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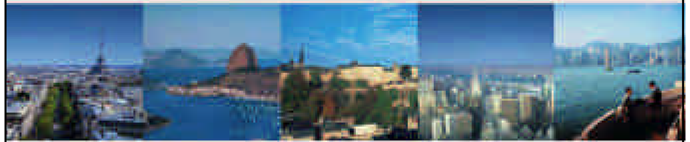
GLOBAL FORUM 2003- ROMA

Satellite Interactive Broadband today in Europe: Reality and/or Fiction?

Christine Leurquin – Senior Manager, European Programmes



Your Satellite Connection to the World

SES GLOBAL: who are we?

- The world's leading satellite operator by revenues, EBITDA and size of fleet
- Born out of the combination of SES ASTRA and SES AMERICOM
  - ASTRA: No.1 DTH broadcast satellite system in Europe with a reach of approx. 34 million households (92 million incl. cable)
  - AMERICOM: Leading position in US cable head-end broadcasting serving over 10,000 head-ends with reach of approximately 80 million cable households
- Strong network of established partners in Asia and Latin America
- Global fleet of 41 satellites with optimal look angles and comprehensive landmass coverage

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SES GLOBAL Structure

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Global reach based on regional market focus

- SES ASTRA is Europe's #1 satellite service provider reaching some 92 million households

- SES AMERICOM is a major player in broadcasting for US cable services reaching some 80 million US households

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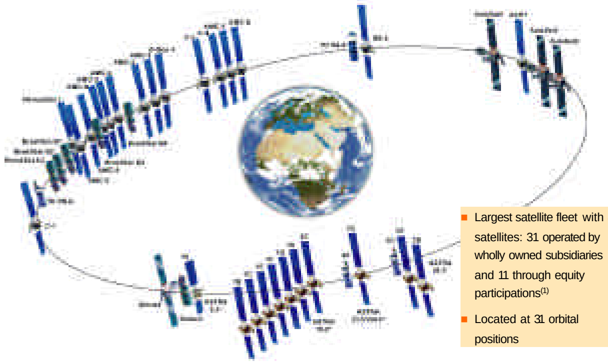
The SES GLOBAL fleet



- Largest satellite fleet with 41 satellites: 31 operated by wholly owned subsidiaries and 11 through equity participations[(1)]
- Located at 31 orbital positions

Notes
[(1)] SES AMERICOM and NSAB both own capacity on the SIRIUS 2 satellite, which is operated by NSAB.

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The ASTRA satellite fleet

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ASTRA coverage area

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SES ASTRA: who are we?

- Operator of ASTRA, the leading DTH broadcast satellite system in Europe
- The hottest show in space over Europe:
  - ASTRA consists of 13 satellites at 4 orbital positions
  - ASTRA transmits more than 1,100 digital and analogue channels on behalf of leading European and international broadcasters
  - ASTRA serves 92 million homes in 30 European countries
    - 34 million homes in DTH reception
    - 58 million homes via cable
- Extended product and services portfolio including broadcast, broadband, telecommunications and technical services
- Tradition of innovation: ASTRA pioneered the development of DTH reception in Europe
- 300 employees from 24 different nations
- An SES GLOBAL company headquartered in Luxembourg

