

Global Information Management



Mini Global II Demonstration

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Federal Aviation
Administration



AIR TRANSPORTATION INFORMATION EXCHANGE CONFERENCE

Global Information Management

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NOAA Auditorium and Science Center • Silver Spring, MD

Mini Global Overview

The Mini Global Demonstrations seek to advance collaborative flight information exchanges utilizing SWIM and established standards amongst operators and ANSPs worldwide

- o Supports ultimate goal of seamless interoperability and harmonization
- o Provides mechanism for ANSPs and operators to support the validation of systems and processes, to enhance efficiencies in their ATM systems

High Level Objectives

- Demonstrate the exchange and applicability of global exchange models to a broader international community
 - Utilize FIXM, AIXM, and iWXXM standards
- Evaluate how these standards will address multiple disparate international systems
 - Different levels of maturity
 - Different levels of data model fidelity
 - Recommend updates to FIXM and AIXM Standards
- Identify and convey potential benefits that can be achieved with the global harmonization of data exchange
- Support validation of ICAO Flight and Flow-Information for a Collaborative Environment (FF-ICE)

Demonstration Benefits

- Promote International Harmonization
 - Standardized data exchange with international ANSPs, AOCs, and the aviation industry
- Assess the compatibility of partner ATM systems with respect to global exchange models (FIXM / iWXXM / AIXM)
- Mature the FIXM standard
 - Provide recommendations to the FIXM WG for future releases
- Accelerates potential uses for iWXXM & AIXM data exchange
- Identify services meaningful to current and future operations
- Collaboratively develop the foundation for new operational capabilities and procedures utilizing international data exchange

