Introduction
ARD and ZDF welcome the opportunity to comment on the RSPG draft opinion on the Radio Spectrum Policy Programme (RSPP).

ARD and ZDF are the Public Service Broadcasters in Germany and for the digital terrestrial distribution of their programmes are extensively using the broadcasting frequencies in Bands III, IV and V.

Broadcasters in general and ARD and ZDF in particular are important drivers of technological development: It was the digitisation of terrestrial television which indeed released the spectrum for the so called digital dividend. ARD and ZDF already switched completely to digital terrestrial TV. In Germany more than 24 million DVB-T receivers have been sold so far. DVB-T is a booming industry. In the markets 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.

ARD and ZDF are supporting and are working on new and innovative services as well as further improvement of quality and new viewing experiences (i.e. HDTV, 3D-TV etc.)¹.

General Remarks
Terrestrial Broadcasting has a longstanding tradition in Germany and throughout Europe. It is the or among the most important platforms delivering broadcasting services in most EU Member States. In particular, Public Service Broadcasters are committed to terrestrial broadcasting transmission since it offers - in combination with other transmission forms - the capacity for universal coverage, availability of and accessibility to a variety of quality content services on a non-discriminatory basis and at affordable prices for all.

The public service mission not only has a content related side, but also a technical one. Achieving universal coverage and accessibility of public service content by all

¹ ARD and ZDF taken together invest for example more than 400 Mio € in the development of HDTV.
relevant technical means is an integral part of fulfilling the public service mission. Terrestrial frequencies play an essential role for complying with this mission. Furthermore, terrestrial broadcasting is the only ‘direct-to-the-consumer’-distribution mechanism that supports portable and mobile reception. Therefore terrestrial transmission is an essential part of our distribution strategy in a more and more mobile society and thus not substitutable for ARD and ZDF. Being accessible and available literally everywhere, even in remote and remotest geographical areas, is a specific contribution of Public Service Broadcasters throughout Europe to avoid the digital divide and to deliver e-inclusiveness.

I. Contribution to the EU 2020 vision

We would like to also underline the important role Public Service broadcaster play in today’s Europe in order to achieve the ambitious goals of ‘EU 2020’. We invest millions of Euros in the digitalization, in new innovative services and the universal availability of content. By these investments ARD and ZDF are also contributing to the development of other players in the value chain: producers, the creative industries, cable operators, mobile phone operators, receiver equipment manufactures etc. Therefore, broadcasters are an important factor for the digital economy.

As part of the discussion on ‘EU 2020’, broadband internet plays an important role. ARD and ZDF acknowledge that broadband internet infrastructure, while still being an emerging technology, is a transmission platform with potentially far-reaching economic, social and cultural value, becoming more and more important. However, as the development of fixed and mobile platforms has shown, mobile platforms always lacked behind as far as bandwidth is concerned. As the supposed bandwidth for Internet-offers is always orientated towards the average bandwidth available on the different platforms, mobile broadband-networks will also in the future most probably not be an adequate alternative to fixed networks.

ARD and ZDF follow with great interest current discussions on broadband and the digital dividend, while at the same time raise concerns as to the envisaged developments in this respect.

We are supporting, in general, the goal of broadband internet access for all and the development of rural areas and white spaces. But we are convinced that in order to achieve real broadband availability particularly in remote and rural areas, Member States should have the possibility to oblige providers to comply with certain requirements as to achieve pre-defined goals. A way to do this could be to impose coverage obligations that define when, where and under which conditions spectrum is to be used.

For example, within the framework of the frequency-auction of the 790 – 862 MHz, 1,8 GHz, 2,6 GHz and 2,8 GHz band which is taking place in Germany in April 2010 the German Regulating Authority (Bundesnetzagentur) linked the possibility to purchase frequencies within this auction to certain service-obligations. Companies wanting to acquire these frequencies have to guarantee that within the 1,8 GHz, 2,6 GHz and 2,8 GHz band coverage of at least 25 per cent of the population has to be achieved until 1. January 2014, while by 1. January 2016 at least 50 per cent of the population must be covered. In the 800 MHz band a coverage obligation of at least
90 per cent of the population is stipulated for certain listed cities and communities until 1. January 2016.

In addition, one would have to take account of the fact, that broadband services transmitted in the UHF band offer a wider range of coverage and improved reception in buildings. But it is still not clear, whether they are suited to offering data-rich broadband services with back channel designed for multiple users simultaneously. Commissioner Kroes underlined the fact, that “First-class wireless broadband” is vital for rural areas and "consumers should also know real speeds, not theoretical speeds. They feel ripped-off when they get broadband at half, or less, than the advertised speed".

