

## The dawn of Mobile TV

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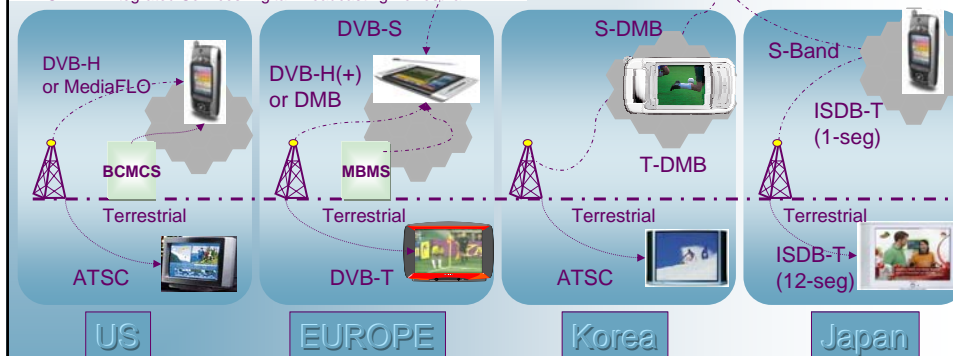
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1

## Variety of Standards

ATSC=Advanced Television Systems Committee  
DMB= Digital Multimedia Broadcasting  
DVB=Digital Video Broadcasting  
ISDB-T=Integrated Services Digital Broadcasting-Terrestrial



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2

# Validating Standards



- **Hard facts:**
    - TV over DAB occupies 1.5MHz of spectrum
    - DVB-H transmissions take up 5MHz and 8MHz
    - DVB-H gives 4Mbps or 5Mbps useful payload (20 good quality video channels)
    - DMB useful bit rate is less than 1Mbps (8 or 9 video channels)
  - Korean T-DMB is a modified DAB system using the whole of the DAB channel for broadcasting video.
  - Japanese system ISDB-T uses a segment of the Japanese digital TV multiplex.
  - MediaFLO is used in the 700MHz band like DVB-H
- The Standards are not harmonized!!!



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▶ 3

# Benefits



- No conflict of interest in principle
  - Broadcasters want to focus on content production.
  - Mobile operators want to focus content delivery.
- It is up to regulators to view this as a legitimate source of additional revenues for both parties.
- Lots to learn about using spectrum in an efficient way.
- The real challenge for mobile operators is getting the most attractive content on their network- this means an open platform.
- Mobile operators and Broadcasts have a “WIN-WIN” opportunity. But how do we get players to stop defending traditional views and business models?



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▶ 4

# Services and Content



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## Streaming media:

- Delivery of IP Based content over an IP network (pictures, sound, web pages and programs)
- Downloads, Music, clips
- Streaming brings media and telecommunications players together

## Unicast



## Multicast (MBMS)

- Web services i.e. Traffic cameras
- News and enhanced MMS
- Enhanced LBS
- Advertising and TV shopping
- Video streaming
- Video blogs



## TV Broadcast

- Interactive TV and streaming



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5

# ISSUES



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- Much work needs to be done on middleware for any really interactive service to be realised.
  - Proprietary middleware platforms are a major hurdle.
  - But protecting European IPR is a major challenge.
- DRM and content protection are far bigger issues than billing.
- A lot of work needs to be done on radio network planning.
- Extremely fragmented spectrum policy.
- How will Frequency allocation take place?
- Who will be the mobile TV broadcaster? The “traditional” broadcaster, the mobile operator, a service provider or someone else? Will 3G Operators be allowed to broadcast TV programmes?



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6

# Challenging environment



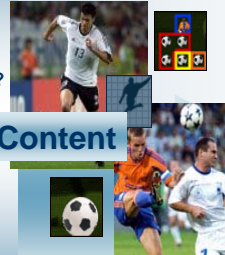
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## Deployment:

- Standards
- Network infrastructure
- Content Platforms
- Transport
- QoS
- Compression
- DRM
- Content Creation and Management
- Interoperability

## Challenges:

- Cross-media Convergence?
- Roles and relationships of participants of the value chain?
- Risks and potential?
- Business model?
- Pricing?
- Media acceptance?
- User control to select content?
- Which content on which terminal?
- Native cross-media formats?
- Further development?



Content

Mobile TV

## User

- Handset
- Laptop
- PDA



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# Conclusions



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- What are commercial realities?
  - MBMS will be launched around 2007/2008?
  - When will the market be ready for Mobile TV?
- How will the money be shared among the actors in the value chain?
- Who will "own" the users / consumers?
- Which value chain player is driving the development? Is it the right ones?
- Do operators understand the content industry enough?
- Does the content industry understand operators' needs and requirements?
- What can be done to improve the understanding of all players in the value chain?
- Are we cannibalising each other? Or ideally supplementing each other? Or should we move into formerly alien domains?
- Is this the case: "mobile TV is TV, not wireless multimedia: users expect the same programs on mobile as on classical TV, even if all programs would not suit the small terminal devices" (VTT study). Do you agree?



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8