Demonstration Partnerships



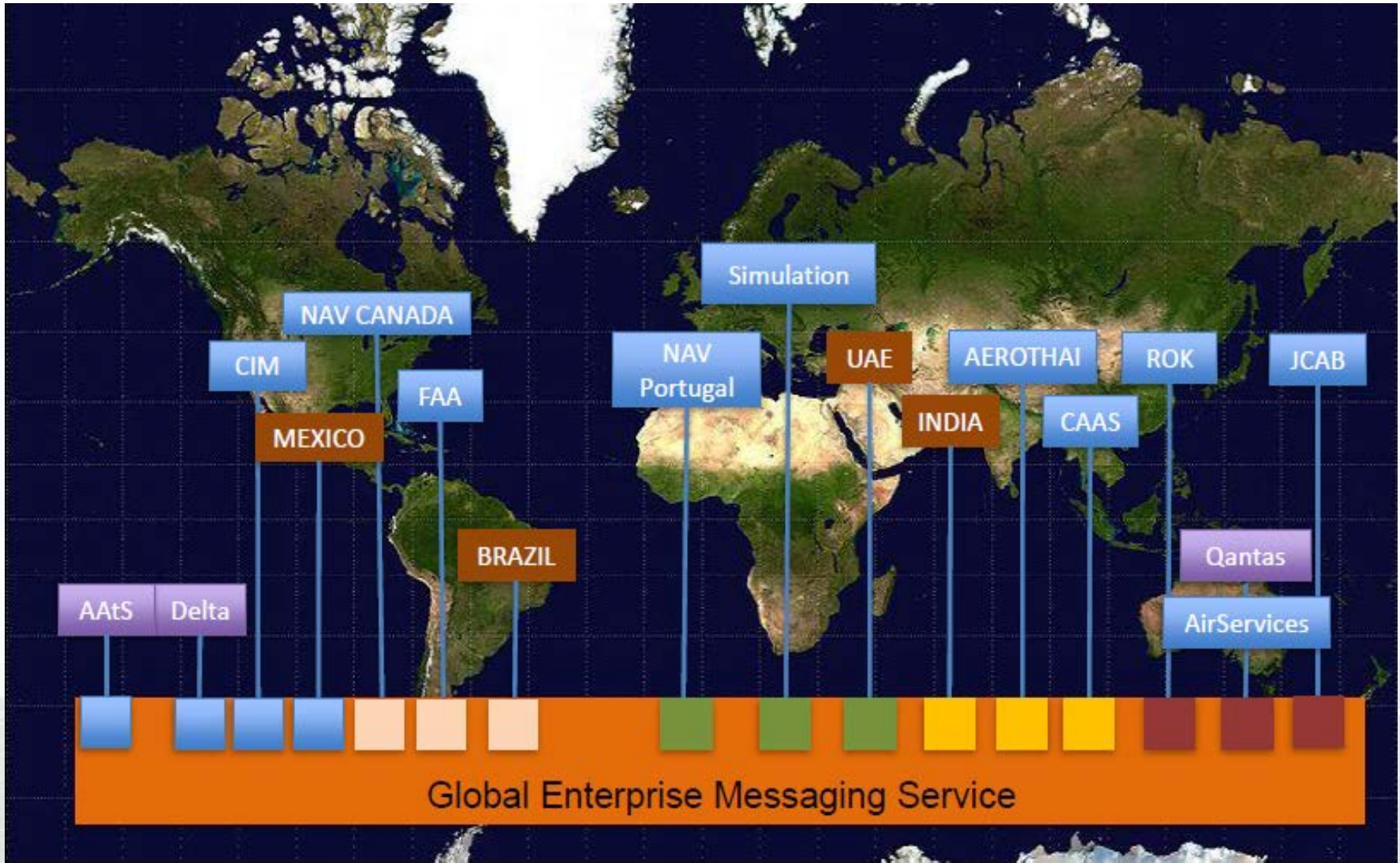
Mini Global I Observations

- Common Messaging
 - Using Enterprise Messaging Service (EMS) to exchange standardized information was successfully demonstrated
 - FIXM messages exchanged among participants revealed no common message interchange format
- Routing and Message Headers (Metadata)
 - Metadata is critical for filtering and routing data
- Provenance
 - AIXM, WXXM, & FIXM data models include provenance fields that need to be utilized to ensure authoritative source
- Governance
 - Business rules needs to be validated and enforced for secure data sharing

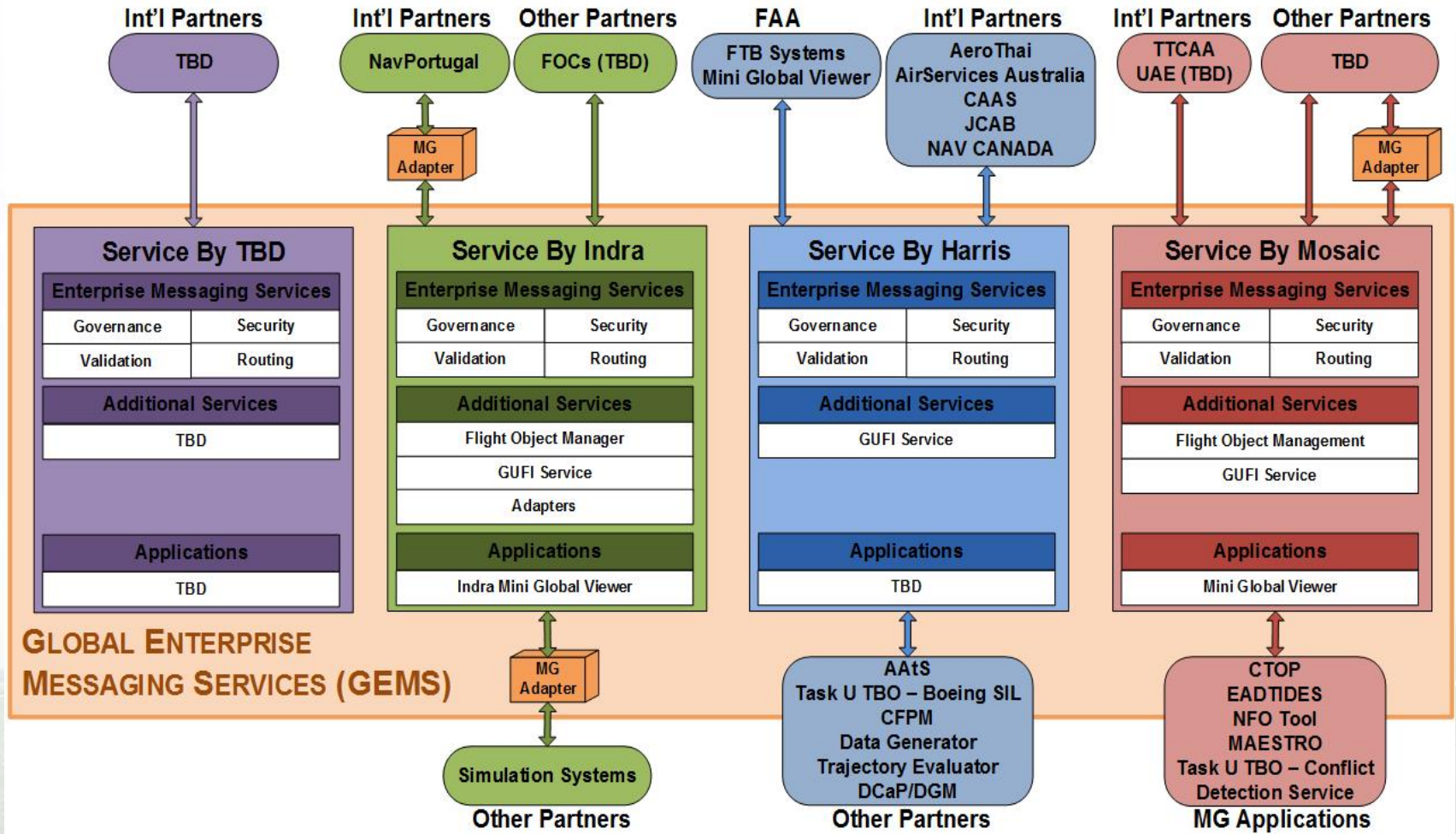
Mini Global II will focus on:

