Towards AIXM & Electronic Chart Implementation

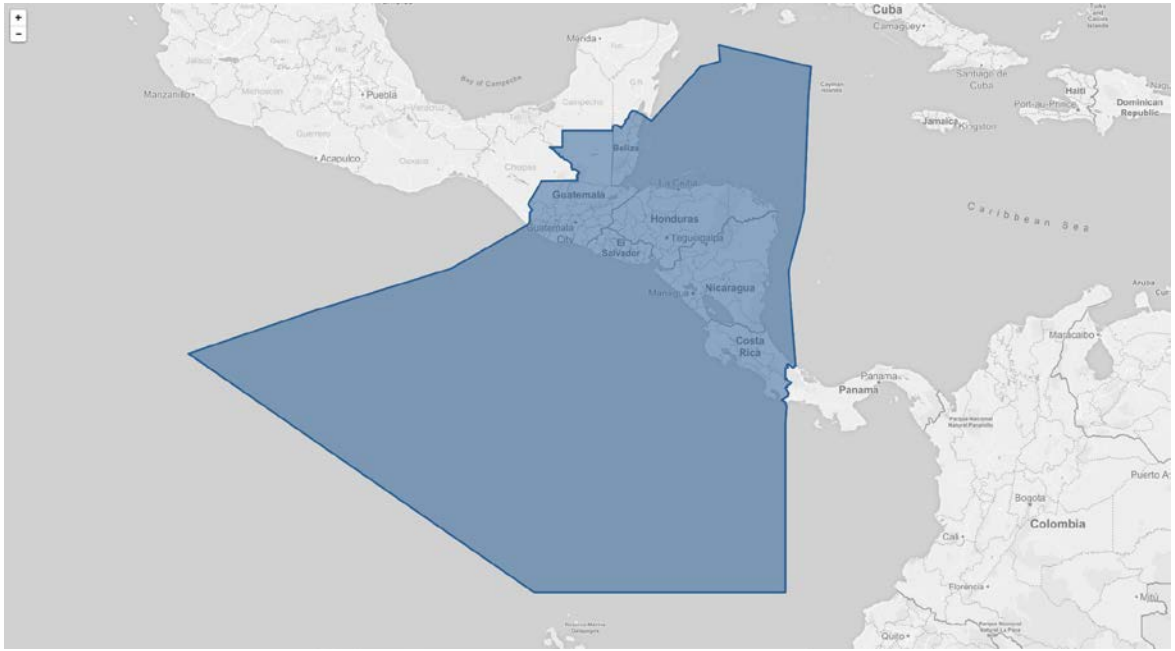
Challenges and Best Practices

About COCESNA

COCESNA is an International Organisation for Regional Integration in Central America

COCESNA is the ANSP for Upper Airspace over Belize, Costa Rica, Guatemala, El Salvador, Honduras and Nicaragua

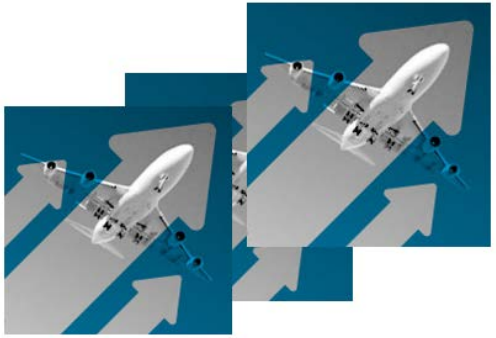
About COCESNA



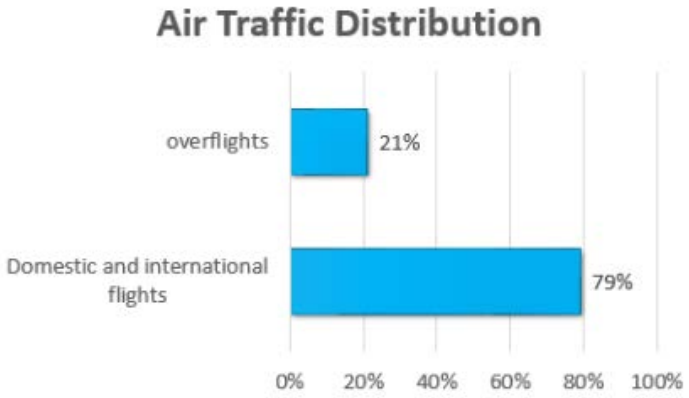
About 2,934,357 km2 of Airspace

Seamless Sky since 26 February 1960
(Upper Airspace CENAMER)

