

EN

COMMISSION OF THE EUROPEAN COMMUNITIES



Brussels, 29.9.2005
COM(2005) 461

**COMMUNICATION FROM THE COMMISSION TO THE COUNCIL, THE
EUROPEAN PARLIAMENT, THE EUROPEAN ECONOMIC AND SOCIAL
COMMITTEE AND THE COMMITTEE OF THE REGIONS**

**EU spectrum policy priorities for the digital switchover in the context of the upcoming
ITU Regional Radiocommunication Conference 2006 (RRC-06)**

EN

EN

**COMMUNICATION FROM THE COMMISSION TO THE COUNCIL, THE
EUROPEAN PARLIAMENT, THE EUROPEAN ECONOMIC AND SOCIAL
COMMITTEE AND THE COMMITTEE OF THE REGIONS**

**EU spectrum policy priorities for the digital switchover in the context of the upcoming
ITU Regional Radiocommunication Conference 2006 (RRC-06)**

(Text with EEA relevance)

Table of contents

1.	The RRC in the context of “digital switchover”	3
1.1.	Origin and scope of the RRC	3
1.2.	The broader broadcasting policy perspective.....	3
2.	Achieving the full potential of the spectrum dividend.....	4
2.1.	Scope of the “spectrum dividend”.....	4
2.2.	A European perspective on the future use of the spectrum dividend.....	4
2.3.	A consistent regulatory approach to the spectrum dividend	5
2.4.	Advantage of an EU-wide harmonisation of parts of the dividend.....	6
3.	Specific impact of EU priorities on the RRC.....	7
3.1.	The need for a “future-proof” approach to the RRC band planning	7
3.2.	Supporting a short transition period.....	7
4.	Conclusion.....	8

1. THE RRC IN THE CONTEXT OF “DIGITAL SWITCHOVER”

This Communication aims at presenting EU priorities concerning radio spectrum availability in the context of the digital switchover and the upcoming ITU Regional Radiocommunication Conference 2006 (RRC-06). It contributes to the objectives of the i2010 initiative¹, launched in relation to the Lisbon agenda, which highlights the importance of spectrum availability to boost innovation in ICT and of more flexibility in managing this resource so as to achieve a more efficient use of it.

1.1. Origin and scope of the RRC

The planning of radio and TV broadcasting frequencies has traditionally been coordinated at international level because of the high potential for long distance interference created by the transmission of broadcasting signals from high power towers. The current international frequency plan dates back to the Regional Agreement for the European Broadcasting Area (Stockholm 1961).

In this context, the **Regional Radiocommunication Conference (RRC)**² was established by the International Telecommunications Union (ITU) to plan the new **terrestrial digital broadcasting frequencies** (i.e. the bands 174-230 MHz and 470-862 MHz). The new plan will be applicable to the geographic territory of the negotiating parties, i.e. Europe, including the Russian Federation, Africa, and parts of the Middle East³ and will eventually replace the Stockholm plan mentioned above. The technical preparation of the Conference in Europe is supported by CEPT which adopts **European Common Positions**, i.e. initial technical negotiating positions, to coordinate the negotiating process.

1.2. The broader broadcasting policy perspective

On 24 May 2005, the Commission adopted a Communication on “**accelerating the transition from analogue to digital broadcasting**”⁴ which sets out the Community policy objectives for the transition. It identifies spectrum gains as one of the major advantage of the switchover, in particular the “*additional spectrum capacity released by the switch-off of analogue terrestrial television*” and the fact that “*it will be important to not constrain unduly the re-use of these bands for new and innovative services*”.

The scope and modalities of the future plan to be developed at the RRC were not systematically assessed in comparison to other possible approaches such as a more decentralised system of planning and/or a limitation of the central planning to a smaller portion of the broadcasting spectrum. The broader policy perspective of the switchover

¹ COM(2005) 229.

² The RRC negotiation process is divided into two sessions: the first session took place in May 2004 (RRC-04), where the technical conditions for designing a new plan were adopted and the second session will take place in May 2006 (RRC-06) where the new plan frequency plan will be negotiated based on the actual demand for frequencies put forward by each negotiating country.

