DAB+ international update

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Contents

• Where does DAB+ stand today?
  - Global status – country rollouts
  - Progress in last 12 months
  - Receivers, including cars
• Why radio needs DAB+
• WorldDAB activities
• Where you’ll find us in Asia Pacific in 2018
DAB+ around the world

Established

On the move

Trials

Turkey, Ukraine

Tunisia, Algeria

Jordan, Kuwait, Oman, Qatar, UAE

Thailand, Malaysia, Indonesia, Myanmar, New Zealand

South Africa
Middle East and South Africa investigating potential

Arab States Broadcasting Union recommends DAB+

Interest and/or trials also in:
- Bahrain
- Jordan
- UAE
- Qatar
- Tunisia
- Algeria

DAB+ on air in Kuwait and trials/regulation for DAB+ in several other Gulf States

South Africa DAB+ trial covering 20% population
Eight years ago, four DAB markets

Established markets
With DAB activity across most of Europe

- Established markets
- Regular services
- Trials
In last 12 months, significant DAB progress: Norway switched off FM
Switzerland preparing for Digital Switchover
Radio needs DAB+
New ways of listening
Competition is intense

Services and aggregators

- To secure its future, radio needs to
  - innovate
  - retain its independence
New connectivity in cars
Limited capacity on FM

National radio services

Source: WorldDAB
What does DAB+ offer?
Up to six times as many services

National radio services

<table>
<thead>
<tr>
<th>Country</th>
<th>AM / FM</th>
<th>DAB / DAB+</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK</td>
<td>8</td>
<td>42</td>
</tr>
<tr>
<td>Italy</td>
<td>22</td>
<td>41</td>
</tr>
<tr>
<td>NL</td>
<td>13</td>
<td>34</td>
</tr>
<tr>
<td>Norway</td>
<td>5</td>
<td>30</td>
</tr>
<tr>
<td>Germany*</td>
<td>2</td>
<td>13</td>
</tr>
</tbody>
</table>

* Will double in next 12 months with launch of second national multiplex  
Source: WorldDAB
DAB+ offer benefits to listeners
DAB+ delivers benefits for society

- Reliability in emergencies & emergency warning
- Media plurality
- Enhanced traffic information
- Spectrum efficiency
- Lower costs and emissions

Free to air / no gatekeeper
1. How do I control my costs?

2. Will I lose listeners?

3. What about receivers?
Successful strategies of established markets

1. Infrastructure sharing
   - Public private partnership

2. Government support
   - Funding or other policy initiatives

3. Regulatory incentives
   - FM licence renewals
   - Relax ownership rules
Listeners: key to success is innovation

Brand extension strategy

**Absolute.**

analuteradio.co.uk

Analogue and digital

Digital-only services

Audience up 136% in seven years
Reach of UK commercial radio has increased by 5 million in last ten years

Weekly reach of UK commercial radio, millions

Year | Reach (in millions)
--- | ---
2008 | 31
2011 | 34
2014 | 34
2017 | 36

Source: RAJAR – all figures Q2; since Q2 2008, digital listening has increased from 18% to 49%
Existing players are the winners

% share of UK listening, top two private groups

- Organic growth
- Acquisitions

Source: RAJAR
A perspective: radio distribution cost analysis (source: EBU)

FM is by far the most expensive distribution technology.

Due to multiplex technology, DAB is inexpensive. In the best case it could be 10 times cheaper than FM.

The expense for internet distribution is highly variable and can easily grow larger than DAB, similar to FM.

Full methodology explained at: https://tech.ebu.ch/publications/tr_2017_radio
Receivers are now mass market

- 60 million receivers sold*
- Prices from USD 20

Consumer and automotive - data to end H1 2017 (as per WorldDAB infographic) plus partially reported figures for Q3 2017
Home receivers

Different functionality for different areas of the home

Kitchen, Living room and Bedrooms
• Stand alone or HiFi connected
• Easy to operate
• Good sound and external connections to HiFi
• Good DLS display

Options
• More volume
• Colour screen
• Docking
• Smartphone control app
Personal / Portable / Smartphone receivers

Portable for a variety of situations

- Work
- Relaxing
- Exercising
Consistent marketing to consumers & stakeholders
European Parliament now supports regulation

Suggested Amendment (September 2017)

“Any radio set put on the market in the EU … shall be capable of receiving digital and analogue terrestrial radio broadcasts\(^1\)

Next phase: talks between Parliament, Commission and Member States

\(^1\) shall not apply to low value, small consumer radio equipment or products where a receiver is purely ancillary.”
Automotive brands fitting DAB+
New cars with DAB growing rapidly

% of new cars with DAB+ digital radio

• 2.6 million new cars with DAB in 2017

• New cars fitted with DAB as standard:
  - 41% in core European markets¹
  - 42% in Australia

• Global volumes up 20% year on year

Source: WorldDAB, national industry associations, JATO
(1) Denmark, France, Germany, Italy, Netherlands, Norway, Switzerland and UK
DAB now standard in cars in advanced markets

% of new cars with DAB / DAB+ digital radio

Norway 98%
UK 88%
Switzerland 66%

Source: WorldDAB, national industry associations, JATO
Our members

100+ Members
Across 29 countries

Connecting
1,250+
Industry Experts

Broadcasters, regulators, network providers, manufacturers of receivers, chips, professional equipment and automobiles

MINISTRIES OF TELECOMS
REGULATORS
BROADCAST ASSOCIATIONS
BROADCASTERS
NETWORK OPERATORS
END-TO-END MANUFACTURERS

DEVICE MANUFACTURERS
AUTOMOTIVE MANUFACTURERS
RESEARCH & DEVELOPMENT
CHIP MANUFACTURERS
SOLUTION PROVIDERS
MONITORING EQUIPMENT MANUFACTURERS
7 new members since January 2018

General Motors

Toyota

OIV Croatia

Avatec

Inovonics

RAI Italy

Pluxbox
How we work

• Define and maintain **digital radio standards** based on the DAB family of standards
• Work with **broadcasters** (public and private), **policymakers** and **regulators** to adopt DAB digital radio and safeguard appropriate regulation and sufficient spectrum
• Encourage **receiver, automotive** and **mobile phone manufacturers** to include DAB in as many devices / vehicles as possible
• Support broadcasters by sharing **best practice** between stakeholders and encourage **collaboration** (national and international) to secure the successful deployment of DAB

WorldDAB Steering Board
Cross section of member segments and geographic regions

- International Marketing Group
- Regulatory & Spectrum Committee
- Technical Committee
- Asia-Pacific Committee
- Digital Switchover Group
- Automotive Working Group

Task Forces

Project Office

Automotive User Experience Group
HOW WORLDDAB CAN SUPPORT BROADCASTERS IN ASIA PACIFIC

Workshops on DAB+

- Features
- Technical operation
- Network and RF planning
- Trials / demonstrations
- System design
- Assistance and guidance for local broadcasters
- Bringing equipment suppliers
- Connecting with receiver manufacturers
- Connecting with auto manufacturers
WorldDAB Asia Pacific events - 2018

- Broadcast Asia, Singapore, 26-28 June – radio stream on 27th

- WorldDAB/ABU/ASBU/AIBD DAB+ technical workshop and demo, 23-27 July Kuala Lumpur

- ABU General Assembly, October 2018

We await your invitation
Conclusions and next steps

1. DAB+ is making significant progress, thanks to industry collaboration – opportunity to share best practices

2. DAB+ is required to secure the future of radio

3. WorldDAB is here to help and support
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