About COCESNA

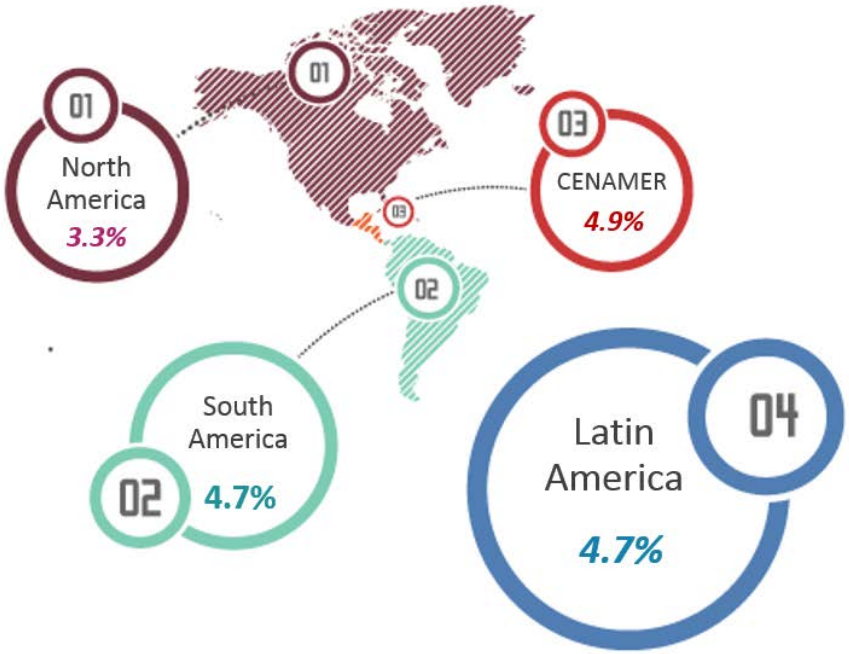


15,000 aircraft movements per month



About COCESNA

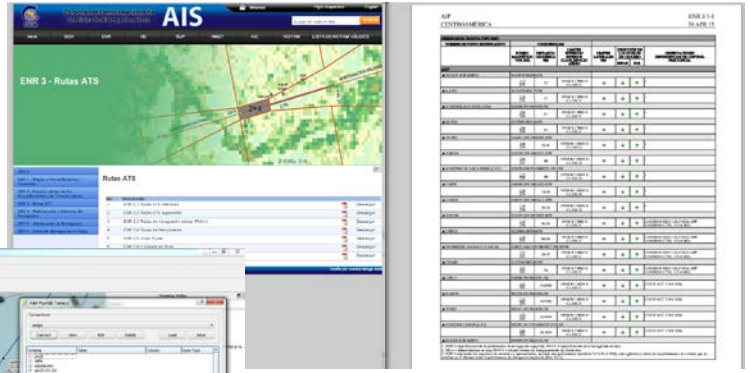
Regional Growth Highlights

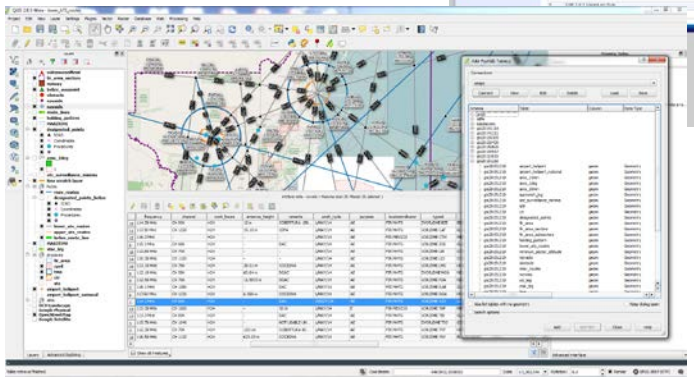


Aeronautical Information Management at COCESNA

AIM
COCESNA

NOTAM International Office (NOF)
AIP Publication
Cartography
GIS
PANS-OPS





AIM COCESNA

By agreement of the Member States: Belize, Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua, from November 5th 1998 at 0001UTC it was delegated the authority to provide the Aeronautical Information Service (AIS) of the International NOTAM office (NOF) for the Central America Flight Information Region (FIR) to the Corporación Centroamericana de Servicios de Navegación Aérea (COCESNA).

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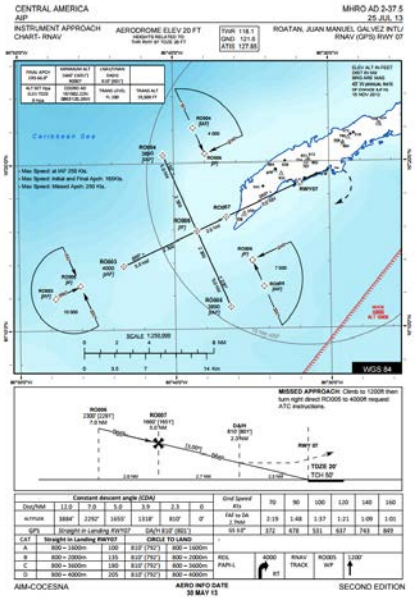
AIM CENTRAL AMERICA

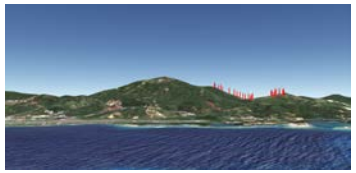
Each COCESNA member State has their own production system