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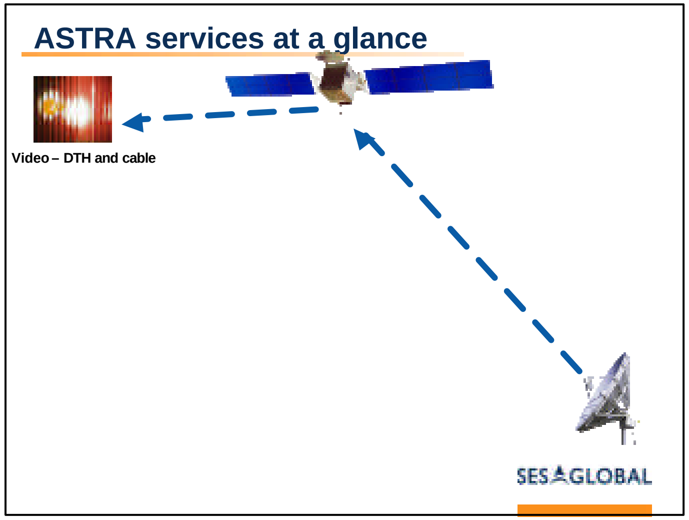
ASTRA services at a glance
Video – DTH and cable
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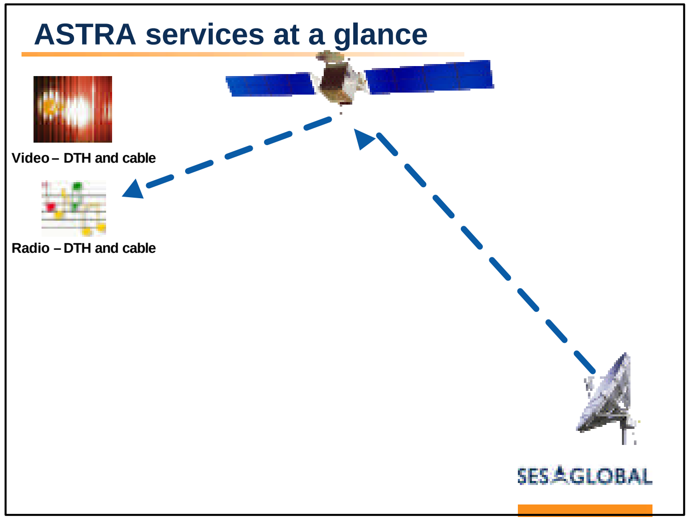
ASTRA services at a glance
Video – DTH and cable
Radio – DTH and cable
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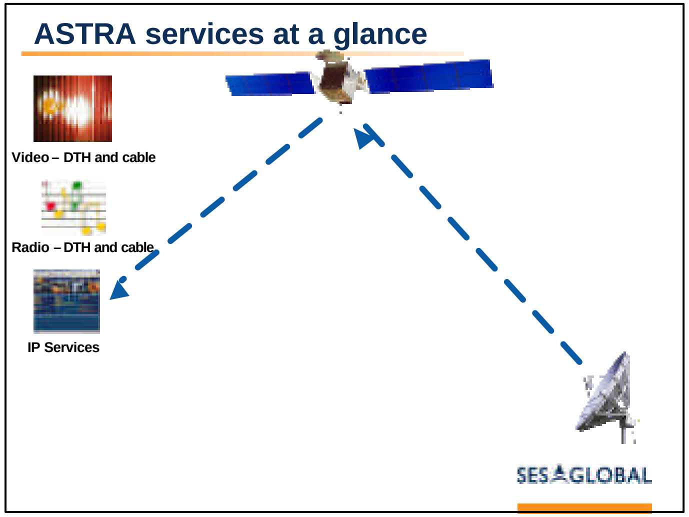
ASTRA services at a glance
Video – DTH and cable
Radio – DTH and cable
IP Services
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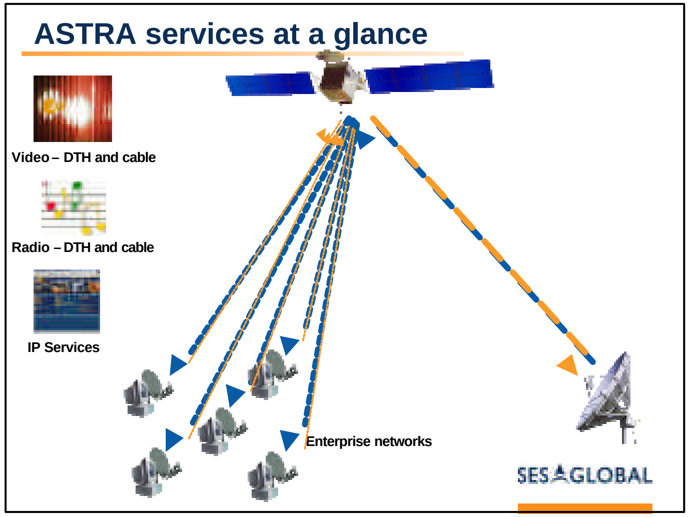
ASTRA services at a glance
Video – DTH and cable
Radio – DTH and cable
IP Services
Enterprise networks
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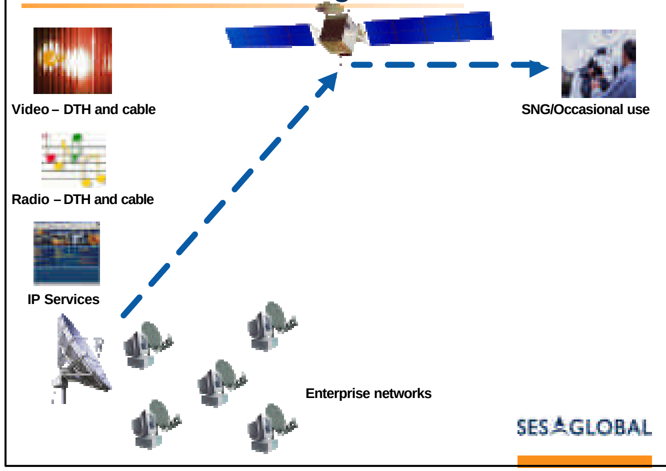
ASTRA services at a glance



