Global Information Management

AATS: Enabling Improved Collaborative Decision Making

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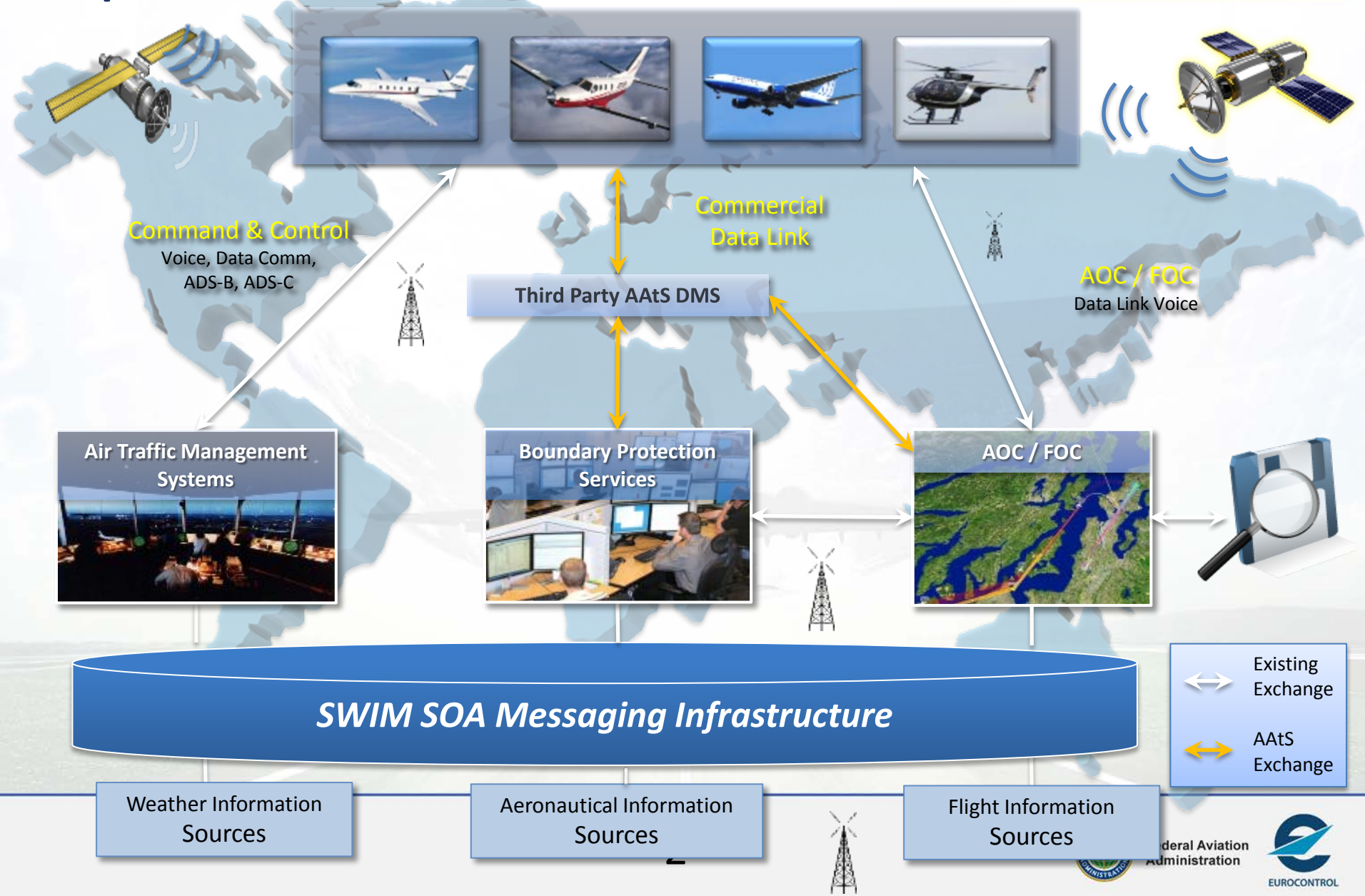
Date: *August 26, 2015*

