



CONNECT



Jeppesen Military NavData

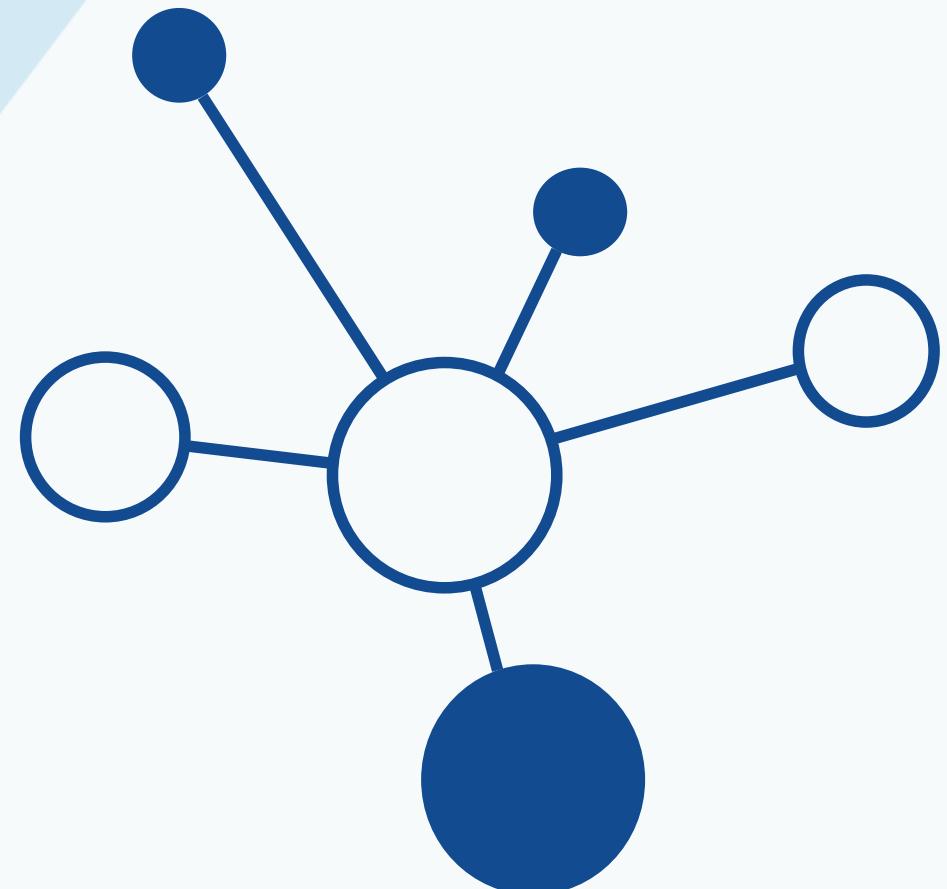
David Heckmann

September 27, 2023

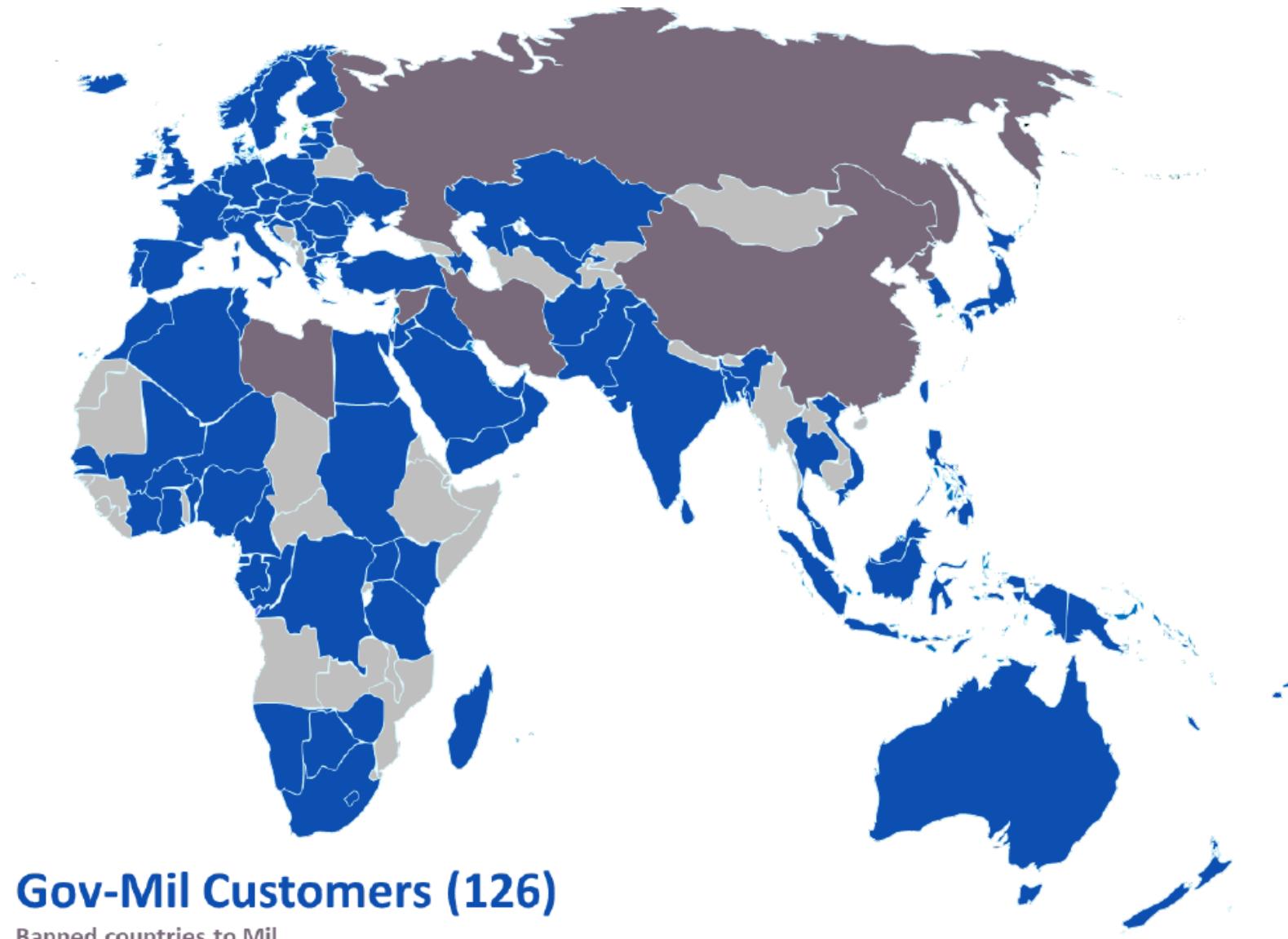


Dave Heckmann

Product Manager -Data Services & Data Office
Denver, U.S.



