

Iridium NEXT Generation Satellite System and Application to CNS

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Material in this presentation has been approved
for public release



- Overview of Iridium
- Iridium Aviation
- New Iridium services
- RTCA Efforts
- Iridium NEXT (Next Generation Satellites)

Iridium Today - Global LEO Network Providing a Unique Capability

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Global communications on the move – people, vehicles, aircraft, assets

- 66 satellite global constellation
- A single subscriber device works worldwide
- Ubiquitous coverage
 - Over all oceans
 - Polar routes
 - Any terrain with clear sky view
 - Where terrestrial infrastructure is unavailable or undesirable
 - Satellite-to-satellite links securely route voice or data around the earth to gateway or Iridium mobile user
- Low time latency worldwide

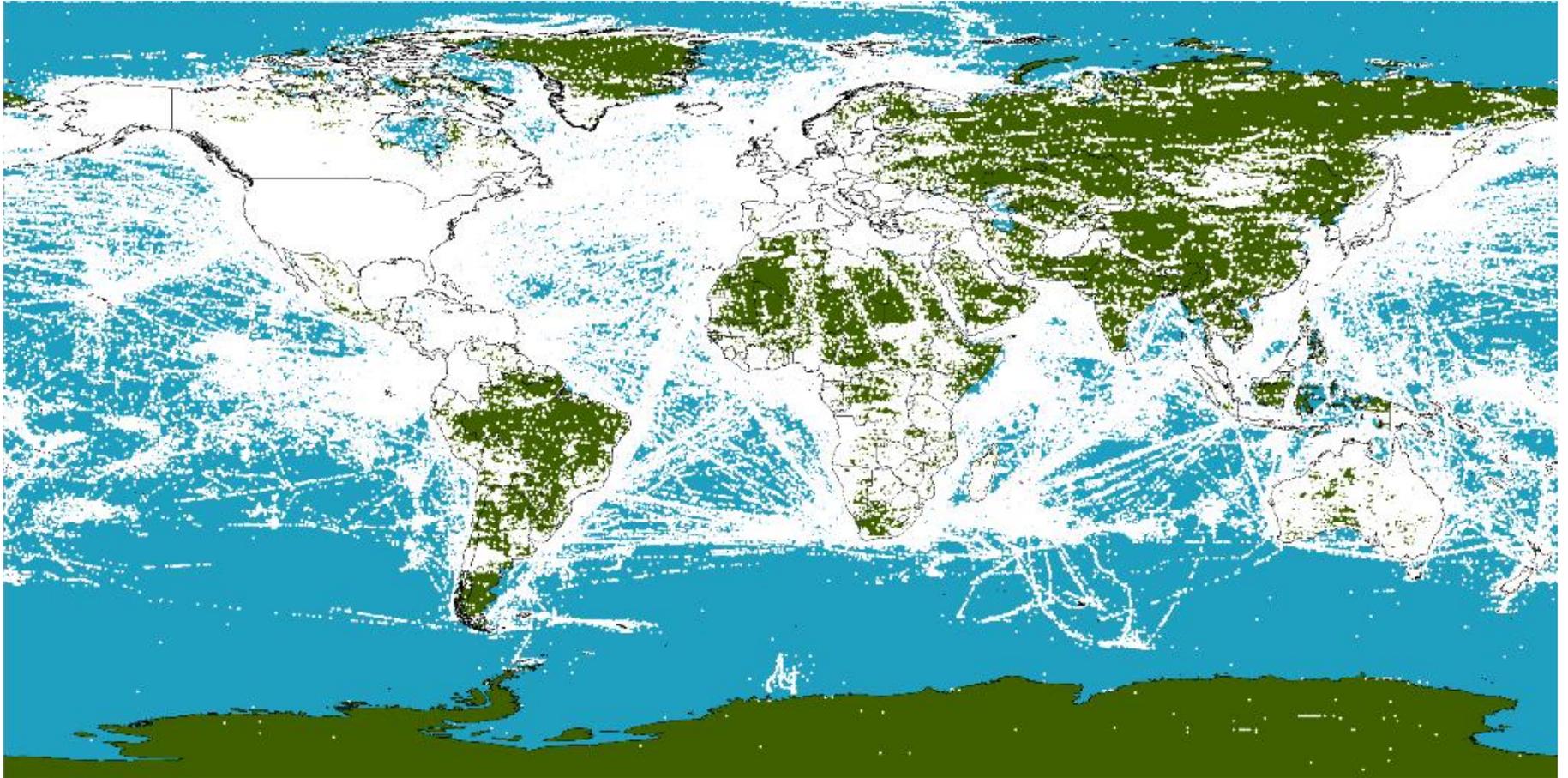


Strong financial performance since restart in 2000

- Dec 2006 cumulative subscribers ~175,000
- 2006 revenue - US\$212M
- 2006 EBITDA – US\$53.9M