³ Formally, ITU Region 1 which includes countries situated to the west of meridian 170°E and to the north of parallel 40°S (except Mongolia) and the Islamic Republic of Iran (120 nations in total). The Member States are the legal negotiating parties in the RRC. The Commission is a non-voting delegation in the ITU negotiations, formally an ITU “sector member” (category: regional and Other International Organisations).

⁴ COM(2005) 204, referred to in this document as the “Communication on digital switchover”.

process must therefore be reconciled with the spectrum planning approach of the RRC, keeping in mind the **wider context** of the “**evolving nature of broadcasting**” and of the phenomenon of “**digital convergence**”. In particular, it is necessary to address **the relationship between the RRC planning approach and the market and policy developments**. It is key to find practical arrangements in the RRC planning to meet these challenges, especially when considering that the new plan is expected to last for several decades. It should be further ensured that the plan will contribute to a truly internal market for goods and services, whilst giving the flexibility to allocate spectrum according to local market demand.

2. ACHIEVING THE FULL POTENTIAL OF THE SPECTRUM DIVIDEND

2.1. Scope of the “spectrum dividend”

If analogue TV broadcasting is switched to digital transmission (same image resolution and size, same number of channels), three to six times less radio spectrum will be needed. This means that some 300 to 375 MHz of the current amount allocated to terrestrial broadcasting could be freed and become newly available.

Even taking into account ancillary factors influencing spectrum use such as the need for simultaneous transmission of analogue and digital channels, possible changes in coverage obligations⁵, the final selection of transmission standards, and the substitution of terrestrial transmission by other platforms (e.g. cable and satellite), it is expected that there will be a substantial amount of “unused” spectrum available at the end of the switchover process⁶. This is often referred to as the “**spectrum dividend**”.

2.2. A European perspective on the future use of the spectrum dividend

Given the fast evolution of broadcasting services and the increasing effect of the technical convergence, combined with technology development, to creating new service opportunities, it is not possible at this juncture to predict the relative weight of future demands on spectrum resources, although the time horizon for a switch-off of analogue TV broadcasting is now increasingly clear. The Communication on digital switchover set out a deadline of 2012 for analogue switch-off. This means that the usage of the dividend should be debated, and decided, over the next six years. This calls for a quick start of investigations at the level of research and development, of market opportunities, and of necessary regulatory measures and planning for the radio resources. The Commission intends to play a leading role in this context where the benefits of EU-wide coordination are evident and to seek the active collaboration of Member States in this process.

⁵ A less stringent obligation for universal coverage would reduce significantly the amount of spectrum needed and therefore increase the potential dividend..

⁶ Ofcom (UK) for example has already projected that at least 112 MHz could be released for new services through switchover in the UK. This expected amount of released spectrum in the UK is only a part of the dividend as defined in this document as it covers only new services other than broadcasting services.

One of the key questions in the context of the switchover will be how to best use the spectrum dividend. The Radio Spectrum Policy Group (RSPG) advised to distinguish three categories of spectrum demands⁷:

- Spectrum needed for the improvement of terrestrial broadcasting services: e.g. services with higher technical quality (notably HDTV), increased number of programmes and/or enhancement of TV experience (e.g. multi-camera angles for sports, individual news streams and other quasi-interactive options);
- Radio resources needed for “converged” broadcasting services which are expected to be primarily “hybrids” of traditional broadcast and mobile communication services;
- Frequencies to be allocated to new “uses” which do not belong to the broadcasting family of applications. Some of these potential new “uses” of the spectrum dividend are future services and applications which are not yet marketed and others are existing ones which do not operate yet in these frequencies (e.g. extensions of 3G services, short range radio applications).

The Commission calls on Member States to support the **launch of a debate on the usage of the spectrum dividend** resulting from the digital switch-over, keeping in mind the proposals of the RSPG and the objective to secure the single market for equipment and services.

The Commission will accompany this process by setting the necessary **orientations in the relevant research areas of the IST work programme**, so that new and innovative technologies in support of emerging services and applications making use of the spectrum dividend can be assessed and that spectrum needs can be quantified.