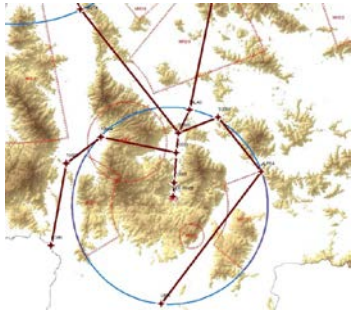
Mainly traditional paper based

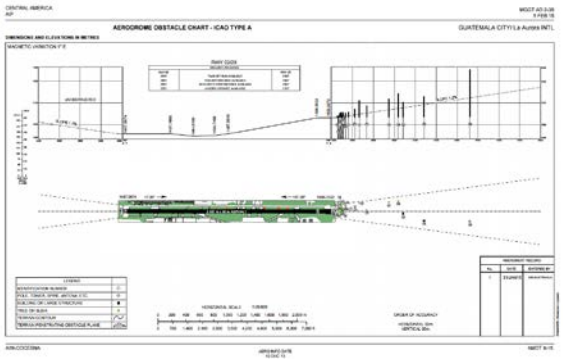
Different tools for Cartography

AIM CENTRAL AMERICA









Current AIP of Member State

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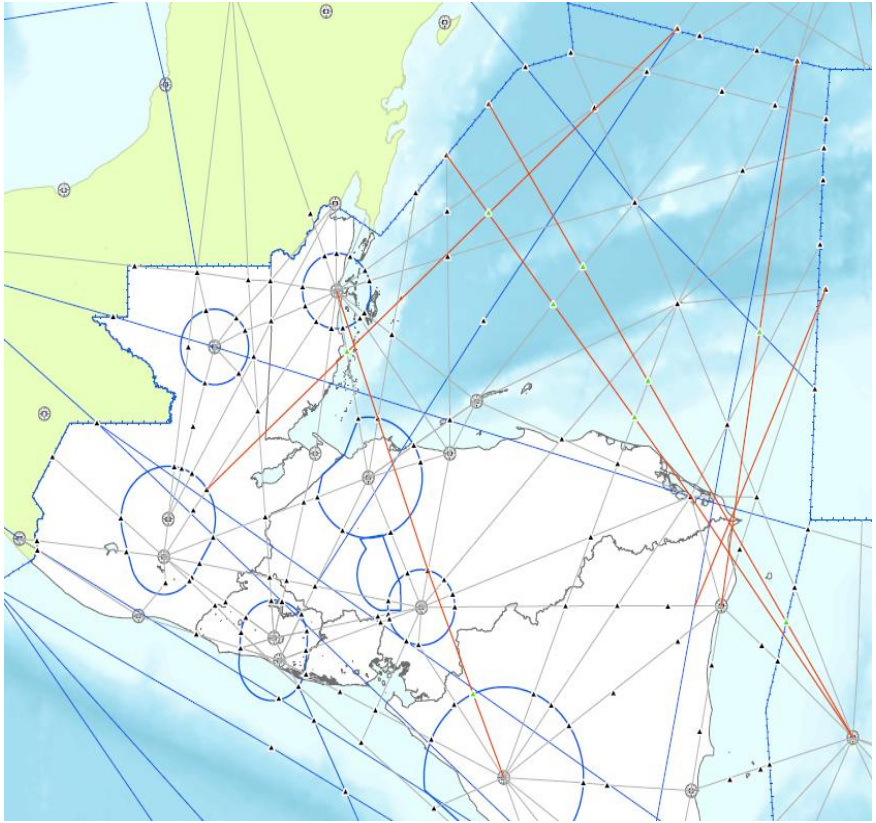
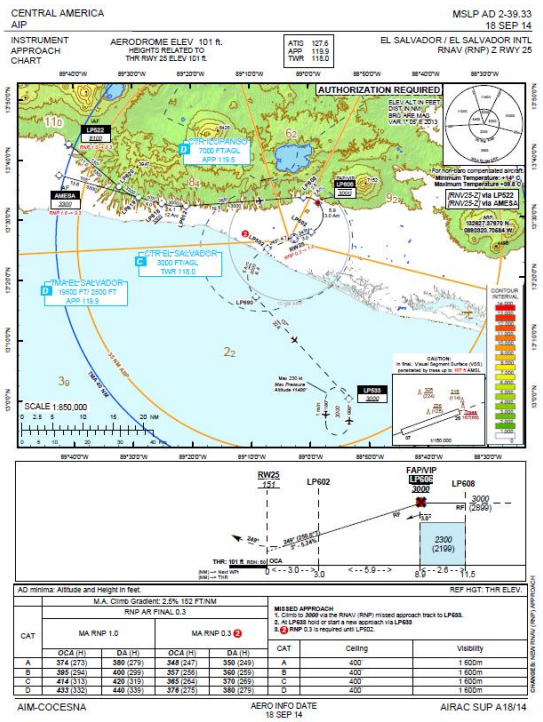
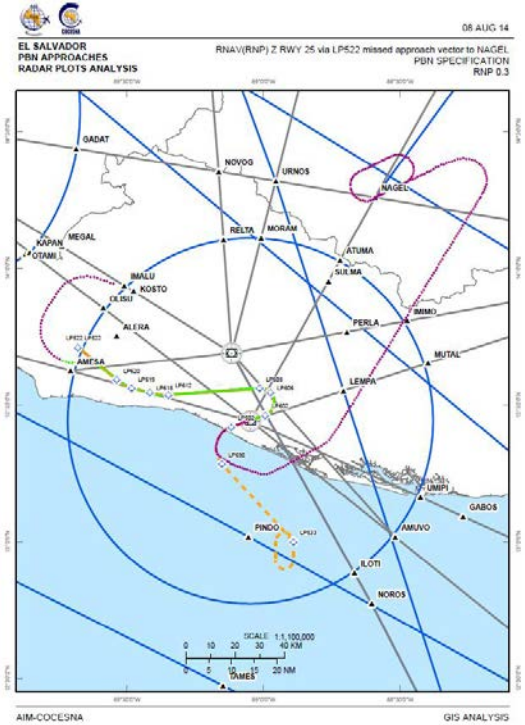


Current COCESNA Cartography



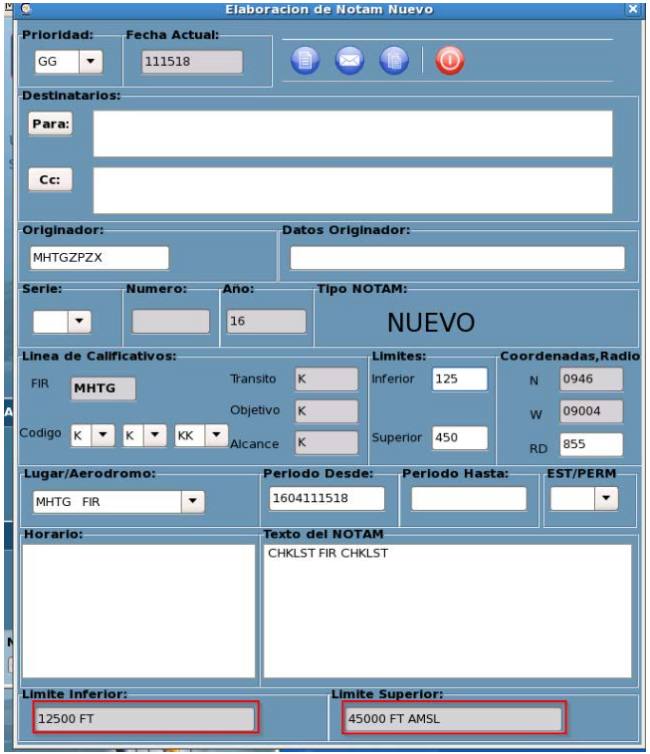


AIM CENTRAL AMERICA

Current COCESNA Cartography

COCESNA

AIM CENTRAL AMERICA



Current FPL and NOTAM system

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Disconnected DB
Currently each system has its own DB and don’t speak to each other, no standard format to Exchange between each other

