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Terrestrial Broadcasting in Europe

EBU Position Paper

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1. Introduction

In many countries the terrestrial broadcasting platform is the primary means of delivering broadcasting services. For EBU members it has an important role in fulfilling the obligation of universal coverage, which is often part of their public service remit. In many countries coverage of 98% or more of the population and free-to-air access to services are mandatory.

Even in countries where cable, satellite or broadband hold a significant market share, terrestrial broadcasting is usually regarded, alongside these other platforms, as an essential, flexible and reliable way of delivering broadcasting content to a mass audience. This is facilitated by the fact that most European households are suitably equipped to receive free-to-air radio and television services, without any subscription.

Digital terrestrial television (DTT) is particularly successful with a steadily growing number of viewers and a rapid increase in the number of available channels. For example, at the end of 2009 it is estimated that more than 730 channels were being broadcast over DTT networks in the 27 EU Member countries and Croatia and Turkey, the two candidate countries. Of these more than 300 are local and regional channels. This shows an impressive rate of growth when compared with the approximately 500 DTT channels in April 2009[1].

As with other communication sectors, terrestrial broadcasting networks are currently becoming increasingly deregulated and exposed to market forces. Telecom regulation in the EU is largely based on the principles of technology- and service-neutrality, and promotes competition and market based approaches. Nevertheless, the EU regulations allow for the application of specific rules to protect terrestrial broadcasting in accordance with general interest objectives, such as audiovisual and media policy.

The purpose of this position paper is to emphasise the importance of terrestrial broadcasting and to highlight its unique features.

Many of the issues addressed in this document apply both to radio and television services delivered terrestrially, regardless of the technology and the frequency bands used. The distinction between radio and television is made where appropriate.

[1] European Commission, DG Communication, Press release - 13 January 2010
http://www.obs.coe.int/about/oea/pr/mavise_end2009.html

2. Terrestrial Broadcasting - What it is and what it does

Terrestrial networks are optimised for the simultaneous delivery of content such as radio, TV and supplementary data services, to very large audiences. Such networks are typically designed to achieve a specific coverage for the pre-defined quality of service and reception mode (e.g. roof-top fixed, mobile, portable indoor, handheld).

Terrestrial networks enable free-to-air reception or conditional access to services depending on the preference of the broadcasters. Service quality and delivery costs are independent of the actual number of simultaneous viewers or listeners.

Digital terrestrial television (DTT) in Europe is based on the very successful DVB standards. Frequency arrangements and international agreements are harmonised while the networks themselves are implemented according to national specifications.

DTT networks facilitate the introduction of new and innovative services on the terrestrial platform (e.g. HDTV, mobile TV, data services) as well as offering the flexibility to meet specific coverage and service requirements (e.g. regional and local programming).

Whilst terrestrial radio is still largely based on analogue FM networks, digital radio services are increasingly available in Europe based on the DAB family of standards. Other digital systems such as DRM/DRM+ are also candidates for delivering digital radio services.

Terrestrial broadcasting spectrum is located in a frequency range that combines a number of particularly favourable features such as good propagation characteristics and the ability to penetrate deeply into buildings. Moreover, the use of digital broadcasting technologies allows for a more efficient exploitation of the available spectrum than does analogue broadcasting. This has enabled broadcasters to provide an attractive offer of broadcasting services whilst at the same time having facilitated a 'digital dividend'. Both propagation and efficient spectrum usage explain why terrestrial broadcasting networks are increasingly employed to serve large audiences in Europe. However, the combination of good coverage and capacity is also the reason why the terrestrial broadcasting spectrum is so attractive to other potential users.

Terrestrial reception is cost efficient for the public because many households in Europe are equipped with suitable receiving antennas. This reception infrastructure was built for analogue services but a large part of it can also be used for digital services. This facilitates the digital switch-over at a reasonable cost for the public whilst the costs of digital transmissions are lower compared to those of analogue for the broadcasters. Any large-scale migration to another distribution platform would result in significant costs for the public and these cost implications must be addressed if such migration is to be considered.

Last but not least, in many countries there is a deep-rooted expectation that free-to-air services are universally available via terrestrial networks.

3. Why Terrestrial Broadcasting is Important

Terrestrial broadcasting is one of the main distribution platforms for media services; it combines many beneficial features in a way not found in other platforms.

Terrestrial broadcasting is an efficient delivery platform because

- it is optimised for the delivery of linear media services to mass audiences;
- of its high spectrum efficiency;
- it is a cost effective delivery mechanism for broadcasters and suitably equipped viewers;
- receiving equipment is easily available and low cost (accessibility for all); and
- it has minimal marginal costs for broadcasters (i.e. additional costs for reaching additional viewers).

