



**International Hydrographic Organization (IHO)  
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**RELIABLE • CRITICAL • LIFELINES**

Iridium Proprietary and Confidential

**Iridium Everywhere**  
**The One True Global Network**

**Anyone can promise you the world.  
Only Iridium can deliver.**


- The only truly global voice and data communications service
- 66 LEO cross-linked satellites
- A single subscriber device works worldwide
- Reliable, low latency connection
- Highly secure, available network for robust voice & data services

**Worldwide Coverage**



1 Month's Commercial Activity

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## Iridium Satellite LLC

### Global Company, Global Focus

Iridium has staked its claim as the world's only *truly* global mobile satellite communications company.

- Infrastructure and support located around the globe
  - Corporate Headquarters: Bethesda, MD
  - Regional Sales offices in Europe, Asia and South America
  - Satellite Operations Center: Leesburg, VA and Tempe, AZ
  - Primary Gateway Earth Stations: Tempe, AZ, Fairbanks, AK and Svalbard, Norway
  - Government Gateway: Wahiawa, HI



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## Iridium Financials - on a roll...

### At the end of Q2 2009:

- Subscribers 347,000+ 23.9% increase on Q2 '08
- Revenue = \$82.7 million 1.2% increase on \$81.7m in Q2 '08
  - Commercial Services \$39.9m 21.6% increase on Q2 '08
  - Government Services \$18.2m 15.2% increase on Q2 '08
  - Subscriber Equipment \$24.6m 25.7% decrease on Q2 '08
- Operational EBITDA \$36.7m 31.5% increase from \$27.9m in Q2 '08
- End of year 2008 \$108.2 million
- End of year 2009 forecast \$120m to \$130m An increase of 10.9% on 2008

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## Focusing on the Future

### Iridium NEXT – Unleashing the Power of Opportunity

We are constantly innovating and finding new ways to expand the possibilities.

- Next generation constellation on schedule to begin launching in 2014
- Maintains today's 66 cross-linked satellite LEO architecture
  - Unmatched global coverage, security, availability
  - Backwards compatibility for existing Iridium customers
- Offers enhanced services
  - Improved data rates, quality of voice service
  - Enhanced IP-based performance and subscriber technology
  - A new communications platform for space applications
  - Hosted payloads: Unprecedented capabilities



## Iridium Solutions

### Rugged, Reliable and Ready to Go – EVERYWHERE



Maritime	Aviation	Government	Land/Mobile	Machine-to-Machine
<p>Voice &amp; data communications in international waters, Sea Area A4</p> <ul style="list-style-type: none"> <li>• Crew calling</li> <li>• Fisheries mgmt</li> <li>• Man-overboard</li> <li>• High Speed Data</li> <li>• SSAS</li> <li>• LRIT</li> </ul>	<p>Voice &amp; data communications in the sky</p> <ul style="list-style-type: none"> <li>• Flight following</li> <li>• Cockpit communications</li> <li>• Air safety services</li> </ul>	<p>Voice &amp; data communications in-theater</p> <ul style="list-style-type: none"> <li>• Over-the-Horizon</li> <li>• Netted</li> <li>• Blue Force Tracking</li> <li>• Unattended Sensors</li> </ul>	<p>Commercial voice subscribers</p> <ul style="list-style-type: none"> <li>• Disaster</li> <li>• Emergency/rescue operations</li> <li>• In-Network calling</li> <li>• Regional Pricing</li> <li>• Quality Guarantee</li> </ul>	<p>Low latency, global applications</p> <ul style="list-style-type: none"> <li>• Hundreds of applications</li> <li>• Fleet management</li> <li>• Container tracking</li> <li>• Oil and Gas telemetry</li> <li>• Oceanographic data</li> <li>• Personal Locator Beacon</li> </ul>



## Iridium Ecosystem

### Taking the network and devices to growing global demand

The Iridium Ecosystem is expanding and increasing the reach to end customers everywhere