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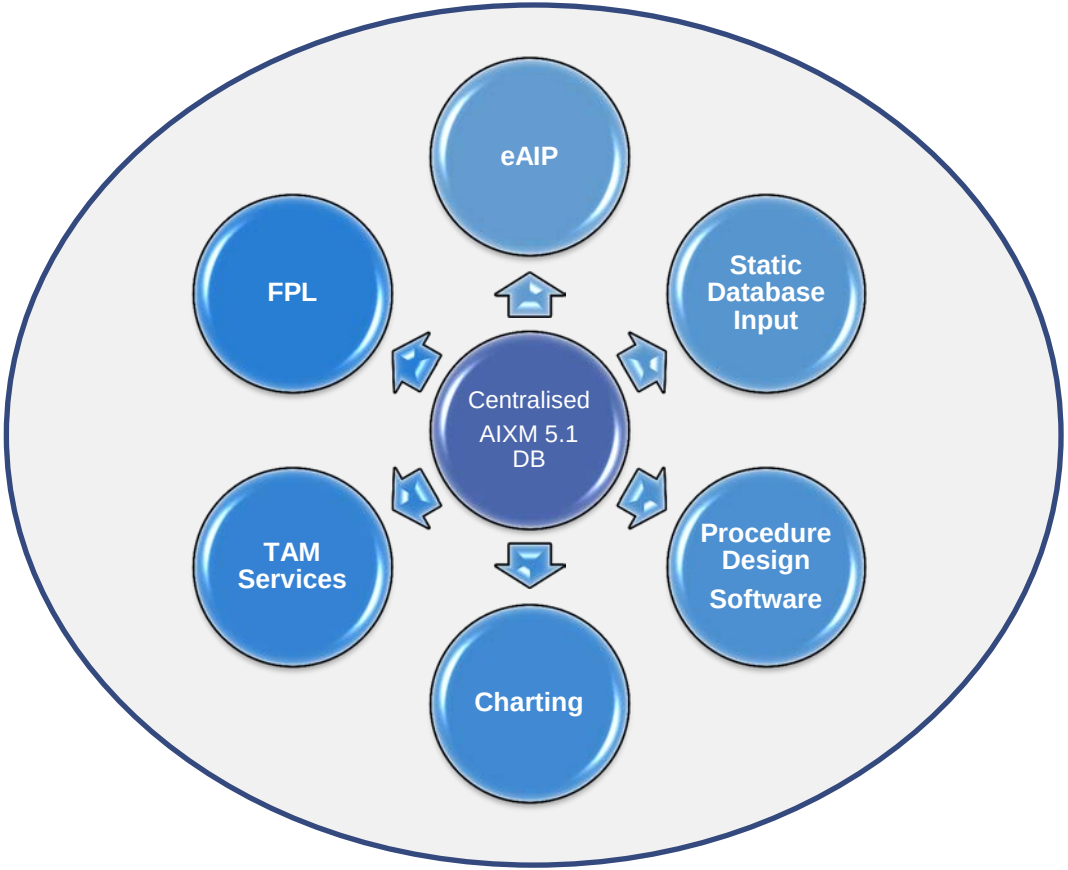
Evolution to AIXM

Procurement for a new AIXM 5.1 based system started on 2015

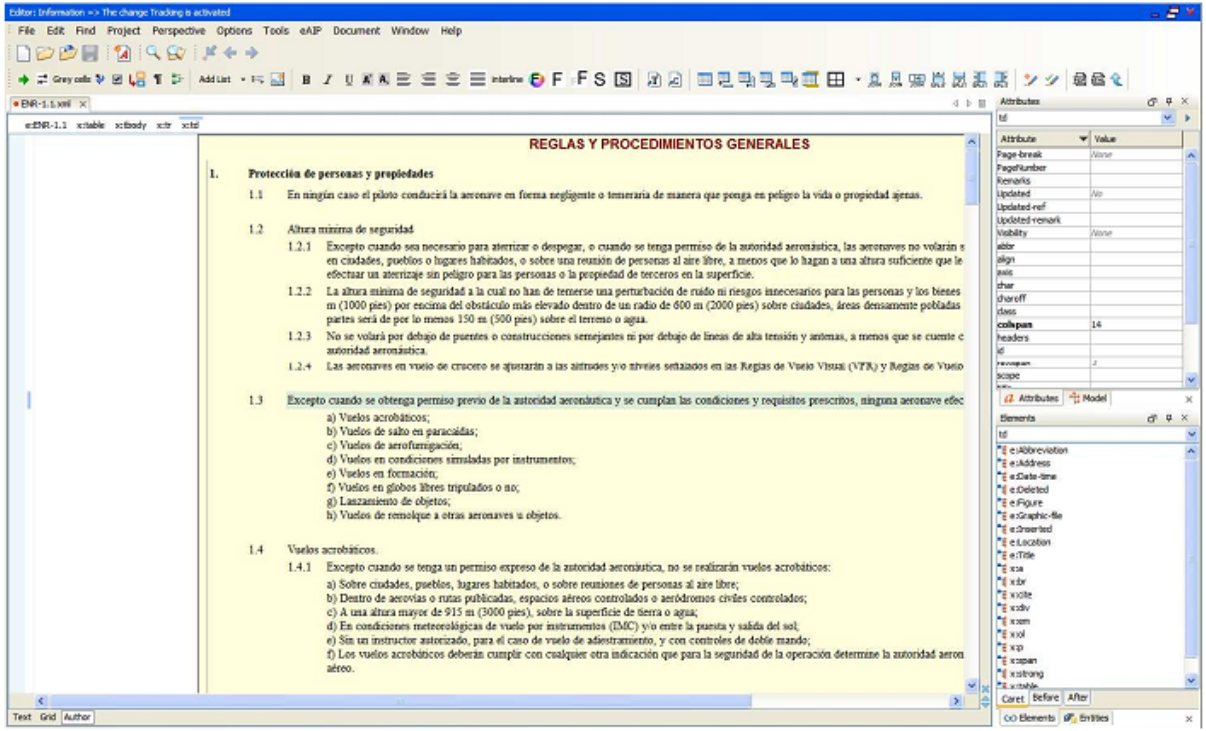
Transitioning to new technologies during 2016

