DISCOVERY *telecom*

Machine-to-Machine(M2M)

Product Management

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RELIABLE · CRITICAL · LIFELINES

Agenda

- Fill-Out Survey

- Introduction

- Product Management Overview

- Machine-to-Machine(M2M)

  - Iridium Positioning

- Iridium Data Services & Products

  - Services: SBD, CSD, RUDICS

  - Modules: 9522A, 9522B, 9601, 9602

- Iridium M2M Value Proposition

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Iridium Product Management Tenets

- Know the customer
  - How and where the customer uses a device will define product and service requirements

- Define both the product and the services to meet customer needs and maximize revenue
  - The product is a "tool" to drive service revenue

- Keep it simple
  - All products should be plug and play
  - An easy to use product with a positive customer experience will increase usage and service revenue

- Launch only when the product and the service are ready for prime time
  - A product launched early will degrade the brand and our partners confidence in our ability to execute, consume resources fixing issues vs developing new revenue generating products and reduce revenue from the expectations of the business case.

- Support the Iridium Brand but strengthen it with the product
  - Reliable, Critical Lifelines

Product Management Responsibilities

- The 5 P's of Marketing
  - Product, Price, Placement, Position and Promotion

- Customer Experience
  - Service Providers and End Users
  - Defining and Improving the customer experience
  - Issues consolidation and working with teams on improvement plans

- Coordinate activities around large projects
  - Iridium 9555, Iridium OpenPort, Iridium 9602, AMS(R)S

- A business decision maker
  - Priority assessment for products and projects

- Developing a single vision for the Product(s) across the company, and with distribution partners

Machine-to-Machine (M2M)

- M2M enables data communications ideal for …

  - High value solutions with a world wide reach

  - Monitoring and controlling of remote assets (trucks, ships, cargo, packages etc.)

  - Optimization of information flow

  - Improvements on response times

  - Reduction of human error

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Iridium Offers Enterprise-Wide Solutions for the M2M Market Place

- Value of real-time data to increase efficiency, security and safety
  - Low uniform latency
  - Small antenna form factor
  - Reliable network protocol
  - Best overall value
  - Competitive hardware and service pricing
- Growth increasing faster than any other Iridium vertical market.

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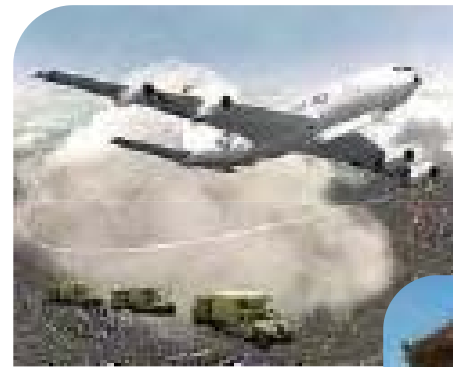
M2M Solutions are powered by
Iridium Data Services and Products

- Iridium Data Services and Products

  - Ideal backbone for remote M2M applications

  - Dependable long-range wireless data links in locations worldwide

  - Low latency high quality data communications services

- High demand for M2M applications on Iridium

  - Growth of 48.3% in SBD service revenue (Q3 2009)

  - Subscriber growth of 71.4% in emerging M2M market (Q3 2009)

  - International regulatory initiatives increase growth for Iridium M2M services

M2M
Iridium Data Services

Iridium Proprietary and Confidential   2/1/2010

Iridium Data Services

- Iridium provides high value satellite services that enable solutions world-wide
    - Short Burst Data (SBD)
    - Circuit Switched Data (CSD)
    - Router-Based Unrestricted Digital Interworking Connectivity Solutions (RUDICS)

- Iridium Services
    - Optimize an array of partner communications solutions
    - Easily integrate in to a variety of partner solutions
    - Ideal for sending and receiving data from equipment around the globe