Global Communications Traffic

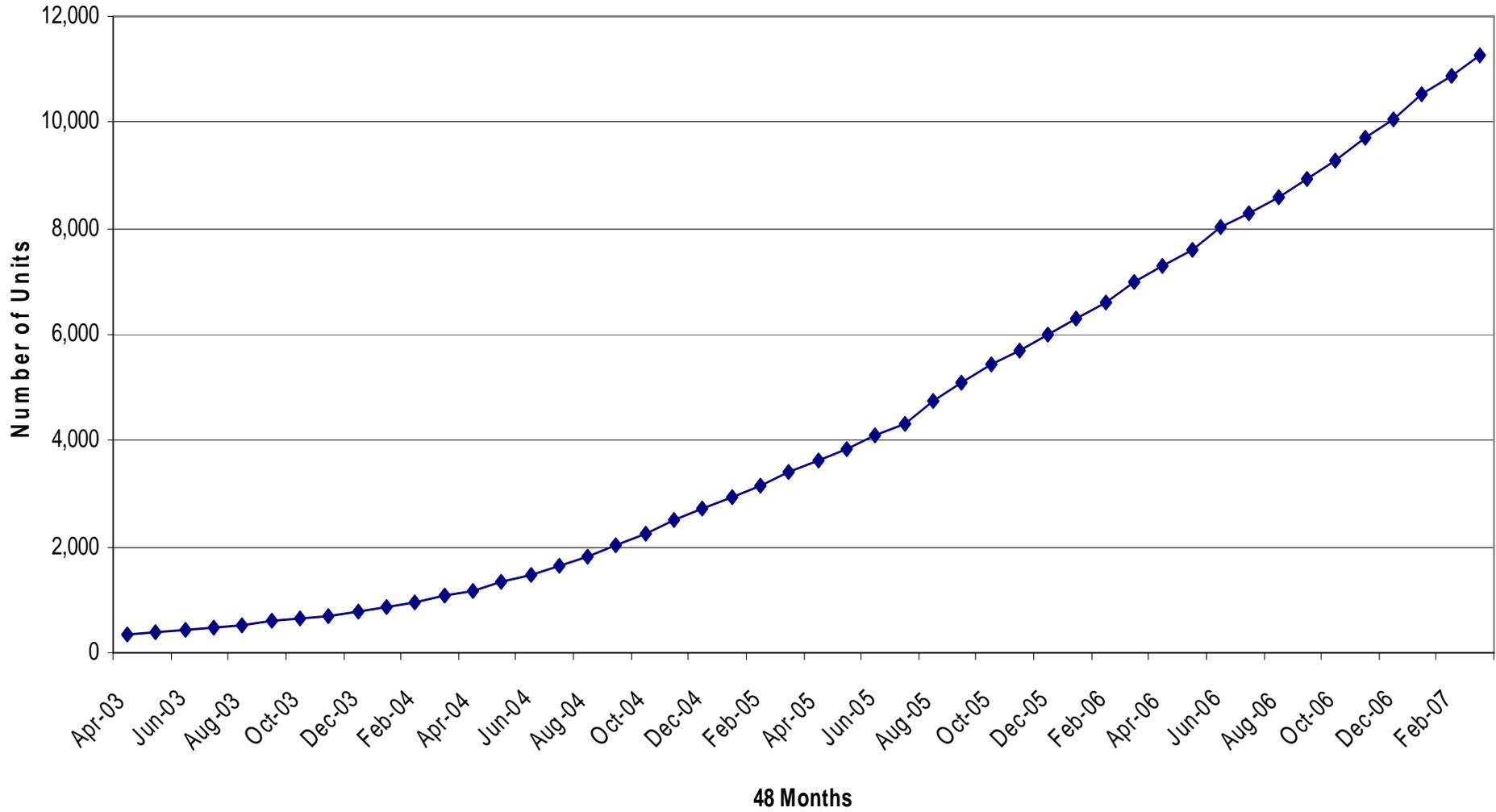
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July 2006