Investment in new technologies, training and workflows

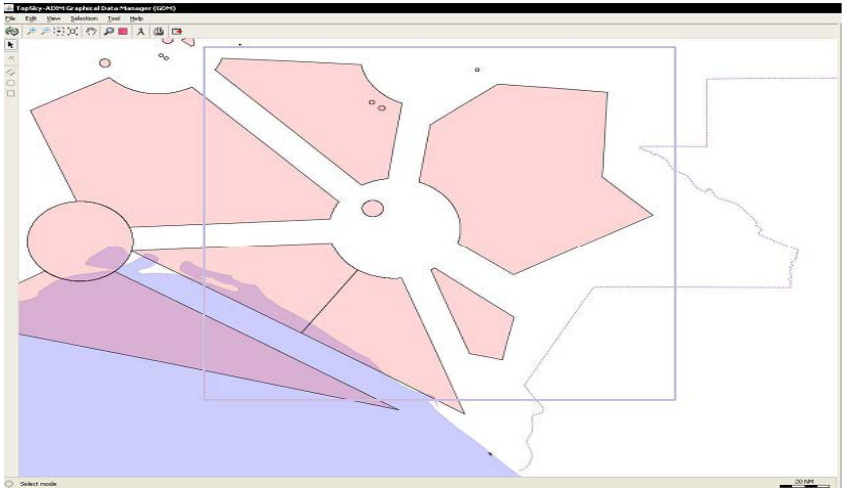
Evolution to AIXM

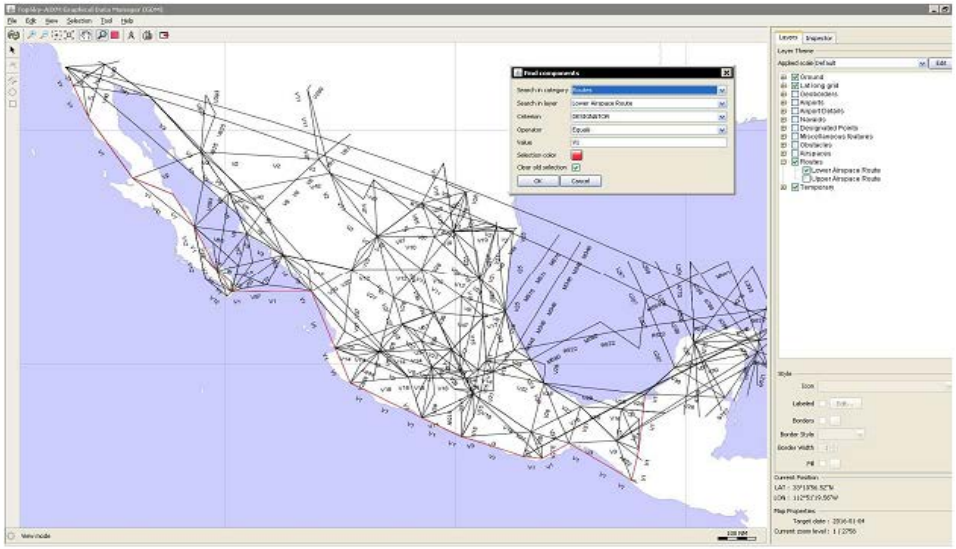


eAIP solution

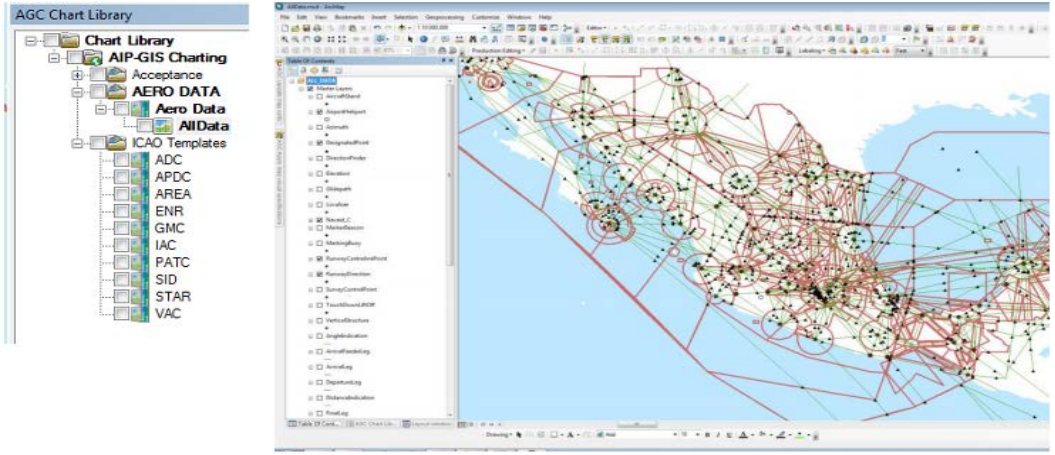


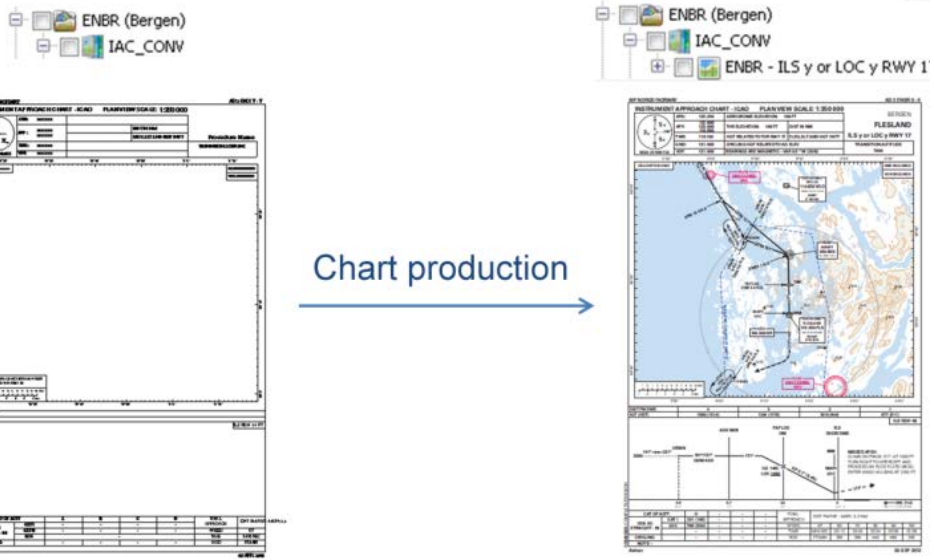
AIXM Centralised DB Static Data Input





Charting solution





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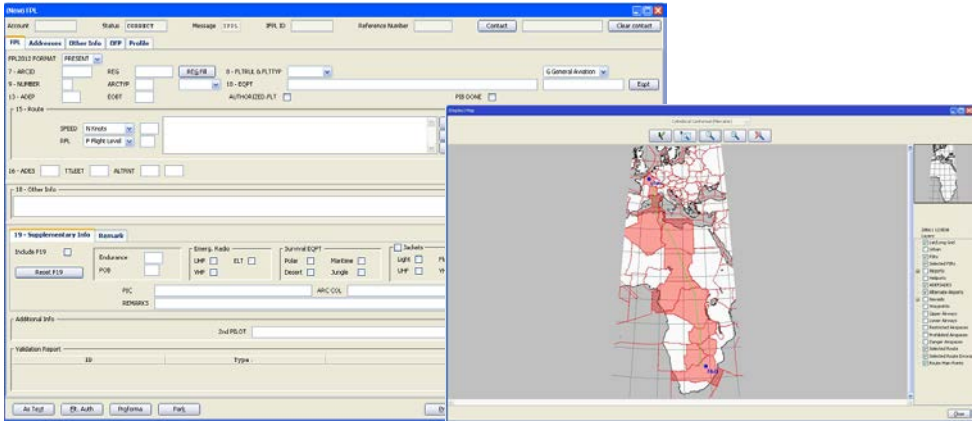

