

Global Market Analysis and Strategic Outlook: 2008-2012

T-DMB Mobile TV

A Global, Regional or Korean-Only Standard?

A comprehensive report on the prospects of T-DMB mobile TV adoption around the world.

Includes:

- A review of Eureka-147 mobile TV standards (T-DMB, DAB-IP and variants) including future technological developments, and updates on latest DAB data standards and data applications
- A detailed review of spectrum availability in VHF Band III and L-band post RRC-06. Latest information on digital dividend spectrum allocations or plans for the majority of western European countries
- A 55-page review of T-DMB trials and commercial services around the world (plus information about DAB-IP trials and commercial services). Also provided is a detailed assessment of the prospects of T-DMB in each individual country and likely scenario.
- Latest information on DAB digital radio in the core European and Asia-Pacific regions. This includes information on the number of multiplexes deployed, available services, regulatory environment and installed base of DAB receivers
- Latest information about DAB data services in key countries including information on interactive data services in South Korea
- Overview of T-DMB receivers and future trends and technological developments. Detailed list and brief details of all devices.
- Detailed profiles of main T-DMB vendors. Profiles include information on DAB and mobile TV products, strategic partners and major customers and highlight their core competences, major achievements and key product differentiators. List of vendors include head-end and RF network suppliers, key chipset design houses plus vendors offering content protection and content authoring solutions
- More than 100 interviews carried out in researching this report with: broadcasters, regulators, chipset manufacturers, network operators, receiver manufacturers, public organizations and institutions, trade groups, etc.

With more than 8.7 million devices sold in two years, the growth of mobile TV via T-DMB has been impressive and FTA T-DMB services have proved to be a big hit with Korean consumers.

T-DMB networks are being rolled out across the whole country during 2007/08 and Korean broadcasters are entering a second phase with the launch of a range of interactive pay-data services.

T-DMB vendors are now aggressively looking for export markets around the world backed by considerable political and financial support from the Korean government.

However, achieving similar success outside Korea will not be easy for a variety of reasons, particularly in regions where there is strong political support

for competing technologies, such as in Europe and in China.

One of the key advantages of T-DMB is that it is based on the Eureka-147 DAB standard. There is extensive DAB network coverage in Europe and in other

“Will FTA T-DMB mobile TV services undermine DVB-H pay services in Europe?”

parts of the world and many more networks will be deployed during the next five years following the release on new spectrum.

DAB radio, data and T-DMB services share the same spectrum, transmission protocol, infrastructure and even receiver

components all of which gives unmatched flexibility, speed and economies of scale.

Although fewer TV channels can be carried on a 1.5 MHz Eureka-147 DAB multiplex compared to an 8 MHz DVB-H or FLO multiplex, a DAB multiplex offers a lot of flexibility with respect to business model options, multiplex ownership and network operation.

Broadcasters will be able to cost-effectively deliver a combination of radio, DAB data services plus two or three TV channels per multiplex. An attractive FTA service could be offered to consumers using 3-4 multiplexes with a minimum of business risk. This could provide an alternative to pay-services via competing technologies and possibly undermine those pay-services – as has been the case in South Korea!

“T-DMB Mobile TV—A Global or Regional-Only Standard?” is a 240 page, non-commissioned, independent report providing an objective analysis of the prospects of T-DMB adoption around the world during the next 5 years

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

- How do European countries plan to allocate VHF Band III spectrum post RRC-06?
- Is FTA mobile TV via T-DMB a viable business for broadcasters in Korea?
- Which European broadcasters have firm plans to launch T-DMB services?
- Can S-DMB compete against T-DMB in Korea and will it survive?
- Which countries plan to launch digital radio services via DAB+?
- Who are the dominant T-DMB chipset design houses?
- Are consumers paying for interactive data services in Korea?
- Will T-DMB mobile phones be sanctioned in China?
- Which European countries plan to auction VHF and L-band spectrum for mobile TV?
- Will DVB-H and DAB-IP become compatible and complementary technologies in Europe?
- Is there a viable non-phone mobile TV market in Europe?
- Which are the most popular T-DMB data services in Korea?
- What impact is EU DVB-H rhetoric having on smaller EC member states?
- Which countries plan to launch digital radio services via T-DMB?
- Following the demise of BT Movio, is DAB-IP dead in Europe?
- When will commercial TPEG services be launched in Europe?
- Advanced modulation technologies could double T-DMB channel capacity. When will this be available commercially?
- What is the most likely RF tuner/baseband integration roadmap for mobile TV chipsets?
- Which mobile TV standards are most likely to be adopted in China?
- How will digital dividend spectrum in UHF Bands IV and V be used in Europe?
- Which vendors are developing T-DMB/CMMB chipsets for the Chinese market?
- Why are European DAB head-end vendors not developing T-DMB encoding equipment?
- How popular are TPEG services in Korea and are broadcasters generating revenues from these services?