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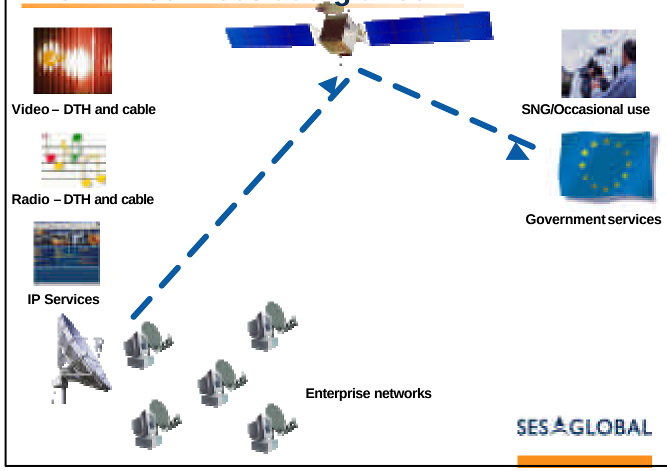
ASTRA services at a glance



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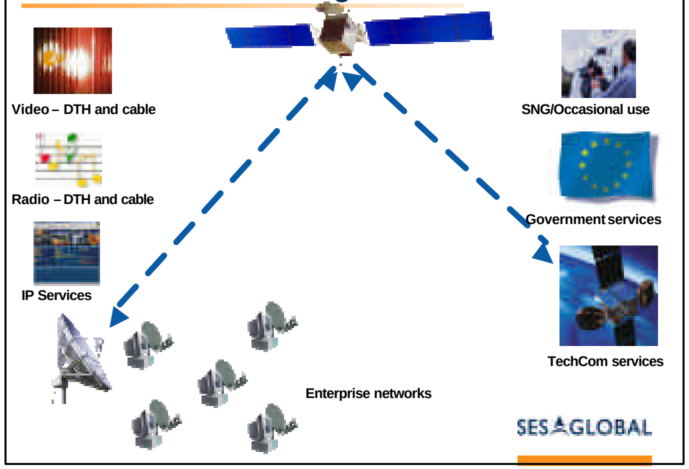
ASTRA services at a glance



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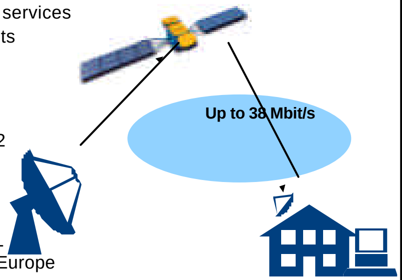
Broadband one-way satellite services

- One-way broadband distribution via satellite with terrestrial return
- Co-location of broadband services at most attractive orbital slots
- Services
  - A-DSL via satellite for residential users
  - T-DSL since May 2002 (Deutsche Telekom)
  - DSL services by NetSystem.com in Italy
  - 100,000 users for DSL via ASTRA services in Europe
  - Broadband services for businesses
- Based on ASTRA-NET platform



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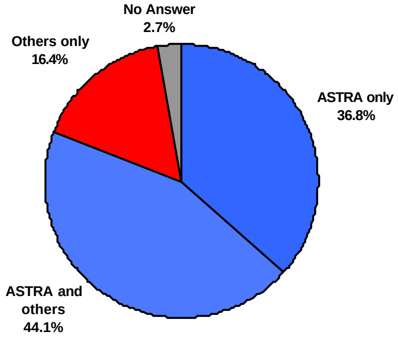
Strong DTH market penetration

ASTRA market share in Europe:

• channels transmitted via ASTRA are received in 80% of satellite homes



Base: 42.57 Mill. DTH/SMATV Households in *30 European countries, Year-end 2002
Source: SES ASTRA, Satellite Monitors