Iridium Services - SBD
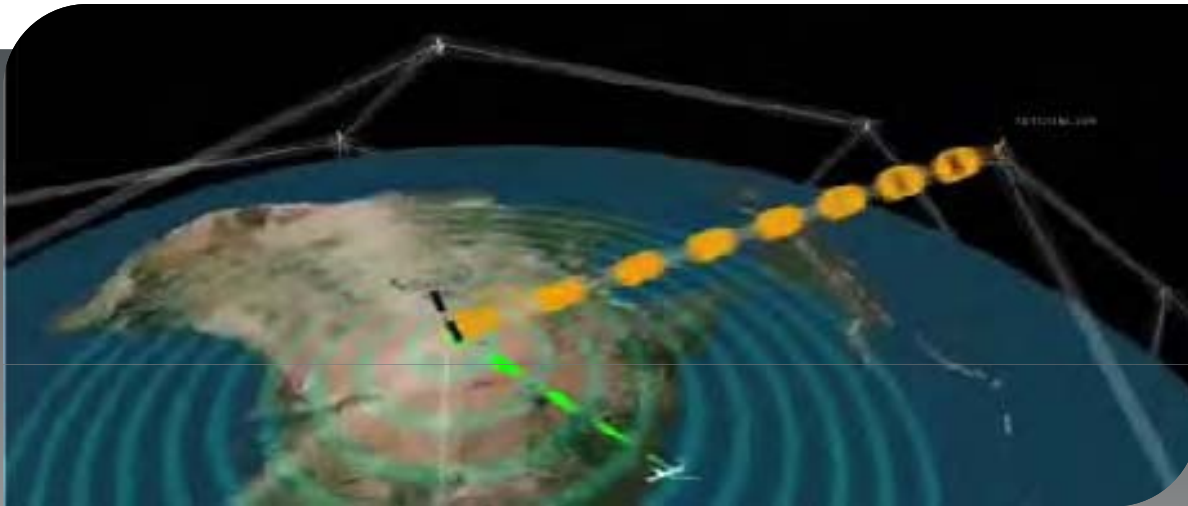
Reliably
- Global network packet data transmissions
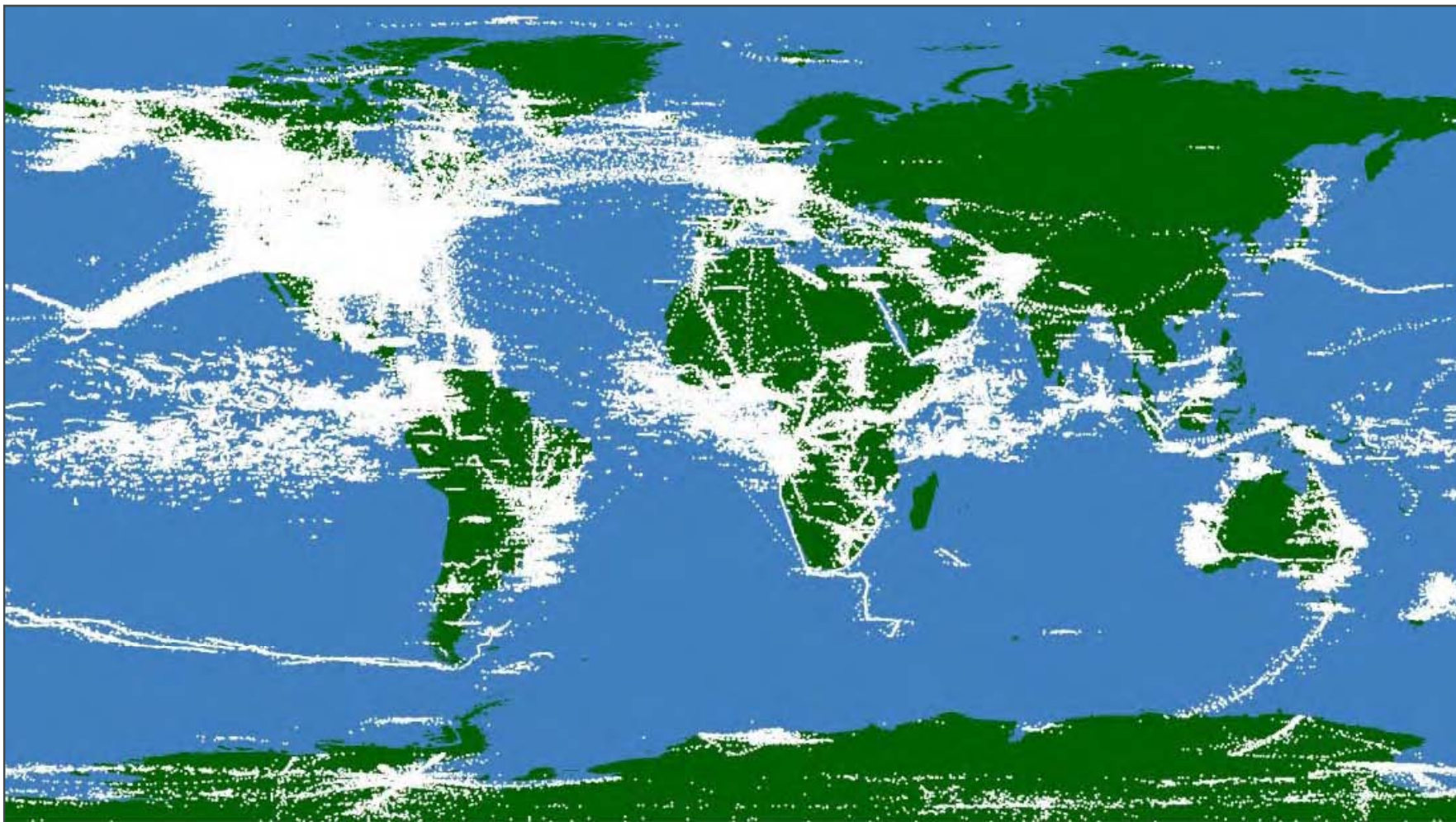- Transfers of small data payloads
- Low message latency