Report Contents

Outline of Report

Abbreviations & Definitions

Executive Summary

1. The Mobile TV Challenge

Technical standards; Business and regulatory challenges; Selling mobile TV to consumers

2. Spectrum Availability post RRC-06

The GE-06 plan; Digital Dividend in Europe (Austria, Belgium, Denmark, France, Germany, Italy, The Netherlands, Norway, Spain, Sweden, UK); Spectrum issues: analogue TV switch-off, transmitter power levels; impact of WRC-07, harmonized sub-band for DVB-H, interference issues, revising the 2002 Maastricht Plan; spectrum licensing: auction or beauty contest?

3. Eureka-147 Technology Platform

Mobile TV via Eureka-147: T-DMB, DAB-IP and variants; T-DMB versus DAB-IP; DVB-H and T-DMB compared; Harmonising DVB-H and DAB-IP; Advanced T-DMB; Data transmission via DAB; DAB applications (Broadcast Web Sites; Slide Show; EPG, TPEG, BIFS, Java middleware platform.); Conditional access and DRM; DAB+ and its implications

4. Trials and Commercial Services

A 55-page review of T-DMB developments in 12 countries in Europe and the Asia-Pacific region. This chapter also provides latest information on DAB digital radio services and planned deployments. Countries covered: China, Denmark, France, Germany, Ireland, Italy, the Netherlands, Norway, Sweden, South Korea, Switzerland, United Kingdom, plus brief details on other countries.

5. DAB/TDMB Data Services

Overview of TPEG services; DAB data services

in Germany (TTI data services, Mobile.info, DIWA, Newsservice Journaline) South Korea (TTI services via TPEG, Broadcast Web Site Services, EPG, KTF Interactive Data Portal); United Kingdom (BBC data trials, Digital music downloads via Cliq); DAB data services in China

6. T-DMB Receivers

Overview of T-DMB products; Mobile phone receiver products; Car navigation units and set-top-boxes; Handhelds (PMPs, etc.), Notebooks, Portable TVs, USB-based products, etc.

7. Broadcast Infrastructure & Vendors

Head-end hardware description; Head-end product matrix; RF transmission and product matrix; Head-end vendor profiles (Digidia, Factum Electronics, OnTimeTek, Pixtree Technologies, Inc.; Radioscape, SM CNS, SomerData Ltd., TeamCast, VDL; C&S Microwave Co. Ltd.; RF vendor profiles (Harris Corp., Radio Frequency Systems, KRTnet Corp., Rohde & Schwarz; Sunwoo Communication Co. Ltd, TeamCast, Unique Broadband Systems)

8. Chipset Technology & Vendors

Chipset technology (RF tuner, Baseband and A/V decoding, Multimedia processors, Trends in RF and baseband integration, Software Defined Radio); Vendor Profiles (Analog Devices Inc., C+S Technology Inc., Corelogic, EtherWaves, Integrant Technologies Inc., KIES, FCI Inc., Frontier Silicon, Future Waves, LG Electronics, Mirics Semiconductor, MagicEyes Digital Co. Ltd., Nexilion, PnpNetwork Technologies Inc., Radioscape, Samsung, Samsung Electro-mechanics, Siano Mobile Silicon, Telechips Inc.

9. Conditional Access, Middleware, Content Authoring & Vendors

CA technology options; vendors (Irdeto, NDS, etc.); Middleware platforms; vendors (TMI, etc.) MPEG-4-based content authoring tools; vendors (Net&TVInc., etc.)

Companies and organizations discussed in this report include:

Analog Devices; Arqiva; BLM; BBC; BT Movio; Channel 4; Coding Technologies; Danmarks Radio; Digital One; EBU; Factum Electronics; Fraunhofer IIG; Frontier Silicon; Imagination Technologies; Integrant Technologies; KBS; LG Electronics; Mirics Semiconductor; Mobile Fernsehen Deutschland (MFD); Nexilion; NRK; Panasonic; PersTel; Pure Digital; RadioScape; Samsung; SARFT; Siano Mobile Silicon; SK Teletel; SSR SRG; Swedish Radio; TDF; Telechips; TU Media; UBC Media; Unique Interactive; VDL; WorldDMB

