

Digital Radio in Europe - Understanding your choices

audiences
digital distribution
online activity and reach
future models

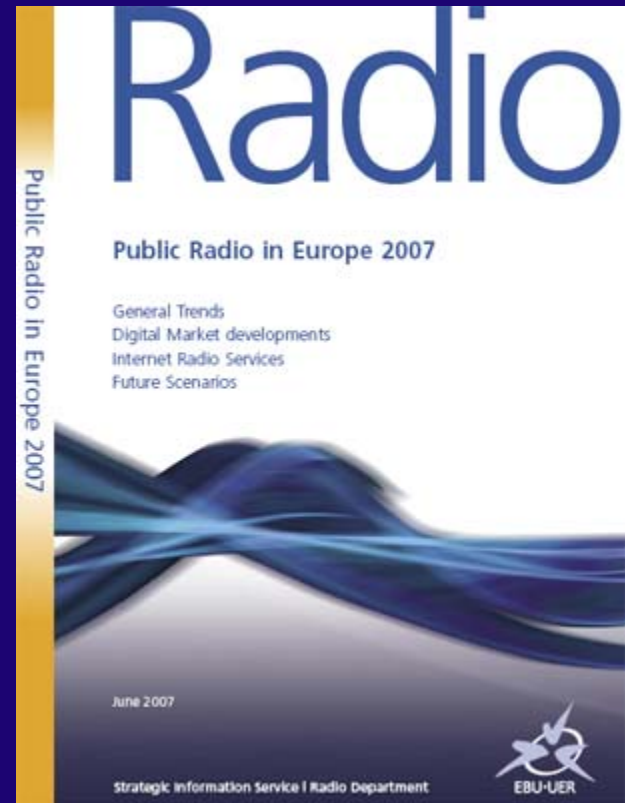
Alexander Shulzycki
European Broadcasting Union

Quo Vadis Digital Radio?, Munich, October 9, 2007



2007 EBU Radio Report

- ❑ Produced in collaboration with SIS (Strategic Information Service) and EBU Radio Department
- ❑ Covers the major EU countries as well as Norway, Switzerland
- ❑ Information in the report is based on an in-depth survey of EBU Members
- ❑ Research conducted 4Q 2006, 1Q 2007
- ❑ Availability: free to EBU Members



General Findings (1)

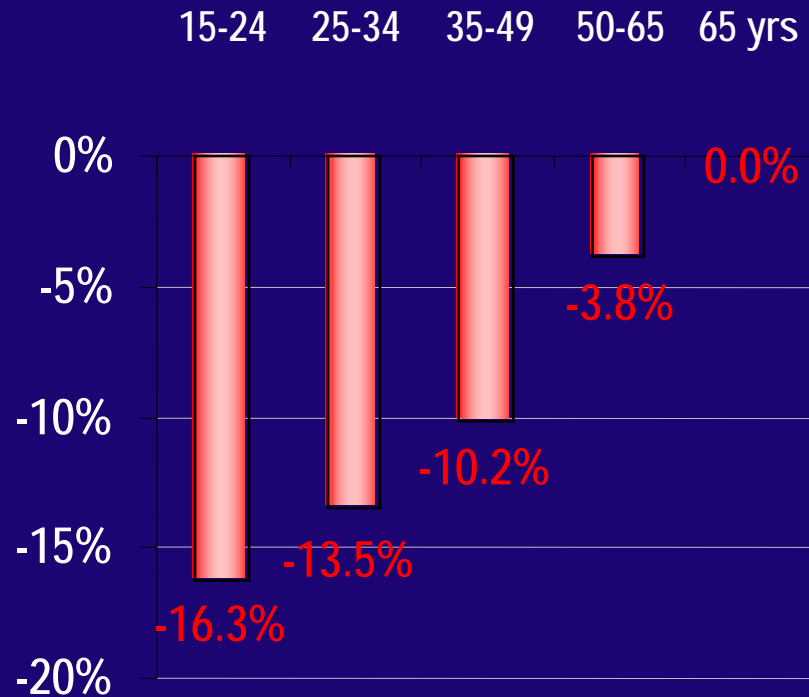
- ❑ Analogue audiences will continue to decline especially among younger listeners
- ❑ Digital radio in the form of DAB has succeeded in several markets because of a strong commitment by public service broadcasters
- ❑ Digital radio in the form of DRM has received strong support from Public Service Broadcasters. The majority of DRM content today is supplied by PSBs
- ❑ Countries with a significant investment in DAB and an installed base of consumer equipment will proceed with DAB
- ❑ The availability of new standards may pause development in other markets
- ❑ The rate of technology migrations will increase and multiple platforms will coexist, both for Europe for some individual countries.