Agenda

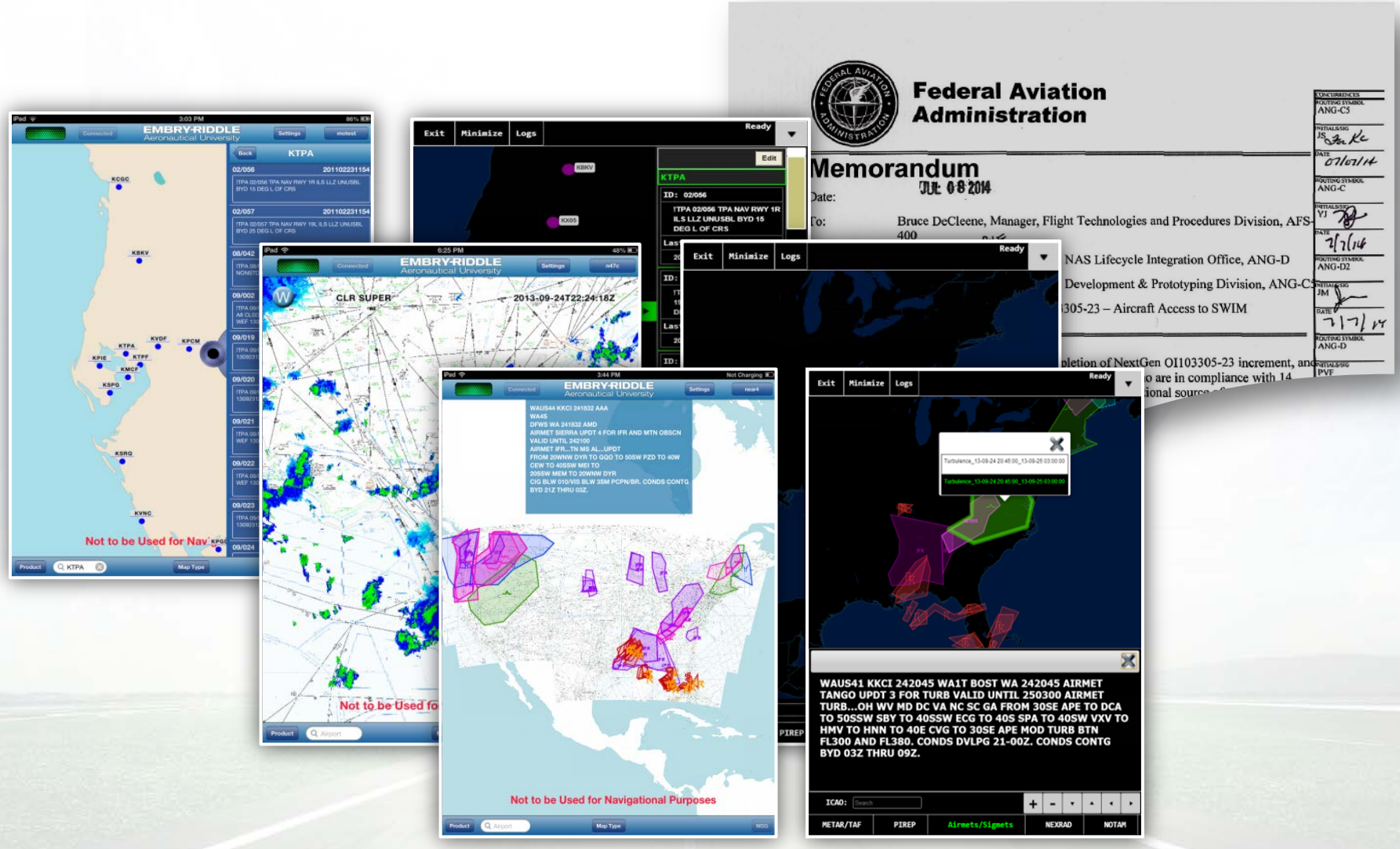
- Concept Overview
- Phase I Accomplishments
- Phase II Demonstration Scenarios
- Schedule

