



PSCE Conference  
30<sup>th</sup> November 2011

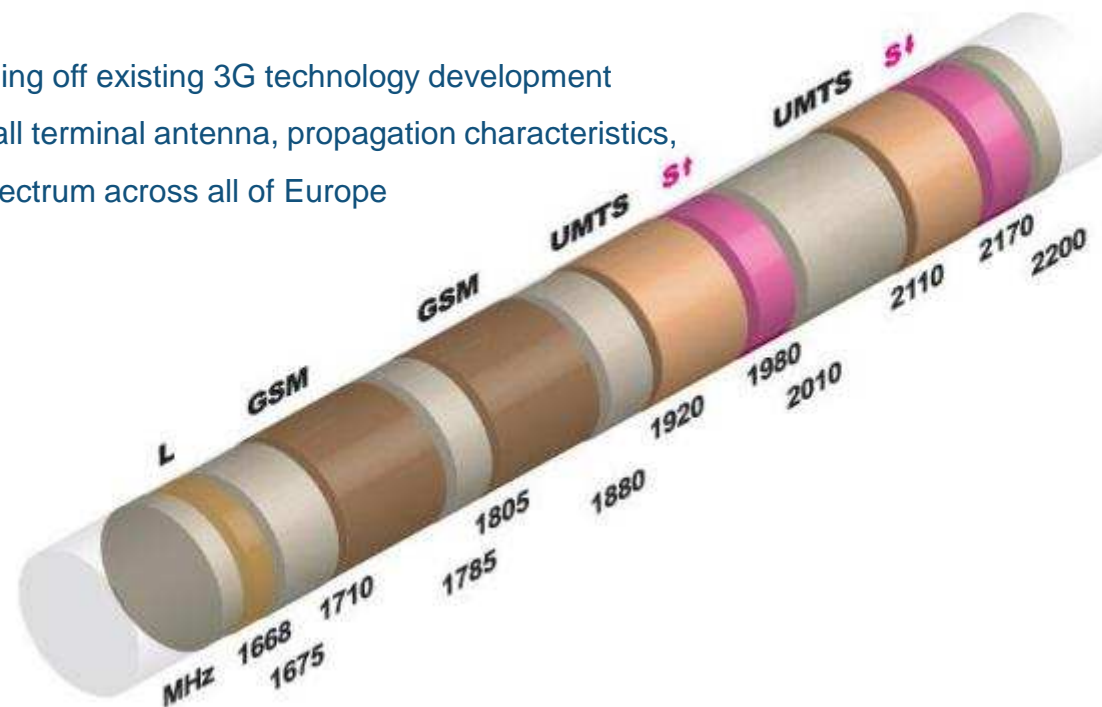
## S-Band

European-wide harmonized spectrum & infrastructure for PPDR  
mobile communications

# Assets - The Spectrum - Why So Special?

## Mobile Satellite Services (MSS) in S-Band

- Directly adjacent to 2GHz UMTS Band 1 as used by 3G operators in Europe
- Configured as 30MHz in the forward direction and 30MHz in the return direction in six paired blocks of 5MHz
- Ideal for mobile services leveraging off existing 3G technology development and network infrastructure – small terminal antenna, propagation characteristics, noise free environment, clear spectrum across all of Europe



## Benefits of Europe-wide co-operation

- **The Vision:-**
- European wide cooperation on a single communications network
  - MSS S-Band spectrum is the only harmonised spectrum available today
- Coordinated terminal development generating high volume demand and greater economies of scale
- Harmonisation on communication protocols and technical standards
- Harmonisation across environment and modes of operation
  - Land
  - Sea
  - Airborne
- Requires leadership at an European Parliamentary level



