

International Conference

Approaches to the Digitisation of Audio Broadcasting in V4 Countries

Banská Bystrica, Slovakia, 18th to 19th February 2015

The DRM Standard and the Prospects of Its Implementation

Radu P. OBREJA, DRM Marketing Director

Introduction to the Digital Radio Mondiale standard and to its two modes, DRM30 and DRM+. An outline of the features of both modes and of the substantial benefits of the standard to broadcasters and regulators in terms of increased coverage, coverage flexibility and cost savings in comparison to the analogue systems. Some technical considerations will be touched upon regarding the implementation of DRM30 and DRM+, where the existing transmitter infrastructure might be used by broadcasters, if they so wish, to digitise their network, thus allowing a speedier and more cost effective launch of digital radio.

Since DRM and DAB+ have some similar features, but a different technical transmission setup (including frequency coverage), it will be beneficial for the audience to learn about their complementarity in a market. Broadcasters will gain a better understanding of what is available through these global open standards in order to satisfy their own and immediate needs for the digitisation of their radio programmes.

The presentation will conclude with information about the development of receivers as well as about how to organise and plan the launch of digital radio, so that all stakeholders in a country can work together towards it and fully benefit from its implementation.

DAB+ - More Than Radio

Miroslaw OSTROWSKI, Radio Wrocław SA, Poland

Our analogue radio ship begins to take water. Should we evacuate? In the same time everything around is digital or just becomes digital. Is that possible for radio to stay analogue all the time? In the digital era radio should also be digital. There's no other way for radio to survive. What are the possibilities? DAB+ is the best solution for the whole European continent. Spectral and energy efficiency, favourable economic aspects, robust transmission, green technology, various multimedia data services, easiness in developing new features, due to digital technology, large spectrum resources to expand program offer for listeners – there are some of advantages of DAB+ radio which is something more than the radio, we already know. Strange sounding shortcuts like DLS, SLS, BWS, EWF, EWS, Journaline, EPG, TMC and TTI will be exposed.

Digital Radio in Europe: an Update on the Rollout of DAB/DAB+ across Europe

Patrick HANNON, President of WorldDMB

This presentation will provide an overview on the status across Europe and beyond, from those countries with regular services and preparing for a digital switch over, to those trailing the technology and investigating a regulatory framework for a digital launch. Information will be provided on the benefits of digital radio (for listeners and broadcasters), progress to date and the key factors required for a successful launch of digital radio (e.g. content, coverage, retail distribution, consumer marketing and the automotive sector).

Digital Radio Toolkit - Key Factors for the Deployment of Digital Radio

David FERNÁNDEZ-QUIJADA, EBU

This presentation summarises the 'Digital Radio Toolkit', a recent study conducted by the EBU, which offers guidelines on how to handle the launch of digital terrestrial radio, building on the experiences and good practices in the countries leading this process in Europe: Norway, Switzerland and the United Kingdom.

Aiming to build the case for digital radio, 30 different key success factors were identified and exemplified with a specific national case, covering eight areas: institutional structure, policy and

regulation, content and offer, technology, switchover process, public communications, consumer electronics and the car industry.

Legislative and Regulative Aspects of Audio Broadcasting in the Czech Republic

Pavel DVOŘÁK, ČTÚ (Czech Telecommunication Office), Czech Rep.

Rethinking the Regulation of Digital Radio Broadcasting in Hungary

Péter VÁRI, Mária KISSNÉ-AKLI, NMHH (National Media and Infocommunications Authority), Hungary

Just after the RRC06 Conference, Hungary was facing big challenges in the field of digital broadcasting. It was assumed that the benefits of digital technology will inspire the players of the broadcasting era – similarly to digital television - to introduce digital radio as soon as possible. In line with the provisions of the Hungarian Digital Act, in March 2008 NMHH published, firstly in Central East-Europe, the call for tender to win the right to operate one national digital radio multiplex for 12 years.

After the successful tendering process at the end of 2008 the winner operator launched the DAB+ service with 3 transmitters in Budapest reaching almost 30 % population coverage. Despite of the original plan of multiplex operator, the improvement of the T-DAB network was stopped after 2008 because of the lack of interest of radio broadcasters.

Taking into consideration that the expected 94 % population coverage had not been reached by the end of 2014 and the regular T-DAB operation had not been started yet, the Hungarian regulator decided to outline the internal and international situation on the digital radio field and rethink the necessary or possible regulatory steps in order to move the Hungarian T-DAB from the deadlock. Despite the difficulties emerging in the recent years, the plan has remained to extend the T-DAB network as soon as possible. The question, which we need to find the right answer to is how we can reach the goals. The actuality is supported by the fact that the network operator Antenna Hungaria is owned again by the state.

The presentation is going to give a view about the Hungarian situation, conclusions of some analyses and the expected changes in digital radio.

Legislative and Regulative Aspects of Audio Broadcasting in Slovakia

Radoslav KUTAŠ, Mediálny inštitút (Media Institute), Slovakia

The legal framework of digital radio (audio) broadcasting in Slovakia is formed primarily by the Digital Broadcasting Act from 2007. The contribution outlines the general legal framework of the digital terrestrial radio (audio) broadcasting in Slovakia within the context of the switch-off of the terrestrial analogue television broadcasting that has enabled, even from the technical aspect, to exercise in full the framework set out for the digital terrestrial radio (audio) broadcasting. Within this contribution the main focus will be put not only on the national regulatory framework related to the authorisation of digital multiplex as content service and the authorisation of digital broadcasting of the broadcasting service that makes the part of the multiplex, but especially on the particularities of legal regulation for providing the terrestrial multiplex of the radio content service, and on the laid out public legal framework of the relations between provider of this multiplex and the provider of the radio broadcasting service.