Significant Growth of Aviation Subscribers

Number of Commissioned Aeronautical Units



Note: Figures are for 9522A LBT (L-band transceivers) and do not include 9505 or 9505A handsets, or 9601 modems



Committed Aviation Partners



International Communications Group



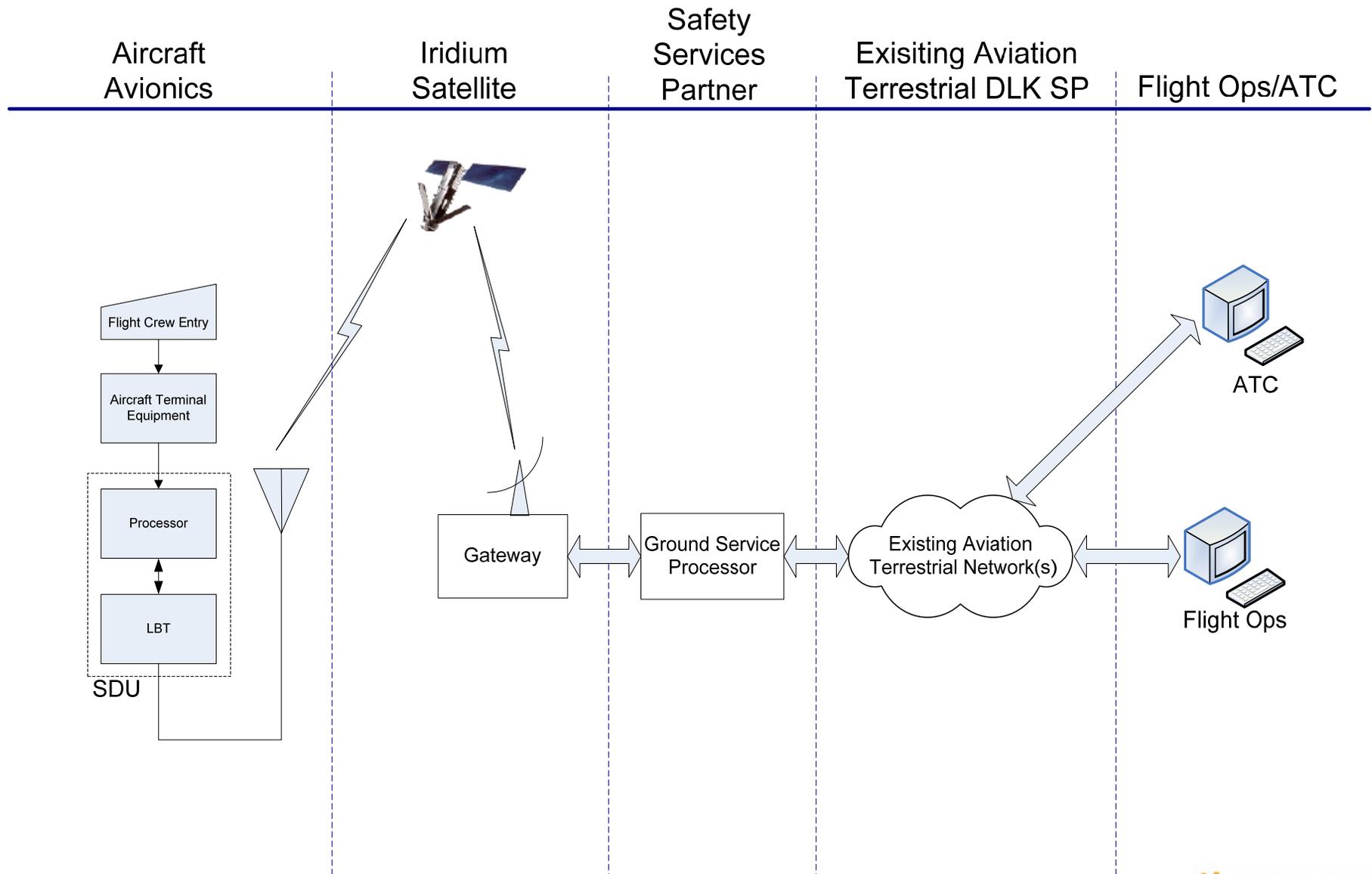
There are a number of avionics and antenna manufacturers of Iridium avionics equipment

