Maritime Use of Satellites

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Introduction

• The Nautical Institute is the International Professional Body for Maritime Professionals.

• Please visit: www.nautinst.org

• I’m a mariner, I used to drive ships – now I represent those “in control of sea going craft”.

• I don’t know much about satellites…
Shipboard Use

- Navigation
- Communication
- Identification
- Entertainment
- Timing
Navigation

- Global Navigation Satellite Systems (GNSS)
  - GPS, GLONASS, Compass, and Galilao
  - Use of Augmentation (SBAS)
  - Questions of reliability due to jamming and spoofing
- Ice/Polar Navigation
- Meteorological Assistance
Communication Needs

• Regulatory compliance
• Safety procedures & response (GMDSS).
• Commercial applications
• Engineering applications
• Medical response
• Personal Communication
Communication

- Inmarsat
- Iridium
- V Sat

- Costs are an issue
- Holy Grail = Affordable Broadband
Identification

- Long Range Identification and Tracking (LRET)
- Automatic Identification System (AIS)
- Satellite Radar
- Emergency Position Indicating Radio Beacon (EPIRB)
- Cargo Tracking
Shore Needs

- Establish Domain Awareness
  - Security (identify rouge vessels)
  - Monitor environment
  - Provision of Marine Safety Info
  - Incident response
  - EEZ management
  - Meteorological services
  - Coastal/Port services
Domain Awareness

• Tools
  – LRET & AIS
  – Satellite Radar
  – Other facilities
  – Networks

• Environment & Incident management

• Communication
Growth

- Identification & Tracking for security, enforcement & compliance.
- Improved environmental and commercial efficiency.
- Polar Navigation
- Broadband Communication (fixed cost…) commercial, safety and entertainment.
Drivers

• Security
• Environment
• Enforcement
• Safety
• Efficiency
• Recruitment & Retention of crews
• eNavigation – eMaritime Projects
Conclusions

• Increased demand for Satellite services.
• Increased demand for reduced costs.
• Increased competition from terrestrial service providers.
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Thank You

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