



# Inmarsat Global Xpress™

## Maritime Solution Overview

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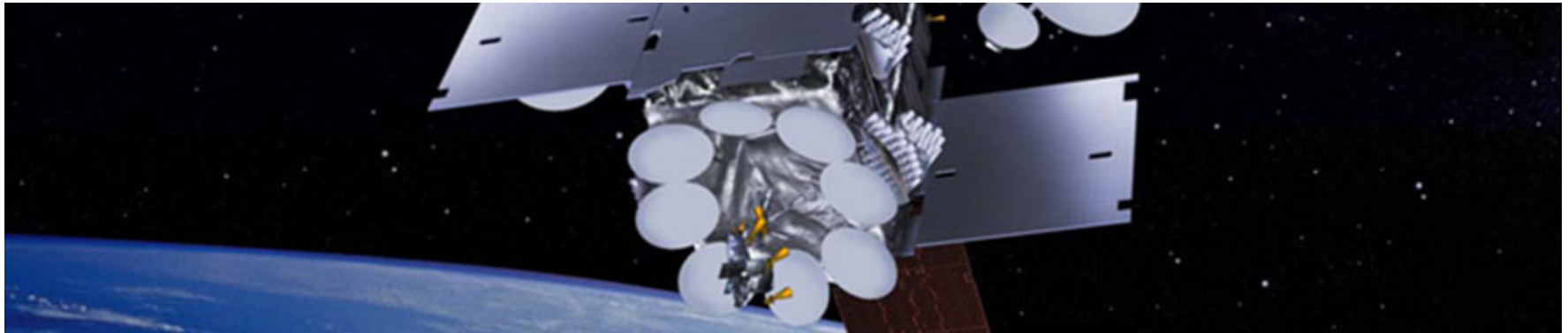
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# Global Xpress Satellite Network

# Global Xpress

The new standard in maritime satellite communications



## High Performance

- ➔ Smaller, more user friendly
- ➔ Standard 60cm performance
  - 50Mbps downlink
  - 5Mbps uplink
- ➔ Higher performance with 1m

## Affordable

- ➔ Lower cost service
- ➔ Lower cost terminals
- ➔ Lower cost implementation

## Reliable

- ➔ Dual satellite constellations
  - Global Ka-Band network
  - Global L-Band Network
- ➔ Inmarsat quality standards, end-to-end

# The Global Xpress Satellites

## Global Beam & Spot Beams

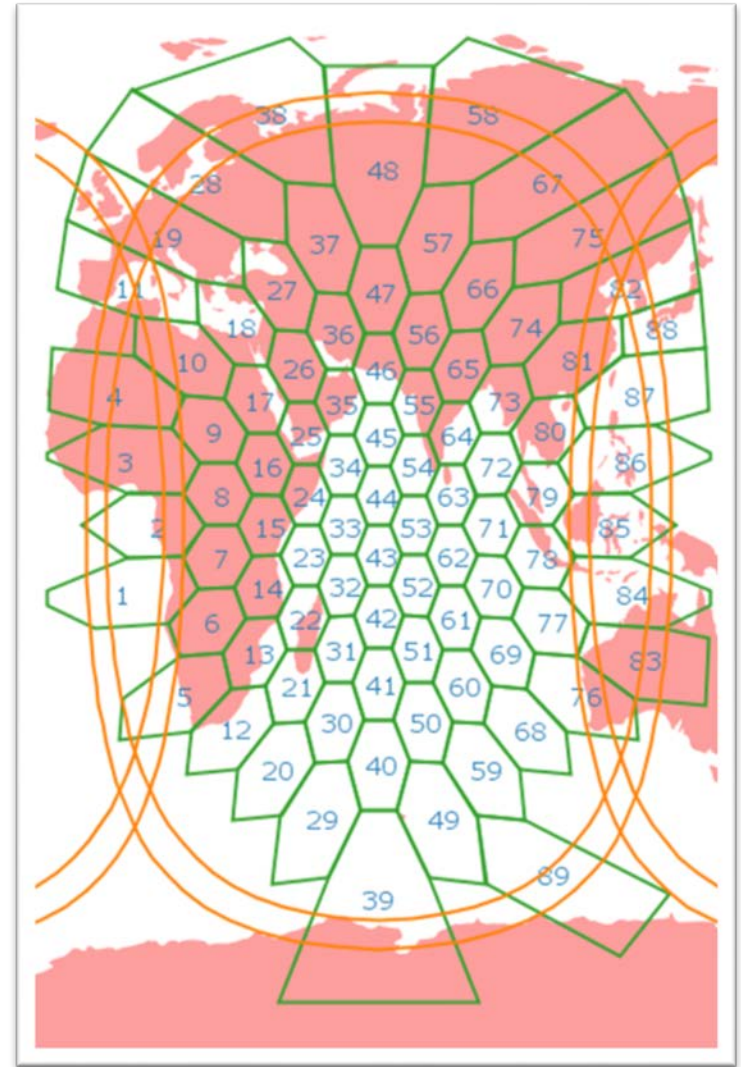
- 89 spot beams per ocean region
- Each spot is capable of 50Mbps/5Mbps
- Frequency reuse increases overall capacity