- All avionics are based upon Iridium developed and manufactured L Band Transceiver (LBT) and L Band Transceiver Data Modem (9601)
- Avionics range from single channel voice to multi-channel voice and data units
- Integrated ACARS units are available (ARINC integration)
- Omni-directional, low drag, low cost, top mounted antenna
- Low weight, low cost, truly global communications equipment



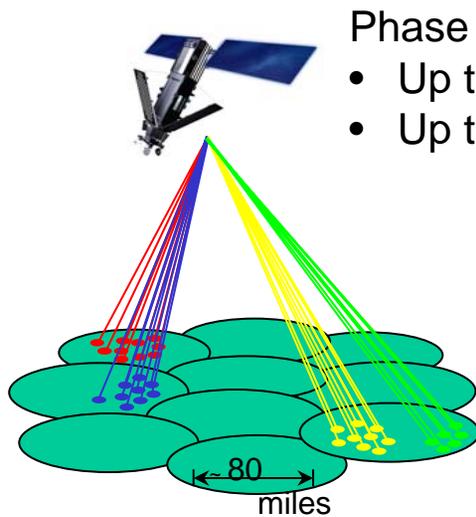
- Approval of Safety Services for Air Traffic Control Communications
 - FAA-sponsored International Civil Aviation Organization (ICAO) working group
 - FAA and International participation
 - Revisions of ICAO SATCOM Standards and Recommended Practices (SARPs) adopted by ICAO Council February 2007
 - Iridium Implementation and Technical Manual and Validation Report for AMS(R)S in final review/approval process
 - Aeronautical Communications Panel (ACP) approval of Manual and Report expected in May '07
- Airline Electronic Engineering Committee (AEEC)
 - ARINC 761, 429, 619, and 620 revised to include Iridium provisions, 10/06 – General Session
 - ARINC 758 revision, in-work
- RTCA
 - Meeting held with FAA, Aircraft Certification Services and Flight Standards representatives to discuss next steps for approval for use of Iridium for aviation safety services
 - Determined the best approach to revise, as needed, RTCA documents related to the Next Generation Satellite Systems (DO-262 and DO-270)

Aviation Datalink via Iridium



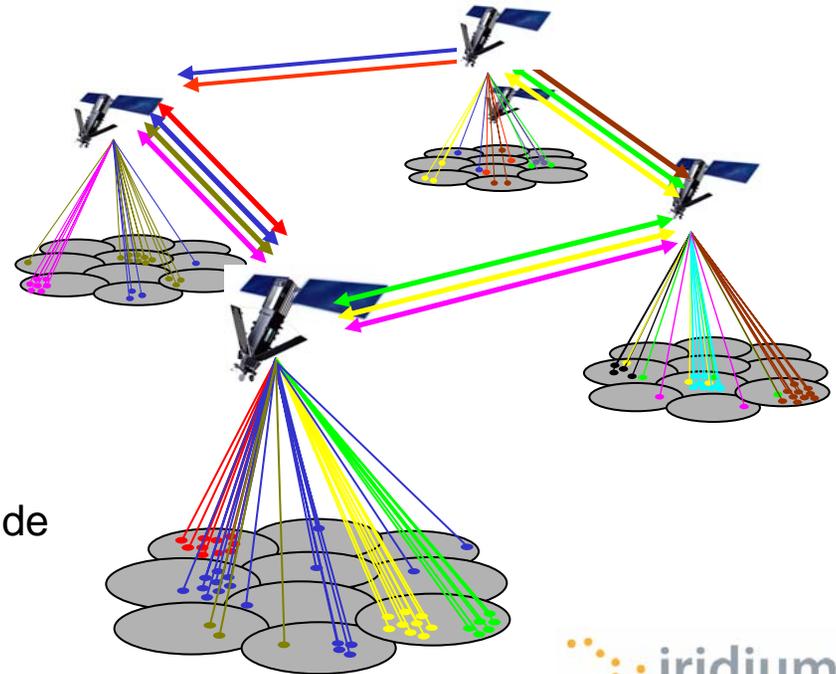
Provides a global *push-to-talk* netted voice and data capability that:

- Provides near- to mid-term implementation
- Makes effective use of existing commercial satellite infrastructure
- Provides a secure netted architecture which is reliable and will scale to support the demand for tactical PTT communications



Phase I (Demonstrated)

- Up to 250 nets w/in single satellite footprint
- Up to 500 users/net



Phase II (In development)

