



**40<sup>th</sup> EPRA Meeting  
Tbilisi, 8-10 October 2014**

**Working Group 3 – Digital Radio: a chance, a challenge, a risk?**

Summary of Questionnaire Findings<sup>1</sup>

(Final public version of 18 December 2014)

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## Introduction

Previous discussion on digital radio took place during the EPRA meeting in Ohrid, three and a half years ago, in May 2011. The issues presented and discussed at that time concerned, among other things, radio via internet vs. on air radio and its complementary solution such hybrid radio, successes and mistakes in implementation practice, necessity of standardization<sup>2</sup>. Since then significant progress has been achieved and new countries have decided to launch digital services or to do it in the nearest future.

This introductory document for Working Group 3 is based on the findings of a questionnaire circulated among EPRA members, which focused on the legal and formal conditions and running of the digitalization process itself, including analogue switch-off issues. 32 answers were received from the following authorities: The Audiovisual Media Authority of Albania (“AL”), the National Commission on TV and Radio of Armenia (“AM”), the KommAustria (“AT”), the Communication Regulatory Agency of Bosnia and Herzegovina (“BA”), the Media Authority of the Flemish Community of Belgium (“BE-VRM”), the Conseil supérieur de l’audiovisuel of the French speaking Community of Belgium (“BE – CSA”)the Council for Electronic Media of Bulgaria (“BG”), The Swiss Federal Office of Communication (“CH-OFCOM”), The Direktorenkonferenz der Landesmedienanstalten of Germany (“DE”), the Danish Radio and TV Board (“DK”), the National Authority for Markets and Competition of Spain (“ES-CNMC”), the Catalan Audiovisual Council (ES-CAC), the Finnish FICORA (“FI”), the French Conseil supérieur de l’audiovisuel (“FR”), the Gibraltar Regulatory Authority (“GI”), the National Council for Radio and Television (“GR”), the Agency for Electronic Media of Croatia (“HR”), the Broadcasting Authority of Ireland (“IE”), the Communication Commission from the Isle of Man (“IM”), the Italian AGCOM (“IT”), the Lithuanian Radio and Television Council (“LT”), the National Electronic Media Council of Latvia (“LV”), Agency for Electronic Media of Montenegro (“ME”), the Agency for Audio and Audiovisual Media Services of Macedonia (“MK”), The Malta Broadcasting Authority (“MT”), the Dutch Commissariaat voor de Media (“NL”), the Norwegian Media Authority

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<sup>1</sup> **Disclaimer:** This document has been produced by EPRA, an informal network of 52 regulatory authorities in the field of broadcasting. It is not a fully comprehensive overview of the issues, nor does it purport to represent the views or the official position of EPRA or of any member within the EPRA network.

<sup>2</sup> <http://www.epra.org/attachments/ohrid-wg2-digital-radio-introductory-paper>  
<http://www.epra.org/attachments/ohrid-wg2-digital-radio-summary>

("NO"), the Polish National Broadcasting Council ("PL"), the Romanian National Audiovisual Council ("RO"), the Swedish Broadcasting Authority ("SE"), the Agency for Communication Networks and Services of the Republic of Slovenia ("SI"), the British Ofcom ("UK").

Even though the questionnaire has had an excellent rate of replies, it should be emphasised that thirteen regulators (out of the 32 who replied to the questionnaire) report that there are currently no digital radio services operating in their respective countries.

## 1. Analogue vs. digital

Analogue FM radio is in a very good condition concerning the quantity and diversity of the programme offer as well as the acceptable sound quality. Moreover, the radio advertising market has been stable and well balanced in the majority of European countries.

The questionnaire answers show that analogue radio FM offers to audiences a huge quantity of programmes delivered by both public and private broadcasters. PSBs have more frequently at their disposal national networks, whereas regional and local radios are, as a rule, the domain of activity of commercial broadcasters or local communities.

Although the radio advertising market share in comparison with the TV market is, in the majority of countries, very low (less than 10%) the popularity of radio as a way of delivering information and entertainment remains very high and is comparable with television. For example, 90% of adult citizens **in the UK** listen to the radio every day. In **Switzerland**, the daily reach for 2013 was between 87% and 90% depending on the linguistic region. In **France**, the daily reach for the period September 2014-October 2014 was 80.4%; the average hours per listener reached 2 hours and 51 minutes.

