

Global Market Analysis and Strategic Outlook: 2005-2010

Mobile Multimedia Broadcasting

Opportunity or threat to mobile operators?

A comprehensive report analysing the commercial prospects of using broadcast networks to deliver TV and video services, music downloads and other multimedia content to mobile devices

Includes:

- Comprehensive analysis and comparison of digital radio and television technologies: DAB, T-DMB, DVB-H, ISDB-T, S-DMB, Qualcomm's MediaFLO. How will these technologies be deployed around the world?
- Interviews with regulators in 17 European countries providing the most up-to-date spectrum and regulatory picture for MMBS. Which European countries plan to allocate UHF Bands IV/V spectrum for DVB-H prior to analogue TV switch-off?
- A review of the global roll-out of digital radio, detailing how existing digital radio networks are being used to deliver multimedia content today. Includes a 15-page analysis of how digital radio technologies can be used to offer mobile TV, music download services and various data services with minimal network expenditure
- Television in the digital age. Analysis of new trends in home TV consumption and new TV technologies, players and business models. How will this affect mobile TV viewing?
- Analysis of MMBS business cases, risks and the role of broadcasters, content providers and mobile operators in the value chain. How will MMBS gateways be regulated and who will own the customer? Could free content from public broadcasters distort the commercial market for mobile broadcast services?
- A 20-page review of MMBS trials and commercial services covering DAB/T-DMB; mobile DVB-T and DVB-H; S-DMB and ISDB-T technologies. Latest information on MMBS receivers and terminals
- Almost 100 interviews carried out in researching this report with: broadcasters; chipset manufacturers; network operators and infrastructure providers; mobile operators; handset and receiver manufacturers; public organizations and trade groups (ITU, WorldDAB, Digital TV Group, etc.)

Radio and TV broadcasters - anxious to leverage their content and spectrum assets - are looking to capitalize on the future consumption of mobile TV and multimedia content by developing new networks to deliver a range of mobile multimedia broadcast services (MMBS): from live simulcast TV, and video streaming to music download services and a variety of data content.

Satellite-based MMBS have already been launched in South Korea and Japan. Terrestrial DAB-based MMBS services will commence in both South Korea and the United Kingdom in early 2006.

However, the convergence of the broadcast and mobile industries is raising a host of new issues: will spectrum be awarded on a beauty-contest basis or

auctioned to the highest bidder; will MMBS gateways be subjected to broadcast regulations or unregulated as in the mobile world; who will own mobile content rights?

Will MMBS networks enable broadcasters and content providers to by-pass mobile operators?

The plethora of new technologies – both open and proprietary – and the scarcity of spectrum in some parts of the world means that MMBS phones will need to be multi-band and even multi-standard.

But mobile broadcast technologies such as DAB, DVB-H and

S-SMB will not be confined to mobile phones: they will also be incorporated into a variety of non-phone consumer devices such as personal music players, portable video players, mobile PCs as well as a range of devices targeted at the automotive market — and could amount to a significant second market opportunity.

Whilst it is clear that the addressable market for MMBS services is substantial, it remains to be seen whether or not subscription MMBS will become a major new money-spinner for service providers, or merely an effective way of reducing churn.

Either way, the introduction of TV screens into mobile phones will introduce many new functionalities and will revolutionize the way consumers use their mobile phones in the future.

“Mobile Multimedia Broadcasting — Opportunity or threat to mobile operators” is a 220-page, non-commissioned, independent report providing an objective analysis of mobile broadcast services during the next 5 years