Enabling Solutions
- Heavy equipment
- Maritime
- Personal Tracking
- Automotive Vehicle location
- Vessel monitoring systems
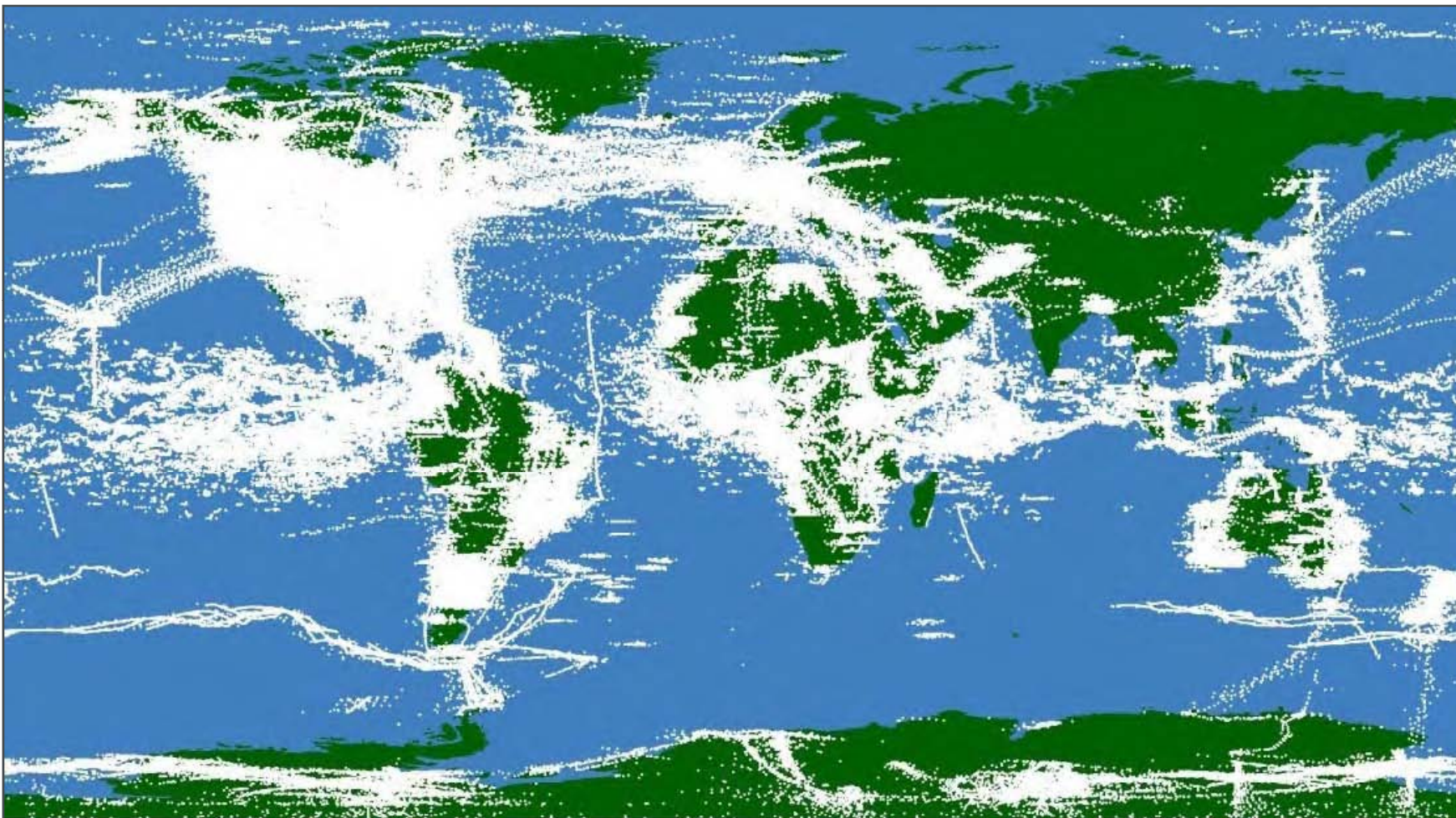- Aviation
- Government

