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FRA WORKSHOP

NM FRA Implementation Models

Vitor Chalaca/Johnny Swennen

NMOC Airspace Data Team

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Unlimited FRA vs Limited FRA with Intermediate Points



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FULL FRA

- Flights can proceed from entry to exit point.
- When ATS route network is present, flights can use both.
- Flights can proceed via one or several intermediate points.
- All published points can be used.
- Intermediate points are optional*.
- Geographical coordinates can also be used.
- DCT limit in the airspace is set to unlimited.

FRA with Intermediate points

- Flights can proceed from entry to exit point..
- When ATS route network is present, flights can use both.
- Flights can proceed via one or several intermediate points.
- **Only defined Intermediate points** can be used .
- Intermediate points are optional*.
- Geographical coordinates **cannot be used**.
- DCT limit in the airspace is set to **0**.

Unlimited FRA vs Limited FRA with Intermediate Points

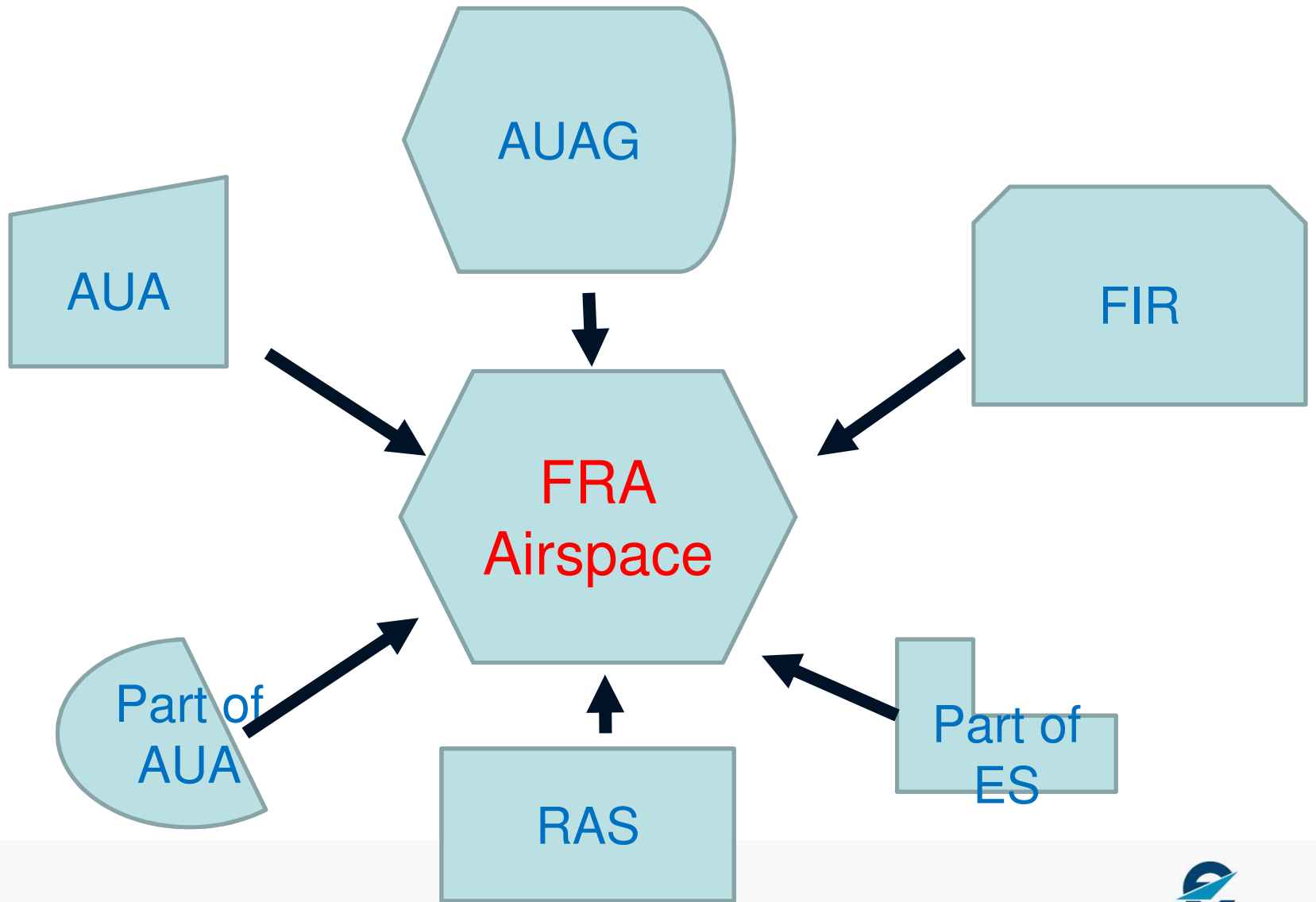


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(*) Intermediate Points are optional:

- This is part of the model.
- It is possible to make some intermediate points mandatory, for example flights entering via A and exiting via B shall proceed via C.
- This is done via RAD restrictions.

FRA Airspace



Complexity/difficulties in FRA implementation



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- Two different FRA models,
- Need to harmonise cross-border implementation between adjacent ANSP's
- ANSPs in one FRA but different FRA requirements,
- Time and level requirements,
- Seasonal FRA requirement (additional workload for NM AD team),
- Cross border issues with exceptions,
- Defining FRA border between adjacent ANSP's needs to be precise to avoid holes in AS profile,
- In some cases creating un-necessary restrictions / flows to maintain same operational requirements as before FRA implementation.

Need for FRA simplification



FRA implementation done by Airspace Type “Regulated Airspace (RAS)” ???

IFPS area build out of FRA Airspaces and Non FRA Airspaces type “RAS”
Common FRA border

RAS Airspace can be build out of:

- Airspace ERAS (Build up out of Geographical coordinates with Min Level/Max Level)
- Airspace CRAS (Can be a composition of Airspace-ERAS and/or Airspace AUA and/or Sector with Min Level/Max Level)

Keep in mind it is only for Flight Planning purposes

Thank You



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