Wide Beam Services in an HTS World
- Flexibility, Choice & Capability

Digital Ship Cyprus 2014
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Agenda

- Intelsat: Legacy of Innovation
- Evolving from the simple
- HTS vs Wide Beam?
- Driving multiband solutions
- The role of the Service Provider Channel
Intelsat is the World’s Leading Provider of Commercial Satellite Services

- Global fleet of more than 50 in-service satellites covering 99% of the Earth’s populated regions
- Our fleet is complemented by the IntelsatOne network, which consists of more than 36,000 miles of fiber that connects our Teleports and PoPs
- Largest satellite operator in terms of revenue ($2.6B in 2012) and capacity
Diverse, Reliable, Global and Innovative

Premier maritime, aero, media, telecommunications and government customer base

Excellent operational track record of providing high-quality, reliable service with a continued focus on the future

Strong history of developing successful global business partnerships

Dedicated to delivering innovative, flexible, satellite-based communications around the globe
Evolution

- **RMS Titanic** (1912)
- **Oasis** (2010 WR)

**Passengers Onboard**

- **RMS Titanic**
  - 2228 Passengers

- **Oasis**
  - 6168 Passengers

**DECKS**

- **Titanic**: 9 decks
- **Oasis**: 16 decks

**WEIGHT**

- **Titanic**: 46,328 tons
- **Oasis**: 225,282 tons

**SPEED**

- **Titanic**: 24 knots (44 mph)
- **Oasis**: 22.6 knots (41.9 mph)

**THE CREW**

- **Titanic**: 883
- **Oasis**: 2,165

**COMMUNICATION**

- **Telegrams**
  - Guests could pay to have handwritten messages relayed to their nearest relatives by Morse code.

- **IPhones**
  - IPhones are available to guests for on-ship communications to make reservations or check in on the trip.

**INTELSAT**

Evolution

- Focus shift from cost to value
- Legacy
  - Communications separate from ship operations
  - Focus on limiting costs
  - Shipboard functions retrofitted to the available technology
- Today and into the future
  - Current and future requirements are driving design of next generation systems
  - SPs looking to leverage and evolve existing investments into the future
  - Vessel owners/operators looking to leverage investment to maximise operational efficiencies and ROI
  - Increasing awareness of ROI vs. simply reducing costs
Implications of HTS on Wide Beam

- Wide beam capacity is better suited to certain applications
- HTS is not required everywhere
- Wide beam can provide 100Mbps speeds today if required
- Existing Ku and C-Band hardware works smoothly across both wide beam and HTS footprints
- Growth may slow but wide beam will continue to be both relevant connectivity option

- Not enough wide beam capacity to meet current or future demand
- HTS will see development of smaller antennas on land, at sea and in the air
- HTS will drive down the Mbit cost of VSAT services
- All of which will see the decline of Wide Beam Services
MARITIME FSS CAPACITY REVENUES FOR VSAT BY FREQUENCY BAND
(2010-2023)

Million dollars

Ka-band

Ku-band

C-band

What The Number Say
High performance where it’s needed

Seamless operations when sailing between wide beam and HTS
Capacity will Flexibly Scale over Time, Offering Continuity, Growth, Resilience

Maps are for illustrative purposes only.
Complementary Capability

• Capacity selection has many considerations:
  • Coverage and beam size
  • Atmospheric conditions in the region that is being served
  • Hardware
  • Budgetary constraints
  • Density of user population
• Applications, Environmental conditions, coverage and deployment concerns continue to drive technology choice
The Power of an Enabled Channel

End User
- Evermore complex applications & requirements
- Tighter installation/rollout and maintenance schedules
- Constrained budgets & continued demands to show ROI

Service Provider
- Committed investment in Global Networks & Value Added Service layer
- Global support & logistic services
- Ability to develop and support multiband solutions

Satellite Operator
- Relevant products & services
- Enable SPs to maintain margins & target new customers
- Driving growth for SP and Operator

User-Service Provider-Satellite Operator relationship diagram.
Key Considerations

How much bandwidth will you need in the next 15 years?

Applications drive solution choice. Will the chosen technology address the next “killer app” … whatever that may be?

Reduce risk by leveraging proven technologies and current investments.

Coverage and capability where you need it.
Thank you

FIFTY YEARS LEADING IN SPACE

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