Jeppesen Government & Military Customers



Gov-Mil Customers (126)
Banned countries to Mil

History

- 2013: First C17 delivered to Indian Air Force, no databases provided
- Boeing Defense requested purpose built Block 18 C-17 NavData & TAWS databases



Filling a Market Need

Military customers want...

- Access to a global data set to support global missions
- LoA certified navigation data
- Fidelity to host nation information
- Simplicity of a single provider for navigation data and charting
- Accessibility of data through EFB



Observations

Tailwinds

Boeing values of transparency, trust, and accountability

Deep domain experience

Global coverage of charts and data

Suites of solutions using common data

Customer-focused product development

Partnership with Jacobs

Headwinds

Switching from “free” to paid subscription

Hesitance to switch data providers

TERPs review process for foreign procedures

Access to source for select military airfields

JMN in the early stages of product lifecycle



Key Features

Leveraging the strength of Jeppesen NavData

- Robust processes employed by global team of aviation experts
- Expansive network of industry relationships accelerate problem solving
- Daily operations support 16,000 flights per day

FAA LoA 1 Certification

Superior worldwide coverage

Unrivaled product support

	Jeppesen Military NavData			Other Defense Data		
	Conventional	RNAV	Total	Conventional	RNAV	Total
Total	44,290	46,920	91,210	12,105	15,067	27,172
Arrival	11,789	13,821	25,610	1,208	3,267	4,475
Departure	16,778	16,392	33,170	3,055	4,569	7,624
Approach	16,541	16,707	33,248	6,876	8,197	15,073

	Jeppesen Military NavData	Other Defense Data
Total	11,050	9,772
Civ	10,287	3,012
Mil	211	403
Joint	552	560
Minimal Facilities, no runways, or inactive	-	5,797

Heliports	1,746	140
Heli Procs	1,289	30

Waypoints	234,862	134,794
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Data & Charting Production Teams

Global Production Team

- 670 people, 10 languages

Denver – 170

Frankfurt, Germany – 200

Gdansk, Poland – 300

- Product based organization

NavData

Charting

AMDB

Obstacles

OpsData

Expertise

- Training

Classroom

Mentor

- Performance management

KPI based

- Continuing Education

Mentorship

Education reimbursement

Continuous Improvement

- Lean-thinking culture

- Innovation team

- Learning cycles (RCA)

Data Production Overview

Procure Source

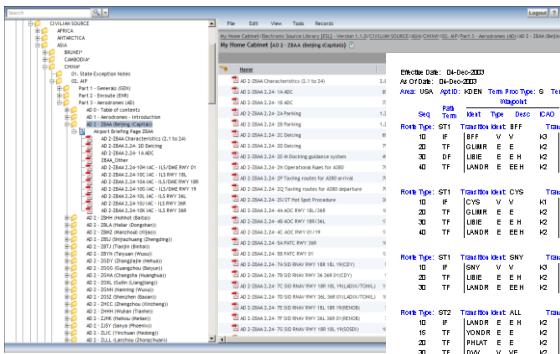
Analyze Source

Maintain DB and Charts

Verify & Commit DB and Charts

FIQR

28 Day NavData Extracts



Japan
SDI/RTI/Reporting Procedure

LANDER Airport (IATA: Doha) IS

Recipient

Type **ID#** **THB** **RHO** **Outgoing** **Content** **TIN** **Rate**
GPS: MSA Unit MSA Type MSA

Location **Database**

Contains Uncommitted Data

GPS: MSA Unit MSA Type MSA

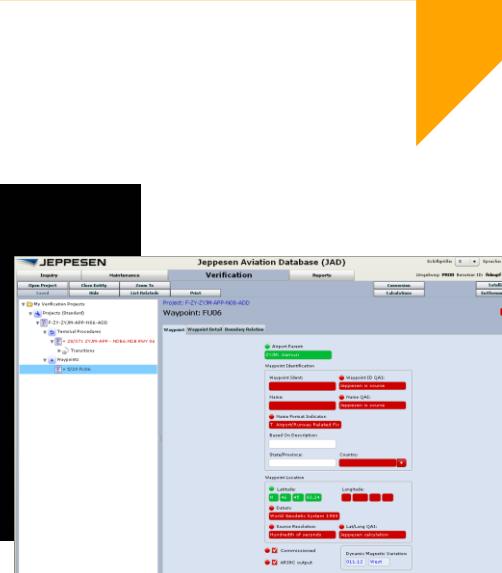
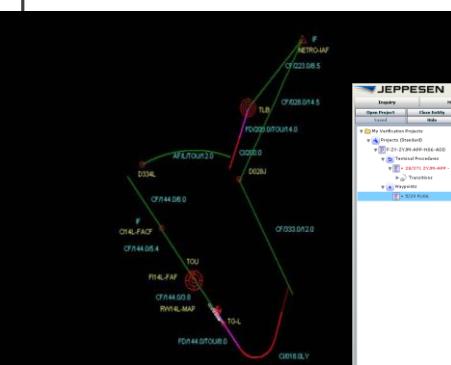
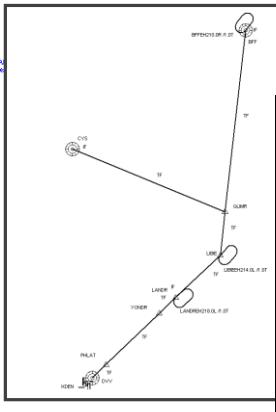
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GPS: MSA Unit MSA Type MSA