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

- What kind of content will be the most appropriate for MMBS delivery?
- When will UHF Bands IV/V spectrum become available for DVB-H in Europe?
- Will DAB and DVB-H become compatible standards?
- Who will control the MMBS revenue model: broadcasters, mobile operators, others?
- How do European countries plan to use VHF Band III post RRC-06?
- Will consumers pay for MMBS services or are they more likely to be marketed as churnbusting services?
- Can T-DMB compete against S-DMB in South Korea
- Is there a viable business case for S-DMB in Europe?
- How can interactive TV services be leveraged to generate revenues in a mobile environment?
- Will analogue TV switch-off dates need to be extended beyond current projections?
- MMBS via DAB or DVB-H: Which offers the lowest business risk?
- Who will own the MMBS gateways and what are the competition issues involved with gateway ownership?
- Which frequency bands are being considered for S-DMB in Europe?
- What implications will recent FCC ATC regulations have on satellite multimedia delivery?
- How will changes in home TV consumption affect mobile TV usage?
- Will mobile TV phones need a TV license and how will roaming issues be solved?
- Will any countries deploy hybrid DVB-T and DVB-H networks?
- Who is best-placed to offer wireless delivered music downloads: radio broadcasters or mobile operators?
- What impact will new PVR-based download-services such as TiVoToGo have on MMBS business models?
- Is there a market for portable video devices equipped with MMBS delivery?
- Which European countries intend to auction UHF L-band spectrum for MMBS?

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2. Mobile Broadcast Platforms

Digital radio standards: DAB, T-DMB, DRM, HD Radio, ISDB-TSB; digital TV standards: mobile DVB-T, DVB-H, ATSC, ISDB-T, Qualcomm's FLO and MediaFLO; hybrid satellite/terrestrial systems; cellular broadcast technologies, comparison of technologies

3. The Battle for Spectrum

Analysis of existing spectrum allocations; RRC-06: planning criteria, results of first planning exercise; demand for VHF and UHF spectrum; using L-band for DAB and DVB-H; the digital "dividend"; spectrum availability in European countries post RRC-06; spectrum auctions; analogue TV switch-off

4. A Review of Digital Radio

Trends in radio; DAB accelerates; country focus: the UK, Germany, France; progress in other countries; DAB receiver forecasts; DAB outside Europe; Digital Radio Mondiale; HD Radio in the US; ISDB-TBS in Japan; New markets for satellite radio

5. Delivering MMBS via Digital Radio

Data delivery via DAB; spectrum availability for MMBS via DAB; the music download opportunity: GCap Media's "Hear it, buy it, burn it", DAB Digital Walkman; Mobile TV via DAB: BT Livetime; DAB data services and applications.

6. TV in the Digital Age

Threat of new business models; new trends in TV consumption; the BBC in an on-demand

world; battle of the content distributors; personalized TV; downloading content to mobile and portable devices: Pace PVR2GO, portable home media centres, TiVoToGo, EchoStar's Pocket-Dish; adapting to the new digital media world; implications for MMBS providers

7. DTT: Implications for MMBS

DTT in Europe: country briefs, barriers to commercial success, implications of analogue switch-off; DTT in North America, Asia & Latin America

8. Mobile Broadcast Business Case

Content: types of content, formatting content, metadata and the TV Anytime project; exploiting interactivity; user surveys; content delivery; MMBS business models; addressable markets for MMBS: phones, music players, video players, etc; mobile broadcast network convergence; challenges ahead

9. MMBS Trials and Services

DAB & T-DMB trials; mobile DVB-T and DVB-H trials, ISDB-T trials; hybrid satellite/terrestrial trials and commercial services

10. MMBS Receivers & Terminals

Key design issues; chipset manufacturers; S-DMB phones; T-DMB phones; DVB-H and ISDB-T phones and receivers

11. MMBS Forecasts

Mobile phone devices, personal music players, portable video players, mobile PCs, automotive market

12. Summary and Conclusions

Companies and organizations discussed in this report include:

Alcatel Space, Arqiva; Bayern Digital Radio; BBC; BSkyB; BT; Crown Castle; Denmark Radio; Digital One; EBU; Emap; ERTICO; Fraunhofer IIG; Frontier Silicon; Gcap Media; Imagination Technologies; oBiquity; Inmarsat; LG Electronics; MBCo; mmo2; Nokia; NHK; NRJ Group; NRK; Pace Micro; PersTel; Philips; Pure Digital; Qualcomm; RadioScape; Samsung; SES; Sirius Radio; SK Teletech; Sony; SSR; Swedish Radio, TDF; Texas Instruments; TiVo; Towercast; TU Media; UBC Media; Unique Interactive; VDL; Virgin Radio; WorldDAB Forum; WorldSpace Europe; XM Radio;

