

## Global Market Analysis and Strategic Outlook: 2006-2012

### Digital Radio 2006

#### A Global Review of Digital Radio in 50 countries

*A comprehensive report on digital radio development providing the latest information on the status and prospects of various digital radio technologies around the world*

##### Includes:

- A comprehensive analysis of the prospects and key challenges facing DAB over the next six years, including details of new DAB spectrum allocations, latest information on proposed multimedia services, new technical standards and new multimedia-capable DAB receivers
- Case study analysis of digital radio in the United Kingdom. Details of the acceleration of multi-platform radio listening, expected impact of new spectrum, new services and licensing plans, DAB product range and receiver sales breakdown and the emerging role of DRM as a platform for small commercial and community radio stations
- A 75-page review of DAB around the world split by region: Europe (including eastern Europe and Russia), the Asia-Pacific region (including India and China) and the Americas. Review based on a comprehensive survey of digital radio developments and future plans in 50 countries
- An evaluation of the Eureka-147 DAB standard as a low-risk platform for mobile operators to quickly enter the mobile TV market. Will mobile TV help to re-ignite DAB growth in stalled markets? Are there risks for radio broadcasters?
- A 30-page review of Digital Radio Mondiale (DRM). The development of DRM+ will transform DRM into a flexible and cost-effective digital radio standard. What are the key challenges facing DRM? Is it being positioned as a direct competitor to DAB?
- An analysis of the prospects of HD Radio in the US and around the world. When will the HD market start to grow and what impact will HD Radio have on the growth of satellite radio in the US?
- More than 125 interviews carried out in researching this report with: broadcasters, regulators, chipset manufacturers, network operators, receiver manufacturers, satellite companies, public organizations and institutions, trade groups (WorldDAB, DRDB, RadioCentre, DRM Consortium, iBiquity), etc.

Declining advertising revenues and media convergence are accelerating the transition of radio to digital and broadcasters are busy evaluating the merits of various digital platforms.

During the past three years, the prospects for DAB have improved substantially around the world. DAB is no longer a UK-only phenomenon and receiver sales are increasing rapidly in several European countries.

In South Korea, mobile TV via the DMB standard has had an impressive start with over a million receivers sold to date and similar services are being launched in China, Germany and the UK. There are now more than 250 DAB and 100 T-DMB receiver products on the market with prices of DAB audio products starting as low as 30 GBP.

The recent allocation of new spectrum for radio means that DAB has returned to the agendas of many regulatory authorities. Eureka Research's latest global digital radio survey revealed that several countries are

*“DAB will become a fully interactive multimedia platform in the next 3 years”*

firming up plans to launch DAB services within the next 12-18 months.

In 2007/8, DAB will enter a new period of accelerated growth driven by the availability of this new spectrum plus the introduction of new revenue-generating opportunities enabled by the availability of new multimedia receivers and mobile TV

phones. In the next three years, DAB will change from being a virtually audio-only platform into a fully interactive multimedia and mobile TV platform capable of delivering a range of revenue-generating services such as music downloads, mobile TV services, visual radio content (graphics, images), TPEG traffic and travel information, etc.

But DAB is no longer the only terrestrial digital radio standard. The development of new technologies such as DRM (and in particular DRM+), HD Radio and ISDB-TBS as well as mobile TV standards such as DVB-H means that DAB's monopoly as the only mobile digital terrestrial radio technology is coming to an end. The availability of these technologies means that broadcasters around the world will have an increasing choice of technical standards in the future.

***“Digital Radio 2006-2012” is a 265 page, non-commissioned, independent report providing an objective analysis of the global digital radio market during the next 6 years***

**Some of the Key Business Issues addressed in this report include:**

- What impact will new spectrum have on DAB growth during the next 6 years?
- Which countries plan to launch DAB services in 2006/07?
- How can DAB penetration in vehicles be increased?
- Will DRM be positioned as a competing or complementary technology to DAB?
- What are the prospects of a DAB revival in Germany?
- Which countries are best placed to exploit new DAB spectrum and which countries still lack sufficient spectrum?
- What impact could new codecs have on the adoption and growth of DAB worldwide?
- What are the risks of introducing new DAB codecs?
- Is DRM a better solution than L-band DAB for local radio services?
- How can broadcasters develop successful DAB business models?
- What are the prospects of HD Radio deployment in Europe?
- Which countries will drive the adoption of mobile TV via DMB and DAB-IP?
- Has satellite radio missed its window of opportunity in Europe?
- Is there a viable business case for S-DMB in Europe?
- Will other IBOC standards supplant HD Radio for AM broadcasting in the US?
- Will mobile TV via satellite survive in S. Korea and Japan?
- Will DRM be able to avoid the receiver-supply problems experienced by DAB?
- What will drive DRM growth in the short-term?
- What are the commercial prospects for music download services via DAB? Can they compete with iTunes?
- When will the first DAB receivers with PDA-sized colour screens be launched?
- What impact will “1-seg” ISDB-T mobile TV services have on S-DMB in Japan?
- How will Ibiqity change its HD business model to penetrate markets outside the US?
- What impact will PLT interference have on DRM reception in the home?