More generally, the Commission will take into account the reality of the spectrum dividend when defining future **orientations of the radio spectrum policy**. In the light of allowing for the market demand to determine the best usage of the spectrum dividend, the Commission has already mentioned the possibility to **make the broadcasting bands tradable**⁸ and will also analyse the relevance to provide access to some of the spectrum dividend for unlicensed use, and possibly to allow underlay services to share broadcasting bands. The Commission will seek the advice of the RSPG on specific issues in this context.

2.3. A consistent regulatory approach to the spectrum dividend

Member States have an obligation **to ensure that the RRC-06 will not create undue obstacles to the strict application of the EU Framework and Authorisation Directives on Electronic Communications Services and other applicable EU legislation** regarding future allocation and assignment of the spectrum dividend. In particular, access to the spectrum dividend will have to comply with Article 9 of the Framework Directive⁹ whereby “*Member States shall ensure that the allocation and assignment of such radio frequencies by national regulatory authorities are based on objective, transparent, non-discriminatory and proportionate criteria*”. In addition, Article 7 of the Authorisation Directive¹⁰ imposes further

⁷ The RSPG Opinion on the “Impact on spectrum of the switchover to digital broadcasting”, ref. RSPG04-55, <http://rspg.groups.eu.int>

⁸ COM(2005) 400.

⁹ Directive 2002/21/EC on a regulatory framework for electronic communications networks and services.

¹⁰ Directive 2002/20/EC on the authorisation of electronic communications networks and services.

requirements on the procedure for limiting the number of rights of use to be granted for radio frequencies when appropriate.

In practical terms, a consistent application of EU regulations should avoid that the switchover creates distortions in markets which are underpinned by spectrum availability. In order to support this objective, the Commission will foster a debate in the **Radio Spectrum Policy Group** and the **European Regulators Group** to analyse the regulatory implications of the future re-farming of the spectrum dividend in order to identify, and address, possible inconsistencies arising between national implementations of EU legislation.

The Commission and the Member States should ensure that **the regulatory treatment to be given to the spectrum dividend** complies with the EU framework for electronic communication services¹¹ and is consistently applied across the EU.

In addition, the introduction of new services which do not belong to the broadcasting service category (as per the ITU Radio Regulations) in the frequency bands subject to the RRC process may require a proper re-allocation, or co-allocation, procedure at the ITU/WRC level, in particular where such services could cause interference to broadcasting services outside of the territory of the EU.

The Commission will work with Member States to identify any **action required at Community level in preparation of WRC-07**¹², as well as in WRC negotiations, in order to ensure “equitable access” to the spectrum dividend by all potential spectrum users.

2.4. Advantage of an EU-wide harmonisation of parts of the dividend

The spectrum dividend creates an opportunity to identify frequencies for new pan-European services. Many of these future services are expected to contribute to EU policy objectives set in the i2010 initiative¹³, in particular building an Information Society that is more inclusive, promotes quality of life, and reduces the regional divides. Consequently, the Commission’s view is that **a part of the spectrum dividend should be earmarked for harmonisation¹⁴ on European level**. Given the fact that the dividend will occur in the Member States at a different pace and will be driven by varying interests, a certain degree of coordination at European level is necessary. It is too early to predict the amount of harmonised spectrum needed, as well as which services should be operated in the harmonised bands and when. However, it is of key importance to start already now a common reflection across the EU in order to avoid fragmentation and the emergence of “legacy” situations which would prevent the later establishment of an EU harmonised dividend.

The Commission and Member States should ensure a sufficient level of **harmonisation of approaches regarding the spectrum dividend**, in particular to be able to satisfy a future demand for **pan-European services**. In order to prepare this, the Member States and the Commission should:

¹¹ As well as with any future legislation resulting from the current review of the regulatory framework.

¹² ITU World Radiocommunication Conference 2007.

¹³ See footnote 1.

¹⁴ The term “harmonisation” should be understood in the wider context of enabling the deployment of pan-European services, including the common adoption of flexible approaches for spectrum management such as spectrum trading and unlicensed use.

- confirm the benefits and the feasibility of harmonising some frequency bands of the spectrum dividend;
- analyse the key characteristics of such harmonised bands in order to maximise their economic and societal value, and
- develop a common strategy to support the objective of a harmonised dividend.