Unmatched Value
- Targeted & bundled pricing
- Usage based pricing
- Development support
- Marketing support
- Certification testing

Iridium SBD Data

Commercial Short-Burst Data Traffic – Jan 2008

Iridium SBD Data

Commercial Short-Burst Data Traffic – Jan 2009

    2/1/2010

Iridium Service – Other Data Services

Circuit Switched Data

Service like traditional terrestrial dial-up data connectivity. Software configured to call another computer via a remote LAN or access to the Internet

Features

- Asynchronous dial-up data connectivity at rates of 2.4 Kbps
- Easily interfaces into existing dial-up data applications
- Extend dial-up data applications to computers where there are no terrestrial dial-up connectivity
- Ability to transfer large files and bi-directional M2M communications
- Supporting dial-up data applications impacted by holes in cellular or terrestrial networks

RUDICS

Service provides Multi-link Point to Point Protocol (PPP.) capabilities where Iridium products can be used to send data simultaneously

Features

- Elimination of analog modem training time
- Increased connection quality, reliability, and maximizing throughput
- Protocol independence
- Both Mobile Originated and Mobile Terminated calls are rates at the same rate

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Iridium Data Products

Iridium Data Products

- Based on three families of hardware; handsets, transceivers and integrated communications systems
  - L-Band Transceivers: 9522A, 9522B
  - SBD Transceivers: 9601, 9602
- Used to optimize partner communications solutions
- Easily integrates in to a wide variety of solutions
- Ideal for sending and receiving data from equipment around the globe
- High value satellite services enabling solutions

L-Band Transceiver – 9522A

Global satellite transceiver ideal for sending and receiving data from equipment around the globe.

