

## **IPDC Forum**

### **EC RSPG's Public Consultation**

### **"Spectrum Implications of Switchover to Digital Broadcasting"**

**European Commission**  
**Radio and Spectrum Policy Group**

**IPDC Forum welcomes the RSPG's public consultation "Spectrum Implications of Switchover to Digital Broadcasting".**

IPDC Forum ([www.ipdc-forum.org](http://www.ipdc-forum.org)) is an international not-for-profit industry association. The Forum seeks to facilitate the growth of IP-based multimedia services for deployment over broadband networks including DVB (Digital Video Broadcasting) and DAB (Digital Audio Broadcasting)

Forum members share a common vision focusing on DVB and including DAB broadcast networks to deliver content-rich IP-based multimedia services over broadband networks to the end-users at home, at work or while on the move.

IPDC Forum was established in January 2002. The membership has grown rapidly to include companies representing most aspects of the broadcast and multimedia industries. These include service providers, technology providers, terminal manufacturers and network operators.

In IP Datacasting any digital content can be delivered in a cost-efficient way over broadcasting networks to large audiences at the same time. For the consumers, this means more choice in accessing multimedia content and a likely increase in the content possibilities.

IP Datacasting is a service where digital content formats, software applications, programming interfaces and multimedia services are combined through IP (Internet Protocol) with digital broadcasting.

Datacasting presents numerous new business opportunities for the content creators as well as the technology and service providers.

**Therefore, IPDC Forum sees that when planning the digital future and the related spectrum requirements IP based services in fixed and mobile environments should be taken into account when establishing regional and national spectrum plans.**

Please find attached the detailed IPDC Forum response to the consultation.

On behalf of IPDC Forum

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**Question 1: “How can coordination between Member States on spectrum management, at bilateral and EU level, contribute to quick and efficient switchover?”**

IPDC Forum wants to highlight the following issues that should be taken into account when planning the transition from analogue to all digital broadcasting:

- § Technological development during the last years has shown that there is an increasing need to approach switchover not only from the traditional TV point of view but also to consider evolving new broadcasting possibilities such as TV-like services in mobile and handheld receivers.
- § When foreseeing those new terminals and service categories the Member States should facilitate the development of a suitable regulatory and spectrum framework so that these new business opportunities can be realized in a timely manner and be developed within a stable framework.
- § Those new contents, services, networks and terminals e.g. in mobile environment will add value for all the players in the value chain and will definitely bring additional incentives for an optimal switchover planning.
- § Member States should collectively reach a common understanding of the strategic value of these new business opportunities and seek the implementation of an adequate spectrum approach for the hosting of these new converged digital terrestrial networks.
- § Such a coordinated spectrum approach across all Member States would indeed be perceived as a positive signal to market players and would therefore encourage investment in the development of this new promising way of providing TV services to Community citizens.

It is vital to get the critical mass for the creation of a mass market. The market players together with administrations and policy makers should join forces to accelerate the switchover with appropriate emphasis on the traditional broadcast services but as well foresee the future options and guarantee the “market path” for those emerging new services.

A common switchover strategy by EU Member States would provide more confidence in respect of the transition. This would form a basis for much technology and business development, thus creating future business opportunities for Europe. The IPDC Forum believes that the EU Commission could be instrumental in broadening national perspectives and encourage the establishment of convergent services as an important component of the European Information Society.

**Question 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?"**

There is a need to recognize the new mobile broadcast services for handheld terminals when measures for a coordinated introduction of digital TV, in particular in the UHF bands IV and V, in Europe are elaborated.

There are evident drivers for a harmonized approach to the introduction of converged mobile broadcast services in Europe and the rest of the world. To ensure spectrum availability for such services, handheld reception should be recognized by CEPT when preparing for the RRC. In practice from a European point of view this will mean:

- § An allotment planning method should be preferred to give the required flexibility for network planning, especially for the handheld reception mode.
- § Convergent services and the related reception modes should be fully included in the context of RRC-04/05, and
- § Whenever possible, based on studies done in the DVB Forum and EICTA, the low and mid parts of the UHF band should be favoured when planning for handheld reception.
- § The EU should encourage CEPT to respond to these requirements by asking ITU-R and RCC to undertake the relevant interference and deployment scenario studies regarding converged broadcasting systems in supporting the future operators of such networks.

Even though the concepts and the technical requirements are on the CEPT agenda to a certain extent already, it is essential that policy makers analyse potential service scenarios and, based on those results, highlight the role of different service categories in the RRC planning process.

**Question 3: "Are greater transparency and technological neutrality of spectrum management, notably valuation and market tools, instrumental to switchover?"**

In the case of convergent services the terminals will have integrated 2G/3G functionality meaning that simultaneous reception of multimedia services and transmission of 2G/3G is necessary.