Analogue radio licences will soon expire in some countries (2015) but there are legal possibilities (beauty contest, tender) to renew them. However, the plans connected to the digital switchover provide for different solutions. In **the UK**, many licences have been renewed in return for providing DAB service. In **Switzerland**, where the date of analogue switchover has not been determined yet, the possibility to prolong the expiration of FM licences without tender is taken into consideration.

It is evident that in the majority of countries the radio frequency resources in the FM band are practically exhausted and eventual refarming would generate additional costs without guarantees of notable effects. Possibilities to extend analogue services are signaled in some cases: in **Lithuania** and **Albania** free frequencies can be used, in **the UK** some low power frequencies can be given to community radios. In some countries extending analogue services is not taken into consideration, either because of technical and economic limitations as well as the concrete digitalization plans (CH, DE, DK) or due to a limited advertising market (IM). Very high level of spectrum occupancy is also signaled in **Croatia, Poland** and **Gibraltar**.

The overview of the situation of digital radio broadcasting is continuously presented in the Country Updates on the WorldDMB website. In September 2014, WDMB issued the new report entitled *WorldDMB Global Update – Digital radio broadcasting using the DAB family of standards* containing data collected on the basis of the countries' reports<sup>3</sup>.

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3 [http://www.worlddab.org/public\\_document/file/493/WorldDMB-Country\\_Update-web.pdf?1410172799](http://www.worlddab.org/public_document/file/493/WorldDMB-Country_Update-web.pdf?1410172799)

According to the report, seventeen countries in Europe operate the DAB family standards in a regular way<sup>4</sup>. The next four ones<sup>5</sup> continue trials and regular service preparations. In the most advanced countries, the digital radio DAB signal is accessible for almost the entire population (99% CH, 98% DK, 95% NL, 94% GB, 91% DE) while the household penetration is close to half of it. It is expected that that figure will rapidly grow if the date of switchover is established and is closer. Sales of receivers continue to grow, especially in cars. 63% of new vehicles in Norway, 55% in the UK and 29% in Switzerland are line-fitted with DAB digital radios.

Apart from the countries with regular or developed trial transmission there are others, which are preparing the tenders for digital multiplex (SI, SL) or taking it into consideration (LV).

However, after unsuccessful launching, the DAB transmission has been stopped in **Finland, Lithuania** and **Croatia**. **Croatia** as well as **Montenegro** are delivering analogue radio services via DTT platforms.

There are currently no plans and actions concerning digital radio in **Greece, FYR Macedonia, Bosnia and Herzegovina** and **Albania**.

## 2. Legal and formal conditions

In the case of terrestrial television, the digital transition from analogue to digital has been strongly supported by governments practically in the whole of Europe, first of all due to internationally “enforced” analogue switch-off date. This is not the case for digital radio; the date of turning off FM radio has not been determined so far. On the other hand, observing existing practice, the probability of launching digital services according to market rules only seems to be very low.

The main advantages of radio digitalization for government are said to be:

- Better spectrum efficiency, which is more and more desirable natural resource,
- Ability to provide additional services and choice for citizens,
- Improvement of safety for citizens thanks to new services such as traffic and travel information and emergency warning,
- Digital divide prevention,
- Limitation of energy consumption and carbon dioxide emission.

For that main reason, governments have been directly involved in the digitalization process. Responsibility for preparing the legal basis, planning the rollout and development of the radio market as well as monitoring is in the majority of countries the domain of the relevant ministries, which closely co-operate with authorities for media and frequency management.

A reference document, accepted by all stakeholders, containing the actions, schedule and conditions seems to be necessary in order to ensure the successful and undisturbed digitalization process. There are different kinds of documents: national strategy, action plans or roadmaps developed by relevant governmental institutions (BE-CSA, DK, GB, NL, NO and BE existing, DE, IT – in preparation), strategy and action plans prepared by radio industry and confirmed by government (CH, HR – in preparation),

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4 Countries with regular DAB/DAB+ services: BE, CH, CZ, DE, DK, ES, FR, GB, GI, IE, IT, MT, NL, NO, PL, SE and Monaco.

5 Countries with trial services: AT, HU, RO, SL.

guidelines of strategy developed by regulatory authority to be confirmed by government ( BE-CSA, FR-CSA – in preparation, PL, SE – in preparation).

The specific situation, induced by technological change, requires special provisions for the future. In the majority of countries new legal acts, recommendations or decrees would be adopted if the current legal regulations are not deemed sufficient. The basis of this alteration could result from earlier agreed strategies or action plans.