Terrestrial broadcasting is a flexible delivery platform because

- of its unique ability to serve any reception mode (roof-top fixed, mobile, portable indoor and handheld);
- of its flexibility to adjust coverage to the desired service area (nationwide but also regional or local coverage);
- it can offer a range of services from linear to on-demand; and
- it allows for free-to-air as well as for conditional access.

Terrestrial broadcasting offers a defined and guaranteed quality of service (QoS):

- continuously for all viewers and listeners
  - independent of the number of simultaneous listeners or viewers;
  - across the whole service area; and
- it allows end-to-end control over QoS and the user experience.

Terrestrial broadcasting represents a mass market platform, in particular:

- the digital terrestrial platform is certainly successful in many countries and is driving the digital switch-over in Europe where the number of viewers is steadily growing
- it is widely supported by manufacturers, network operators, broadcasters, regulators and the public;
- it constitutes a competitive alternative to other delivery platforms; and
- it enables development of broadcasters' radio and television brands whilst safeguarding their market positions.

Terrestrial broadcasting offers intrinsic additional value such as:

- delivering to secondary TV sets and other (non-broadcasting) consumer equipment;
- providing coverage in places where other platforms may not be available, for example
  - in moving vehicles,
  - in public places; and
  - in satellite shadow areas;
- leverage for implementation of national audiovisual policies;
- giving access to services for people with disabilities;
- not raising privacy issues;
- implementing provisions for content management and copy protection; and
- providing an essential and reliable channel for the authorities to inform the public in case of emergencies.

Terrestrial broadcasting builds a framework allowing for new opportunities such as:

- the implementation of new broadcasting technologies;
- new services;
- promoting convergence and synergies with other platforms; and
- creating new business opportunities.

In addition, terrestrial networks are important for public service broadcasters because they are

- suitable for free-to-air delivery;
- provide complete or near-complete coverage at reasonable cost;
- based on open standards; and
- not controlled by gate keepers.

4. EBU Positions on Terrestrial Broadcasting in Europe

The terrestrial broadcasting platform represents a unique combination of characteristics such as, technical excellence and efficiency, favourable coverage and support of services, flexibility, market success and wide acceptance by industry as well as by the public in most European countries. Furthermore it provides intrinsic added value and stimulates a constant search for new opportunities. As a result the terrestrial broadcasting platform generates significant social and economic benefits.

Digitization of the terrestrial networks is driving the analogue switch-off at a reasonable cost for consumers and broadcasters.

In many countries, terrestrial broadcasting is the primary delivery means for broadcasting services to the public. It equally serves the public service broadcasters and the commercial broadcasters as well as a range of other players in the value chain.

The terrestrial platform is important for the broadcasting industry even in those markets that are dominated by other delivery platforms. It stimulates competition amongst the delivery platforms but can also be complementary to other platforms. It is therefore in the interest of both the broadcasting industry and society as a whole that the terrestrial broadcasting platform remains

attractive for viewers and listeners and a viable alternative to other delivery platforms.

The terrestrial broadcasting platform is widely supported by manufacturers, network operators, broadcasters, regulators and the public. For this support to continue, regulatory clarity and certainty are required as they enable broadcasters and the associated industry, not forgetting the public, to make the right investments into future technology and services.

Radio frequency spectrum is an essential resource for terrestrial broadcasting. Sufficient spectrum must be available now and in the future to accommodate the evolving needs of terrestrial broadcasting and to protect the investments made by broadcasters, network operators and the public. The needs of both public service and commercial broadcasting must be taken into account.

Furthermore, the EU spectrum policy needs to take account of the specific circumstances in each country. Any further reduction of the available spectrum for terrestrial broadcasting would have negative consequences for the public and broadcasters alike, for instance, increased interference levels, decreased coverage, fewer services and a reduced possibility for future development. Degradation of the terrestrial platform will likely entail a large scale migration to other platforms and this will inevitably incur very high costs much of which would have to be borne by the public.

Terrestrial broadcasting networks are optimised for the delivery of linear media services to large audiences and they will continue to be important in delivering these services in the future.

There is a potential for synergies between the terrestrial and other delivery platforms, and in particular broadband networks, since their combined use enables personalized on-demand and interactive media services that neither platform can realise individually. It is the combination of broadcasting and broadband networks that will enable broadcasters to offer the richest range of services. These exciting possibilities need to be further explored and developed.