Global End Customers  
**EVERYWHERE**

Global Distributors

Value Added Specialized Solutions

VAD  
VAM  
VAR  
SP



Iridium

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Everywhere

## Maritime growth in 2008


Iridium continues to be the fastest growing MSS provider in Maritime

Merchant Shipping	Fisheries	Oil & Gas	Leisure	Oceanology
				
Crew Calling Biz Ops Container Tracking Fuel Optimization Maritime Safety: SSAS LRIT	Crew Calling Biz Ops VMS E-Logbook Fish-tracking Intra-vessel	Emergency Telemetry SCADA Social calling Handheld	Social calling Geo-fencing / protection Race Tracking Handheld	Ocean data Early warning Animal tracking Climate Change 150+ applications


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Everywhere 8

## Iridium Devices

Ready to work anytime and everywhere you need it



Short Burst Data	OEM Transceiver	Shipboard/Rig/ Fixed Equipment	Satellite Handheld Phone
Track your interests everywhere — simply and reliably	Voice and data asset tracking — its what's inside that counts	Finally the "open ocean" really is open	The tough customer chosen by even tougher customers
<ul style="list-style-type: none"> <li>• Environmental monitoring</li> <li>• Pipeline monitoring</li> <li>• Distress and alarm</li> <li>• GPS compatible</li> <li>• Asset tracking</li> </ul>	<ul style="list-style-type: none"> <li>• Maritime Safety</li> <li>• Flight Tracking and Monitoring</li> <li>• Land and Mobile Military Operations</li> <li>• Voice and Data Communications</li> </ul>	<ul style="list-style-type: none"> <li>• Easy to install</li> <li>• No moving parts</li> <li>• Supports prepaid calling</li> </ul>	<ul style="list-style-type: none"> <li>• Voice and data communications anywhere in the world</li> <li>• Just like dialing a GSM phone</li> </ul>

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## Iridium Openport®



- Scalable data speeds up to 128k
- Low cost pay per MB data plans
- 3 voice lines
- Lowest cost solution for ship's business and crew calling

- Global pole-to-pole coverage
- IP-based architecture
- Multiple independent phone circuits



### Bringing New Services to Market

**Crew Welfare**  
GoChat™  
45 minutes  
60 minutes  
30 minutes

**Regulatory Safety & Security**  
Iridium LRIT

**Operational Efficiency**  
OpenPort®

**9555**

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Everywhere

### Maritime Safety Services

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**iridium**  
Everywhere

## LRIT

Long Range Identification & Tracking

- Iridium, through its service partners, offers a range of cost-effective, robust LRIT solutions to meet IMO carriage requirements.
- Iridium is the only MSS Provider covering Sea Area A4.

**VAM**  
Value Added Manufacturer

**CSP**  
Communication Service Provider

**ASP**  
Application Service Provider

## LRIT

Long Range Identification & Tracking

- Truly global real time coverage, including Sea Area A4
- Low uniform latency
- Single gateway access point
- Small compact antenna size
- Robust, proven, affordable equipment
- Easy install

**Example: Vendée Globe race 2008-9**  
tracked thru Iridium Thorium unit manufactured by CLS

**Proven Success with asset tracking and security applications**

## LRIT

Long Range Identification & Tracking



**EIMA**  
EMMA  
BlueTraker® LRIT

**CLS**  
Thorium® LRIT

**WATCHDOG Inc.**  
Leading The Way In Satellite Tracking  
Faria Watchdog 750

**Trident sensors**

Stand-alone, dedicated terminals ensure interference-free operation

**Iridium LRIT Value Added Manufacturers**




## GMDSS

Global Maritime Distress & Safety System

- **Regulatory Status**
  - IMO guidelines for other mobile satellite systems to provide GMDSS services
  - Amendments to SOLAS Chapter IV = effective July 1, 2009
  - Resolution A.1001(25) = establishes criteria for qualification
  - International Mobile Satellite Organization (IMSO) to provide oversight
  - COMSAR subcommittee has voted to endorse expansion of Worldwide Navigational Warnings for Arctic Region; relies on HF radio now
- **Iridium Application as GMDSS Service Provider being prepared**
  - Technical review and project planning in progress
  - Ongoing discussions with sponsoring government
  - Expect to submit application to IMO at MSC87 (May 2010)
- **Iridium already has Proven success in Aviation safety**
  - ICAO granted Iridium international approval to offer satellite air traffic safety services in 2008