Such a special regulation already exists in **Switzerland**. It concerns the governmental aid for broadcasters during the transition period and the future of FM release after switch-off. **In the UK** the Digital Economy Act was adopted in 2010.

One of the most controversial matters of digital radio implementation plans is the need for governmental aid for broadcasters, customers and other stakeholders. There are at least two different opinions and practices. The first one emphasizes the prime role of the radio industry in the process (“...let the market do its job as much as possible.” - NL). Nevertheless, the governmental co-operation in creation of public awareness and motivating the public is welcome.

On the opposite side, there is the strong conviction that without governmental aid the transition from analogue to digital terrestrial radio will be unsuccessful, or even impossible. Special care should be given to the small, local broadcasters. There are also concrete examples of this kind of solution. As was mentioned before, in **Switzerland** the special legal act regulates the financial contribution for broadcasters (reimbursement of 25 % of operating costs). Another proposal (PL) is to limit or totally reduce administrative fees (licence fee, frequency reservation charge).

### 3. Switchover issues

The determination of the switchover date seems to be the most difficult and controversial decision. It is evident that the transition period should be as short as possible because of double transmission costs and long enough to achieve sufficient receiver penetration, coverage and digital radio audience. It makes the decision about the switchover criteria and the idea how to meet them more important than the date of digital switchover itself.

In the countries where the digital radio implementation has already been started, the first position on the list of criteria is affordability, the percentage of households with possible digital reception and the second criterion is the accessibility of digital signal (coverage).

Only two countries have announced so far the date of switching-off analogue transmission, provided that the criteria will be met on certain targets. In **Denmark**, it will be 2019 if 50% (or more) of the radio listening is in digital platform by mid- 2018.

In **Norway**, there are two dates: 2017 or 2019 and two types of conditions should be met: absolute conditions concerning the coverage for both PSB and commercial broadcasters as well as added value to the listeners, and secondary conditions which are affordability and acceptable quality of in-car radio reception and the requirement of at least 50% of daily radio-listeners in all available digital platform. “... *The secondary conditions must be fulfilled in 2015 in order for switch-off will take place in 2017. Switch-off may take place in 2019 if absolute conditions are fulfilled.*”

The remaining countries, which launched the digital transmission or are preparing for it, carry out the discussions between stakeholders and estimations of the market in order to choose the most

suitable criteria and conditions of cutting out the analogue FM. For example: the year 2023 in **the Netherlands** and the year 2024 in **Switzerland** are taken into consideration.

Several countries, such as **France**, have adopted a wait-and-see approach for the time being and are closely monitoring the developments concerning switchover in Europe.

On the other hand, a certain group of experts says that the switch-off of the analogue FM transmission is not necessary after implementing the digital radio in the band III in the large scale and this part of spectrum could remain analogue.

Regarding the common switchover date across Europe, the opinions presented in the questionnaire are also diverse. Generally, it is possible to distinguish three options.

The first one assesses that an agreement at the European level would be very useful to speed up and increase the effectiveness of digitalization process (BE–CSA, PL, ES).

The second opinion admits the usefulness of common approaches but at the same time undermines the reality of this kind of solution because of different market conditions and various digitalization concepts (NL, PL).

Finally, the digital switchover process is not the domain of NRAs but governmental decision and each country has its own reasons of planning according internal conditions.

#### 4. Standards

The DAB family of standards is the most popular in Europe.

In countries, which started digital radio implementation before 2007 (CH, DE, DK, GB, BE, ES, NO, IE), there is DAB on the basis of ETS 300 401 but they have plans for transition to new DAB+ standard or already switched to DAB+ (as for ex. CH). Countries which started later or are planning to start in the near future, have chosen DAB+ (LV, PL, SE, HR, ES, IT, GI, MT, AL, SI).

The video-centric DMB standard is currently used in **Italy** and tested in **Norway**. DMB was also originally the standard chosen in **France** but since 2013 radios may broadcast in T-DMB and DAB+.

Another possibility to broadcast radio content without additional investment costs is DTT platform in DVB-T standard. That practice is used in several countries (NL, DE, GB, BE, ES, IE) but the audio-centric version of next DTT generation DVB-T2 Lite is very seriously taken into consideration.

Parallel developing DRM standards, especially DRM+, are also considered (PL, ES) but in lower bands of spectrum.