## Satellite Configuration

- 72 beams can be illuminated at any time
- 24 beams can be paired, with the ability to load balance capacity between them

## High capacity overlay

- 6 steerable beams for additional on-demand capacity



# Satellite Access Stations (SAS)

## **SAS sites are the Ground Station for the GX Network**

- Three SAS sites, one per ocean region
- Each SAS site has two fully diverse teleports

## **Ultimate Redundancy and Reliability**

- Automatic switchover between sites
- Handles any outage situation



# The Global Xpress Maritime Solution

# Maritime Solution Objectives

- Turnkey, managed service
- Easy installation & trouble-free operation
- Integrate and manage satellite communications
- Enforce system security & access control
- Offer reliable voice, video and Internet services
- Efficient bandwidth utilization
- Manage and deliver content and applications

# Global Xpress Maritime components

## Shipboard satellite equipment

- 60cm or 1M Ka-Band Antenna with antenna controller
- FleetBroadband 500 with antenna controller

## GX Ship Master – Onboard communications router and application server

- Data traffic routing between Ka or FB
- Shipboard firewall
- Voice & video conferencing services
- Application and content host

## GX Shore Manager – Shoreside portal for administration and control

- Activation, configuration and management
- User access control
- Administration and monitoring
- Applications and content management



# GX Ship Master - core functionality

## Automatic traffic routing

- Ka is primary, fallback to FB after timeout (configured on portal)
- Returns to Ka when available
- Switches both voice and data

## Firewall and proxy (web access)

- Configured on shore portal, replicated to Ship Manager
- Master control on shore to control browsing
- Whitelist / Blacklist for specific websites or by site type

## Internet Optimization

- IP Stream compression
- Web compression, image downsampling

# GX Ship Master - voice services

## Advanced IT Capabilities

- Network access permissions
- Simple separation of sub-networks aboard ship (VLANs)
- Customer control of traffic priority (QoS)

## Voice services

- SIP phones support
- 3 x RJ-11 ports for PBX and/or analogue phone interface
- VoIP via GX, ability to rerouting via FB Streaming when Ka not available
- Smart phone applications for WiFi calling

## End-User Service Packages

- Customer controls blending of prepaid & postpaid usage
- Voice, data, Internet and video calling services

# GX Ship Master – applications & content

## Application & Content Distribution System

- Distributes to ships for local storage and retrieval
- Standard delivery, off-peak, multicast options

## Who can become a GX provider?

- Inmarsat, VARs, third-parties, equipment manufacturers
- Customers

## Purchasing Services

- Owner can subscribe on behalf of the ship
- Crewmember can purchase services directly