# Report Contents

## Executive Summary

### 1. Radio and the Digital Challenge

*Threats to radio; Digital radio platforms: multiple platform distribution, growth in digital radio listening in the UK; Competing in the converged marketplace*

### 2. DAB: The next six years

*Key drivers for future growth; DAB as an interactive multimedia platform: leveraging DAB to increase advertising revenues; music downloads and multimedia content, data services; The mobile TV opportunity: standards, trials & commercial services, mobile TV in S. Korea, the China opportunity; Case Study: DAB in the UK; Challenges facing DAB: reigniting growth in stalled markets, the codec issue, maximizing the mobile TV opportunity, increasing DAB penetration in vehicles, investing in new digital content, developing successful business models, competing standards, etc.*

### 3. DAB in the EMEA Region

*A 50-page review of DAB developments in 30 countries in the EMEA region with emphasis on spectrum and regulatory developments, network coverage and services*

### 4. DAB in the Asia-Pacific Region

*A 20-page review of DAB developments in 11 countries in the Asia-Pacific region with emphasis on spectrum and regulatory developments, network coverage and services*

### 5. DAB in the Americas

*Review of DAB developments in Canada and outlook for introduction of DAB in Latin American countries with emphasis on spectrum and regulatory developments, network coverage and services*

### 6 Prospects for Digital Radio Mondiale

*The DRM standard: benefits of DRM, audio quality and codecs, DRM in the 26 MHz SW band,*

*DRM in the FM bands, simulcasting with DRM; DRM for local, national and international broadcasting; DRM around the world: China, France, Germany, UK, North America, etc. DRM receivers: prototypes and commercial devices; DRM IPR; DRM vendors; Challenges facing DRM; The case for DRM*

### 7. A Review of HD Radio

*The technology: NRSC-5 IBOC standard, HDC audio codec, other codecs, HD2 multicasting; The US market: HD roll-out, HD multicasting, marketing and distribution—the HD DR Alliance; HD around the world: the Americas, Europe, Asia-Pacific; Receiver design issues: multicast-enabled receivers, tuning & display issues; HD receivers; Data services via HD Radio: first-generation receivers, second-generation receivers; AM IBOC issues: nighttime listening, other technologies for AM; iBiquity shareholders; HD business model; Licensed vendors; Regulatory issues; Challenges facing HD Radio; The case for HD Radio*

### 8. Digital Radio via Satellite

*North America: the players, content & business models, core automotive market, new personal devices market, financial outlook & growth prospects, regulatory challenges, data and video services, mobile TV via satellite; Asia: WorldSpace (India), MobaHo! (Japan), TU Media (South Korea); Europe: spectrum & regulatory issues, is there a market in Europe?, business models, telematics & mobile TV opportunity*

### 9. Digital Radio in Japan

*The ISDB-TBS standard & frequencies; trials and commercial services; 1-seg ISDB-T mobile TV*

### 10. Digital Radio Forecasts

*DAB: the EMEA region, Asia-Pacific region, the Americas, Mobile TV via DAB; DRM: the EMEA region, the Asia-Pacific region, RoW; HD Radio: US & RoW, Satellite radio: North America, Asia & Europe*

## Companies and organizations discussed in this report include:

Arqiva; BLM; BBC; Boston Acoustics; BT Movio; Channel 4; Coding Technologies; DRDB; Danmark Radio; Deutsche Welle; Digital One; EBU; Emap; Factum Electronics; Fraunhofer IIG; Frontier Silicon; Gcap Media; Imagination Technologies; iBiquity; KBS; LG Electronics; MBCo; MediaCorp. Radio; NHK; NRJ Group; NRK; Panasonic; PC Radio; PersTel; Polk Audio; Philips; Pure Digital; RadioScape; Roberts Radio; Samsung; SARFT; Sirius Radio; SK Teletech; Sony; SSR; Swedish Radio, TDF; Texas Instruments; Towercast; TU Media; UBC Media; Unique Interactive; VDL; VT Communications; WorldDAB; WorldSpace; XM Radio;

## Who should buy this report?

Radio and TV broadcasters; network operators; broadcast infrastructure manufacturers; chipset developers; receiver manufacturers; mobile operators; mobile phone manufacturers; software and content providers; policy developers; regulators; advertising agencies; trade organisations; etc. who want:

- The most detailed and up-to-date review of DAB around the world including details of future plans for trials and commercial services
- To understand the multimedia capabilities of DAB and how the Eureka-147 DAB standard can be used to deliver a variety of revenue-generating multimedia content using existing networks
- To understand the capabilities and prospects of new digital radio standards such as DRM and HD Radio and their impact on DAB deployment around the world
- Detailed 6-year forecasts of digital radio growth broken down by geographical region and by technology (DAB, DRM, HD Radio, ISDB-TBS, satellite radio), including forecasts for Eureka-147-based mobile TV devices

### About Eureka Research

Eureka Research is an international market research and consulting organization specializing in digital radio and mobile multimedia broadcasting technologies and services.

Set-up by a number of ex-Gartner analysts, it has a presence in Europe and in the United States.

Since its formation in late 2003, Eureka has published a number of comprehensive reports about digital radio via DAB and other technologies such as DRM, HD Radio and satellite radio.

### About the author

Gareth Owen is a Research Director at Eureka Research. Prior to setting-up Eureka in 2003 he was an analyst at the Gartner Group for 6 years and specialized in mobile data and broadcasting technologies and services. Prior to Gartner he worked for many years as an R&D engineer on research contracts for the European Space Agency which culminated in a Research Fellowship at ESA's research and technology centre in Holland.

He has a combined B.Sc. (Hons) in Engineering and German, a Ph.D in Control Engineering and an MBA in Innovation. Strategy and Information Technology

## Prices and pricing options for this report ...

### **Digital Radio 2006 - A Global Review**

Complete 265 page report:

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- Paper copy @£2050/€3060

### **Option 1: DAB only** (150 pages)

Chapters 1-5 plus DAB forecasts in Chapter 10:

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