- Hundreds of nets worldwide
- Unlimited users/net

- **Iridium's next-generation satellite constellation**
 - **Seamlessly replaces current constellation; ensures mission continuity**
 - **Backward compatible with present applications and equipment**
 - **Maintains attributes which make Iridium unique: global coverage, security, availability, LEO architecture**
 - **Provides new and enhanced capabilities -- speed, bandwidth, flexibility – and enables new generation of user equipment**
 - **Potential for new applications beyond mobile communications**
- **Provision for government and commercial partnerships which leverage NEXT's unique architecture**

Core Voice and Data Services	High Speed Data Services	Private Network Gateways	Wide Area Broadcast Services
<ul style="list-style-type: none">▪ Flexible delivery of bandwidth▪ From existing 2.4 kbps to 1.5 Mbps▪ Voice and data▪ L-Band service▪ Backward compatibility	<ul style="list-style-type: none">▪ Up to 10 Mbps to a portable terminal▪ Up to 30 Mbps to a transportable terminal▪ Ka-Band service	<ul style="list-style-type: none">▪ Dedicated gateway▪ Private Network on Iridium system▪ Subscriber group “homed” to private Gateway	<ul style="list-style-type: none">▪ Two broadcast channels▪ Dedicated continuous global broadcast channel▪ Demand assigned channels for location specific data broadcast

NEXT offers new high performance global services, enabling cost effective and flexible allocation of bandwidth to the user

NEXT Partnership Opportunities for Space Applications

Independent Nodes

Independent Satellites
Imaging High Resolution
Continuous Earth View
Content

Secondary Payloads

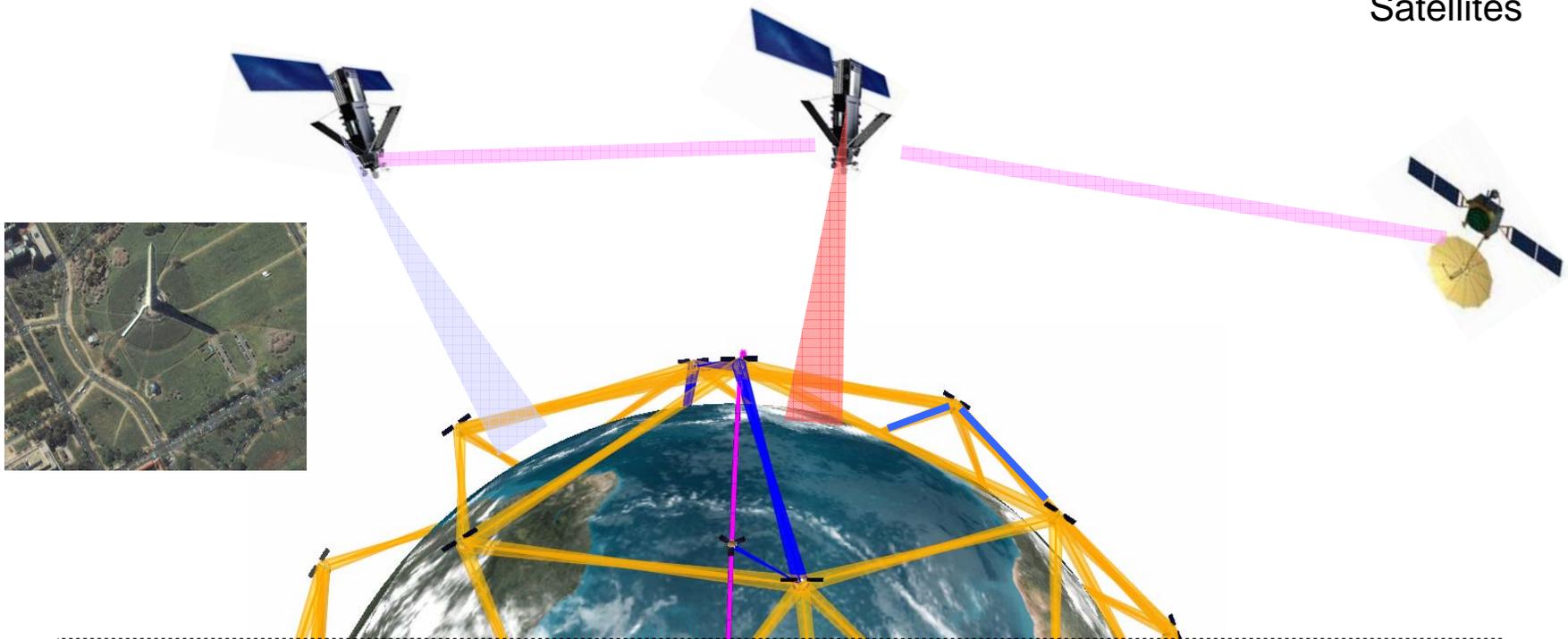
Imaging and Sensor
Applications
Climate Change,
Science

