

# Iridium Transmission for XBT and TSG Operations

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# Introducing Iridium

- Alternative to Inmarsat-C
- Lower Cost

XBT 12K profiles:

\$12,250-\$20,250 vs. \$183.5K

Inmarsat

TSG 10sec daily file (~48 KB):

Approx. \$1,000

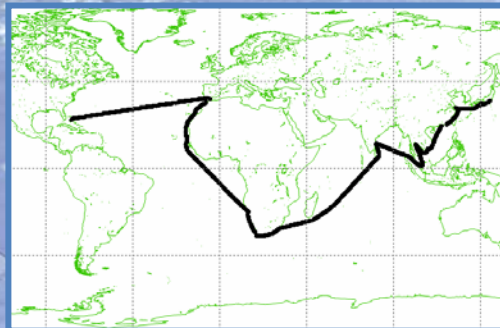
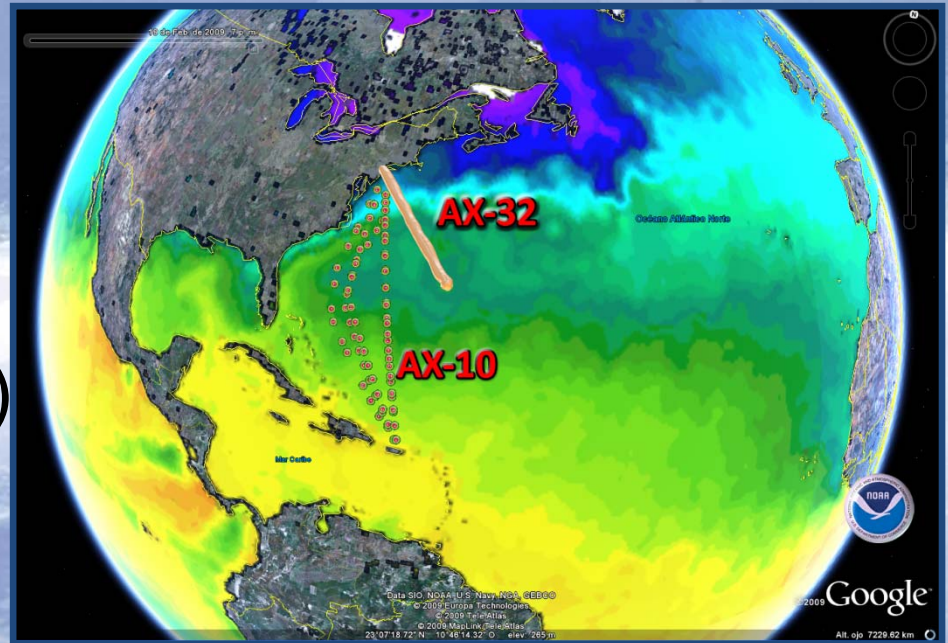
- SMS Messaging
- Global Coverage (66 satellites in 6 polar orbits)





# Operations

- XBT Operations
  - Oleander (AX-32, HD&FR)
  - AX-10 (HD)
- TSG Operations
  - Oleander (AX-32)
  - MV Explorer (Global)



# Iridium Transmission Costs

- Iridium charges are higher than expected based on theoretical calculations
- Initial software Issues: Too many files were transmitted, the cost per file was 50% higher than the nominal rate. Better logging needed.
  - Iridium Antenna Signal Strength Lock
  - Automatic redial turned off
- Cable/Antenna Problems:
  - High Quality cable&connectors
  - Oleander (35% Drop in monthly charges)





# Ongoing & Future Work

- Improve data tracking for monitoring purposes
- Expand operations to other transects (AX-7)
- Share our experience and learn from others
- ARGOS-3
- Software & Hardware Upgrades (blocking of modem to prevent unauthorized access to Iridium modem, EMS PDT 300i )