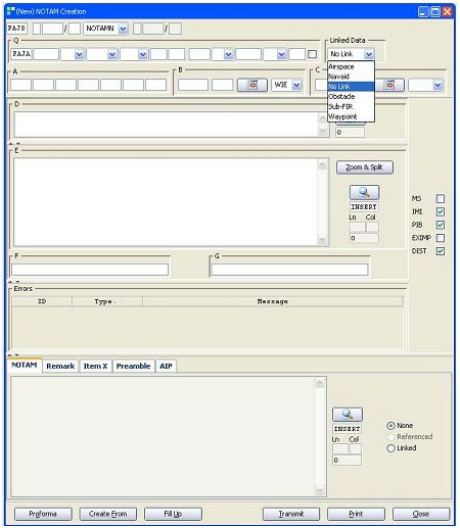

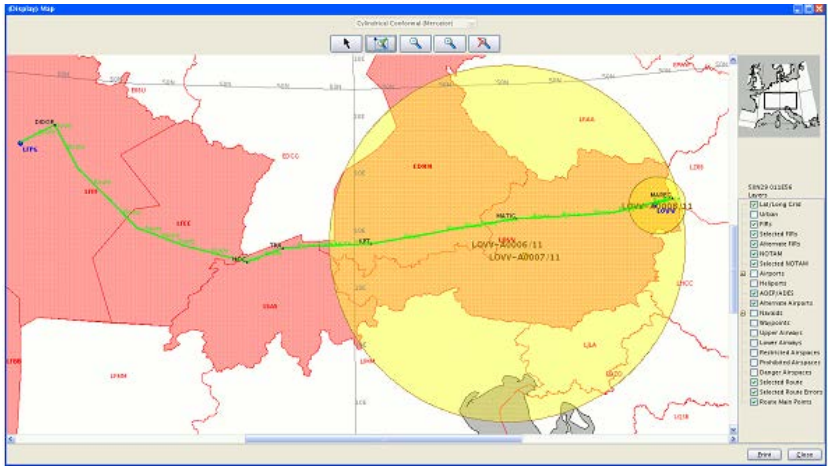

AIS operations

- TAM
- FPL
- MET

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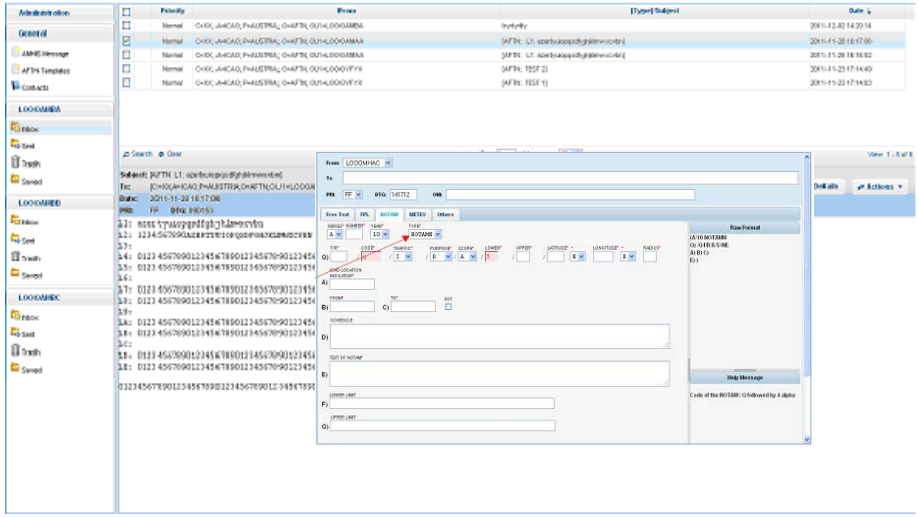
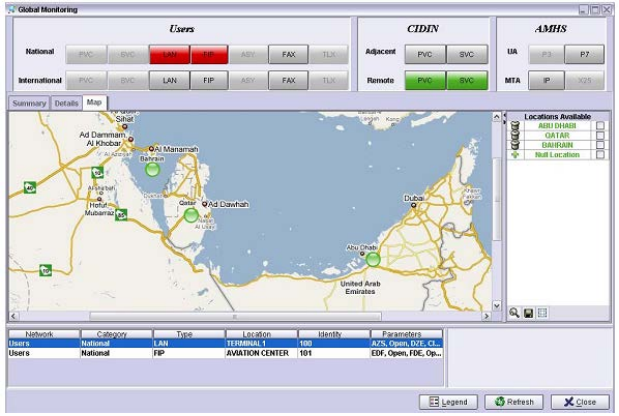
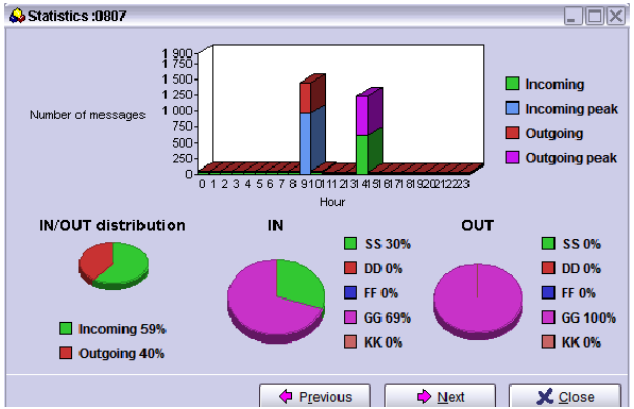
AMHS solution







Staff training

Training is an important and often overlooked item in any new system, having a State of the Art software doesn't matter if your staff can't use it

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Evolution

Implement and put into operation the centralized AIM Regional Operation Center (AIMOC) with the purpose of providing information and aeronautical data of the highest quality in real time to all those users interested in making decisions on reliable information allowing to improve the safety and efficiency of air operation such as management of safer routes and flight planning.