- Global EMS (GEMS) Interoperability
 - Integrate regionally diverse EMS service providers
- Standards/Governance/Business Rules
 - GEMS WG chartered to address interoperability between EMS providers
- Extending International Partnerships
 - Continue to foster new international partnerships
- Developing and Executing Complex Use Cases
 - Implement FIXM 3.0.1, AIXM 5.1, iWXXM 1.0 and the TFM Exchange Model
- Developing New Applications
 - Promote development of applications to benefit global aviation
- Providing Recommendations on FIXM and AIXM

Mini Global II GEMS



Proposed Mini Global II Architecture



GEMS Working Group

- From GEMS Charter:
 - GEMS providers will work together to ensure seamless end-to-end connectivity for stakeholders
 - GEMS Working Group will formulate the requirements for data sharing agreements amongst the GEMS providers
 - GEMS Working Group will define a process for enforcing governance policies across multiple GEMS
- Role of GEMS is to ensure the reliable and timely delivery of data and to ensure information integrity
- The GEMS Working Group will not be defining any governance, business rules, or policies which are related to the management and/or generation of flight, weather or aeronautical information

GEMS Future Plans

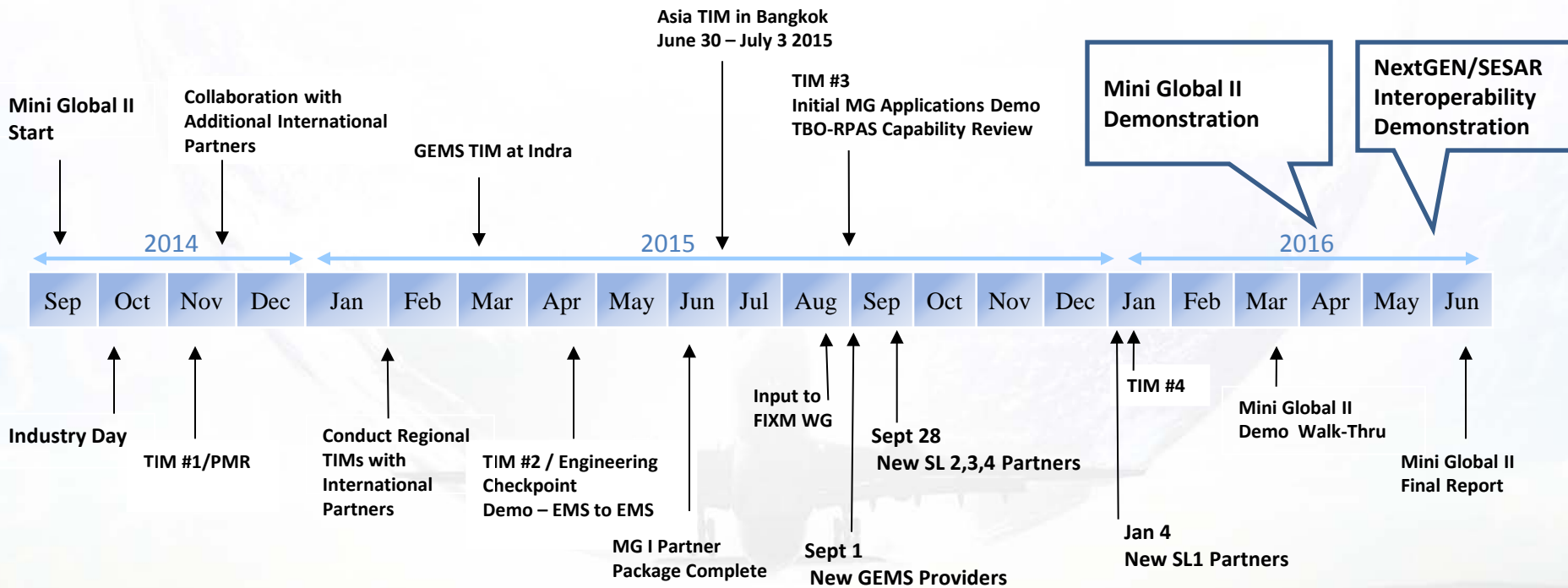
- Integration of Additional GEMS Providers
 - Indra GEMS (Currently only partially integrated)
 - Others
- Determine Partner Data Sharing Requirements
 - Define Inter-GEMS Requirements
 - Identify messages with sharing restrictions
 - Finalize Metadata for April 2016 demonstration
- Support Recommendations to FIXM Working Group
 - Recommendations to FIXM Schema
 - Recommendations to Flight Object messaging
- Begin Testing with Partners
 - Start with testing connections to GEMS Provider
 - September TIM to include partner integration testing

NextGen / SESAR Interoperability Demo

- Focused on a collaborative interoperability demonstration between FAA and SESAR
- Follows Coordination Plan (CP 5.3) scope that covers the FAA-SESAR collaboration as part of SWIM demonstrations of global nature
- The interoperability demonstrations will be conducted:
 - as part of the Mini Global II demonstration in April 2016 (location FTB)
 - a SESAR demonstration planned for May/June 2016 (location Europe: TBD)
- FAA and SESAR teams are currently developing joint operational scenarios, data services, and architecture for the demonstrations

Events Schedule (2014 -2016)

Mini Global II



Questions



Contact Information

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