Concept Overview

Operational Environment



Phase I Accomplishments

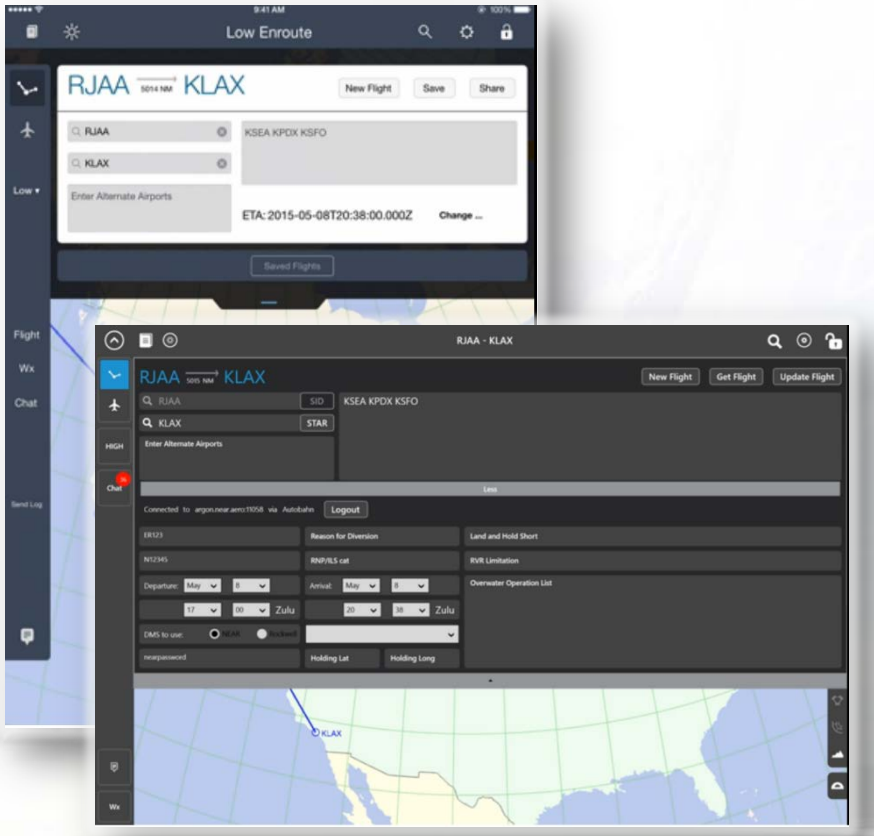


Phase II Demonstration Scenarios

- Flight Information Update
- Electronic Pilot Report Submission
- Aircraft Preference Publication
- Airborne Reroute Negotiation