# GX Shore Portal – customer access

## User account configurations

- Access rights, permissions, functionality

## Invoicing and billing

- View and download monthly invoice
- View and download usage details

## Applications and content

- Purchase applications (or block apps and content)
- Subscribe to content feeds

## Support

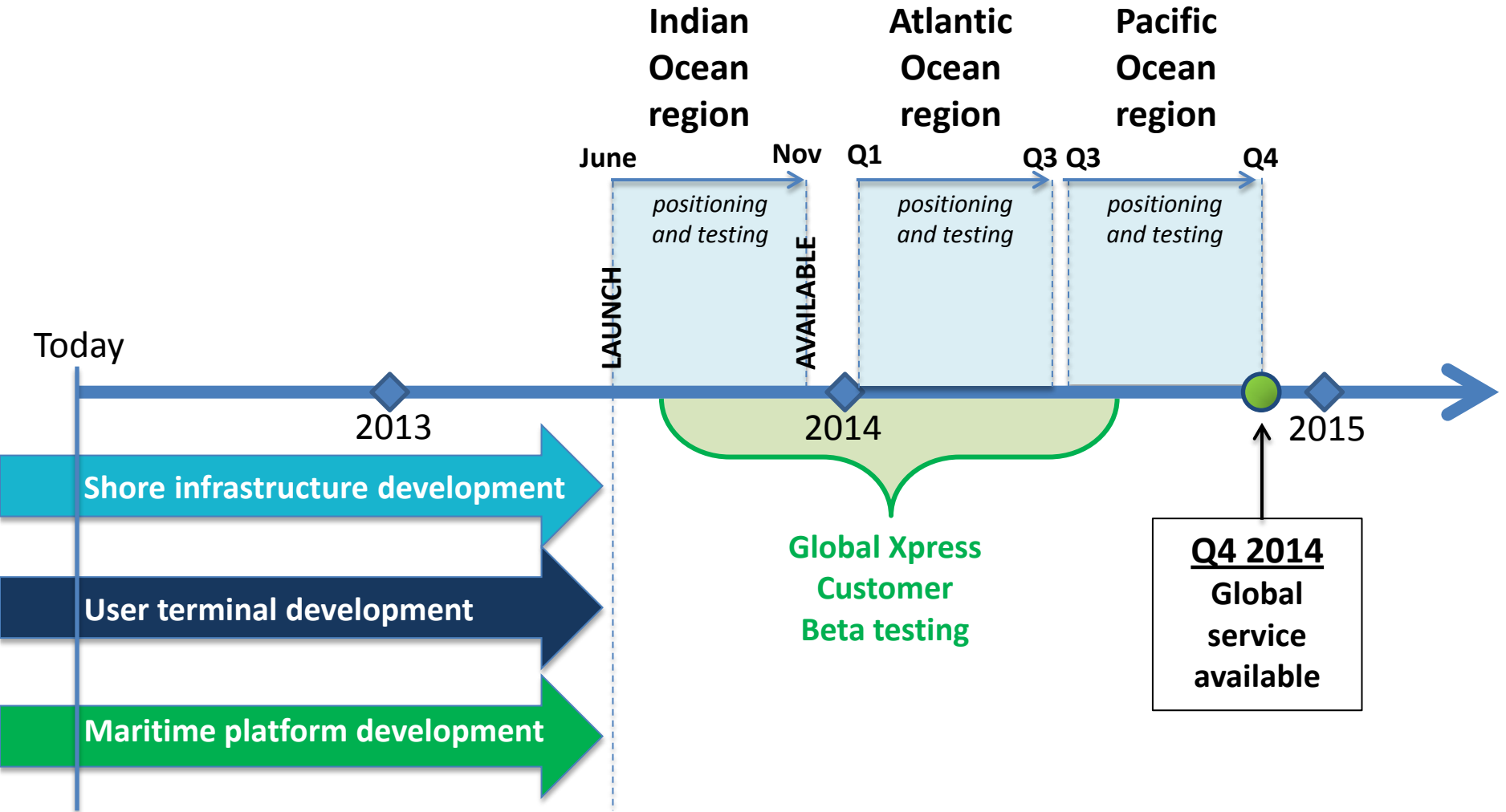
- Support and service requests, view online help database