At the same time, one has to take account of other distribution platforms that are already available and well established, such as DSL, cable and satellite, which in terms of sufficient bandwidth are much better suited when it comes to the distribution of data-rich services and real broadband internet: Broadband services via satellite offering download speeds up to 4 Mbit/s are already available. Eutelsat will be upgrading its satellite broadband service “Tooway” to offer download speeds of up to 10 Mbit/s by the end of 2010. The EU can contribute to reach the aim to bridge the digital divide by helping to create adequate framework conditions including all appropriate technical means (wired, terrestrial, satellite). At the same time, it can help by providing for the possibility of Member States to oblige providers to fulfil certain goals, i.e. with respect to roll-out of infrastructure and services, coverage, quality of service, etc.

In conclusion: ARD and ZDF support of course the goal of ‘EU 2020’ and are important players in the digital economy. At the same time we are convinced that one has to be very careful in choosing the right instruments in order to achieve the goals envisaged.

II. Spectrum governance in the EU

Rules of the Telecom-package

Given the general interest in rich and diverse quality audiovisual media services and their universal availability and accessibility, the rules of the revised Telecom Package should duly be respected when dealing with spectrum management and the development of the RSPP. This is especially true for exemptions from spectrum trading, the principles of general authorizations vs. individual authorizations as well as for service and technological neutrality with respect to broadcasting. Frequency management is and remains to be an important tool for executing audiovisual media policies in the Member States reflecting certain public interest objectives such as the need to preserve media pluralism and cultural diversity.

Therefore, ARD and ZDF want to reiterate the legal rules of the revised Telecom Package as the determining basis for a first RSPP. According to these rules (especially Art. 9 ff. of the Better Regulation Directive and Article 1 (4) of the Spectrum Decision), the RSPP should enshrine the important role that the UHF spectrum plays as a public good to execute Member States’ audiovisual media policies.

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2 Details can be found in the respective tendering-documents under http://www.bundesnetzagentur.de/cae/servlet/contentblob/138464/publicationFile/2807/PraesKammerEntschg_Id17404pdf.pdf.

3 Speech 10/87/Economic growth in Europe Maastricht, The Netherlands, 12th March 2010
In addition and according to Article 9b (3) of the Better Regulation Directive, broadcast- 
ing frequencies are not subject to spectrum trading. This is essential for ARD and 
ZDF. We are of the opinion that spectrum trading can only be an option in cases 
where spectrum is employed on solely economic grounds. With respect to the public 
service mission and the social and cultural implications of broadcasting guaranteeing 
pluralism, spectrum trading is not an appropriate way to promote efficient usage of 
spectrum for broadcasting.

Role of the Commission
The decision on the use of the 800 MHz band for mobile services depends on indi-
vidual national conditions as well as compatibility issues with respect to adjacent 
spectrum usage. The situation regarding digital terrestrial television is very different in 
all 27 Member States. In Germany the 800 MHz band has been allocated to mobile 
services. Starting on 12 April 2010 this band will be auctioned and is therefore no 
longer accessible for broadcasting services.

Further action with respect to the usage of the 800 MHz band for mobile services 
should be taken by the Member States themselves. The Commission should monitor 
the process and organise the exchange of good practice.

Frequencies below 790 MHz
In order to prosper and maintain its universal coverage obligations, terrestrial broad-
casting needs a reliable spectrum basis for the future. Further reducing the broad-
casting spectrum by identifying a supposedly second digital dividend will make terres-
trial broadcasting fall behind. Concretely, this is to say that the UHF band below 790 
MHz is predominantly to be preserved as a broadcasting resource. Any future crea-
tion of another digital dividend in this field should also cater for specific broadcasting 
needs.

Efficient use of spectrum
In addition, before trying to identify another part of UHF spectrum that could be allo-
cated to mobile services it is necessary to optimize the spectrum usage of spectrum 
already allocated for mobile services. In parts of the spectrum outside the UHF band, 
there is capacity available and practically unused that can be employed for delivering 
broadband internet. Applying advanced technologies (3G/4G) in mobile service spec-
trum would allow releasing a “mobile dividend”.

Interference problems
Disturbance of 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 interfer-
ence than it is the case for analogue broadcasting. The deployment of other services 
than broadcasting in the 800 MHz band has to be carried out in a way that no addi-
tional constraints are imposed on broadcasting services according to the current 
GE06 plan and its evolution. In particular, it has to be ensured that there is neither 
additional interference nor further restriction on the usage of UHF channel 60.

