

**ARD Submission
to the RSPG Consultation
in the context of the development of a RSPG Opinion
on the spectrum implications of switchover to digital broadcasting**

I. Introduction

As a public service broadcaster, ARD¹ is a prominent user of radio spectrum and therefore welcomes the opportunity to take part in a European discussion of spectrum implications of switchover to digital broadcasting.

From our point of view, any such discussion must start from the premise that frequencies are a public good. As a general principle, its allocation must not be submitted to purely economic considerations. This principle is all the more relevant with respect to public service broadcasting, since a broadcaster like ARD could not fulfil its public service remit without adequate access to the frequency spectrum.

While we recognise that the use of such a scarce resource needs to be optimised, it is necessary also to acknowledge the unique value to society that spectrum use by certain public interest services generates. Sufficient allocation of spectrum to public service broadcasting allows it to serve such fundamental freedoms as freedom of expression, freedom to receive and disseminate information and ideas, media pluralism and cultural diversity.

In the information age, where universal coverage of objective and independent information for all is essential to bridging the digital divide, the public good aspect of frequency spectrum is enhanced. Special spectrum needs which originate in the public service mission of public service broadcasters in a digital environment, therefore, need to be adequately reflected in spectrum policy and allocation during and after digital switchover.

II. Specific comments

1. How can co-ordination between Member States on spectrum management, at bilateral and EU level, contribute to a quick and efficient switchover?

As ARD has stated publicly at EU level in the past, its general reservations about greater radio spectrum harmonisation remain valid. Spectrum

¹ Association of German Public Service Broadcasting Organisations

management - except for frequency management dealing with cross-border frequency co-ordination and technical implementing measures (c.f. Decision No. 676/2002/EC of the European Parliament and the Council of 07 March 2002 on a regulatory framework for radio spectrum policy in the European Community (Radio Spectrum decision) - falls within the competency of the Member States. Any further harmonisation at the European level would very likely call into question the legal regime regarding the use of the broadcasting spectrum of the German states (Länder) as an expression of the competency of the Länder for broadcasting law.

Switchover from analogue to digital poses some significant challenges to regulatory authorities who allocate spectrum nationally. Not only do frequency bands within a national territory need to be allocated to the various spectrum users, but for reasons of interference, timing and synchronisation, co-operation with neighbouring regulatory bodies is also needed. ARD holds the view that the present system, whereby Member States are responsible for spectrum assignment and distribution within their own territories, while spectrum co-ordination at the European and international levels is dealt with by CEPT or ITU respectively, has proven to be very successful. This system is well adapted to facilitate a quick and efficient switch-over. In preparation of the RRC 04/06, an international planning conference of the ITU scheduled for 2004/2006 CEPT is working on European Common Proposals (ECP's) and common guidelines to ease the work of the Conference. The German regulatory authority has also started bi- and multilateral negotiations with the regulatory authorities in neighbouring countries. Nearly every week such a meeting is taking place and it can be expected that this will go on at least up to the second part of the RRC.

The above account must also be seen in the context of the Commission Communication of 22.09.2003 on the transition from analogue to digital broadcasting. It emphasises that the analogue-digital switchover is mainly a market-driven process, which should be accompanied by political measures of the Member States in a transparent, justified and adequate manner. We agree with the observation in the Communication that political intervention should primarily take place on a national level in order to ensure in the broadcasting sector that market and regulatory differences between Member States are duly taken into account. The Communication also states that even in the case of a more efficient and flexible use of frequency spectrum the public service mission of broadcasting must be preserved.

These statements in the Communication were also confirmed by the meeting of the Council of Telecommunication Ministers on 20 November 2003 in Brussels. The Council emphasised that broadcasting markets and broadcasting policies differed greatly in individual Member States and that suitable measures should therefore be decided largely on a national level. In this respect, the Commission's role was perceived mainly as that of a co-ordinator, observer and facilitator. As the conclusions of the Telecommunications Council also stated, the switchover-related measures of Member States - especially regarding the time horizons in view of other political considerations in this sector - should be monitored by the Commission.

2. In particular, what would be the added value from EU co-ordination ahead of the Regional Radio Conference starting in 2004 and other international negotiations?

