

**EICTA comments to
EC RSPG's Public Consultation on
"Spectrum Implications of Switchover to Digital
Broadcasting"**

1. General comments

EICTA¹, The European Industry Association for Information Systems, Communication Technologies and Consumer Electronics strongly believes that the digital switchover provides a unique opportunity to create a future spectrum arrangement in the bands below 1GHz that concurrently facilitate the replacement of current analogue services with digital broadcasting services, and facilitate the introduction of complementary digital broadcasting and completely new kind of services.

In this regard, EICTA believes that the spectrum implications of the switchover to digital broadcasting require detailed analysis in order to:

- understand the spectrum requirements of the traditional television broadcast services and of the proposed new digital broadcast services;
- arrive at a band plan that maximizes the benefits of the all service types (including new types of services); and
- be able to facilitate the preparation of the national and regional spectrum planning to fulfil the future opportunities which digitalization will bring.

In this context we believe that the European Commission has a crucial role to play in influencing, mind-setting and co-ordinating Member States in order to unlock the true value of Radio spectrum for the , still very much, evolving digital TV applications as well as new innovative applications specifically addressing mobility.

¹ EICTA combines 46 major multinational companies as direct members and 31 national associations from 22 European countries. EICTA altogether represents more than 10.000 companies all over Europe with more than 1.5 million employees and revenues of over 190 billion Euro

2. Comments to Questions raised in the Consultation on “Spectrum Implications of Switchover to Digital Broadcasting”

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

The EU Member States have not yet created a common switchover strategy, which could set the objectives for a common approach. The common EU level strategy should include at least the main objectives like:

- agreement on a Europe wide switchover schedule (the service launch schedule including population and geographical targets, simulcast period and the target analogue switch off time window e.g. 2007 – 2010);
- analysis of existing broadcast and new digital broadcast or other services and the impact of those spectrum needs.

By having a Europe wide strategy and objectives for the switchover the spectrum management of the Member States would be able to:

- estimate, based on the national and regional service scenarios, the required and quantified spectrum requirements for the present broadcast services;
- identify potential national or regional bottlenecks from a spectrum point of view;
- define possible approaches for the efficient spectrum usage;
- plan the frequency usage and licensing policy and procedures better in advance, taking also into account any impact eventually derived from the introduction of secondary spectrum trading and liberalization;
- co-ordinate the detailed spectrum plans with the neighbouring countries; and
- plan, when needed, common service launches across different nations, in order to improve the perception of some particular services for the roaming users.

All these coordinated spectrum management issues are essential to an efficient and quick switchover process. The coordinated spectrum management will enable the creation of a mass market, which is beneficial for consumers and businesses by providing innovative and new services and new consumer equipment at reasonable prices, and will enable Europe to have a leading digital infrastructure so crucial for its future e-economy. It is extremely unlikely that a coherent policy can be established in Europe in a multilateral approach without leadership and decisiveness in defining a strategy that is a good balance to resolve all conflicts of interest potentially arising. The current spectrum used for analogue TV transmission represents a unique and valuable resource to be managed with vision.

Question 2: “In particular, what would be the added value from EU co-ordination ahead of the Radio Regional Conferences starting in 2004 and other international negotiation?”

The spectrum re-planning process in CEPT and the upcoming ITU Regional Radio Conferences in 2004 and 2006 will provide the necessary technical tools and methods for the analogue to digital transition.

In light of the CEPT re-planning process and the nature of this process, it can be seen that the technical framework for the transition is in place.

Further EICTA sees that Europe wide guidance at the political level would assist in developing a successful transition through

- Supporting the switchover as a service-led process where the administrations and the political decision makers would explicit their national/regional objectives (services, schedules, priorities) for the technical framework, and
- Allowing coherent consideration of frequency planning scenarios that take a more forward looking approach in planning the digital future, even when this has an (acceptable) impact on the availability and quality of today's analogue TV transmissions, and
- Establishing regulatory frameworks allowing other media to help in resolving blind/uneconomical spots in DTTV coverage under consumer-conditions similar to the delivery of analogue terrestrial TV today, and
- Indicating the option for reasonable compensation of organizations or consumers strongly negatively affected by scenario-compromises, in view of the overall economic value at stake, and
- Establishing a uniform EC policy for governing the spectrum and issuing licenses, and
- Creating confidence for the market players to develop existing and new business models for the digital future.

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

Though certain elements of technological neutrality are in order, technological neutrality itself is not a means to stimulate switchover.

When re-planning the usage of the broadcast spectrum usage the following transparency and technological neutrality issues should be considered:

- For markets where the broadcasting infrastructure plays a public / key infrastructure role (e.g. DTTV) and/or technology is an instrument in creating unnecessary barriers for competition in providing services and limiting end-equipment choice for the public, a more directive approach should be considered, since the spectrum is scarce and reallocation/re-licensing and other instruments in ensuring an optimal management to serve the public interest should not be unnecessarily constrained.
- Due to the technical developments the options to use the broadcast spectrum bands, VHF and UHF bands, will increase. For new digital broadcasting services there are different means of providing the same service and therefore there are opportunities and motivations to take a more technology neutral position
- A licensing policy supporting a horizontal (consumption, connection and content layers) business model will facilitate an efficient frequency usage. Digital broadcast network can be used for the distribution of various broadcast services, both traditional TV services and emerging new data services. This way the broadcast network operator is not locked to a specific service type but has

freedom to use the existing capacity for several business models thus using frequencies in an economically and technically optimal way.