**Green Light – submission planning in progress**





## GMDSS

Global Maritime Distress & Safety System

- Opening of new Arctic Sea Routes endorses the need for expanded safety
- New NAVAREAS/METAREAS XVII to XXI require reliable MSI broadcasts beyond current NAVTEX and SafetyNet coverage



*Only Iridium provides complete coverage over GMDSS Sea Area A4  
>70 degrees latitude served only by HF radio*



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## GMDSS

Global Maritime Distress & Safety System

- **Global Data Broadcast Capabilities** are currently being investigated by Iridium using our proven Short Burst Data (SBD) Service
- These capabilities would include all GMDSS requirements
  - Scheduled and unscheduled broadcasts
  - Global (All Ships), 21 NAV/METAREAS, Coastal Warning areas and Circular, Rectangular and User-defined Areas (SAR ops)
  - MSI message particulars (type, priority, number)
- **Main specifications (provisional)**
  - Capacity 8.3 Mbytes per day
  - Data rates from 770 bps (global) to 9,200 bps (local)
  - Low latency (< 30 seconds from receipt to delivery)
  - Recorded voice?
- **Availability (tentative)**
  - H1 2011

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 **FARVANDSVESENET**  
Danish Maritime Safety Administration

**: Greenland MSI - Sept 09 onwards**

- Arctic NAV AREAS introduction in 2011
  - Additional transmitters required in time for that introduction or find an alternative
- DaMSA invited Iridium to propose an alternative to NAVTEX
- Building a pilot demonstration of MSI delivered over Iridium (NAVTEX equivalent) to arctic regions
- Demonstration will run from September
- Danish Naval vessel(s)
- Completely configurable - highlights
  - Interfaced to printer / will print message once
  - Messages cancellable & transmitted as warning requires
  - Pilot to mimic NAVTEX but there are additional features on Iridium which mean it can be executed differently with same impact
  - Geo-location capability for vessels entering / leaving NAV AREA

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iridium®  
Everywhere

The slide contains a list of bullet points detailing the introduction of Arctic NAV AREAS and the pilot demonstration of MSI over Iridium. The Farvandsvesenet logo is in the top-left, and the Iridium logo is in the bottom-right.

**FARVANDSVÆSENET** : Greenland MSI  
Danish Maritime Safety Administration

- Message tx + ack
- Message retransmit, or
- Geo-fence entry sensed, tx

Ship 1

Ship 2

Greenland MSI Input Interface  
 Greenland Command

MSI Origination

RB  
 WARNING NO. 168  
 GALE WARNING FOR:  
 KANGIKAJIK:  
 NORTHNORTHEAST 15 M/S.  
 APUTITEEQ:  
 NORTHEAST 23.

RB  
 WARNING NO. 168  
 GALE WARNING FOR:  
 KANGIKAJIK:  
 NORTHNORTHEAST 15 M/S.  
 APUTITEEQ:  
 NORTHEAST 23.

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**Canadian Coast Guard - LRIT Arctic Trials**

Fisheries and Oceans Canada / Pêches et Océans Canada

- 3 different LRIT terminals under test
  - Inmarsat C, SkyWave D+ & Iridium
  - Installed on 3 CGG icebreakers patrolling Canada's Arctic waters
- Tests and performance monitoring of all 3 systems well underway, will continue throughout the 2009 Arctic season
- Results will be reported by Canada to the IMO

- Iridium VAM Partner: EMA, BlueTraker LRIT terminal
- Iridium VAR Partner: Pole Star, Canada's LRIT ASP