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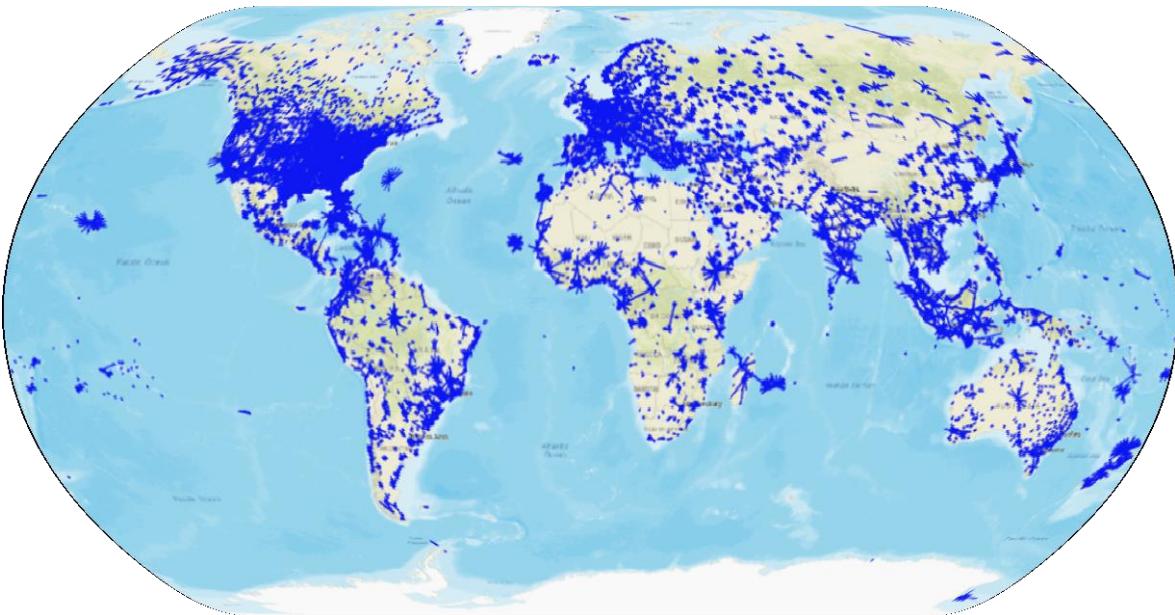
Contains Uncommitted Data