General Findings (2)

- ❑ Consensus of all key industry players is necessary to drive radio digitalisation
- ❑ The European Commission may facilitate digital radio through further market study and guidance when appropriate
- ❑ Without a dedicated transmission network, radio may risk being subsumed by other platforms dominated by television or other services. Radio broadcasts may lose prominence if offered as a supplementary service by aggregators controlling the menus, EPGs, and technical parameters of transmission
- ❑ Public service radio broadcasters have strong presence on internet
- ❑ Analogue switch-over is not on the horizon for radio

Youth Audience decline

Change Time Spent Listening in France (1995-2005)



Source: Radio France

Drop in youth audiences for radio is a universal tendency.



DAB – overall situation

Launch Status: **Launch**

Denmark (99%), Belgium (98%), UK (90%), Germany (85%), Norway (80%), Switzerland (73%)

Launch Status: **Soft Launch**

Portugal (75%), Netherlands (70%), Spain (52%), Italy (50%), Ireland (37%), Sweden (35%), France (25%)

Launch Status: **Testing**

Hungary (30%), Czech Republic (20%), Estonia (20%), Greece (20%), Lithuania (20%), Poland (20%), Austria (19%), Slovenia (15%), Romania (15%)

Launch Status: **None**

Bulgaria (0%), Latvia (0%), Slovakia (0%)

Launch Status: **Terminated**

Finland (0%)

The situation remains fluid.



DAB Channels, Coverage, Take-up

<u>Country</u>	<u>Channels</u>	<u>Public</u>	<u>Digital</u>	<u>Coverage</u>	<u>Take-up (000)</u>
Denmark	19	17	14	99%	720
Belgium	14	14	4	98%	150
UK	215	43	22	90%	4,800
Germany	109	45	52	85%	546
Norway	18	15	11	80%	385
Switzerland	30	30	6	73%	50

DAB take-up totaled about 6.6 million in the most developed markets between 4Q 2006 and 3Q 2007

Reasons for DAB success

- ❑ government commitment and effective spectrum allocation
- ❑ PSB initiative with balanced offer from commercial broadcasters
- ❑ wide network coverage
- ❑ clear guidance to receiver manufacturers
- ❑ variety of affordable consumer receivers
- ❑ extensive and effective marketing

A consensus of key players ensuring content, coverage, and consumer equipment.