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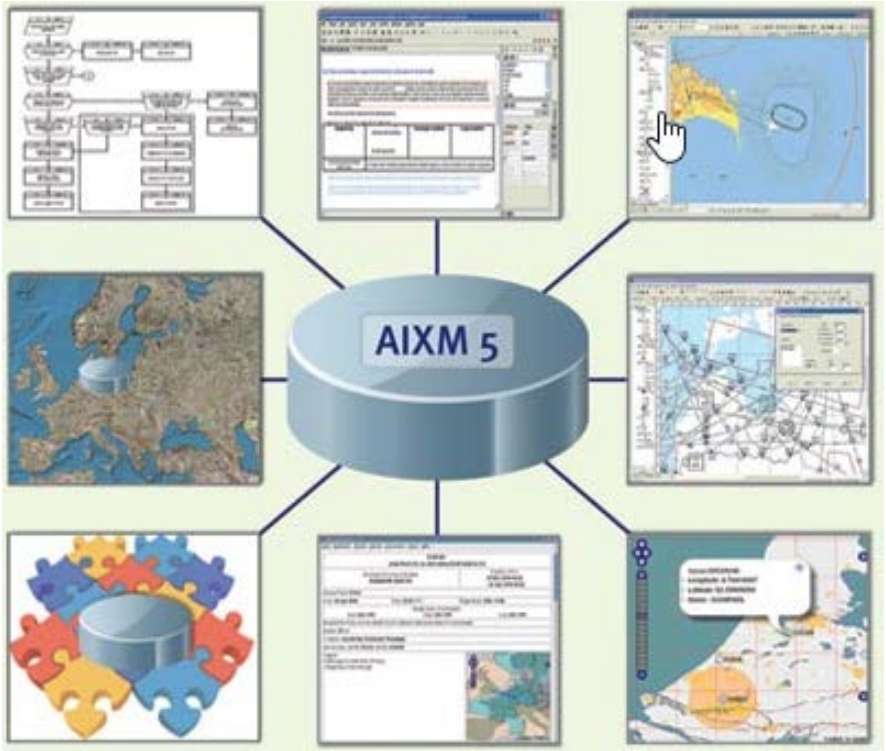
Evolution



Centralised database concept

Challenges

Non standard information/ uniformity

Several disconnected databases

Different production systems

Challenges

Lack of software for charting

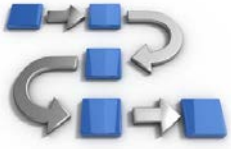
Lack of resources

Lack of staff/ skilled staff

Best Practices

Staff training

Cost sharing schema



Standard procedures through same systems

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Best Practices

Centralised database for a single authoritative datasource

Enterprise solution, used by all your organization not just one unit

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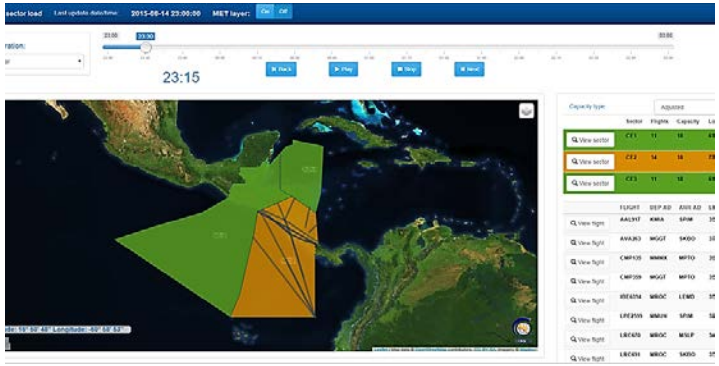
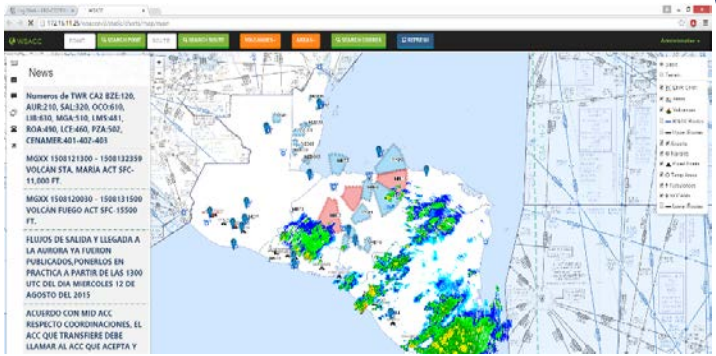
Best Practices





Internal developments based on the centralised database used for ATC/ ATFM operations

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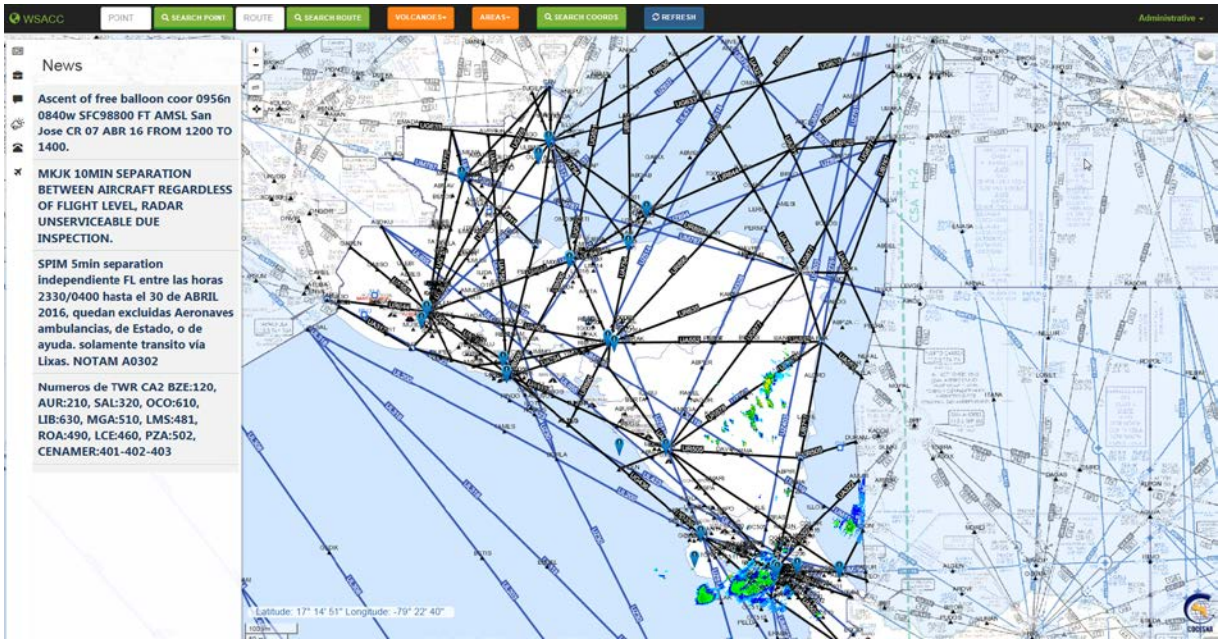
Best Practices