For 2004/2006 the ITU has scheduled an international planning conference (Regional Radio Conference RRC 04/05) to revise the 1961 Stockholm Plan. European and African countries and some countries of the former Soviet Union will take part in the conference. Planning will encompass DAB and DVB-T in the frequency areas of band III (channels 5 to 12) and band IV/V (channels 21 to 69). Spectrum resources are to be allocated preferably in an equitable manner. Germany has already started to negotiate with its neighbouring countries in order to identify common grounds and to solve any problems at an early stage in order to arrive at an optimum result. The new frequency plan is expected to remain valid for as long a time as the former Stockholm Plan. For this to happen the plan needs to be sufficiently flexible. It must not be tailored only to the needs of the present day but must offer room for future developments as the Stockholm Plan did.

EU Member States use the three modes of broadcast-transmission (cable, satellite, terrestrial) in varying degrees. Due to differences in the acceptance of terrestrial television, we cannot expect a Europe-wide consensus on the switch-off date, especially not with countries outside of Europe. Any attempt to set a common switch-off date at the planning conference would mean to postpone this date into the distant future. Hence, mechanisms are needed to ensure the long-term viability of both digital and analogue transmitters that enable a flexible timing of conversion in the various countries.

In Germany, analogue television switch-off is envisaged for 2010. The aim is to find bilateral agreements with neighbouring countries in order to reach the target. In this respect, no further EU co-ordination ahead of the Regional Radio Conference is needed.

3. Are greater transparency and technological neutrality of spectrum assignment, notably through valuation and market tools, instrumental to switchover?

As was mentioned before, radio spectrum is a limited resource. From an economic point of view it makes sense to optimise its allocation. However, spectrum evaluation poses fundamental problems. Prominent examples are the disastrous results of the UMTS auctions in Germany and Great Britain. Although prices paid were four times higher than what had been expected, operators had no resources left in order to build up the network or offer the relevant services. As a result, two UMTS groups have given back the UMTS licence and UMTS has not yet been profitable, neither for the operators, nor for society as a whole. It is now widely acknowledged that spectrum auctioning is not necessarily in the public interest. In addition to economic considerations, governments need to take a whole range of factors into account.

As far as public service broadcasting is concerned, the „value“ of its services to the public can hardly be measured in monetary terms. Due to its public service mission, which is expressly acknowledged by the EC Treaty in the Amsterdam Protocol, its use of radio spectrum serves to meet public interest goals such as

the maintenance and promotion of democratic, social and cultural needs and the need to safeguard media pluralism and cultural diversity. The „value“ of the services of public service broadcasters, therefore, essentially lies in the improvement in quality of life for citizens and the functioning of democracy, public interests which can hardly be quantified in monetary terms.

We do not think that spectrum evaluation adds value to facilitating the digital switchover. On the other hand, the role of public service broadcasting is instrumental to this switchover. In Germany, for example, ARD has been on the forefront of digitalisation of radio as well as television services. Public service broadcasters play a key role in providing high quality digital content through the simulcasting of our existing programmes as well as the offer of new digital only channels. This entices viewers to switch to digital television services rather than stay with analogue reception. With regard to radio, Digital Audio Broadcasting (DAB) would not be possible without the special efforts of public service broadcasters. Without sufficient commercial incentives for private broadcasters to provide digital services, they cannot be expected to be the first movers in this newly emerging market. Last but not least, we want to point out our strong commitment to interoperability. For example, by choosing and promoting the open European standard MHP as the API for digital interactive television in Europe, we strive to create an environment for consumers in which they can receive digital television on the same conditions as in the analogue world. This also helps to build consumer confidence in the digital switchover.

4. What will be the „spectrum dividend“ from switch-off and how should this be allocated to specific services?

In general, digital communication technologies allow for a much more efficient use of spectrum than analogue technologies. Quite large quantities of spectrum are allocated to radio broadcasting (the LF-, MF-, HF- and FM- bands) and to television broadcasting (bands I, III, IV and V). Therefore, national spectrum management authorities entertain great expectations that considerable quantities of spectrum could be released after switchover.

While there will undoubtedly be some kind of „digital dividend“, this may vary greatly according to a range of parameters and framework conditions. The following paragraphs are meant to illustrate a development which we consider likely for Germany:

In Germany, bands I, III and IV/V are currently being used for the transmission of analogue terrestrial television. Band I carries channels 2 to 4, band III channels 5 to 12 with a bandwidth of 7 MHz. This corresponds to a bandwidth of 77 MHz. Channel 12 was assigned to digital sound broadcasting T-DAB in the Wiesbaden Plan 1995 and is no longer used for television in Germany. In band IV/V channels 21 to 60 are used for analogue television. All in all, 50 channels are currently being used by analogue terrestrial television in Germany.