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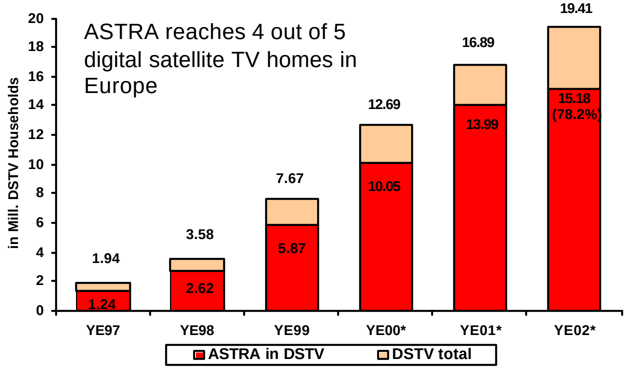
The leader in digital reception in Europe



* incl. 8 additional CEE countries: Belarus, Bulgaria, Estonia, Latvia, Lithuania, Romania and Ukraine, Greece only in YE01
Sources: SES ASTRA, Satellite Monitors, Digital Pay-TV Operators; UK figures based on MY02

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Key success factors

- A culture of innovation
- A culture of operational excellence
  - Highest-quality services
  - Industry-leading satellite fleet reliability and availability
- Strong customer focus
  - Flexible and service-minded solutions
  - Fast roll-out of new services through established market network
  - Closeness to the customer
- Strong supporter of open standards
- Multicultural workforce
  - Understanding the customers' marketplace

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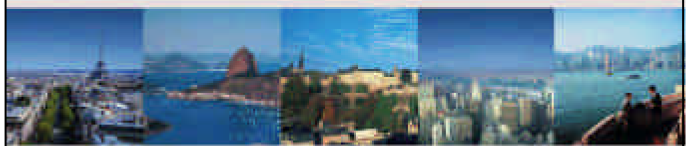
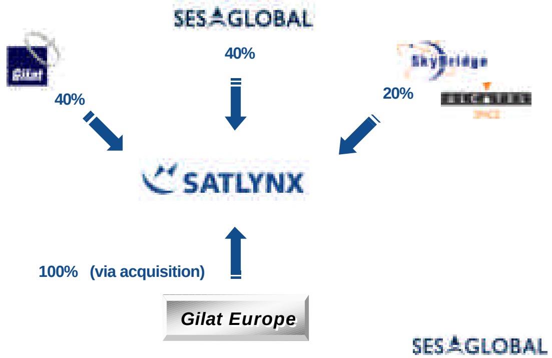
Corporate Satellite Broadband Market



Your Satellite Connection to the World

Company Structure



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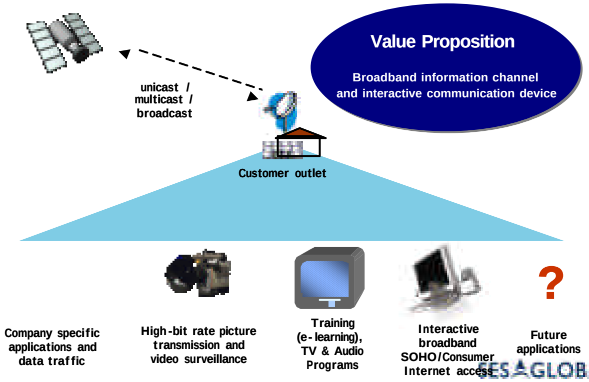
Service portfolio for 2-way satellite



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Major Broadband Interactive success

➢ **NEO SKY:** Wireless corporate LMDS operator with current presence in 33 cities. Majority owned by Iberdrola, major Spanish power company.

- ➢ Satellite offers complementary service rollout to 100% of territory, for NEO's corporate services already provided to Spanish enterprises
- ➢ Hundreds of companies with multiple sites for IP-VPN connectivity and satellite two-way broadband access for 2002
- ➢ Neo is implementing satellite & WIFI satellite solutions in partnership with Cisco
- ➢ Commercial service since Q1 2003.

