





Alcatel Unlimited Mobile TV

Olivier Coste
 President Alcatel Mobile Broadcast
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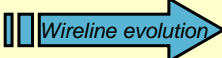
Mass Market Mobile TV - The Next Big Thing


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IPTV

Wireline evolution



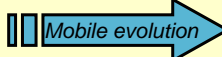



Mobile TV today
is 3G



Mobile TV


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


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Towards mass market Mobile TV

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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

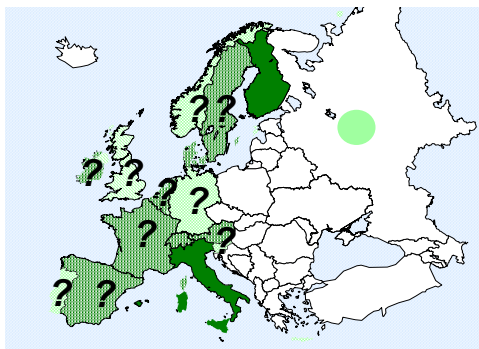
- Access to live, on demand, store, location based or personal TV/content
- Offer interactive services (voting, community, alert, EPG)
- Federate interactive and personalized advertising

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

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→ Spectrum availability uncertainties and incomplete in UHF

▶ 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

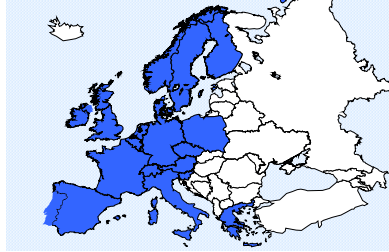
- Spectrum inefficiency
- Hand-over constraint

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Hybrid broadcast in S band: Fast and secure access to spectrum...

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■ Satellite IMT2000 FDD European allocation
□ Terrestrial IMT2000 FDD European allocation

→ DVB-H on S band secures
harmonized deployment

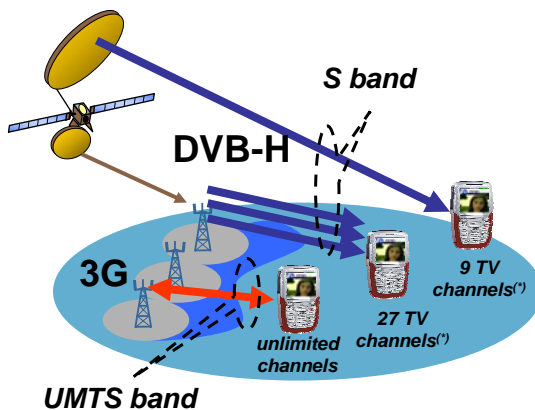
- ▶ **Full Continental coverage**
 - Major countries with Satellite and terrestrial coverage
 - Small countries completed with terrestrial local content
- ▶ **Handset economy of scale**
- ▶ **Seamless Mobile TV roaming**
- ▶ **Consolidated framework for access and use of spectrum**
- ▶ **At national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

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

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- ▶ **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

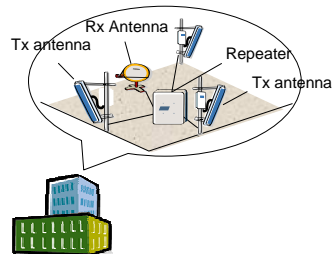
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Terrestrial Broadcast of DVB-H in S band leverages 3G assets to the maximum

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- ▶ 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

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

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- ▶ **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



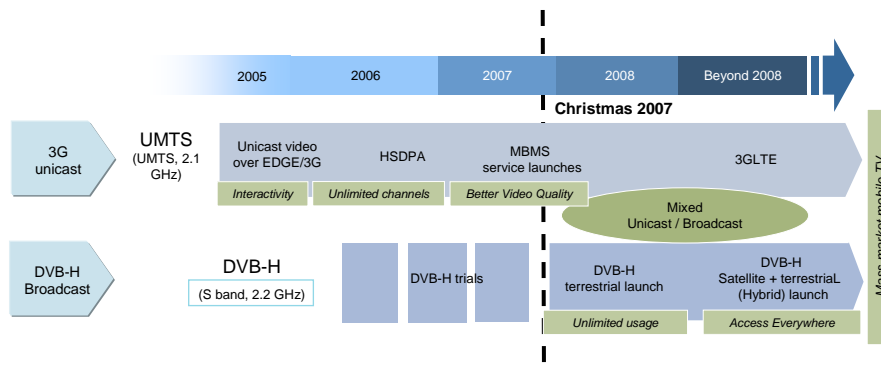
Cost equivalent to DVB-H/3G Handsets
agreements with chipset manufacturers and terminal vendors in place

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Alcatel Unlimited Mobile TV Roll-out in Line with Mobile TV Traffic Growth

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Alcatel system is also helpful for crisis management

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- ▶ 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

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Key advantages of Alcatel Unlimited Mobile TV

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- ▶ **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**



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Mobile TV : The need for an EU approach

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- ▶ **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**

Alcatel Mobile TV solution designed for implementing
a European approach to Mobile TV



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