Features

- Voice and data up at 2400 bps

- High value cost airtime pricing

- Easy development

- Integration through AT Command Set

- RS 232 Serial interface

- Global coverage

- Enables continuous circuit switch connections

- Connects to small Omni-directional L-Band Antennas

Sold Out

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t7   Get details on service timefram from Kathy Dickerson.
         thompson_l, 1/11/2010

L-Band Transceiver – 9522B

Second generation satellite transceiver ideal for sending and receiving data from equipment around the globe. Smaller form factor to the 9522A and an addition of a GPS pass though port.

Features

- Voice and data up at 2400 bps

- High value cost airtime pricing

- Easy development

- AT command set

- RS232 Serial Interface

- 26-pin IDC connector

- Global converge

- Enables continuous circuit switched connection

- Connects to small omni-directional L-band antennas

SBD Transceiver - 9601

Sends and receives packets of data over signaling channels making it suitable for integration into a variety of tracking and monitoring projects

Features

- Transmits and receives small packets of data over the signaling channel
- Easy development and integration through AT Command Set
- Low, uniform global latency
- Pricing based on monthly access fees and usage
- Vast developer network
- Single Header connector
- SMA Antenna Connector
- Converge in areas not served by cellular

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NEW! SBD Transceiver - 9602

Second generation SBD transceiver that sends and receives packets of data over signaling channels making it suitable for integration into a variety of third party tracking and monitoring projects
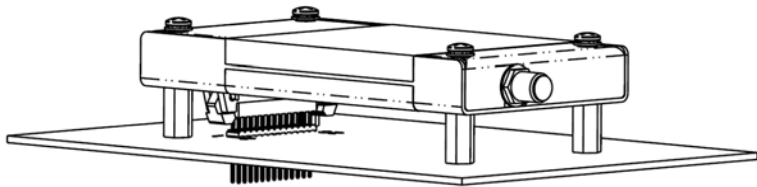
Features

- Smaller size and form factor to the 9601
- Easy development and integration through existing AT Command Set
- Ability to integrate into robust M2M solutions
- Product designed for commercial development needs
- Growth opportunities in profitable new markets, particularly in assets based operations
- Low, uniform global latency
- Pricing based on monthly access fees and usage
- Coverage in areas not served by cellular
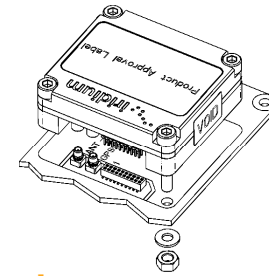
Coming June 2010...

9601, 9602 Features, Connectors & Assembly

9601 mounted to an unpopulated PCB

Features

- Single board transceiver, Small Form Factor and No SIM card
- Designed to be incorporated into an OEM solution
- Maximum mobile originated message size 340 bytes
- Maximum mobile terminated message size 270 bytes
- Automatic Notification to the transceiver that a mobile terminated message is queued at the Gateway
- Global operating capability and RoHS compliant

9602 mounted onto populated PCB

Features

- Utilizes a motherboard design and small inter board connectors
- Serial Interface is now TTL and not RS232 (level shifters or adaption to a TTL voltage interface level may be needed)
- GPS Pass through port
- Single board transceiver, Small Form Factor and No SIM card
- Designed to be incorporated into an OEM solution
- Maximum mobile originated message size 340 bytes
- Maximum mobile terminated message size 270 bytes
- Automatic Notification to the transceiver that a mobile terminated message is queued at the Gateway
- Global operating capability and RoHS compliant

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Iridium M2M Partner Solutions

Iridium Partner
Solutions Enabling Customers

Iridium partners supply solutions to customer with...

