

## European Commission

### RSPG

Telefonaktiebolaget LM Ericsson (Ericsson) welcomes the opportunity to express the following additional<sup>1</sup> views in response to the RSPG public consultation in the context of the development of a RSPG opinion on the *spectrum implications of switchover to digital broadcasting*.

#### Introduction

Ericsson believes that the digital broadcasting switchover process provides a unique opportunity to create a future spectrum arrangement in the bands below 1GHz that concurrently:

- facilitates digital broadcasting services replacing current analogue services;
- facilitates new interactive services that complements and enhances traditional broadcasting services and also provides completely new services;
- facilitates the introduction of new uni-directional as well as bi-directional communications services that complements or enhances broadcasting services, or are separate from these .

Therefore the spectrum implication of the switchover to digital broadcasting should be studied in more detail to:

- establish the relative service volumes for which terrestrial services spectrum will be needed in the medium and long term,
- understand the resulting spectrum needs when transferred to the digital domain and the new digital broadcast services,
- arrive at a band plan that maximizes the benefits of socio-economical long-term aspects by leaving room for future flexibility in service and technology introduction. The opportunities for non-intrusive sharing between different services should be recognized and optimal transmission directions for different band ranges should be established, and
- be able to facilitate the concrete preparation of national and regional spectrum planning to fulfill the future requirements and opportunities which digitalization brings.

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

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<sup>1</sup> Ericsson has in parallel forwarded views in cooperation with other parties.

A common EU level strategy should include objectives like:

- Agreement on a Europe wide switchover schedule which includes a target analogue switch off time window, e.g. years 2007 – 2010,
- Analysis of existing and new services and their spectrum needs in different scenarios, including the use of different distribution technologies such as satellite and cable. .

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

- Calculate, based on the national and regional service scenarios, the required and quantified spectrum requirements for a fully digital broadcast service, also considering the use of different distribution technologies such as satellite and cable.p
- Identify potential national or regional bottlenecks from a spectrum point of view,
- Define measures for efficient spectrum usage,
- Better plan the frequency usage and horizontal licensing policy and procedures,
- Better coordinate the detailed spectrum plans on a regional level, and
- Plan, when needed, common service launches and service roaming between nations.

***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?"***

No additional views.

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

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

- Due to technical development the number of available options for use the broadcast spectrum bands, VHF and UHF bands, will increase.
- The digitalization should be combined with interactivity as much as possible, to vastly increase the number of opportunities available to the consumer. Currently existing communication channels, fixed or mobile, offer return channel alternatives; other alternatives can be

created in the current broadcasting bands. By combining available and emerging technologies and systems in an efficient way the end result will be increased spectrum efficiency.

- A licensing policy supporting a horizontal (consumption, connection and content layers) business model will facilitate efficient frequency usage.
- The valuation and pricing of spectrum is a national/regional issue for the policy makers. However, similar competing services in the same or neighboring markets provided through different technologies should be subject to corresponding spectrum pricing principles.

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

Ericsson believes that important socio-economical opportunities are provided by the digital switchover of broadcast spectrum. This significant spectrum resource that to date has been locked into the unidirectional broadcasting service can now thanks to technological progress be put to better use for a variety of purposes to fulfill the public policy obligations that falls on it.

Ericsson also believes that the increased spectrum efficiency of digital broadcasting technology provides an opportunity to allocate part of the "spectrum dividend" to new services, e.g. those directed specifically at portable and mobile devices. It also opens up for the introduction of bi-directional communications services that may either be complements or separate new services. An example of such a separate service would be low-cost wide-area coverage fixed or mobile communications for rural areas, facilitated by the better propagation characteristics of the frequencies constituting the broadcasting bands, compared to current commercial mobile communications frequency bands.

It is important to note that none of these enhancements in the use of the broadcasting spectrum need to be at the expense of current broadcasting service levels.

A simplified model for capitalizing on this opportunity is that:

- A generic down-link band is created in the 174 – 240 MHz range allocated to advanced public digital broadcasting services, and fixed and mobile services;
- A further generic down-link band is created in the 550 – 862 MHz (approximate) range allocated to advanced public digital broadcasting services, and fixed and mobile services;
- A generic up-link band is created in the 450 – 550 MHz (approximate) range for advanced public digital broadcasting services, and fixed and mobile services.

EU policy makers and spectrum administrations should take these opportunities and requirements into consideration when planning the switchover and preparing for the all-digital future. Early guidelines that include consideration of new opportunities 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?"***

No additional views

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