show the difficulties. The studies conclude that interference will occur with the currently discussed channelling arrangement and BEM (Block Edge Mask) and that additional measures will be needed to protect the broadcast services (guard bands and filters, among others). Even cable network reception will face severe interferences through LTE-applications in the UHF-spectrum.

ARD and ZDF regret that the Consultation document does not address all the interference issues at stake in a adequate way. Costs and difficulties associated with the interference management are expected to represent the highest challenge for the introduction of mobile services. We particularly notice that these interference issues were only partly taken into account when defining the BEM and the channelling arrangement in CEPT. As a consequence, the protection of broadcasting services and the implied costs should not to be left to national initiatives but should also be a part of an European approach. And here those responsible for the of costs occuring shall be billed and neither the viewers nor the broadcasters which did not induce the changes. First - quite conservative - estimations for Germany show that there will be at least costs up to 130 Mio. € for all DVB customers (implementation of filters, change of receivers to secure the compatibility of broadcasting and mobile services) and at least 140 Mio. € for the broadcast network operators (necessity of higher network density and higher

transmission power). Moreover public broadcasters will have to face 6 Mio. € additional costs due to necessary communication measures and the change of wireless production equipment (SAB/SAP). This creates a remarkable amount of uncertainty: for the national administrations for which the best approach has yet to be defined (regulatory and/or technical), for the mobile industry which does not know the cost implications of possible protection clauses for the users and their DVB-T equipment, for the consumer electronics industry which does not know which level of immunity is required and last not least for broadcasters like ARD und ZDF as well.

Due to those uncertainties, we suggest a closer collaboration of the consumer electronics industry on the one hand and the European Commission and CEPT on the other hand - as this is already the case for the mobile industry - in order to overcome those problems.

III. Specific comments on the Consultation document

Statement 4.1:

Improving consumers experience by ensuring high quality standards for terrestrial digital television receivers in Europe

This objective which is targeting at HDTV, more programmes and mobile reception is evident and ARD and ZDF fully support it. However, the availability of both, advanced network and receiver technology as well as sufficient spectrum for broadcasting services, must be ensured. It has to be further investigated if the increase in data capacity when introducing next generation broadcasting systems will compensate the increased need for capacity when offering more programmes eventually all in HD.

Action 4.1a:

Ensuring availability of a compression standard for all DTT receivers sold after 1 January 2012 that is at least efficient as the H624/MPEG-4 AVL standard

Since ARD and ZDF are planning to introduce HDTV in the near future such a step is welcome. However, it has to be borne in mind that migrating to HDTV will not be accomplished over night. Therefore, standard DVB-T networks and networks offering higher quality based on advanced coding and compression technologies will co-exist for quite some time. Hence – as the Commission rightly points out - , backward compatibility of new receivers has to be guaranteed in order to safeguard the investment taken by broadcasters on standard DVB-T infrastructure.

Action 4.1 b:

Setting standards for the ability of digital receivers to resist interference

Recent results of studies carried out by CEPT (Report 30) come to the conclusion that sharing of UHF spectrum between broadcasting and mobile services requires DVB-T receivers to be equipped with appropriate HF filters in order to prevent front-end overloading. However, confronted with the vast number of DVB-T receivers sold in Europe it is obvious that the market penetration of receivers with such capabilities will take time. For at least 5 — 8 years mobile networks employing the 800 MHz band will have to cope with existing receivers and their susceptibility for overloading.

Statement 4.2:

Increasing the size of the digital dividend through further spectrum efficiency gains

At present the term “digital dividend“ refers to releasing UHF channels 61 — 69 from broadcasting usage in order to implement mobile service networks. If statement 4.2 aims at optimizing the spectrum usage for this part of the UHF band ARD and ZDF will certainly support such an initiative, but will object to any tendencies to extend further mobile usage beyond channel 61 into the broadcasting spectrum range.