The terminals will have two radio interfaces from which DVB/DAB will be used for receiving broadcast (unidirectional) services and 2G/3G for telecommunication (bi-directional) services. Convergent or hybrid terminals will use terrestrial broadcast spectrum band for DVB/DAB reception.

By taking into account the technical recommendations made by DVB Forum and EICTA the following technical guidelines should be noted:

- § It has been shown that the interoperability of the two radio systems is probably the biggest challenge in implementing convergent terminals. Selection of the broadcast frequency band will have a major impact on the terminal feasibility.
- § Based on the technical studies (DVB, EICTA) the low or mid UHF band (up to 700 MHz) would be technically the most suitable.

When planning national or regional services the spectrum requirements set by convergent services should be considered. When planning the licensing framework for convergent services in a mobile environment the approach of a horizontal business model should be applied. The main points of such a horizontal approach are

- § Any service via any network; broadcast networks should be seen as one distribution channel among others.
- § The broadcast network and services are separated from each other. There can be several service providers for one broadcast network. The traditional broadcast (TV) content regulation should not be applied.
- § Equal playing field for all the market players.
- § Flexible spectrum management and assignment tools should be promoted by spectrum administrations to support market entry and encourage rapid service creation for consumers.
- § Provisions for the free circulation and right of operation of digital TV enabled handheld terminals shall be established on a Union Level.

**Question 4: "What will be the 'spectrum dividend' from switch-off, and how should this be allocated to specific services?"**

IPDC Forum conducted a service survey during the year 2003 to estimate the consumer demand for mobile TV terminals and services. In practice this means a mobile phone, which has an integrated DVB/DAB<sup>1</sup> receiver for broadcast services.

The study was undertaken in three countries: Finland, Sweden and UK. In each country more than 1000 adults were interviewed. The summary results can be found at [www.ipdc-forum.org](http://www.ipdc-forum.org). Some of the key findings were:

- § Mobile phone owners endorse the TV functionality (e.g. 34% of the mobile phone owners in Sweden endorse the idea of mobile TV),
- § Teenagers are the most receptive audience for mobile TV (over 50% endorse the idea),
- § Up to 30% of respondents expressed immediate interest in the concept,
- § Preference for the content/channels differs by country (Finland/Sweden; more factual and information seeking, UK; more entertainment focus),
- § The top ten list consisted of services such as general news, regional news, sports and music.

Another service survey on digital television was undertaken by DigiTAG two years ago. The results also supported the concept of mobile TV reception.

As can be foreseen the market naturally will expect the enhanced digital broadcast services in the traditional TV environment. The question is how to prepare for those new services which are not restricted to the static TV set at home and the corresponding relevant business models.

There are already trials and pilots ongoing in Finland and Germany to prepare for commercial launch of convergent IP based digital services using the terrestrial DVB standard. The local spectrum administrations have responded positively to these plans and have supported them actively. It is important that these experiences are brought into the RRC process and shared among market players.

The IPDC Forum also believes that there are many potential services of a broadcasting nature that can be at the border between traditional broadcasting and telecommunication and that these services should be prioritised in case of spectrum dividend.

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<sup>1</sup> Such as DVB-T or DVB-H or Eureka 147

**Question 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?"**

In the future the border between broadcasting and other communication services will be less clear and possibly completely transparent to the users. Some flexibility will be needed simply because it is difficult to define future services well in advance. Nevertheless both from a technical point of view (standardization of terminals) and from a business point of view (stability for the business) it is important to have certain harmonized rules for spectrum allocation and bandwidth. Stability does not mean rigidity and to a certain extent there should be some openness. The IPDC Forum feels that providing convergent services in spectrum traditionally dedicated to TV broadcasting is a pragmatic way to address this question.

In the context of the forthcoming Regional Radio Conference the IPDC Forum supports the view expressed in European Common Proposal no 5 to the Conference (EUR/7A5/2) that "The Agreement should also contain provisions that terrestrial systems having characteristics different from those of the digital terrestrial broadcasting systems planned at the second session of the Conference may be used, provided that such use does neither cause greater interference nor demand higher protection than the system indicated in the Plan entry". Such a provision is considered to give the required flexibility for the future.

It should also be noted, that the broadcast band III (VHF) is not well suited for the cost-effective design of small antennas for handheld TV-terminals. For the design of GSM based terminals the optimum spectrum is indeed to be found in the UHF bands IV and V, considering that there is a need to be sufficiently far away from the 900 MHz GSM band for the purpose of mitigating interference between GSM transmitters and the DVB receivers in the mobile terminal.