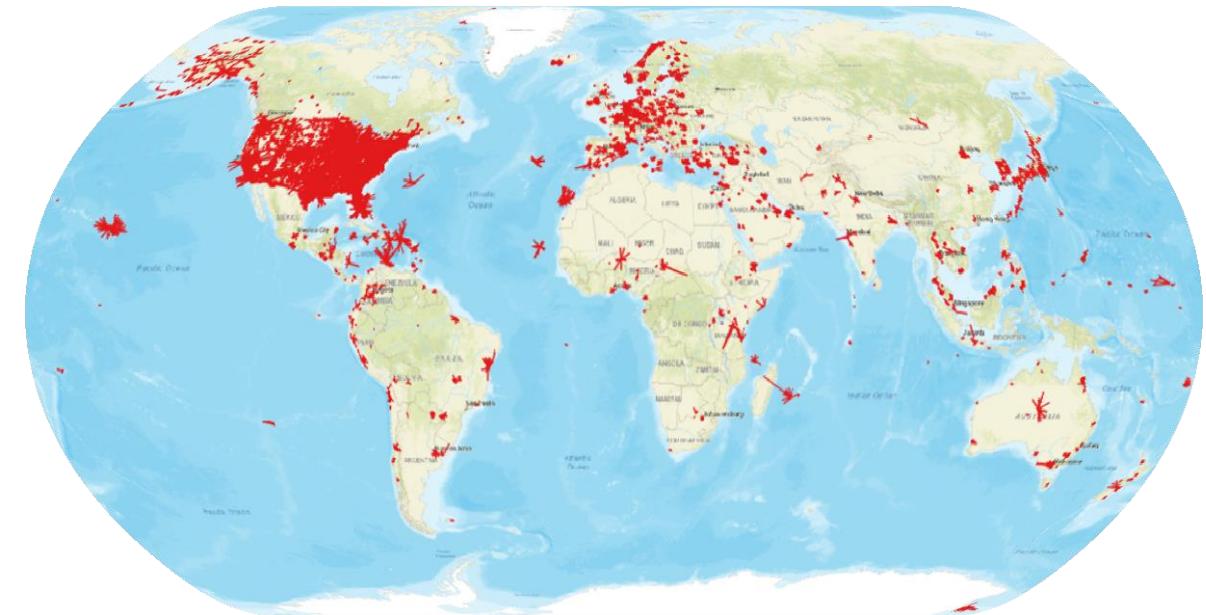
- ARINC424
- JMN

Comparison of Global Coverage

Jeppesen Military NavData

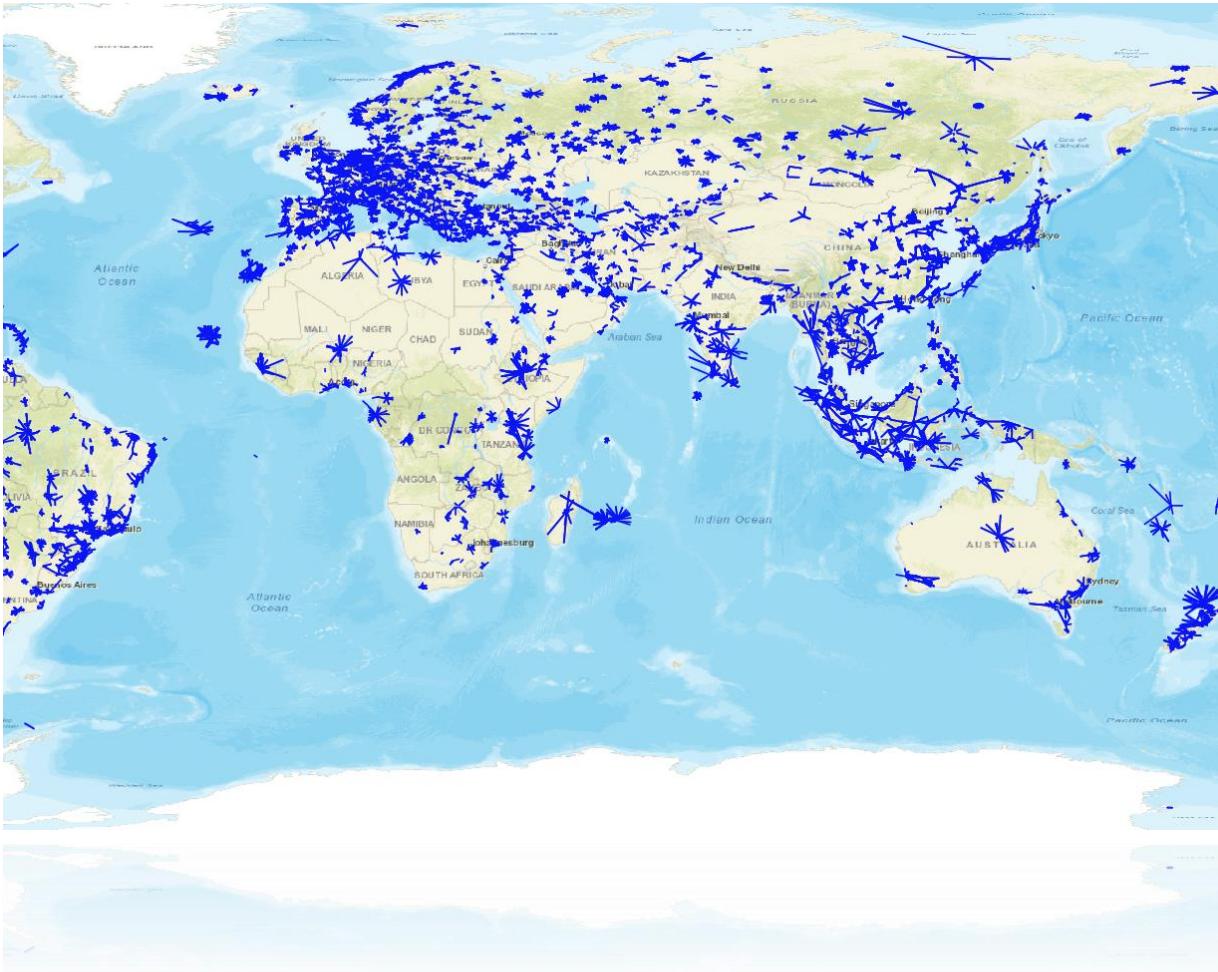


Other Defense Data

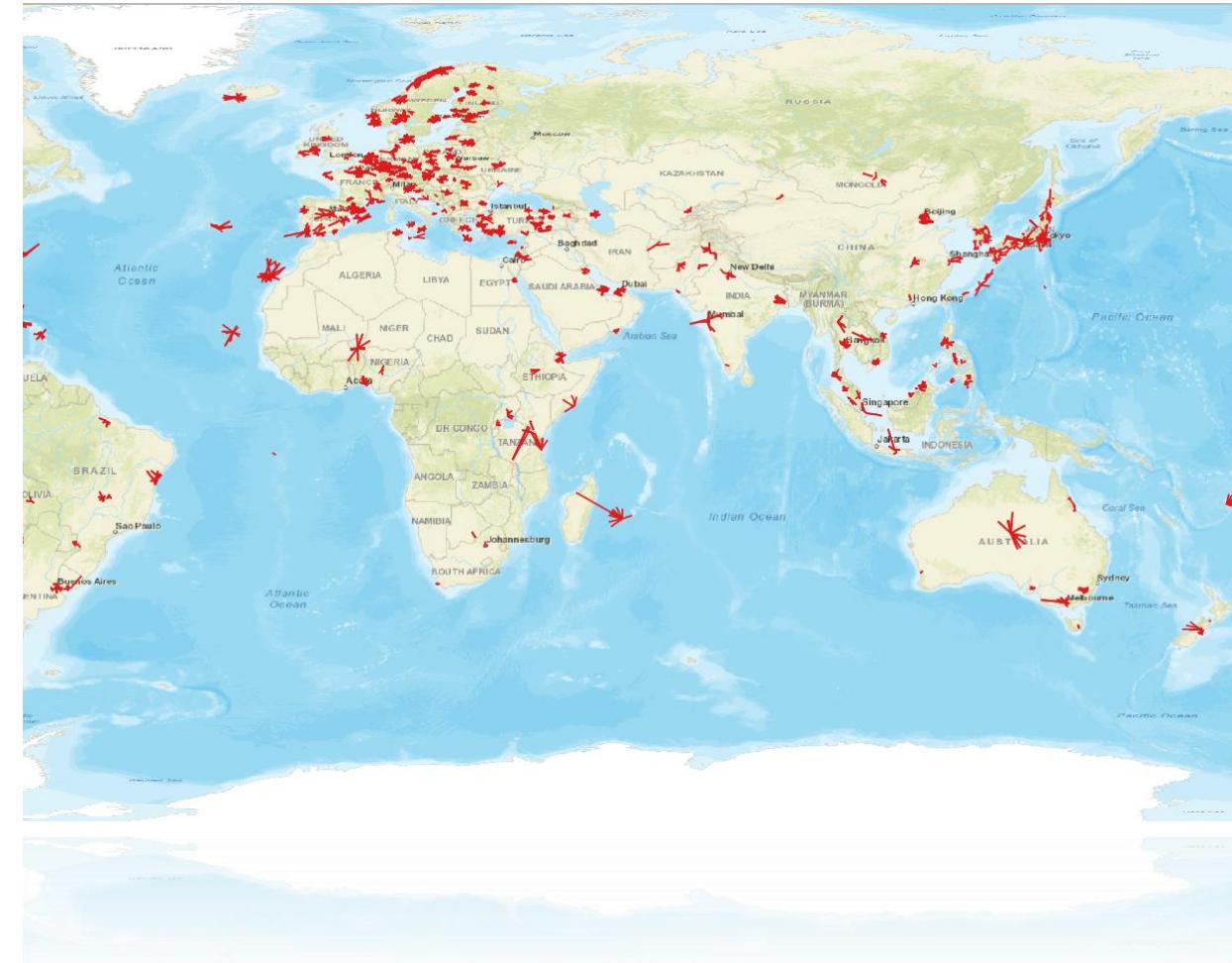


Departure Procedures

Jeppesen Military NavData

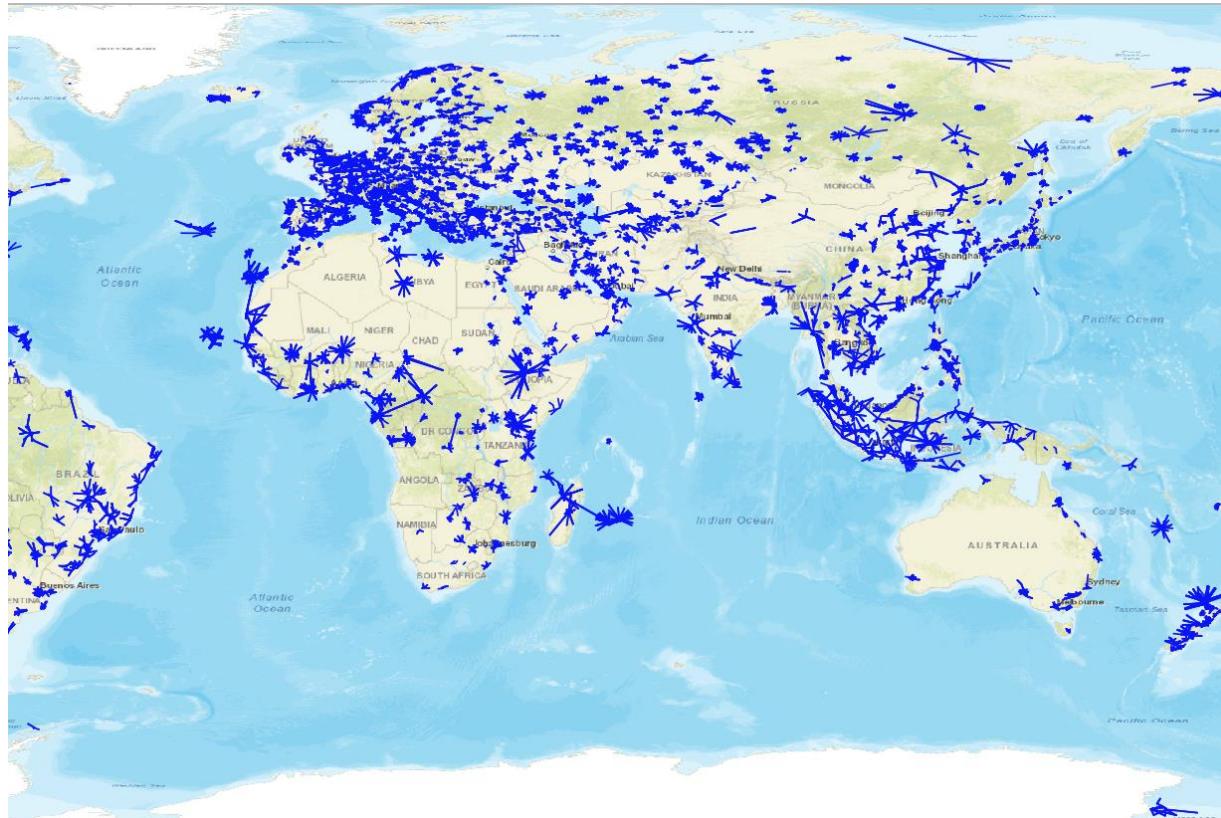


Other Defense Data

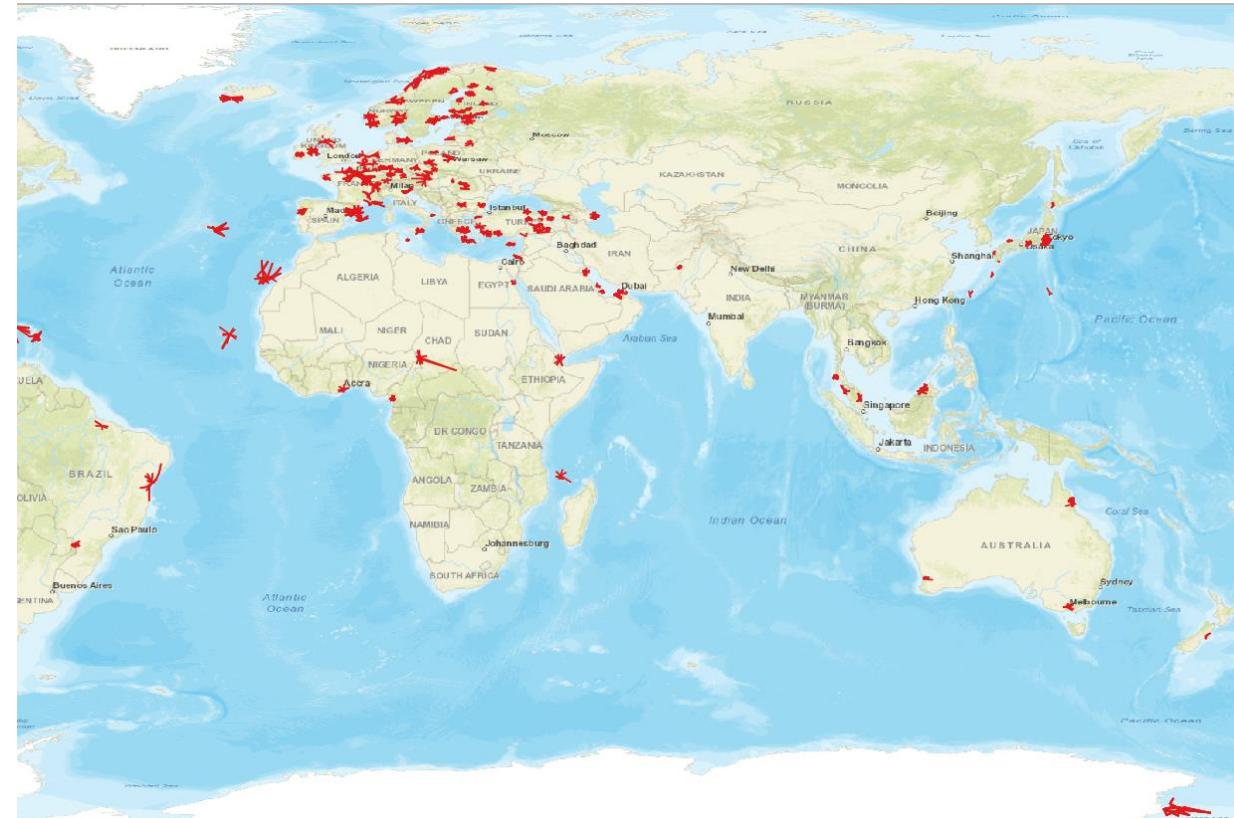


Arrival Procedures

Jeppesen Military NavData

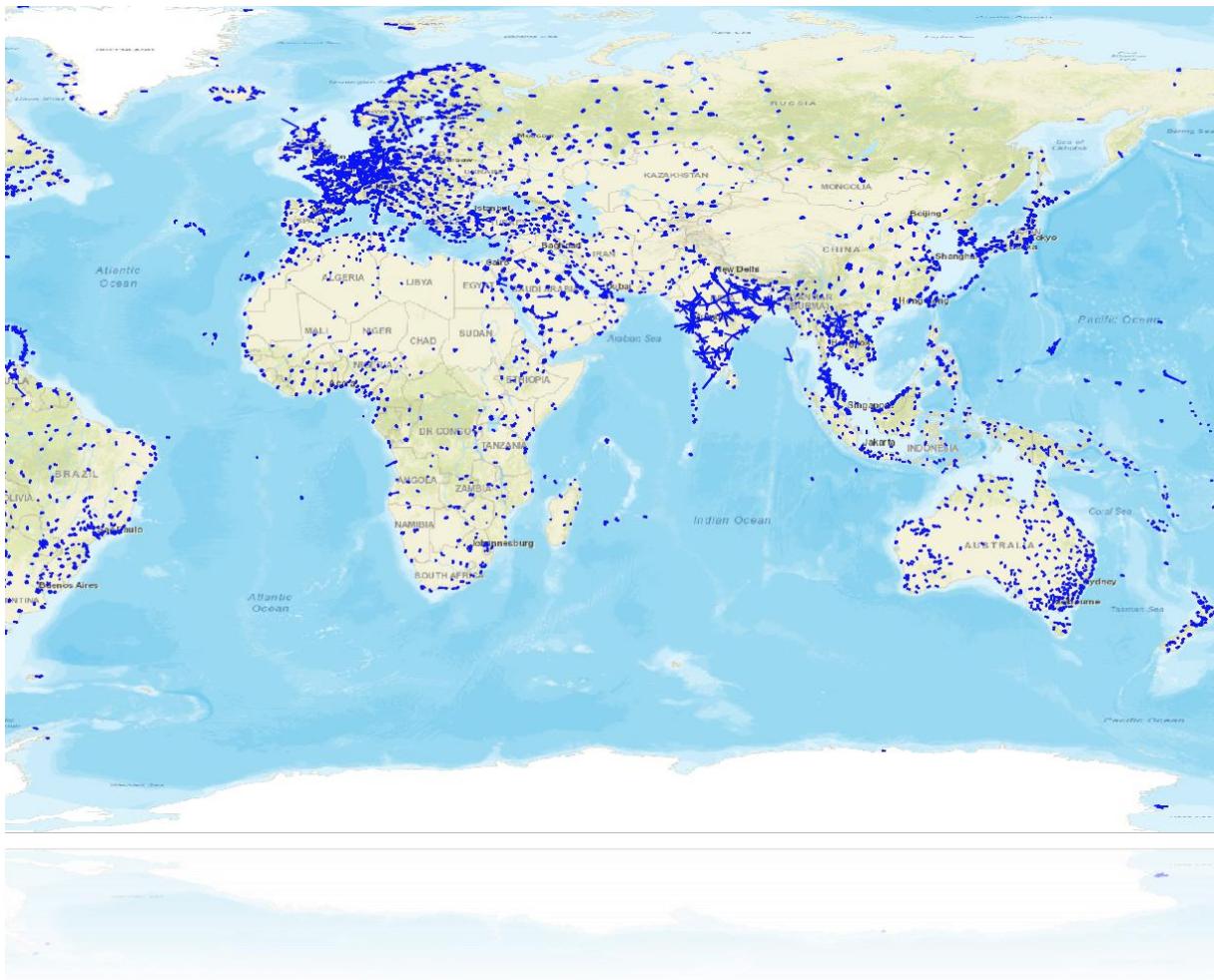


Other Defense Data

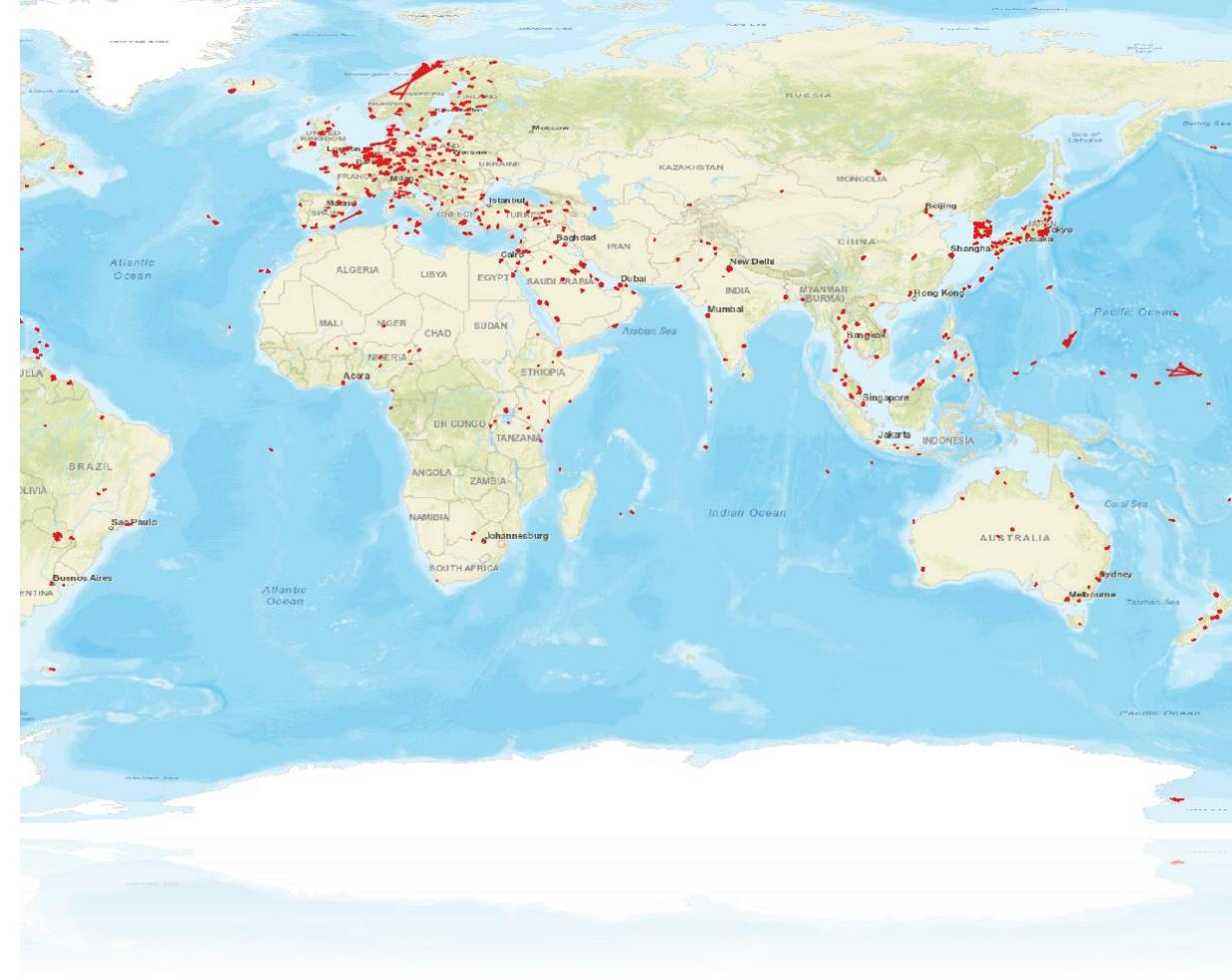