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Major Broadband Interactive success

Cyberkiosque

- Contract signed with Groupe La Poste, using ASTRA satellite space segment across Europe
- Public service: internet access points, local community information and teleconferencing application open to general public in:
  - post offices and
  - local communities across France
- Possible to interface to existing LAN infrastructure and to expand to multiple kiosks

LA POSTE

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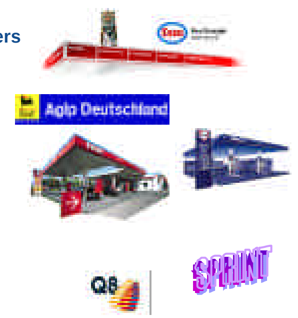
Major Broadband Interactive success

- AGIP , ExxonMobil, ESSO , TOTAL FINA ELF , SPRINT , KUWAIT Q8 and others

Almost 8,000 Gas stations in Germany and Europe:

- Debit- and Credit cards
- Public Internet access
- Electronic cash
- Wet-data batches
- Pricing adjustments
- Software downloads
- Remote maintenance



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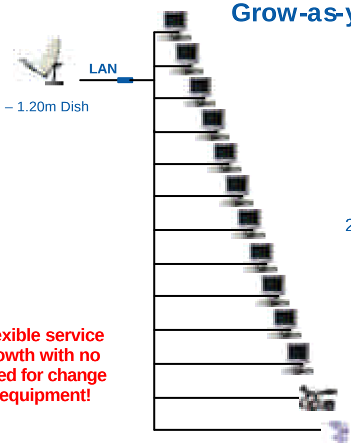
Broadband Interactive System (BBI): Grow-as-you-need Scalability



Flexible service growth with no need for change of equipment!

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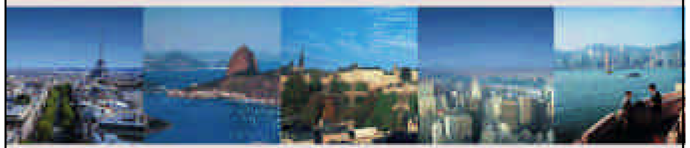
Satellite: Creation of revenues and Value Proposition for the digital divide.



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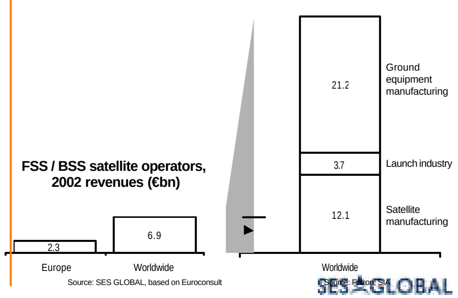
SATCOMS: generate upstream revenues

European commercial satellite operators generated 2.3 bn€ of rev enues in 2002. They also contributed significantly to the creation of value for other players

- Satellite operation industry generated 2.3bn€ in Europe, and 6.9 bn€ globally last year
- Satellite operation industry is a **key enabler** of value creation in many other industry segments. Estimate for 2002 worldwide revenues from satellite manufacturing, ground equipment manufacturing, and satellite launch services is 37bn€.



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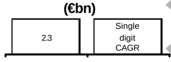
Satellite enables future downstream value creation

While satellite operator's growth is slowing, they enable future creation of value for DTH platform providers and cable operators

- Technology evolution (MPEG-4 emergence, DVBS-2 uptake, fiber roll-out) slows satellite operators' growth
- Satellite operators will enable European DTH platform providers and cable operators to sustain their future growth
- Broadband services still need to be strongly supported to ensure future growth

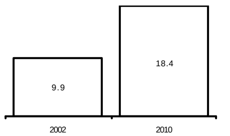
Forecast of European FSS / BSS satellite operator's revenues (€bn)



Excluding Satellite Broadband access

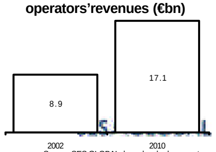
Source: SES GLOBAL

Forecast of European DTH platform revenues (€bn)



Source: SES GLOBAL, based on broker reports

Forecast of European cable operators'revenues (€bn)



Source: SES GLOBAL, based on broker reports

Satellites: Key to bridge the Digital divide (even in Europe) * (ESOA Figures)

Table 1: Number of Households without wire-line broadband availability (in millions). Source: CMA