- High value and high quality solutions

- Sophisticated services and applications

- Ease in solutions installations

- Secure and reliable communications

- Mission critical communications services

- Robust customer and dealer support

- Reducing the gap of terrestrial-based infrastructure limitations

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M2M
Iridium Service & Product Roadmaps

Iridium Proprietary and Confidential   2/1/2010

SBD Roadmap

SBD 5.2 Release – Q1/2010

- Increased capacity to 250k sessions/busy hour
- Support simultaneous sessions
- Ring Alert queuing feature
- Enhanced delivery performance
- Enhanced platform architecture
- Improved system monitoring
- Enhanced troubleshooting utility

SBD 5.3 Release – Q4/2010

- Increased capacity to 350k sessions/busy hour
- SQL database cluster environment
- DirectIP MT message prioritization
- Increased SEP MO & MT queue
- MO Delivery Acknowledgement
- Enhanced logging details

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Iridium Data Product Roadmap

LBT	SBD

Modules

Embedded Solutions
- General purpose use
- Broad technical knowledge base
- Low volume systems

2006

2010

Embedded & Integrated Solutions
- Designed for unique functions
- Optimization of product size
- Mass production capabilities
- Specialized technical knowledge base
- Mid volume systems

2011 **Reference Design**

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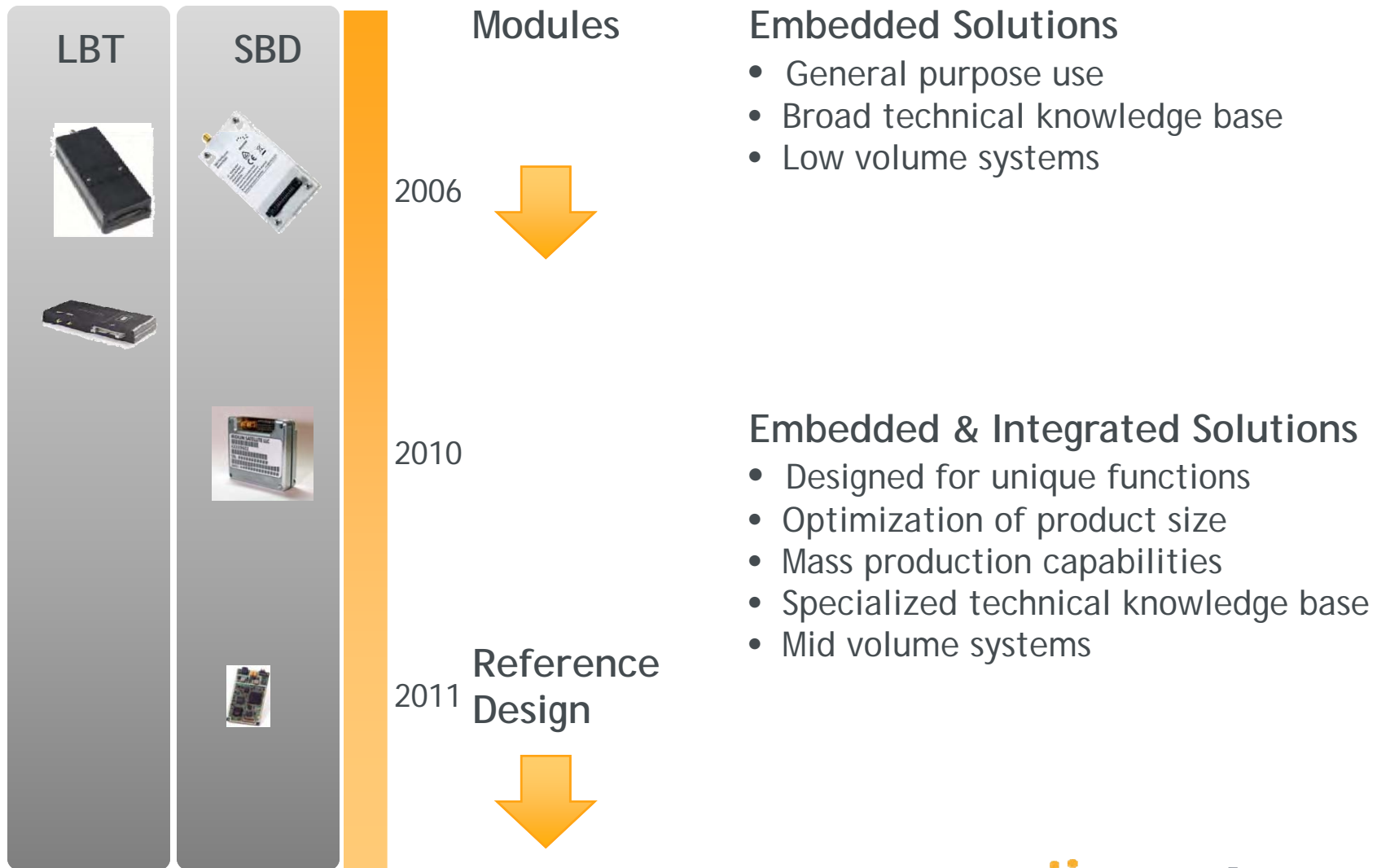
M2M
Iridium M2M Value Proposition