Approach Procedures

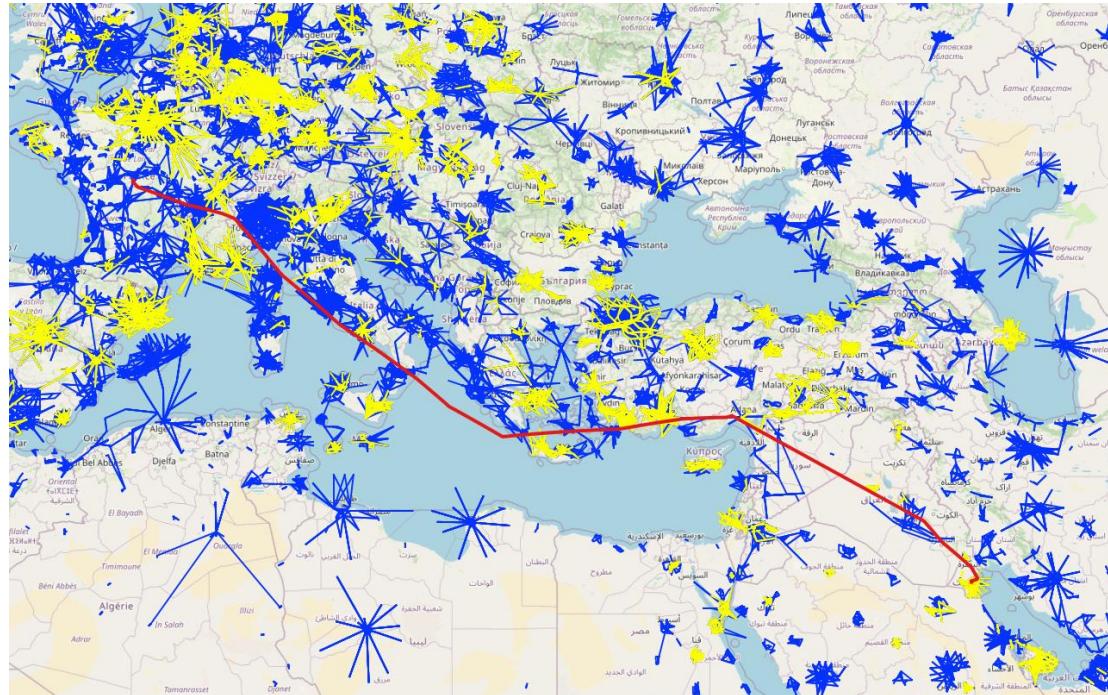
Jeppesen Military NavData



Other Defense Data

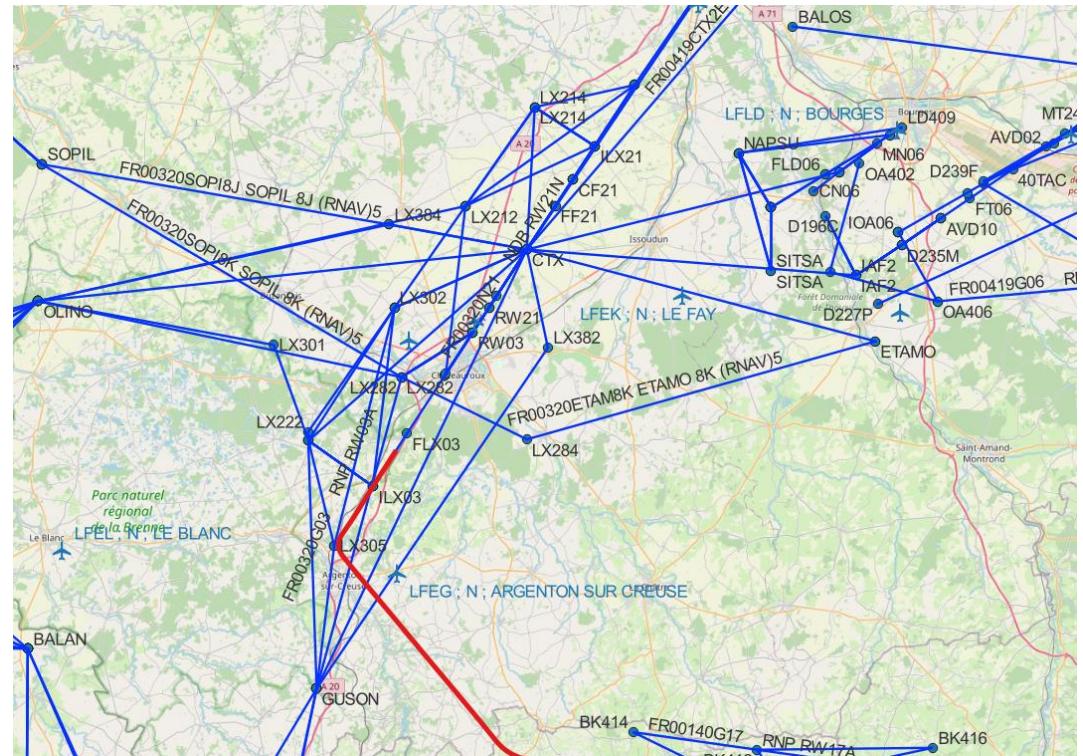


Kuwait Air Force C-17

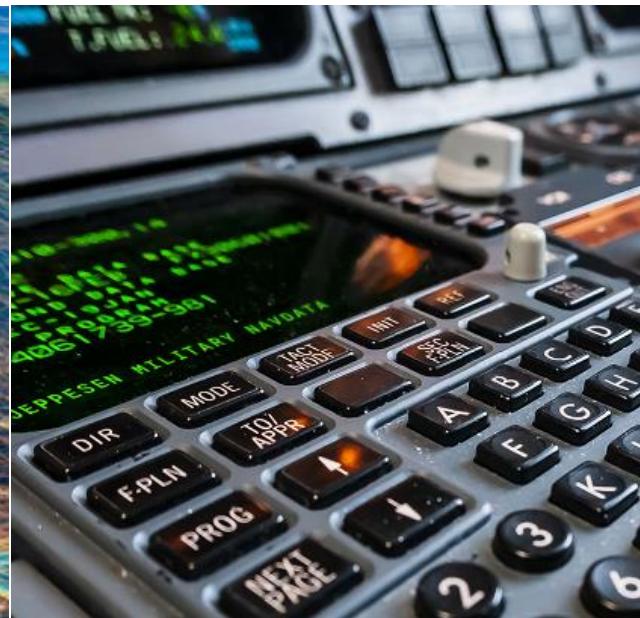


JMN Procedures @ LFLX			DAFIF Procedures @ LFLX			
	Conventional	RNP	Total	Conventional	RNP	Total
Arrivals	1	2	3	0	0	0
Departure	2	1	3	0	0	0
Approach	2	2	4	0	0	0
Total	5	5	10	0	0	0

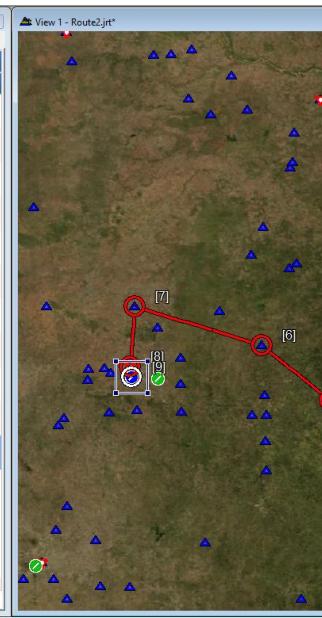
- Depart OKKK (Kuwait Intl) 0630 Z
- Arrive LFLX (Châteauroux-Centre) 1515Z
- Terminal Procedure RNP RWY 03