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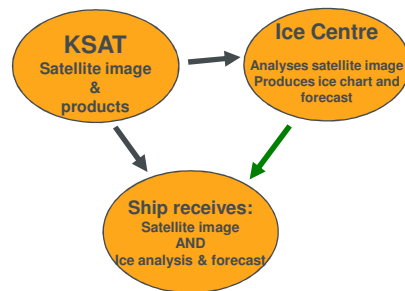
## Kongsberg Satellite Services (KSAT): Satellite Technology and Arctic Governance



- KSAT and Iridium have teamed to demonstrate how satellite technology (imaging, GNSS, communications) can benefit industry, government and research operations in the Arctic.
- Real-time images for maritime surveillance (coastal states), ice and pollution tracking, oil companies and environmental monitoring
- Iridium satellites enable delivery anywhere in the world

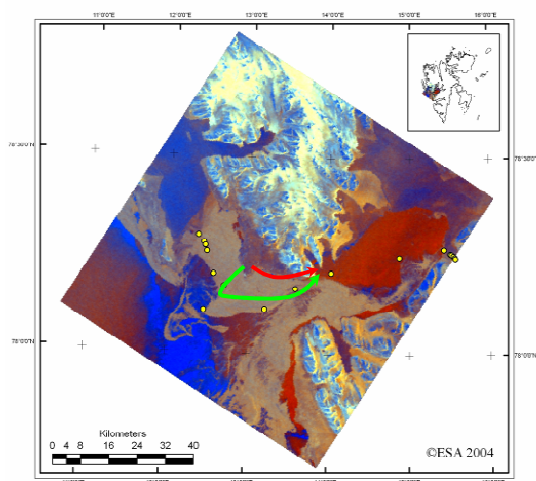


78° North:  
- KSAT Svallsat  
- Iridium Gateway



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## KSAT Ice Navigation Optimal Routing



Planned direct route  
through the ice  
**6 hours**

Actual route  
around the ice  
**3 hours**

**The view from above  
halved the journey time**



## The Open Passage Expedition: Sailing the Canadian Arctic



- S/V Silent Sound (4 crew) 7,000 miles in 4 months from Victoria, BC to Halifax, NS over the top of Alaska and Canada
- Relying on **Blue Sky Network's** Iridium-based D2000 GPS Tracking Device and Iridium 9555 Satellite Phone for real time tracking and critical voice and data communications

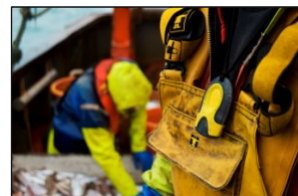
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## Royal National Lifeboat Institution Man Overboard Guardian



- Vessel overdue - hourly transmissions
- Man Overboard
- UK fishing fleets
- RNLI / AWS / McMurdo / Iridium Satellite
- Lives saved



## 9-1-1 Emergency Call Center Service

- In 2003 the FCC specifically addressed the obligation of mobile satellite services, telematics services, multi-line telephone systems, resold and pre-paid service, and disposable phones to provide enhanced 9-1-1 capabilities.
- The FCC requires that MSS carriers provide a few minimum functionalities including:
  - MSS carriers must ensure that call centers are accessed by dialing “9-1-1”, call centers must ascertain the caller’s phone number and location
  - Call center must transfer or forward the call to an appropriate PSAP (Public Safety Answering Point).
- Iridium selected the Intrado E9-1-1 Call Center Solution to provide its subscribers with life saving emergency services when they dial 9-1-1 on their Iridium Satellite System handsets.
- Under study: extending the 9-1-1 service beyond the continental U.S.

intrado®



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## Iridium Everywhere The Facts Speak for Themselves

Iridium delivers the world without limits, without compromise and without exception.

**Iridium** covers every inch of the Earth’s surface

**Iridium** is unmatched for secure, near real-time services and network availability

**Iridium** manufactures rugged, reliable and easy to integrate devices

**Iridium** creates *Reliable Critical Lifelines* with hundreds of mission critical applications

**Iridium** is advancing the way global enterprises do business

**Iridium** is growing, profitable and on-track to launch Iridium NEXT



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