Due to the digitalisation of terrestrial television broadcasters will no longer need band I and can make channels 2 to 4 - corresponding to 21 MHz - available to the management authorities for other purposes. Also, two further channels in band III are intended to be used additionally for T-DAB. Therefore,

in the VHF-band around 35 MHz (5 channels) will no longer be used in future for terrestrial television .

To facilitate the transition from analogue to digital broadcasting, channels 64 to 66 are to be used for DVB-T. Unlike in some other European countries, channels 61 to 63 and 67 to 69 will not be available for broadcasting in Germany in the medium term and can at most be used in the long-term. Moreover, radio astronomy services must be protected in channel 38, and its use for broadcasting is highly restricted or not at all possible. Within the VHF- and UHF- bands 49 channels are available in total for DVB-T.

During the transition period, analogue and digital transmitters will in many cases still have to be used simultaneously to enable a smooth transition for the public. As a rule, this phase will entail increased spectrum needs.

However, spectrum needs for DVB-T depend primarily on the number of television channels and the level and range of the services envisaged. In Germany, spectrum for DVB-T use is needed for 24 to 30 services or 6 multiplexes with the aim of portable indoor or outdoor reception, i.e. without roof-top aerials. This service level is considered essential for the consumer acceptance of terrestrial television. Unlike in analogue, bouquet broadcasting is an essential feature of digital broadcasting generally. It is unthinkable to limit digital terrestrial television transmission to just the 3 or 4 channels presently transmitted in analogue. Digital television is part of the e-Europe initiative to bring high quality multimedia services at affordable costs to European citizens. If DVB-T is to play its role in this endeavour, it needs to offer citizens access to services that are relevant and attractive in the knowledge society. Finally, portable and mobile reception of digital television services serve the same goals and are hence part of the overall strategic considerations for DVB-T.

With the transmission mode variant 16QAM ($R=2/3$) chosen by Germany it is possible to accommodate 4 PAL quality TV programmes in an 8 MHz TV channel. Given that some 7 TV channels are needed for full area coverage in Europe, this amounts 6-7 coverages (multiplexes). With the selected DVB-T variant it is possible to realise the envisaged 24 to 28 programmes (6 – 7 multiplexes carrying each 4 programmes).

In order to assess how much spectrum will be freed up by digital switchover, another consideration has to be taken into account. Today, the spectrum assigned to broadcasting is not solely used for television services. A range of other services make use of these frequency bands as well. In particular, SAB/SAP services are indispensable for programme production and feature high growth rates due to the rising number of producers. After the introduction of digital transmission, this use of the frequency bands on a secondary basis will no longer be possible. In Germany, the 1 MHz gaps available in analogue TV have so far been used intensively by SAB/SAP (e.g. wireless microphones). With the introduction of DVB-T these gaps are eliminated. This would restrict the operation of current SAB/SAP and wireless microphones in future. Hence, CEPT is trying to find alternative spectrum resources for these SAB/SAP services.

As noted above, the spectrum needs after the transition to DVB-T will ultimately depend on a number of framework conditions, such as the DVB-T variant, the reception mode (stationary or portable), and the extent of coverages considered necessary in the public interest. Those convinced that digital switchover will necessarily free up a lot of frequency spectrum for alternative services may want to contemplate the consequences for spectrum use if Europe were to opt for HDTV. The Commission has already launched a public consultation process on HDTV and has pointed out the consumer benefits and industrial policy advantages that such a choice would mean for Europe given its competition in the IT sector with the United States and Japan.

(http://europa.eu.int/information_society/topics/ecom/shortcuts/digital_broadcasting/comm_staff_working_papers/index_en/htm)

In summary, while digital switchover will bring a “digital dividend”, regulatory authorities need to take into account that an information society for all will require broadcasters to offer additional digital terrestrial television programmes and enhanced services. Europe needs to ensure that such spectrum needs in the public interest can be met and that Member States retain the flexibility necessary to respond adequately to new technologies, such as HDTV, if deemed necessary.

5. Does convergence require more flexible allocation mechanisms than traditional ones, which tightly link frequency bands and individual communication services according to ex ante decisions?

Flexible allocation may be suited to the requirements of point-to-point services, where consumer demand may vary dramatically according to the time of day, the relevance of life events or short-term interests, etc. However, broadcasting services are different. They provide a steady offer of permanent content services to a large public. There is no rise and fall in the amount of data transmitted via DVB-T or DAB. Thus, flexible spectrum allocation mechanisms are not suitable for the purposes of digital broadcasting.