WSACC electronic charts

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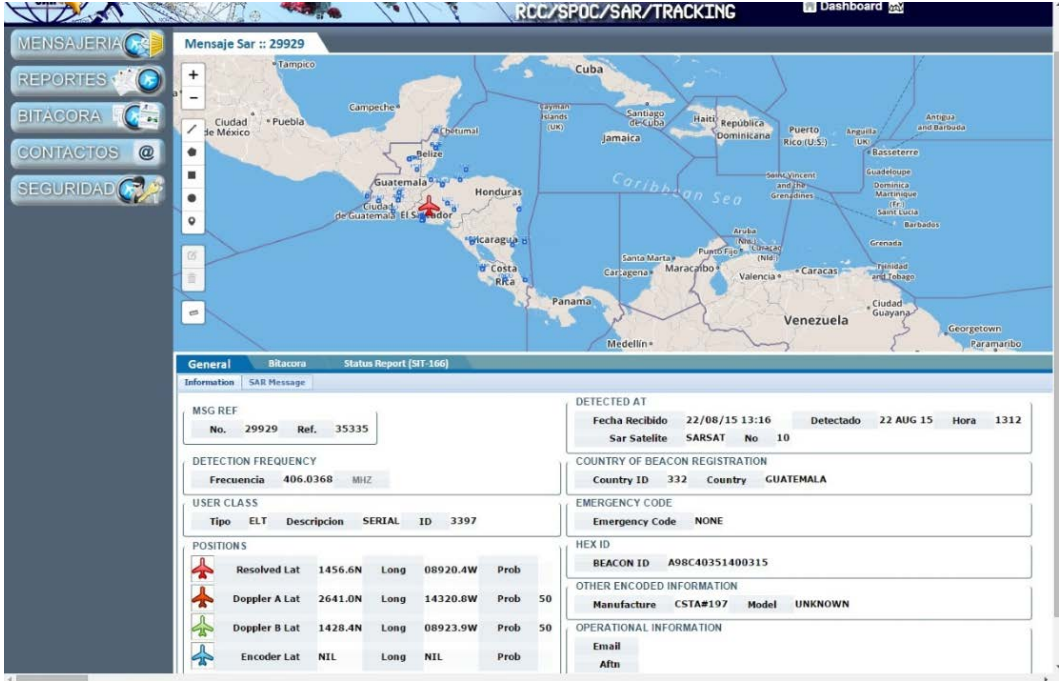
Best Practices



Search and Rescue Tracking System

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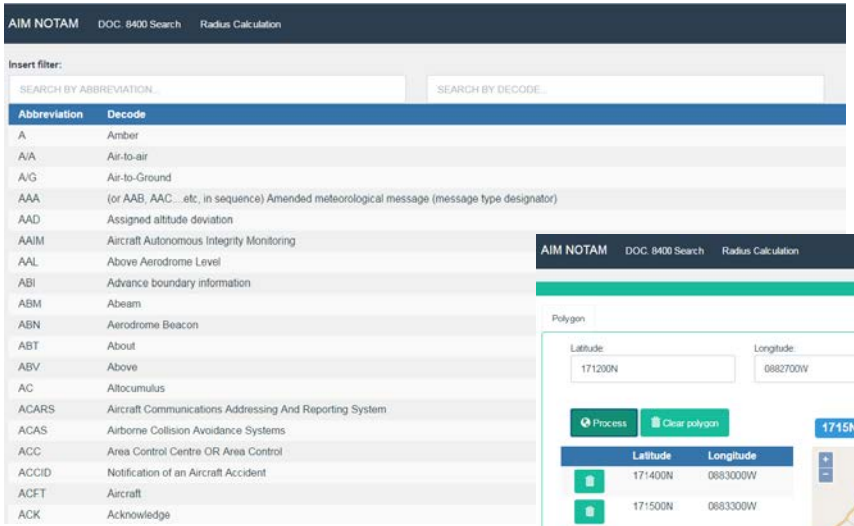
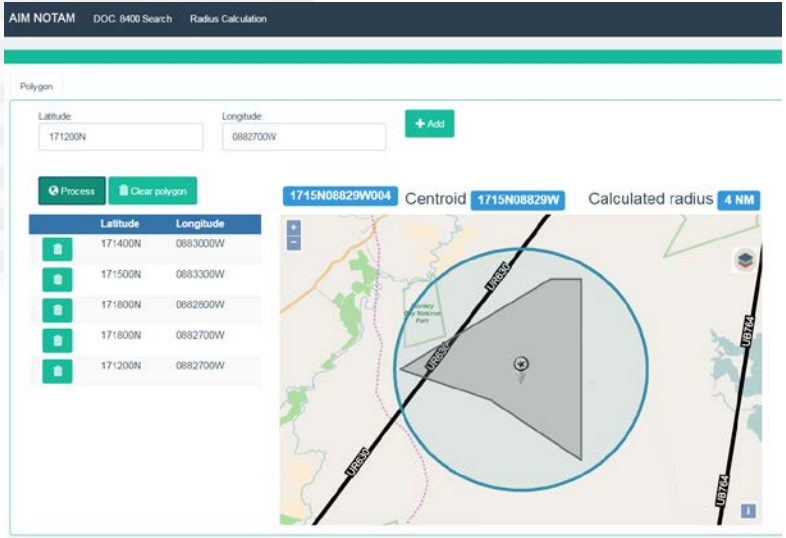
Best Practices





AIM internal development tools (helpers to increase efficiency)

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Best Practices

Moving towards standardisation in Central America for eAIP, Charting, Static Database Input

Aeronautical Charting based on leading GIS software, internal tolos based on proven open source technology stack

Conclusion

Let’s build a community around AIXM, strive for the right information at the right time

THANK YOU

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