3. SPECIFIC IMPACT OF EU PRIORITIES ON THE RRC

3.1. The need for a “future-proof” approach to the RRC band planning

Since the details of the future demand for each of the potential services and modes of operation in the spectrum dividend cannot be predicted with sufficient certainty, the **RRC planning** should offer **sufficient technical flexibility** to cope with a wide variety of **future broadcasting services** and to allow **potential alternative use** of the same spectrum **by other technologies and services**¹⁵. The objective of flexibility was already partially addressed at the RRC-04. However, there are still some technical aspects included in the planning modalities which risk hampering future technology developments¹⁶. It should be further ensured that the technical planning modalities are not conflicting with Community law, in particular the R&TTE Directive¹⁷.

Spectrum for digital radio is also part of the RRC planning and whilst the support for a transition towards digital radio broadcasting is less pronounced at this point in time, it is nonetheless important that radio broadcasting services obtain the spectrum required for a smooth migration to the digital infrastructure¹⁸ and for the various possible standards without excluding any future options¹⁹.

The Commission calls on Member States to perform a **review** of the **technical bases of the RRC planning to identify unnecessary restrictive requirements** which could undermine the principles of “flexibility” and “technology neutrality”²⁰. This should facilitate cooperation between Member States and the Commission in the RRC negotiations in order **to minimise the effect of such restrictive requirements**.

3.2. Supporting a short transition period

In its Communication on digital switchover the Commission has expressed its commitment for a swift “switchover”. It indicated the beginning of 2012 as the deadline for the switch-off of analogue TV for the Member States and therefore as the end of the transition period in the European Union.

¹⁵ This objective is also supported by the Radio Spectrum Policy Group. Please also refer to the Opinion mentioned in footnote 6.

¹⁶ E.g. restrictive “channelization” requirements, assumption of network topologies based on “high tower/high power” transmitters.

¹⁷ Any specifications in the RRC of elements covered by this Directive (e.g. out-of-band emissions, spurious emissions, receive characteristics) should be avoided.

¹⁸ In some markets, there is an increased risk of spectrum scarcity for digital radio because some of the frequencies initially earmarked for digital radio have already been used for deploying other services (such as mobile applications relying on the DMB standard).

¹⁹ The currently RRC modalities include provisions for the T-DAB standard only.

²⁰ This technical review could be conducted in the context of the CEPT preparation for RRC-06. It should include both TV and radio services.

In a broader context, the RRC will have to decide when the current allocations for analogue broadcasting will cease to be legally protected against interference. For Europe, the end of the protection of analogue channels should ideally coincide with the proposed analogue switch-off date, i.e. 2012. In case of a much longer protection period for analogue transmissions requested by their non-EU neighbours, Member States which have borders with non-EU countries might be at a disadvantage. However, two scenarios have already been retained at the first session of RRC negotiations (RRC-04): one scenario is based on a deadline of 2015 for the end protection against interference of analogue broadcasting channels, and the other one is based on a date of 2030 or beyond. As a result, the Commission recommends that Member States agree on a common negotiating position in the RRC to support the retained scenario based on the end date which is the closest to 2012, namely **2015** for the end of general protection of analogue channels transmitting from outside the EU.

The Commission calls on Member States to adopt **a common position** in the RRC negotiations to ensure that the **end of the transition period**, namely the end of general legal protection of analogue channels will take place **at the earliest proposed date**, as close as possible to 2012.

4. CONCLUSION

The switchover to digital broadcasting is as much a political issue as it is a technical one. Technical decisions taken at RRC-06 may significantly influence the transition process towards digital broadcasting, with a risk of limiting the range of options which should be available in the future to regulators and policy makers in the light of the changing context of broadcasting, technical development and convergence.

In addition, the European perspective should be fully taken into account. Member States should maximise their “negotiating” weight by adopting common positions and common negotiating strategies whenever possible, starting from a genuine agreement on the way to take the main policy priorities into account. Consequently, Member States are urged to jointly address the outstanding issues presented in this Communication and coordinate their action.

The Commission calls for the political support of the Council and the European Parliament to achieve the goals set out in this Communication.