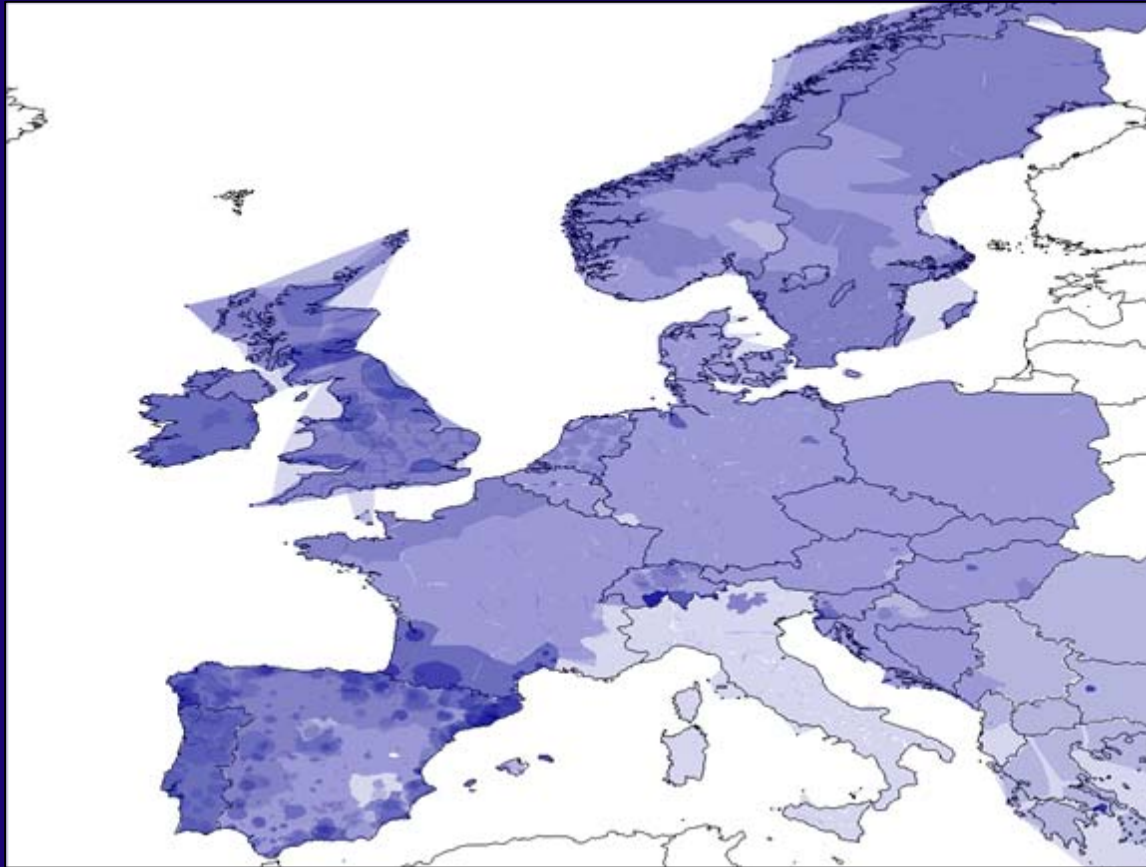


Reasons for DAB Shortcomings

- ❑ FM has, and will continue to be, an effective radio delivery platform.
- ❑ commercial radio channels hesitating or obstructing
- ❑ lack of commitment from government on spectrum policy and funding.
- ❑ inadequate coverage
- ❑ reception issues (power limits, insufficient indoor)
- ❑ small stations not financially feasible
- ❑ insufficient consumer awareness
- ❑ relatively high cost of receivers
- ❑ competition from MP3, internet, etc.

Recently, new standards are forcing a re-think of strategies

Geneva Frequency Planning Conference RRC-06 Results for DAB Coverages



DAB coverages:
Darker = more
Lighter = less

Source: EBU

Demonstrates potential interest by National administrations, however, DVB-T block can latter be allocated to DAB.

Spectrum for Digital Radio Systems

Band	Frequencies	Analogue systems	Digital systems
LW, MW, SW	<30 MHz	AM radio	DRM
Band I	47-68 MHz	TV	(DRM+)
Band II	87.5-108 MHz	FM radio	(DRM+)
Band III	174-230 MHz	TV	DAB/DMB, DVB-T
Band IV and V	470-862 MHz	TV	DVB-T/H
Band L	1452-1492 MHz	-	DAB/DMB

Source: EBU

DAB implemented in Band III



National Tendencies: DAB, DMB, DAB+

Countries with substantial installed base will be cautious about alienating existing digital radio customers:

- Switzerland (only 50,000 receivers sold) may move first to DAB+
- Denmark and Norway are considering DMB
- Germany and Portugal are looking at DAB+

- Italy – moving to DMB
- Austria – looking at DMB
- Ireland – continuing with DAB
- France – DMB is “preferred choice”
- Finland - DVB-H

Other countries – no strong indications in recent period

DAB standards are not mutually exclusive



Flexibility of DAB Standards

- ❑ Broadcasters have the flexibility to offer a combination of DAB, DAB+, and DMB services within the same multiplex.
- ❑ The main issue is the ability for end-user devices to receive the various standards.
- ❑ For the installed base of DAB receivers only those services in the original standard can be accessed
- ❑ DAB+ receivers will be backwards compatible but not be able to decode any DMB services
- ❑ Only DMB receivers, theoretically, will be able to pick up services from all standards