## Networks fit for the public safety

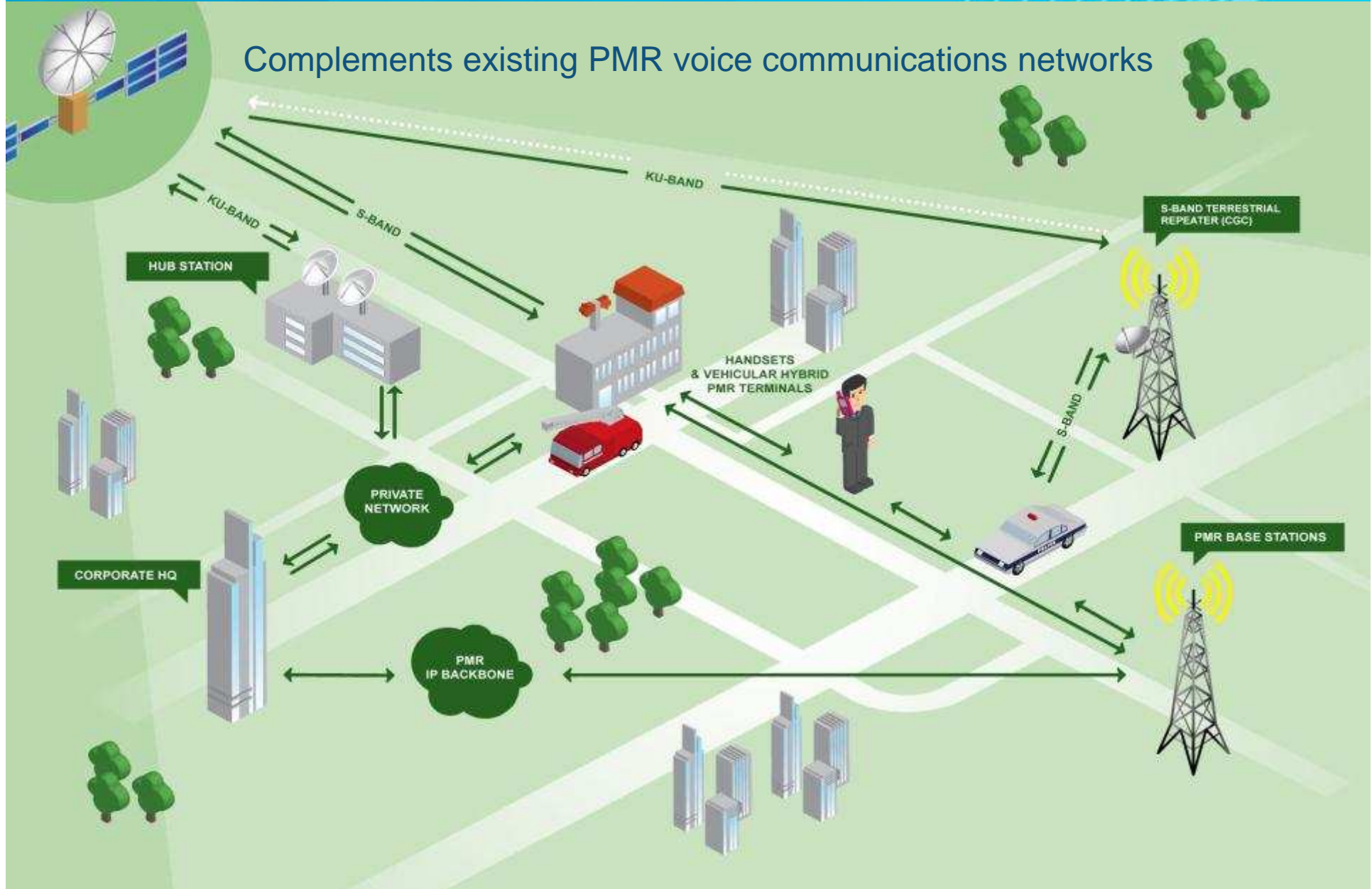
### Public Sector reliant upon commercial mobile broadband networks

- Unprecedented demand from web enabled phones, pads, notebooks & laptops
- Enormous stress on the commercial networks resulting in data capping and highly controlled traffic management
- Existing networks cannot cope with increasing demand for capacity to stream video and audio on a one-to-one basis
  - Several examples already of complete network failure due to simultaneous demand
- Networks operators seeking to increase spectrum holding and migrate to LTE to meet demand, but;
  - High cost of deploying new infrastructure in new bands – 2.6GHz (new terminals)
  - Cherry picked areas driven by business profile
- **Expect a slow roll-out in a geographically fragmented way nationally and European-wide**