Legislative and Regulative Situation in Poland

Krystyna ROSŁAN-KUHN, KRRiT (National Broadcasting Council), Poland

DAB+ Network Deployment Plans in Hungary

Zsolt ÁRKI, AH Zrt. (Antenna Hungaria Zrt.), Hungary

After a successful tendering process in 2008 Antenna Hungaria won the license of one DAB+ network for Hungary. Right after the tender the company started to deploy the network and launched the service in the capital region with three transmitter by reaching 30 % population coverage.

Despite of the original plan the further network development was stopped due to the lack of interest of radio broadcaster.

As of today the situation is more promising, all stakeholders show interest for DAB+. Antenna Hungaria has a concrete plan for network deployment to reach the expected 94 % population coverage.

This technical presentation is going to give a brief summary of the plan and foreseeable challenges.

Economic Advantages of DAB+

Jens STOCKMAN, GatesAir, Germany

Digital Radio systems offer many advantages and feature to develop a new style of radio while providing cost effective operation at the same time.

The ppt will focus on DAB+ and its impressive cost saving potential for infrastructure and operation. After an overview about the differences of DAB+ compared to FM networks the system parameter and feature of DAB+ with impact to costs reduction will be identified. Which are the parameter and how they are linked? How contribute each to them to the total cost savings? What is to consider for cost effective DAB+ system design? On generic calculation a total cost comparison between DAB+ and FM will complete the presentation.

Infrastructure, spectrum usage, coverage, energy and operation will be part of the considerations.

Impact of the Audio Broadcasting Digitisation on the Car Industry

Ján LEŠINSKÝ, STU (Slovak Technical University), Slovakia

In the last 15 years the number of road vehicles on the globe increased by 40%. By 2020 the rapidly developing countries will have a strong demand in volume over 100 % (Central Europe +10 %), the OECD area will be primarily concerned by quality (+5 %). In Central Europe a substantial development of auto mobility is expected. In years 2005 – 2014 the yearly production of passenger cars increased from 1.9 mil. to capacity of 5.4 mil. ones. The improvement of antipollution technology (by producers of cars, aggregates and fuels) combined with high automotive fleet innovation and new recycling system should bring also for Central Europe and V4 Countries (SK, PL, CZ, H) a significant improvement in mobility.

The paper describes and analyses

- auto mobility and increase in car production of V4 (1995 - 2015),
- trends of auto mobilization of the world (1965 - 2015),
- influences of car density on human - mobility (world 1800-2020),
- strategy of TRIADA producers and supplier in Central Europe countries,

On the critical basis the paper shows solutions of big discussions “Combustion engines – electro power”, or main – road motor vehicle as a “mechanical machine – or man driver machine (independent) vs. fully impact of information and communication technology” (including an offer of DAB) for all hand side of driving so popular machine in this decades - car.

Readiness of Network Operators in the Czech Republic

Tomáš ŘAPEK, TELEKO; Marcel PROCHÁZKA, ČRa (Czech Radiocommunications), Czech Rep.

a)

b) Existuje místo na trhu pro DAB (?)

FM broadcasting benefits from the high penetration of radio receivers, good transmission quality and coverage. The capacity of mobile networks will soon allow the distribution of radio broadcast via LTE. DAB will not have an easy position to assert themselves in the radio market. What are the biggest opportunities and threats for the position of DAB radio broadcasters and network operators?

Polish Radio Digital Future

Piotr WAWROWSKI, Jzef WACNIK, Polskie Radio SA (Polish Radio), Poland

Digital Radio is filling the gap between traditional FM broadcast and online services.

How Polish Radio builds the digital exclusive offer? How we expand the radio experience? How we make the digital platform appealing to our listeners? We'll try to answer these questions analyzing the Polish Radio case.

Creating the digital strategy, programming the channels, managing the additional content, advertising the digital radio – brief content overview of public service radio digitalization process in Poland.

We'll also introduce our digitalization process timeline and technical aspects of building the digital broadcast platform in Poland.

Future of Terrestrial Broadcasting from the Perspective of RTVS

Andrej DOLEŽAL, RTVS (Radio and Television of Slovakia), Slovakia

CRo Intentions in Digitisation of Audio Broadcasting

Pavel BALÍČEK, Český rozhlas (Czech Radio), Czech Rep.

Digital Radio - Possibility and Responsibility

Péter JÁKÓ, MTVA (Hungarian Public Media), Hungary

Due to the crowded FM spectrum in many countries public broadcasters are unable to start new nationwide radio services. Digital radio seems to be a possible breakthrough. However broadcasters have to be careful when making up multiplexes since sound quality is vital. Thorough listening tests confirmed that Advanced Audio Coding is less efficient than promoted earlier. In many cases experts could easily differentiate between 128 kbit/s AAC+SBR and 192 kbit/s Layer II DAB services. The results are content dependent, but even non-expert listeners found 192 kbit/s Layer II services superior to the usual data rate DAB+ services. These test results should warn everybody involved in the deployment of digital radio to keep the balance between programme count and sound quality.