Role of Satellite in Advanced TV services: Hybrid Broadcast/Broadband solutions

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A video revolution is taking place

**Access to always higher-quality video**
- Digital television in the early 2000
- HD new reference of image quality
- Ultra HD becoming a reality

**“TV everywhere”**
- Personalised choice
- Linear and non-linear content
- Anytime, anywhere & on any device

**TV trends**

**Infrastructure answer**
- Satellite: champion of digital transmissions for almost two decades
- Satellite leader with HDTV
- Satellite, unique infrastructure to provide UHDTV to everybody

- Being a unicast infrastructure, terrestrial broadband allows new personalized experience
- It is natively compatible with mobile devices

No single delivery infrastructure ticks all the boxes
Satellite/Terrestrial hybrid solution: Joining forces for a sustainable state-of-the-art experience

- Satellite to stream & push most popular content (video + others) to a “home - CDN”
- Terrestrial broadband for interactivity, long tail & time-critical access

Exponential NGA deployment cost
Incremental satellite user cost unchanged + an installed basis of 86 Mio HHs in EU

Cumulated Deployment Cost

Reach

Satellite
Broadband

HHs Reach

EU Households Reach

NGA Roll-out

Pan European 4Gbit/s broadcast satellite (each)

Distribution Cost

1c/Gbyte CDN cost per receiver

< €20 /GByte on satellite for any number of receivers

Cost per Gbyte

# Receivers
The best of both worlds: high quality linear TV and best in class on demand TV services

Broadband cannot be the only infrastructure for advanced TV needs

- Current common assumption: advanced TV = Broadband
- But terrestrial broadband does not / will not
  - Provide quality video to a large share of users \(^1\)
  - Provide sufficient QoS at peak hour \(^2\)
- … despite constant and costly investments of telcos in infrastructure

Broadcast by satellite is a must-have pillar to enable advanced TV for everybody

- **Linear content.** Satellite broadcast is the best infrastructure for high-quality linear video, from a cost and quality perspective
- **Non-linear content**
  - Satellite guarantees best QoS at anytime for most demanded content …
  - … complemented by broadband for ‘long tail’ catalogue and user generated content \(^3\)

Broadcast / Broadband hybridization:
perfect match to provide cost-efficient and spectrum-efficient advanced TV to everybody, NOW

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1) e.g min 30% of households not eligible to IPTV in almost all European countries
2) especially for OTT services
3) UGC: content available on YouTube …