Action 4.2 a:

Promoting collaboration between Member States to share future broadcasting network deployment plans (e.g. migration to MPEG-4 or DVB-T2)

Collaboration between Member States of the EU is self-evident in connection to spectrum usage for broadcasting and mobile services. Both CEPT and ITU provide a corresponding framework to successfully carry out coordination between administrations. Further regulation, i.e. on EU level, is therefore not a *conditio sine qua non*.

Action 4.2 b:

Encouraging the deployment of Single Frequency Networks (SFNs) over Multiple Frequency Networks (MFNs)

Broadcasting systems based on OFDM-technology quite naturally provide the possibility to use available spectrum in an efficient manner by building SFNs. The GEO6 Plan for Europe was built on that opportunity to a large extent. Hence, the GEO6 Agreement can be used as a harmonized example to exploit SFN deployment. Clearly, any initiative to motivate countries not yet making use of SFNs is welcome even though there are cases in which SFNs do not provide a satisfying solution for broadcasters. Implementing SFNs is not necessarily linked to migrating to lower power/higher density networks. In particular for the objective of public service broadcasters to serve large areas, e.g. nation-wide coverage or regional coverage, such lower power/higher density network topologies do not seem to be an economically viable solution.

Statement 4.3:

Making the 800 MHz band available for low/medium power electronic communications networks, under harmonised technical conditions, following the principle of technology and service neutrality.

According to the WRC07 a country can decide to make use of the 800 MHz band for mobile services or keep it for broadcasting services. A shared use of that band in a country does not seem to be technically possible and economically viable according to the findings of corresponding investigations like CEPT Report 30. However, even using the band for mobile services on one side of the border and for broadcasting on the other is not straightforward. Rather, case-by-case analysis is required to fine-tune the network configurations for both, mobile and broadcasting networks. Minimal conditions for sharing between these two services as defined in Report 30 of CEPT do not automatically guarantee protection of services. As mentioned in Report 30 appropriate mitigation techniques need to be applied. Therefore, simple coordination rules based on block edge

masks (BEM) are not sufficient. However, they could be used as a starting point for international coordination as requested by the GEO6 Agreement in order to define appropriate mitigation techniques.

Statement 4.4:

Adopting a common position on the potential use of the “white spaces“ as part of a possible extension of the digital dividend

ARD and ZDF welcome the proposal to adopt a common position on the use of white spaces in the band 490 — 790 MHz. However, the focus should be put on the usage for services associated to broadcasting in order to allow a reasonable future development. Furthermore, it should be investigated to what extent SAB/SAP services currently operated in the 790 — 862 MHz band could be migrated to the remaining broadcasting band below 790 MHz. Only if the perspectives of these two demands can be satisfactorily accomplished, the introduction of new services like cognitive radio services could be envisaged, however, preceded by studies that allow to conclusively formulate the conditions under which such operation would not interfere with broadcasting usage.

Statement 4.5:

Ensuring the continuity and further development of wireless microphone applications and other secondary uses of the UHF spectrum

see Statement 4.4

Statement 4.6

More effective cross-border coordination with non-EU countries

Coordination within CEPT and ITU is carried out between administrations. ARD and ZDF would support the idea that the EU creates a platform where all stakeholders can take part in international coordination on an equal footing.

Statement 4.7:

Addressing future challenges

ARD and ZDF welcome the intention of the EU to monitor technical developments in the broadcasting and mobile service sector and to make this information available to all stakeholders.

Action 5.1:

Accelerating analogue switch-off by 2012

There are cases where the introduction of digital terrestrial broadcasting is blocked in some countries due to analogue TV transmissions in their neighbour countries. Therefore, ARD und ZDF support the initiative to set a European-wide date for analogue

switch-off across Europe.

Urgent Action 5.2:

Taking steps towards the opening of the 800 MHz band for electronic communications services by adopting harmonised technical conditions of use in Europe

As mentioned above ARD and ZDF do not see the necessity of an EU Decision which mandates the Member States to implement the mobile band. EU Member States should be free to decide themselves if they want to use the 800 MHz for mobile services or not.

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