Flexibility for broadcasters but potential confusion for customers



DRM Status

- ❑ Approximately 800 hours of DRM broadcasts each at the end of 2006 and that this amount may double this year.
- ❑ Most of this output is being provided by public service radio broadcasters.
- ❑ Receiver prices still relatively high.
- ❑ DRM Consortium has a project to extend the DRM system to operate in all the broadcasting bands below 120 MHz. This range includes 87.5 MHz to 107.9 MHz (Band II) allocated to FM radio broadcasting.
- ❑ DRM and DAB can coexist as act as complementary rather than competing platforms. The DRM Consortium and WorldDMB have a cooperation agreement. Multi-band receivers are already available.

Main players are Deutsche Welle, BBC World Service, Radio Netherlands Worldwide, plus national broadcasters in France, Germany, UK.



Other Digital Radio Possibilities

DVB-H - Digital Video Broadcasting to handhelds is being implemented in parts of Europe mostly by telecom operators who are focusing on mobile television. For example in a recent test in Sweden, Nokia highlighted 14 TV channels and only 4 radio stations.

HD Radio IBOC - High Definition Radio is the standard used for terrestrial radio in the United States. It has been tested in Switzerland, but no European country is expected to adopt the technology.

Satellite Radio - Pay services exist in the United States. World Space has launched services in other parts of the world and is exploring potential for Europe.

3G mobile telephones - In a recent mobile usage survey radio listening ranked 6th, with only 19% of mobile phone users in the EU and Norway regularly listening to radio over their mobile phones. Visual Radio has been offered on mobile phones combining FM reception synchronized with WAP/GPRS. The economics of mobile operators "broadcasting" radio channels may not be optimal.

WiMAX - Extending wireless IP-technology to portable devices dedicated to radio. These networks are being rolled out in many European countries.

Many believe that without a dedicated transmission network, radio may risk being subsumed by other platforms dominated by other services. Radio may lose prominence if offered as a supplementary service.