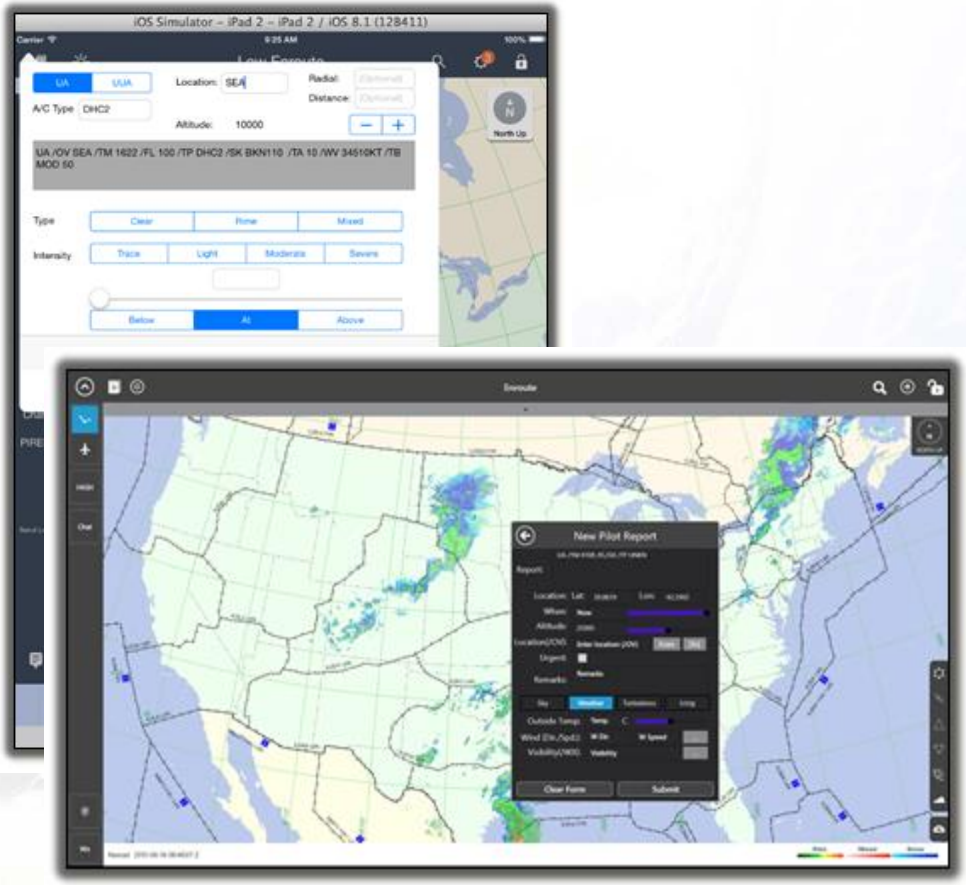
Flight Information Update

- Flight Object: single source of relevant information about a particular flight
- Flight Object exchange between aircraft and standardized Flight Object services
- Exchanged in the globally interoperable Flight Information Exchange Model (FIXM)



Electronic Pilot Report Submission

- Flight crews able to electronically publish PIREPs for immediate dissemination via SWIM
- Operators' situational awareness improved
- Weather modeling capabilities enhanced
- Exchanged in in the globally interoperable Weather Information Exchange Model (WXXM)



Aircraft Preference Publication

- Traffic flow advisories and constraints provided to flight crews
- Prioritized pre-departure and inflight preferences submitted by operator
- Operator preferences considered in decision support tools
- Exchanged in accordance with appropriate Interface Control Document (ICD)*

Unique Flight Data

ACID	ORIG	DEST	IGTD	TYPE	ERTD
ABC123	DEN	IAD	05/1945	B757	05/1957

TRAJ OPTION

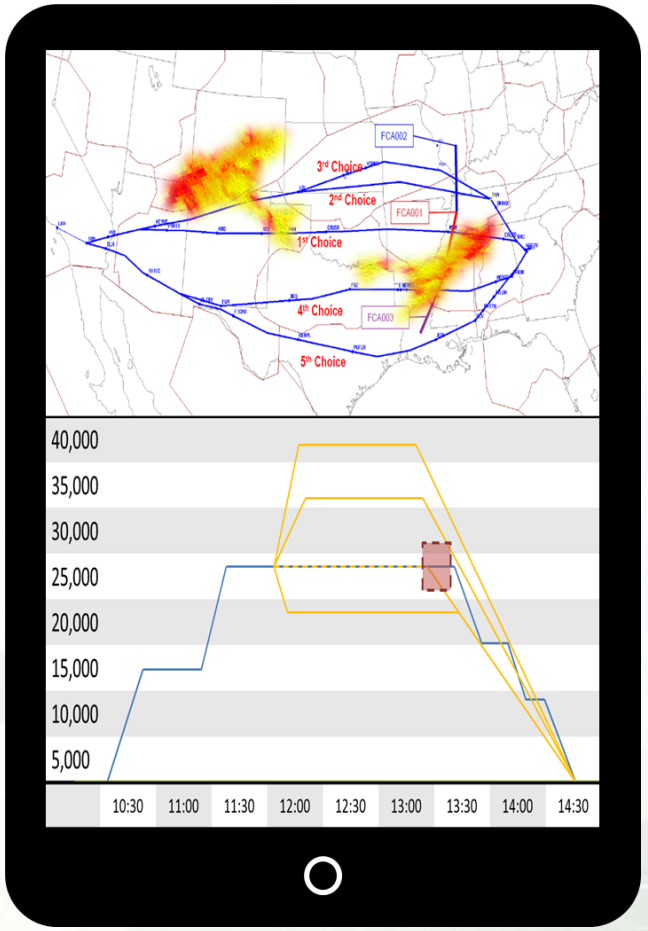
RTC	RMNT	TVST	TVET	Route	ALT	SPEED
0				GLD SLN J24 MCI J24 STL J134 FLM J24 HVQ SHNON2	350	435
25				GLD SLN J24 MCI J80 VHP APE AIR J162 MGW VERNI ESL SHNON2	350	435
35				PLAIN4 HCT J128 OBH J10 IOW BDF J64 WHETT J30 APE AIR MGW MGW121 VERNI ESL ROYIL2	310	430
50		1945	2145	YELLO6 HANKI OBH J10 IOW BDF J64 WHETT J30 APE AIR MGW MGW121 VERNI ESL ROYIL2	350	425
65		2030	2200	YELLO6 HANKI ONL J148 MCW J16 BAE J34 AIR MGW MGW121 VERNI ESL ROYIL2	310	430
90	45	1945	2145	PIKES4 PUB J28 ICT FAM J78 HVQ SHNON2 DEN PIKES4 PUB TBE BGD IRW FSM BNA BKW ROYIL2 IAD	350	435
120	45	2045	2245	PIKES4 PUB TBE BGD IRW FSM BNA BKW ROYIL2	350	440