Use Cases



Alt	Aspd	Altitude	Temp	MH
631 FT		631M	+57F	
3.4E				
631 FT		N/A	631M	+57F
3.4E				
UNK		2166..	-18F	
3.6E			21966	
900 FT		0.85M	2600..	-34F
3.7E			10709	
1300 FT		0.85M	2600..	-34F
3.6E			7466	
UNK		0.85M	2600..	-34F
3.8E			7450	
UNK		0.85M	2600..	-34F
4.0E			7437	
UNK		0.85M	2600..	-34F
4.3E			7421	
UNK		N/A	1294..	+13F
4.7E			3592	
1809 FT		N/A	3459M	+47F
4.8E			2560	
1790 FT		N/A	1790M	+53F
4.7E			2858	



Procedure Design

- USAF GPD
- RCAF GPD

Flight Deck

- Indian Air Force C-17
- Kuwait Air Force C-17

Mission Planning

- JMPS
- Boeing AOP

Mission Support

The Data Journey



FMS Testing & Integration Efforts

Collins CDU-7000



E-2C



CH-47

**C-17
Block 25**



KC-46



Product Roadmap

Initiative	Timeline	Business Value
Aerial Refueling Tracks	January 2024	<ul style="list-style-type: none">• Capture information in source database• Include in standard output
Military Training Routes	2024	<ul style="list-style-type: none">• Capture information in source database• Include in standard output
Airport ID Interoperability	2024	<ul style="list-style-type: none">• View DAFIF mission plans with Jeppesen Military NavData
Arrestor Gear	2024	<ul style="list-style-type: none">• Capture information in source database• Include in standard output
DAFIF 9.0 (ARINC 424-23)	2024	<ul style="list-style-type: none">• Support XML DAFIF format



Advancing Operational Sustainability



Minimizing Disruption Impact



Improving Operator Efficiency



Improve Readiness and Operational Availability



Reduce Administrative Costs and Complexity



The Art of the Possible