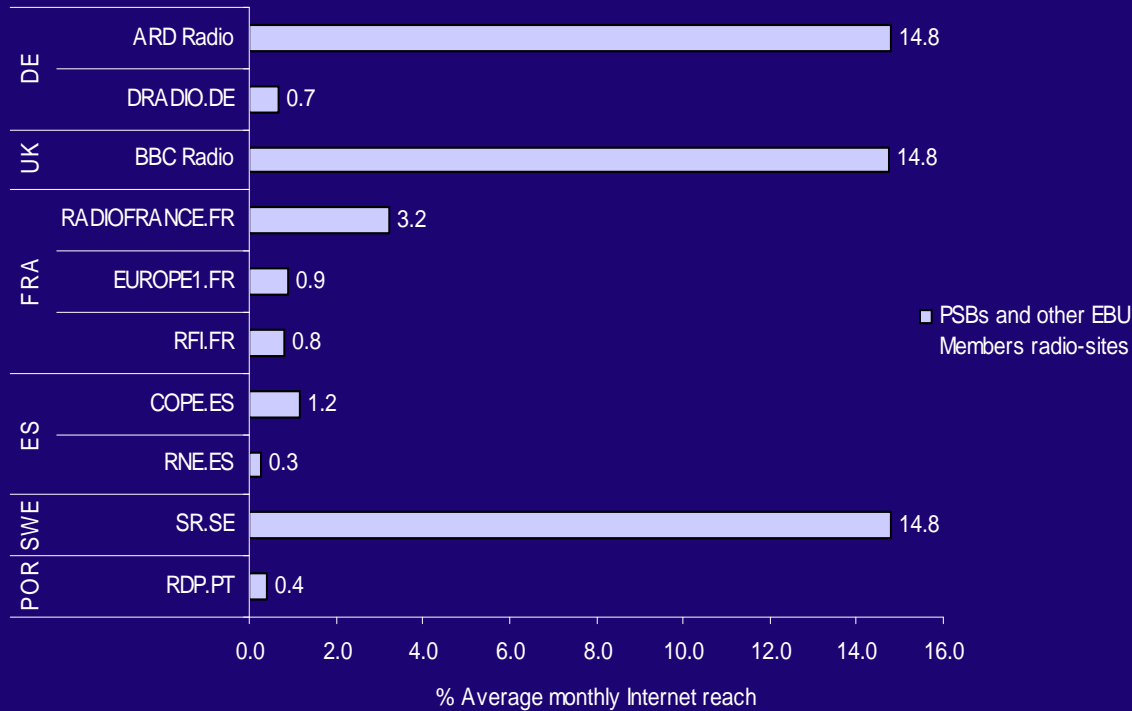
Internet visitors to radio sites

Radio Website Usage (in thousands) in Europe April 2007

Country	total unique visitors	to radio sites	% to radio sites	PSB rank
Austria	3,721	487	13.1%	1
Belgium	4,728	1,148	24.3%	1
Denmark	3,045	439	14.4%	1
Finland	2,818	399	14.2%	1
France	25,388	5,153	20.3%	2
Germany	32,578	9,344	28.7%	1
Ireland	1,365	107	7.8%	1
Italy	18,086	1,529	8.5%	2

Only broadcasters know details of activity: streaming, podcasting, etc.

Internet reach for Radio PSBs



Source: ComScore Internet database

ARD1, BBC2 and SR radio sites stand out as the most popular radio web-sites. These sites had an average of 14.8% Internet reach per month in 2006.

¹ Aggregate of all main ARD radio channel sites

² Aggregate of all main BBC radio channel sites



Future of Radio

The Commercial Prospective

		Availability in 2006	Ad revenue potential	Consumer payment potential	
Broadcast radio	Radio	Analog radio	High	High	Low
		Digital radio	Medium	High	Low
		Mobile radio	Low	Low	Medium
		Satellite radio	Medium	High	High
		High def radio	Low	High	Medium
	www	Free streaming	High	Low	Low
		Subscription services	High	Low	High
		Podcasts	Medium	Low	High
		Archive services	Low	Low	High
		Aggregation services	Low	Low	High

Source: Deloitte Touche Tohmatsu, 2005

Revenue expected from emergence of subscription radio



Future of Radio

The Commercial Prospective

- ❑ Radio stations will move away from the advertising and generate more diverse revenue streams.
- ❑ Radio customers will assume greater control of their listening experience and be able to choose the level of advertising they wish to be exposed to.
- ❑ High quality content and classic archive material could be reserved for paying customers only. There are licensing opportunities for established radio broadcasters.
- ❑ The globalisation of local radio can boost revenue streams.
- ❑ Subscription radio will develop worldwide.

Source: Deloitte Touche Tohmatsu, 2005

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Future of Radio

Results of DRACE Analysis

- ❑ By 2015 FM will still be a significant distribution platform in Europe.
- ❑ There will be distinct national solutions and multiple co-existing digital systems for radio delivery.
- ❑ DAB was seen as important primarily in countries with existing networks.
- ❑ Radio will offer much more personalized and specialized content - also with multimedia elements- which will be then actively selected by the users, but...
- ❑ continued belief in traditional strengths of radio: mobility, easy access, real-time broadcasts, localism and integration with the community, personalities, entertainment, traditional journalistic and artistic audio programming.

Source: DRACE – Digital Radio Cultures in Europe

Research based on 43 expert interviews



Future scenarios for the Radio media

<p>'Digital diversity'</p> <p>Multimedia, on-demand and subscriptions are gradually becoming as important as traditional broadcast radio</p>	<p>'Multimedia market'</p>
<p>Radio will become digital by using different technologies in different markets. No dominant design on a global level.</p> <p>'Towers of Babel'</p>	<p>Delivery technology</p> <p>Digital radio will have a dominant design: a globally used technology or a combination of fully compatible technologies</p> <p>Free broadcast delivery and linear/real-time consumption of radio content is the most important way to use both analogue and digital radio.</p> <p>'DAB Dream'</p>

Source: DRACE – Digital Radio Cultures in Europe

Most (37%) expect that future consumption will be based on free broadcast delivery but over different platforms while most consumption would remain in real time.

