Mass Market Mobile TV - The Next Big Thing

IPTV
- Wireline evolution

Mobile TV today is 3G
- Mobile evolution

With Unlimited coverage
With Unlimited audience
With Unlimited content
With Unlimited usage
With Interactivity

Combining the best of the Mobile and TV worlds
Towards mass market Mobile TV

Mobile TV, like Mobile phone requires...
- Large coverage including indoor, on the go, outdoor...
- Interactivity to create new revenue generators

Mobile TV, like TV requires...
- Unlimited number of channels, and easy use
- Support for Unlimited number of TV viewers

Mobile TV will federate mobile entertainment
- Access to live, on demand, store, location based or personal TV/content
- Offer interactive services (voting, community, alert, EPG)
- Federate interactive and personalized advertising

Terrestrial broadcast networks suffer from Lack of spectrum availability before analog switch over

- Danger of fragmented deployment
  - T-DMB in Band L in Germany?
  - T-DAB in Band III in UK?
  - DVB-H in UHF in Italy?
- Limited to urban areas
- Limited economies of scale for handsets
- Complex Multiple Frequency Network
  - Spectrum inefficiency
  - Hand-over constraint

- Spectrum availability uncertainties and incomplete in UHF
Hybrid broadcast in S band: Fast and secure access to spectrum...

- Full Continental coverage
  - Major countries with Satellite and terrestrial coverage
  - Small countries completed with terrestrial local content
- Handset economy of scale
- Seamless Mobile TV roaming
- Consolidated framework for access and use of spectrum
- At national level, Single Frequency Network
- No complex planning and related hand-over

DVB-H on S band secures harmonized deployment

Combining DVB-H on S band and 3G to deliver Unlimited Mobile TV tomorrow

- Frequency band available
- S band frequency adjacent to UMTS frequency for 3G
- Optimised indoor coverage with terrestrial repeaters
- Instant & cost-effective nationwide coverage with satellite

Unlimited coverage, unlimited audience, unlimited number of channels, and interactivity
Terrestrial Broadcast of DVB-H in S band leverages 3G assets to the maximum

- Reuse of existing 3G sites
- Reuse of 3G antennas
- Reuse of existing cabinets

- Reduced Investment
  - Limited CAPEX per repeater
  - Significantly reduced Installation cost (compared to UHF)
  - Full deployment: number of repeaters equivalent to 3G sites

DVB-H In S band: Securing Handsets Leveraging DVB-H Momentum

- Limited impact on DVB-H chipset
  - Reuse of OFDM waveform
  - Tuner agility easy to extend to 2.2 GHz frequency
  - Turbo-Code & enhanced time interleaving
- Use of antenna diversity possible in S band
  - Improves antenna gain
  - Operate in the same 3G frequency bands

Cost equivalent to DVB-H/3G Handsets agreements with chipset manufacturers and terminal vendors in place
**Alcatel Unlimited Mobile TV Roll-out in Line with Mobile TV Traffic Growth**

- **3G unicast**
- **DVB-H Broadcast**
- **UMTS** (UMTS, 2.1 GHz)
- **Interactivity**
- **Unlimited channels**
- **Better Video Quality**
- **MBMS service launches**
- **3G/LTE**
- **Unicast video over EDGE/3G**
- **HSDPA**
- **MBMS service launches**
- **Christmas 2007**
- **2005**
- **2006**
- **2007**
- **2008**
- **Beyond 2008**

**Alcatel system is also helpful for crisis management**

- Alcatel hybrid satellite/terrestrial architecture allows cost-efficient Mobile TV service...
- ...and also Crisis Management services with crisis independent satellite coverage
  - Population alerts and information
  - Specific information to police, fire brigades, etc.
  - In car emergency communication through secured return channels
Key advantages of Alcatel Unlimited Mobile TV

- Unlimited coverage for a 100% of population and country
- Cost efficient Approach with 3G site reuse
- Large capacity for attractive TV bouquets
- Crisis management assistance
- Available spectrum over Europe and worldwide
- European technology for a world market

Mobile TV : The need for an EU approach

- Mobile TV raises new regulatory questions
  - What is the value chain? Who are the new actors?
  - What needs to be regulated?
  - Often the same questions from country to country …

- EC is central to structure the future shape of Mobile TV in Europe
- Regulatory framework to be confirmed during 2006