In this respect we would like to recall that the RSPG stated in its opinion on the Digi-
tal 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 broadcasting 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 broadcasting services (guard bands and filters, among others). Even the TV-reception by cable network will face severe interference through LTE-applications in the UHF-spectrum.

ARD and ZDF are of the opinion, that those responsible for the costs occurring due to these interferences 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 of 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 broadcasting network operators (necessity of higher network density and higher transmission power). Moreover, Public Service Broadcasters will have to face 6 Mio. € additional costs due to necessary communication measures and the change of wireless production equipment (SAB/SAP).

ARD and ZDF underline the importance of the interference issues at stake and ask the RSPG to take account of this problem in its opinion to the RSPP. Costs and difficulties associated with the interference management are expected to represent the highest challenge for the introduction of mobile services.

III. External relations

The European broadcasting markets are characterized by a large variety. Common targets of European countries are synchronized within the European Conference of Postal and Telecommunications Administrations (CEPT). Therefore, we see no advantage to introduce an additional layer of coordination with respect to broadcasting in Europe attached to the EC. The mere existence of an EU policy not automatically creates an international policy dimension and thus does not necessarily put the Commission into a position of asking for respective competence or mandates in international processes. This is why Council and Parliament have put this issue in the revised Telecom Package under their scrutiny in co-decision.

In addition, any EU position at the WRC should duly reflect the diversity of spectrum management needs and situations in the Member States and their wide discretion in acting accordingly.

Furthermore, in view of harmonised spectrum management there clearly can be a particular role for the EU to play in international processes subject to concrete definition by Council and Parliament.

Finally, once the 800 MHz band would be released by Member States for services other than broadcasting, the Commission could indeed play a role in negotiating with neighbouring countries, particularly in order to avoid harmful interference. Still, the fi-
nal responsibility for frequency management should remain a prerogative of the Member States and their national administrations.

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.

IV. Spectrum policy objectives

Based on the considerations above, ARD and ZDF are of the opinion that the following policy objectives should form an essential part of the RSPP:

- As laid down in the revised Telecom Package, in the field of spectrum management the legislator has to take due account of the economic as well as social and cultural aspects related to this resource. While digital dividend spectrum is currently allocated to other than broadcasting services to boost economic growth in related fields of business activity, the other parts of the UHF band are needed to serve broadcasting needs now and in the future, thus reflecting wide ranging public interest objectives including the contribution of broadcasters to the digital cultural economy.

- The decision on the allocation of the digital dividend should not 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.

- Furthermore, the implementation of filters in order to solve the interference problems is an important opportunity that should further be exploited.

- In order to fulfil its purpose and to remain competitive with other distribution platforms used by broadcasters, a critical amount of spectrum has to be available for terrestrial broadcasting. UHF frequencies, especially below 790 MHz, are indispensable for digital terrestrial broadcasting in order to offer an attractive variety of programmes and the quality of services displayed (i.e. HDTV, 3D-TV, etc.).

- In order to prosper and maintain its universal coverage obligations, terrestrial broadcasting needs a reliable spectrum basis for the future. Further reducing the broadcasting spectrum by identifying a supposedly second digital dividend will make terrestrial broadcasting fall behind. Concretely, this is to say that the UHF band below 790 MHz is predominantly to be preserved as a broadcasting resource. Any future creation of another digital dividend in this field should primarily cater for specific broadcasting needs.

- Competition of the different platforms is an important element to retain the consumer's freedom to choose as well as to balance prices. Therefore, the existence of digital terrestrial platforms is crucial not only for broadcasters but also for consumers as well as the wider (creative) industry.

- Public service broadcasters need legal and economic certainty for securing investment in terrestrial infrastructure.
Certainty is equally important from a consumer protection point of view. Consumers have invested in equipment which is to stay for a certain time before being renewed or replaced. Care has to be taken that legacy equipment remains functional for an appropriate transition period.

Prior to any further proceedings with respect to the 800 MHz band which have the potential to impact negatively on the provision and reception of broadcasting services, important decisions have to be taken and solutions have to be found. This relates to the interference problem between broadcasting and electronic communications services and to migration and re-allocation costs. It needs to be clarified by which means of spectrum planning and technical adjustment the interference problem can be solved and who has to bear the costs for affected service providers (migration, re-allocation, adjustments in broadcasting transmission infrastructures) and consumers (acquisition of new user equipment). Generally speaking, the ‘polluter-pays-principle’ should apply.

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