EUTELSAT

Satellite Broadband

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EIF Study Visit to Milan ‘Media, research and entrepreneurship in the digital era: technology excellence and innovation in difficult times’
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HTS such as the Eutelsat’s KA SAT are ‘game changers’

- Barriers to the delivery of consumer-grade Internet access removed by recent progresses and investment in satellite broadband technology
  - capacity and speed considerably increased
  - fixed and recurrent costs for the final user reduced

Standard consumer offers up to 22 Mbps
Eutelsat KA-SAT & Tooway™ characteristics today

**KA-SAT**
- Built by Astrium (now Airbus D&S)
- Located at 9°E, coverage **82 beams**
  - Energy focused: 250km spot size
  - Frequencies re-use, 4-color scheme
  - 40 GHz system from 2 GHz of spectrum
- Total capacity **90Gbps** (Europe's first HTS satellite system)

**Tooway™**
- **22 Mbps** downstream, **6 Mbps** upstream
- Antenna size < 80cm, 3W amplifier
- Plug and play with Ethernet and/or Wi-Fi
- TV reception with optional dual-feed
- Installed terminal €300 - €500 per household
Digital Agenda for the EU – the issue of low take-up

- Low broadband penetration, especially in remote and rural areas (‘Basic Broadband’ (fixed + fixed and mobile wireless coverage = 99.4%)
- Real user demand in those areas - but users scattered over all the territory
- Unlikely solved with terrestrial solutions only in areas where difficult topographical conditions or low population density make them impractical / economically unviable
- The unit costs for terrestrial connection increase as population densities drop, because of high fixed investment costs
Achieving Broadband-for-All with satellite broadband

- Satellite solutions ideally suited to providing instant access to broadband everywhere
  - Rapid deployment, cost independent of location, immediate provision of access (basic infrastructure already in place, investment already amortized)
  - N.Kroes, European Commissioner for the Digital Agenda: “Thanks to the extra coverage from satellite broadband, with representation in every EU country, we have achieved our 2013 target of BB for all”
  - Satellite broadband still under-exploited in Europe - take-up not yet widespread in the rural areas and still marginal

- Correct integration of satellites in the implementation of public policies for broadband development could help bringing 4 A’s (Availability, Affordability/Accessibility, user Acceptance)

- Upfront, one-off connection costs (few K€) are a genuine barrier
- Public funds to support broadband take-up in rural areas
- Subsidies (including ERDF and EAFRD) and national funds, for the purchase and installation of user ground equipment
in the EU

Two major obstacles slowing down the take-up of satellite broadband

1. **Absence of a Single Telecom Market**
   - Very different market (rules, dynamics and languages) in each country/region

2. **Dispersed management of public funds**
   - Public funding allocated to regions and typically managed at regional (or even at sub-regional) level
   - No viable central action to promote services availability and inform on public initiatives

Elsewhere (single telecom markets)

- **U.S.A.**
  - 935,000 subscribers to Hughes consumer broadband service (June)
  - Viasat claims over 1 M Exede terminals
  - Dept. of Agriculture, Rural Utilities Service, Broadband Initiatives Program, up to $100M available for grants for Satellite projects (2010)

- **Australia**
  - The national satellite broadband project (NBN) is confronting a demand spike

- **Canada**
  - Several national funding programs to improve remote services since 2009
Common approaches to satellite broadband public deployment

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<tr>
<th>Activity</th>
<th>Central Government</th>
<th>Local</th>
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<tr>
<td>Core scheme design</td>
<td>✓</td>
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<tr>
<td>Specification of local parameters</td>
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<tr>
<td>Provision of guidance documentation</td>
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<tr>
<td>Provision of central “Information Portal”</td>
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<td>Provision of funding</td>
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<td>Scheme administration</td>
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<td>Delivery of anti-fraud checks</td>
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<td>Local demand stimulation (for the take-up of vouchers)</td>
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<td>Payments to suppliers</td>
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<td>Scheme reporting (local level)</td>
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<tr>
<td>Scheme reporting (programme level)</td>
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“THINK GLOBAL - ACT LOCAL”