The Belgian CSA would be in favour of introducing an obligation to implement a multi-standard chip, supporting at least DAB+, DMB and DRM+) in all receivers at European level. As the band VHF is the main band for DAB family of standards, it is evident that the countries using or planning DAB/DAB+ or DMB have allocated their digital radio station on the band VHF (band III) according to Geneva 06 Digital Plan, where they reserved a definite number of layers. The band L, from the point of view of the networks construction (low coverage), is more expensive and can be used in case of necessity (PL, IT).

The DAB family of standards may be profitable for national or macro-regional range because of high frequency efficiency: more programmes broadcast - lower power to cover the same area – lower costs of transmission. However, for small local broadcasters the existing national GE06 plan is in the majority of cases unsuitable (large allotments around the high power stations). The countries which wrestle with this problem are intensively seeking the appropriate solution.

The simplest answer has been proposed in **Norway**. The majority of small, local radio stations will have the right to continue transmitting in FM after analogue switch-off date. In **the Netherlands** there is an idea to integrate and centralize the distribution of local PSB content to several platforms and locations. It is expected to result in significant costs reduction. In the **UK, Switzerland** and **Poland** the low cost software solution is worked out. Moreover, in **Poland**, the frequency solution for small, low power stations or a group of stations is designed on the basis of existing and additional frequency resources. In **France**, local radio stations are on the upfront of digitalization and represent a significant number of the stations which are broadcast in Paris and Marseilles in DAB+. At the moment, there is no plan to switch off analog stations and hence no solution is foreseen.

In **Belgium**, the CSA is looking into ways for implementing multi-local multiplexes through DAB+ standard and band III frequencies. DAB+ has been considered for full digital coverage of radio for fear of a lack of available DRM+ receivers, hence the Belgian CSA's support for a multi-standard chip at European level.

The concept to solve the problem of small radios stations, supported by the DRM consortium, is to use the DRM+ standard to convert these stations from analogue to digital, after totally or partially releasing the band FM by bigger broadcasters. However, it is very difficult to make such a decision at the moment without knowledge about DRM+ future in Europe.

## **Conclusions and Questions for Debate**

The present report only partially reflects the situation in Europe because of a limited number of answers to the questionnaire and because many regulators, while monitoring and documenting the digitalization process, do not engage in policy decisions concerning the future of digital radio broadcasting. However, the information collected allows drawing some conclusions and raising some important questions for discussion.

Digital terrestrial radio is developing in Europe rather slowly and unequally. There are the countries which are advanced and determined to continue the process of radio digitalization and there is another group of countries, which are currently testing the new possibility and preparing the concept. Finally, there is still a last cluster of States, which decided to observe the rest of Europe and wait for positive results before engaging in the process.

Radio digitalization process is irreversible. As the WorldDMB puts it: *"Radio needs a digital broadcast future. Through the DAB family of standards, radio can build on its strengths - great content, live, local, mobile, intimate and social - by lowering costs, enabling new content and by stimulating new revenue streams."*

As it was mentioned above, a significant part of the band VHF has been internationally reserved for digital radio in DAB standard. However, in the current situation of pressure to release the frequencies for broadband and mobile telecom services any delay in using these spectrum resources for radio, may be dangerous. Radio DAB in the band III could be in some countries the first victim of the digital dividend 2 (700 MHz), resulting in seeking the new places for terrestrial television. Spectrum has a big value. This could be summarized in a nutshell by the slogan: *"Use it, or lose it!"*

In the majority of countries, commercial broadcasters are reluctant to launch digital radio.

- *If this process cannot be carried out according the market rules only, what kind of governmental aid during the transition period will be the most expected by the stakeholders?*
- *How long should the transition period be?*

According to the Swiss Prognos AG institute<sup>6</sup>, without switching off FM there will not be any chance for success of digital radio and vice versa - without the success of digital radio there won't be any chance to switch-off FM. Is it possible to deal with this paradox?

The international decision about switching-off analogue terrestrial television was taken when countries-signatories of the Geneva agreement in 2006 were on the different stages of media digitalization. In spite of that the transition from analogue to digital of terrestrial TV in majority of countries has been successfully completed.

- *Does such an agreement make sense in the case of radio?*

Last, but not least, whereas most policy issues will eventually be left to governments to decide, what is the specific role that regulators can play?

- *Success in digital radio will require collaboration across the radio ecosystem, how can the regulator help?*
- *What are the good practices in the monitoring and documenting of the digitalization process?*
- *What are the success stories concerning awareness actions, consultation with stakeholders?*

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<sup>6</sup> <http://www.mediareports.de/offen/index.php?hf2018>