- The valuation or pricing of the frequencies is a national/regional issue for the policy makers. However, a flexible frequency assignment mechanisms for the establishment of new services and their related trading and business models will be vital to make commercial verification possible in the early deployment phase before the mass market takes up.

Due consideration should be given towards early adopters of the spectrum and organizations bearing the cost of the switch-over in creating sufficient opportunities for growth of services in that domain once additional spectrum becomes available. Specifically extension of DTTV services towards more channels, better quality, increased interactivity and mobility needs to be regarded as a natural extension of the early start of DTTV as a replacement of analogue TV. As stated before the need for general availability and interoperability of receiver equipment and services will require clear and uniform regulatory guidance with respect to the technical properties of the broadcast signal.

Question 4: “What will be the ‘spectrum dividend’ from switch-off, and how should this be allocated to specific services?”

Market interest can be foreseen for both the traditional TV services and new extended data services in fixed and as well in mobile environments. The digital broadcast data services may include TV like video services and other content types; such as audio content, files transfer and interactive applications.

Related to this EICTA has created a technical specification for mobile, portable and hand held portable devices capable of receiving digital terrestrial broadcast services. The specification covers the technical issues to support the network and terminal design and implementation. These specifications have been defined in close co-operation with the technical group of CEPT Frequency Management (FM). CEPT FM is working on the technical bases for the Regional Radio communication Conference (RRC 04/06). At the same time there is under development the specification of a digital terrestrial broadcast interfaces for mobile handheld devices (for example DVB-H) in the DVB Project organization.

EICTA believes that important societal opportunities are provided by the digital switchover of broadcast spectrum. A significant spectrum resource that to date has been locked into the unidirectional broadcasting service, can now be used for a variety of purposes thanks to technological progress,– while strengthening the ability of the broadcasting service to continue to fulfil its public role in society.

Today’s typical DTTV bouquet of typically 20 modest-quality, mostly national Standard Definition TV channels with good (but not excellent) coverage in static reception conditions(with large aerials, and just emerging interactive TV applications) is too limited for the future. Therefore due consideration has to be given to the following anticipated DTTV needs that may affect spectrum requirements:

- Increased coverage of the DTTV services,
- Increased regionality / locality of DTTV services: terrestrial networks are unique in broadcasting TV & interactive end-user services adapted to local culture and community sense,

- Increasing the number of channels available, possibly using new business models for the exploitation of such services (these business models should not create a conflict with the open, horizontal market character that DTTV has today),
- Higher power levels & more frequencies to allow for portable and mobile TV applications as under consideration in many countries and partially deployed in Netherlands and Germany,
- Improving the quality of Standard Definition TV to meet the increased customer viewing experience expectation created by DVD media and the new high quality high resolution Plasma and LCD screens,
- Potential introduction of High Definition TV, probably using new more efficient compression technologies to use the bandwidth efficiently (DVB-AVC will allow HD quality transmissions in 8..10Mbit/s, effectively allowing at least two HD channels to be carried on one 8MHz channel).

The increased spectrum efficiency of the digital broadcasting service provides an opportunity to allocate part of this “spectrum dividend” to new digital broadcasting services, e.g. DVB-H, which is directed specifically at portable and mobile devices.

EU policy makers and spectrum administrations should take these opportunities and requirements into consideration when planning the switchover. They should facilitate the creation of an open and effective market for such services by ensuring fair and transparent access to frequencies assigned to such services.

Early guidelines that include consideration of new opportunities and situations will have long-term impact and prevent potential regulatory and spectrum obstacles for emerging services.

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?”

When a discussion about convergence implies supplying similar and eventually coordinated services through telecom and broadcast systems the following aspects should be highlighted:

- The broadcast system is traditionally meant for unidirectional distribution, and is most efficient where many users require the same data at the same time.
- The telecom system is meant for bi-directional communication, but can be complemented by supporting some forms of datacasting services (including voice and video) required by many users in a cell. It can be used to broaden the appeal of broadcasting services by providing interactive broadcast-related services.

Additionally, the telecom services including 2G/3G mobile currently have assigned spectrum bands, mainly at higher frequencies, which require a higher level of investment in infrastructure. The spectrum managers should therefore study how much of the spectrum not required for the traditional broadcast services could be made available for use by other services (enhanced broadcast or telecom) in the most flexible possible allocation framework. In other words, this particular convergence scenario suggests the need for an allocation mechanism that is more flexible than the traditional ones.

There may also be a need to be more specific about the frequencies as such in order to allow for the needs of compact handheld devices.

Additionally it can be noted that the traditional network planning for broadcast networks is based on the strict coordination of the transmission towers and the power levels of each specific transmission mast. When instead network planning requires more flexibility, as in a mobile and portable environment, the principles of allotment planning have been introduced. The major benefit is reduced need for coordination and negotiations between neighbouring countries when adding or changing new transmitters