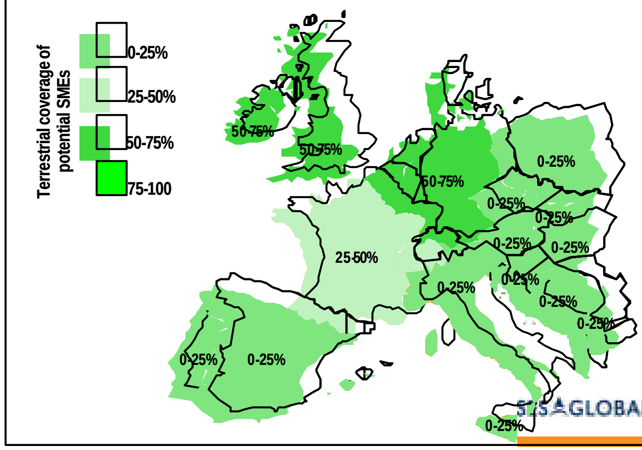
	2000	2001	2002	2003	2004	2005	2006
Germany	16.5	3.5	2.8	2.5	2.2	1.8	1.8
Austria	0.8	0.7	0.6	0.4	0.3	0.2	0.2
Switzerland	3.1	0.5	0.4	0.2	0.2	0.2	0.2
United Kingdom	11.9	8.3	7.4	5.8	4.7	3.5	2.3
France	16.1	9.8	6.1	4.9	4.5	4.0	3.8
Italy	11.6	6.8	5.9	5.5	4.3	3.6	3.0
Spain	5.5	2.3	2.1	2.0	1.8	1.6	1.4
Poland	12.5	12.6	10.1	6.9	5.3	4.4	3.7
Czech	4.0	4.0	3.2	2.6	2.1	1.8	1.6
Hungary	3.7	3.4	3.0	2.4	2.0	1.6	1.4
Denmark	1.1	0.5	0.4	0.4	0.4	0.3	0.3
Sweden	3.1	1.5	1.0	0.9	0.8	0.7	0.6
Norway	1.6	1.0	0.5	0.4	0.4	0.3	0.3
Finland	2.4	0.7	0.6	0.6	0.5	0.5	0.5
Total	**93.8**	**55.4**	**44.2**	**35.5**	**29.3**	**24.5**	**21.1**

Satellites: Key to bridge the Digital divide (ESOA Figures)

Combining DSL and cable roll-out plans, by 2006, more than 21 million European households will still not have access to standard wireline broadband options = 13.6% of the total household population (Source CMA)

In the longer term (to 2012), **15 million** European households will continue to be denied access to wireline broadband = 9.5% of the total household population

Projections of Broadband Terrestrial penetration(short-term:2005) (Mc Kinsey study – 2001)



Satellite 's competitive positioning

➢ **Solves the terrestrial bottleneck:**
Higher speed
Last-mile availability

➢ **Cable/ADSL are only partial solutions:**
Fragmented European coverage
Long implementation timelines

➢ **ADSL-like functionality with value added:**
Available anywhere within beam coverage
Broadcast/multicast in the same platform

➢ **Open-standards DVB/IP platform for service providers:**
Immediate implementation
Independence from local telephone operator

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Satellite Broadband at EU level

▲ **Various European initiatives and actions**
- White Paper on the future of space policy
- e-Europe 2005 : Broadband Initiative
- Decision to earmark substantial funds from Structural Funds for technology-neutral development of Broadband Infrastructures.

▲ **Is the technology-neutral objective effective in practice?**
- Many households in Europe may not be served by terrestrial technologies any time soon.
- Satellite infrastructure is often - certainly in more remote areas – the only or, at least, the more cost-effective and readily available solution.
- Increased role for satellite solutions -> cost-effective use of Structural Funds for citizens not being offered any other alternative.

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Satellite Broadband at EU level

▲ **Together with ESOA (European Satellite Operators Association) * launch a coordinated SATCOM initiative to**

- Help achieving the objectives of e-Europe 2005, bridging the digital divide;
- Kick-start a new virtuous circle stimulating new services, applications and common standards;
- Support the industrial objectives of Europe's Space Policy.

▲ **Aggregation of demand by regions and local collectivities are key factors for success of such an initiative.**

*ESOA's membership comprises EurasiaSat SAM, Europe*Star, Eutelsat S.A, Hellassat, Hispasat, Inmarsat Ventures PLC, New Skies Satellites N.V., Nordic Satellite AB, SES GLOBAL, Telenor and Telespazio.

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Satellite two-way BB: Reality and/or Fiction?

▲ **Satellite interactive BB is already a reality in Europe for SMEs and Corporate entities. Various network and service providers deliver good quality service. Equipment prices : 800Euros-1500Euros range. Equipment services : 120Euros/month (ADSL-like service).**

▲ **Still a fiction for the end-consumer ? NO, if:**
- **Support from the Public institutions: 10% of foreseen expendidures on terrestrial infrastructure over the next 5 years**
- **Aggregation of demand**
- **Economies of scale over all regions : orders in quantities, drop of terminal prices (+-300Euros)**
- **Service fee equivalent to ADSL-like services.**
- **Satellite could be the only technology available to bridge the technical digital divide and help provide "universal access" in Europe.**

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