Operationally Responsive Bus

Access to large
production line of SVs
for other missions

C3

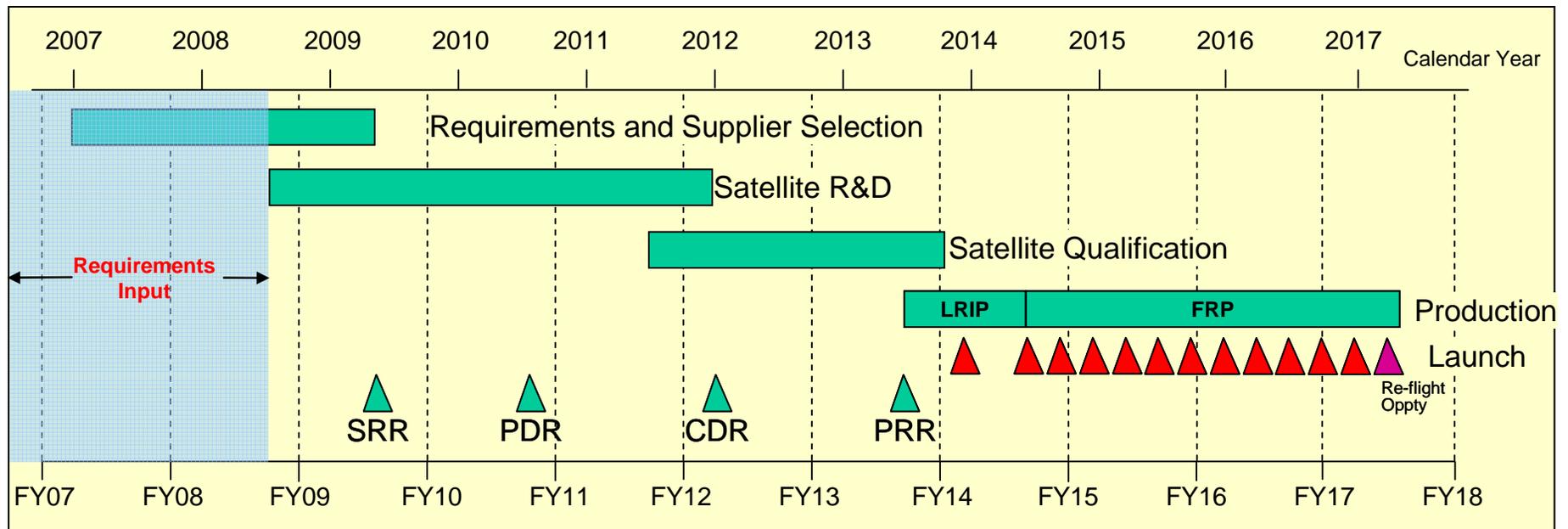
Global Command,
Control and
Communications
for Independent
Satellites



**Unique Global Opportunity for Space Assets Leveraging
NEXT Communications Backbone**

NEXT Deployment Schedule

- Schedule is driven by the commercial plans of ISLLC
- Customer requirements inputs needed by end of CY2007
- Interactive design phase with PDR in early 2010
- First launch in CY2013 on expected case timeline



Project timeline will be managed to ensure service continuity

- Reliable, long-term ATC infrastructure for polar and ocean routes
- Netted capability enables efficient use of Iridium for ATC (potentially even as back-up for low density terrestrial areas)
- Higher bandwidth increases breadth of applications
- Broadcast capability will allow wide area weather data and alert updates
- And maybe??Earth Observation will provide higher resolution weather data and forecasting

Iridium is a unique, time tested, operationally proven and secure interlinked LEO satellite system

Iridium is currently making new investments in infrastructure, services and devices that will maintain its leadership position

Aviation is an important market for Iridium service

Iridium is launching the next generation satellite replacement program that will extend the value of Iridium to new, more robust aviation services

Iridium – the Global MSS Leader