IGTD – Initial Gate Time of Departure; ERTD – Earliest Runway Time of Departure;
RTC – Relative Trajectory Cost RMNT- Required Minimum Notification Time;
TVST – Trajectory Valid Start Time; TVET- Trajectory Valid End Time

Optional values provided by the Flight Operator

Airborne Reroute Negotiation (4DT)

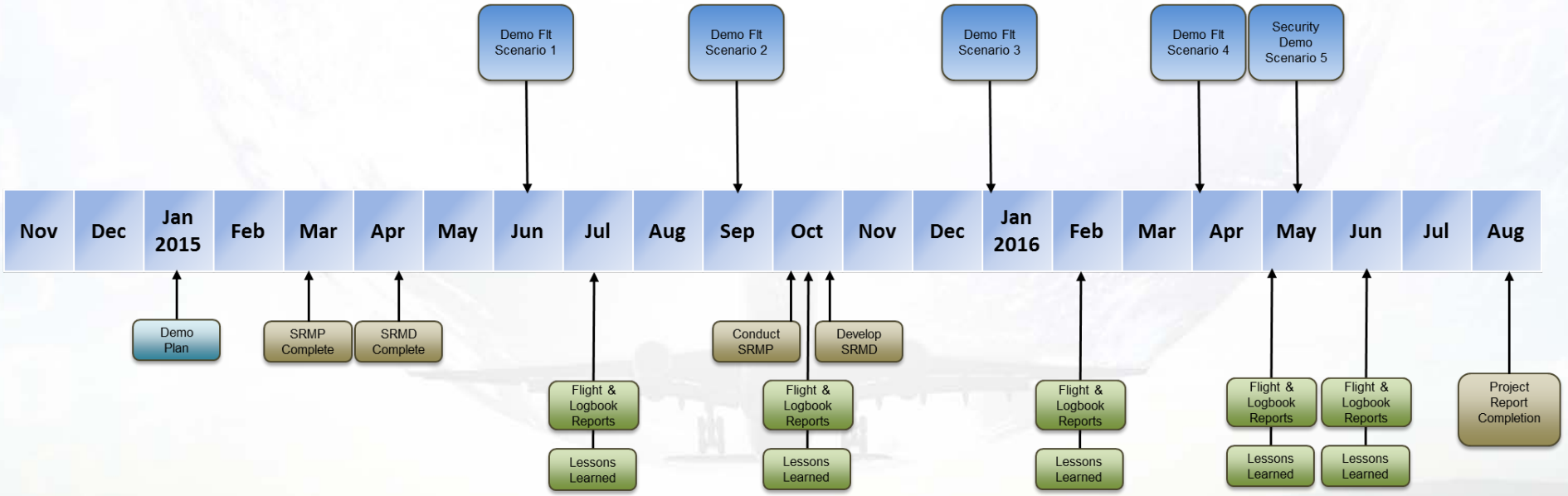
- Preferences submitted by operator in four dimensions (latitude, longitude, altitude and time)
- Assigned trajectory periodically evaluated for optimization utilizing operator preference
- Updated 4DT trajectory options from TFMS exchanged with operator
- Exchanged in accordance with appropriate Interface Control Document (ICD)*



Security

- Malformed XML messages sent from EFB to NESG through DMS
- Various security protection layers detect these messages
- Identify gaps in detection capabilities

Schedule


Demo Flt Scenario 1
Demo Flt Scenario 2
Demo Flt Scenario 3
Demo Flt Scenario 4
Security Demo Scenario 5
Nov
Dec
Jan 2015
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Jan 2016
Feb
Mar
Apr
May
Jun
Jul
Aug
Demo Plan
SRMP Complete
SRMD Complete
Flight & Logbook Reports
Lessons Learned
Conduct SRMP
Develop SRMD
Flight & Logbook Reports
Lessons Learned
Flight & Logbook Reports
Lessons Learned
Flight & Logbook Reports
Lessons Learned
Flight & Logbook Reports
Lessons Learned
Project Report Completion

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