



The Integral Satcom Initiative



***European Technology Platform
for Satellite Communications***

***FI PPP initiative – Open Days meeting;
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SatCom inherent key features

Ubiquitous access: Anywhere

- ❑ Broadcast and/or data collect over wide area
- ❑ Simultaneous Connectivity to large and low density populated areas
- ❑ Connectivity to vessel/aircraft

Dependability: Anytime

- ❑ Not subject to man made or natural disasters
- ❑ High reliability/availability
- ❑ Resilience: Service continuity or fast recovery
- ❑ End to end control

SatCom = essential features for many telecommunications applications
enabler component for ubiquitous connectivity, universal access & mobility

SatComs evolutions in the coming 5 to 10 years

Enrichment of service offer

- ❑ Broadband: from 2 to 50-100 Mbps
- ❑ Handheld: towards GSM form factor



- ❑ Broadcast: from HD to 3D format

Cost reduction

- ❑ Increased throughput by 2 orders of magnitude: towards several hundred of Gbps per satellite
- ❑ Connection fee: Terminal and set-up
- ❑ Ground network and space segment: deployment, operation and maintenance

Improved network interoperability

- ❑ Integration with Next Generation Network: IMS
- ❑ Security, privacy and trust
- ❑ Bandwidth aggregation accross heterogenous access technologies
- ❑ Compatibility with Future Internet protocols and network interfaces

Increased system features

- ❑ Capacity where and when needed
- ❑ Connectivity scenarios: Flexibility during the satellite life duration
- ❑ Mobility management: nomadic, vehicular, vessels and aircraft mounted devices



SatCom: Disruptive changes ahead



SatCom in Future Internet

Smart Content systems: Social inclusion

□ SatCom role

- Broadcasting and media delivery services, incl. 3D Media and Ultra HDTV, in simultaneous broadcast to large and low density populated areas

□ Added value

- Optimise Quality of Experience with services based on high resolution content format

SatCom: Efficient one to many infrastructure for high quality at a low cost

Smart health-care systems: Public health

□ SatCom role

- Broadband connectivity provisioning in low density populated areas

□ Added value

- Assistance to patients in their homes and interconnection to hospitals and medical teams in low density populated areas

Smart systems for transport and mobility: Sustainable transport

□ SatCom role

- Alert & guidance services as well as asset monitoring
- Broadband connectivity to trains, buses, vessels and aircrafts

□ Added value

- Optimise traffic information to the public and private transport stakeholders
- Infotainment services to railway and bus passengers

SatCom: complementary w.r.t. coverage gaps & terrestrial infrastructure dependability



SatCom in Future Internet

Smart energy grids: Climate change and clean energy

□ SatCom role

- Monitoring from remote and/or critical remote nodes
- Back-up critical links of the communication network

□ Added value

- Optimize the efficiency of the global monitoring and black-out management

Smart environmental information systems: Climate change and clean energy

□ SatCom role

- Data gathering from sensors deployed over a wide area (regional, national or continental), on board observation satellites or on board Unmanned Aerial Vehicles (UAV)
- Data relay to relevant stakeholders, Alert and guidance services provisioning

□ Added value

- Real time environmental monitoring for early decision

Smart broadband access systems: Social inclusion

□ SatCom role

- Very High Speed Broadband access in low density populated areas

□ Added value

- Provide Next Generation Access service grade to all

SatCom = essential access technology for FI communication enablers to be global, reliable, resilient, trusted and secure.

End of presentation