# Launch timeline



# Global Xpress Planned Timeline



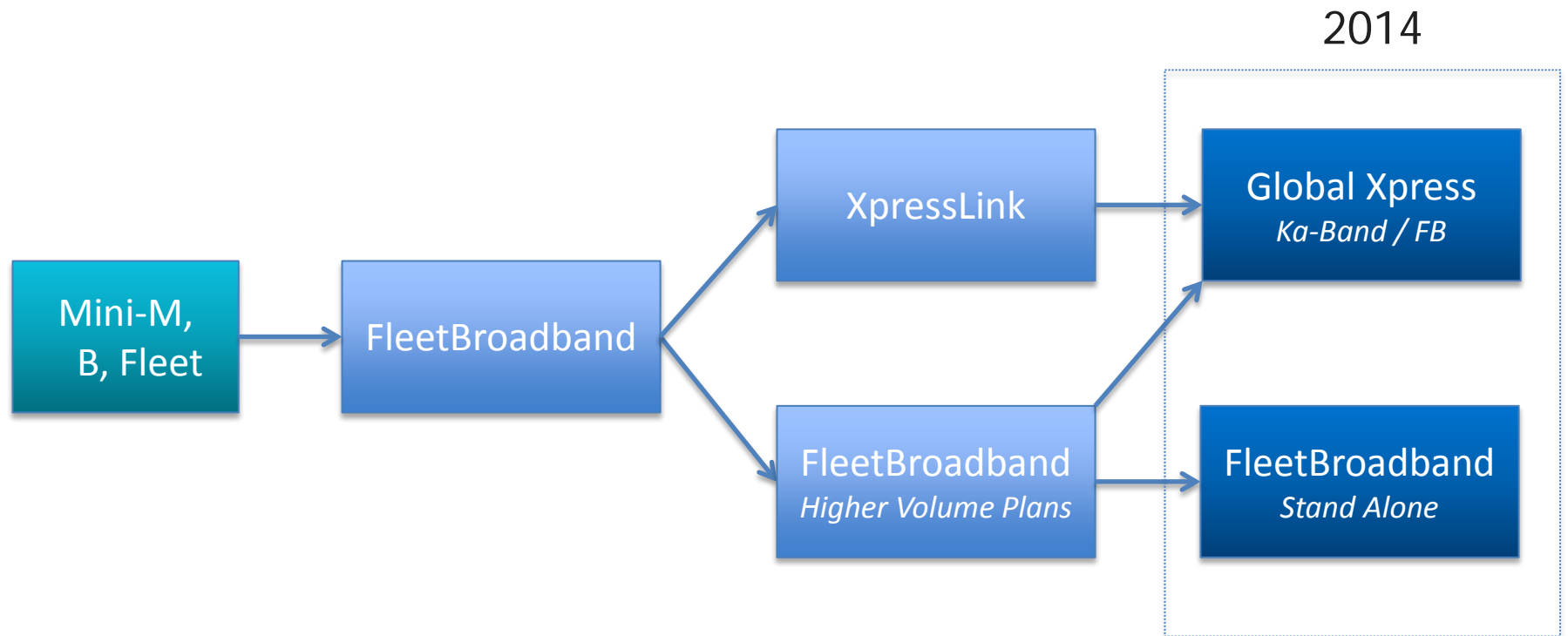


# Pathway to Global Xpress



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FleetBroadband is central to all future Inmarsat services





# Summary

## Global Xpress Maritime

### Today

- Customers can choose either FleetBroadband or XpressLink as a pathway to Global Xpress

### 2013

- Work continues on satellites and ground infrastructure, along with Partner development for Global Xpress

### 2014

- Global Xpress and FleetBroadband form comprehensive, global offering to meet the communications needs of all maritime customers.