# How it works

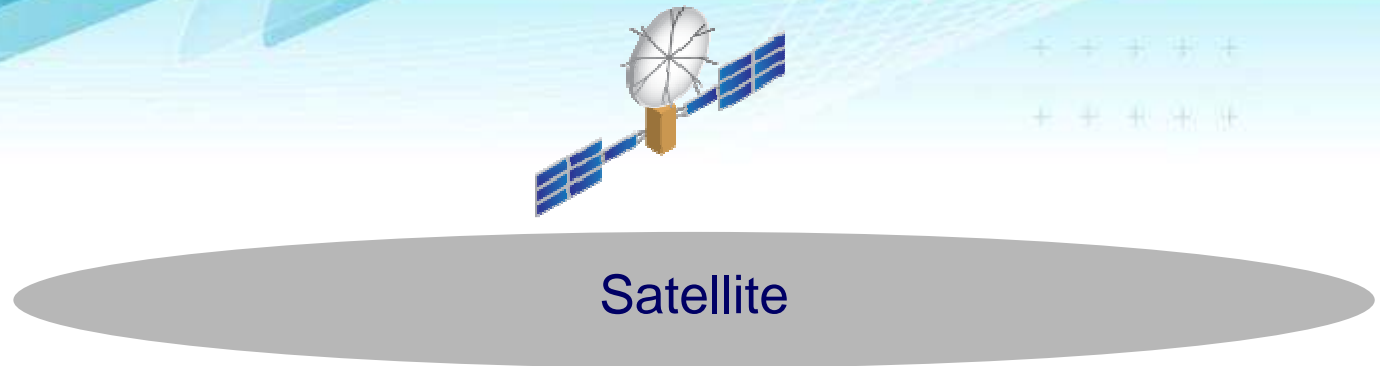
Complements existing PMR voice communications networks



# Purpose Based Infrastructure

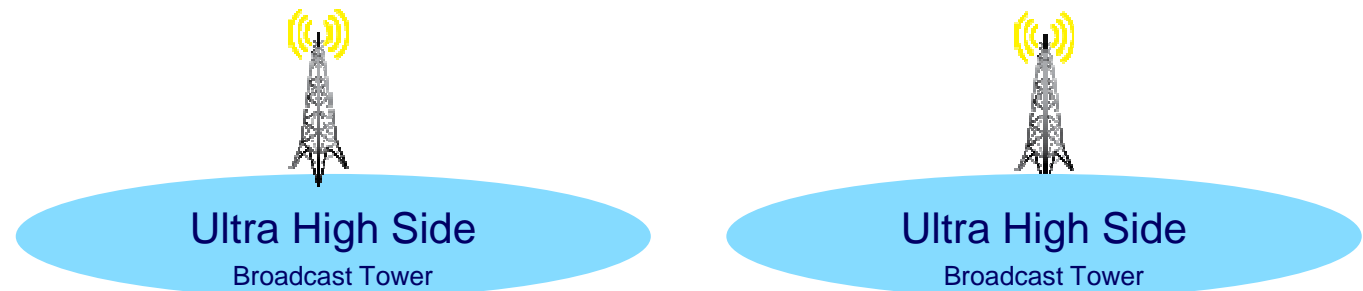
## All Europe/EU Coverage

- EU wide services
- Satellite transport
- One to Many optimized
- Only valid option for Sea and Airborne
- DVB-SH/ESSA based
- High Level structures



## Member State Coverage

- Terrestrial transport
- Broadband optimized
  - S-band 3G or LTE standard
- One to Many support through DVB-SH repeater
- Covering EU member state land
- Less Detailed structures



## Hot Spot or City Coverage

- Low Tower transport
- Dense Broadband optimized
  - S-band LTE
- Preferable on dense city
- Highly detailed structures



# Integrated S-band DVB-SH & LTE Gateway



# Public services, safety and security

Effective, immediate and reliable mobile communications during times of critical needs

Solaris Mobile can provide capacity for authorities and civil protection

- “Always on” and ubiquitous wireless connectivity during time of emergencies
- High-capacity and highly secure communications over IP networks
- Monitoring rescue operations in isolated regions and extreme conditions
- Communications in the event of immobilisation of terrestrial networks

Solaris Mobile offers the opportunity for the first time for a **single unified IP network for public services in all EU member states** for air, sea and land based services







Thank You