Inmarsat Global Xpress™

Maritime Solution Overview

Shane Rossbacher

01 Feb 2012
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

Indian Ocean region
- June: positioning and testing
- Nov: available

Atlantic Ocean region
- Q1: positioning and testing
- Q3: positioning and testing

Pacific Ocean region
- Q4: positioning and testing

LAUNCH AVAILABLE

Today

2013

Shore infrastructure development
User terminal development
Maritime platform development

2014

Global Xpress Customer Beta testing

Q4 2014
Global service available

Dates shown are subject to change
Pathway to Global Xpress
Pathway to Global Xpress

FleetBroadband is central to all future Inmarsat services

- Mini-M, B, Fleet
- FleetBroadband
- XpressLink
- Global Xpress Ka-Band / FB
- FleetBroadband Higher Volume Plans
- FleetBroadband Stand Alone

2014
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.