Iridium: the best solution for today...

- Technically superior to Orbcomm, Globalstar, Inmarsat and Thuraya

Key Iridium attributes	Iridium SBD	Inmarsat M2M	Orbcomm	Globalstar simplex	Thuraya
Truly global coverage	✔	✘	✘	✘	✘
Largest message size	MT: 270 bytes MO: 340 bytes	MT: 100 bytes MO: 25 bytes	MT: 256 bytes MO: 128 bytes	MO: 9 bytes	SMS: 140 bytes
Latency	5-20 secs	10 secs MO 1 min MT	Mins to Hours	20 secs MO	
Rapid delivery confirmation	✔	✘	✘	✘	✘

- Superiority proven in the market: fastest growing M2M solution

  - Iridium has increased its share of the satellite M2M market by more than 75% between 2007 and 2009 and now accounts for almost 20% of wholesale M2M service revenues (Source: TMF Associates, November 2009)

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...optimized for key
M2M growth sectors...

- With the most sophisticated partner ecosystem and demonstrated success in all of these areas

Key Iridium attributes	Maritime	Aviation	Safety/ Homeland Security	Government	Transportation
Reliability	Full maritime coverage	Polar/oceanic coverage	High latitude coverage	Truly global coverage	High latitude coverage
Value	Lowest cost	Lowest latency	Lowest latency	Lowest latency	Lowest cost
Regulatory	LRIT, SSAS	AMS(R)S		Dedicated DoD gateway	

- Iridium is also committed to participating in formulation of future regulatory mandates for deployment and meeting their established benchmarks for reliability, coverage, latency, etc. which will drive deployment in these growth sectors (e.g. LRIT)

...and for the future

- Iridium's extensive MSS partner ecosystem cannot be matched by new satellite systems

- Only MSS solution with truly global coverage

- Clearly defined products and services to meet our partners commercial needs

- Future proofed with a backwards compatible Iridium NEXT constellation

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Benefits of Doing
Business with Iridium

Global
network

Unmatched
value

Dedicated
support

Sophisticated
partner
eco-system

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Summary / Questions & Answers

Group Discussion Topics

- Are there additional topics that you expected to hear about during this session?

- What type of year will 2010 be for M2M?

- What are the biggest threats facing the Iridium M2M market?

- What are the biggest opportunities for the Iridium M2M market?

- Are there any new customer segments that are becoming more interested in Iridium M2M?

- What services do you think could be better leveraged to drive service revenue for M2M?

- How can Iridium help you be more successful?

Thank You for Participating!