

Functional Airspace Blocks

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Can they inspire the ANS World?

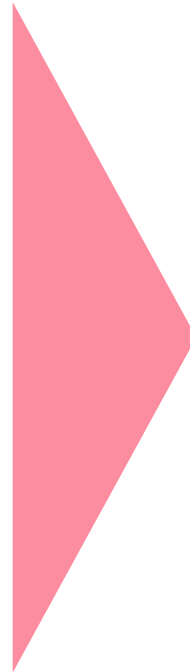
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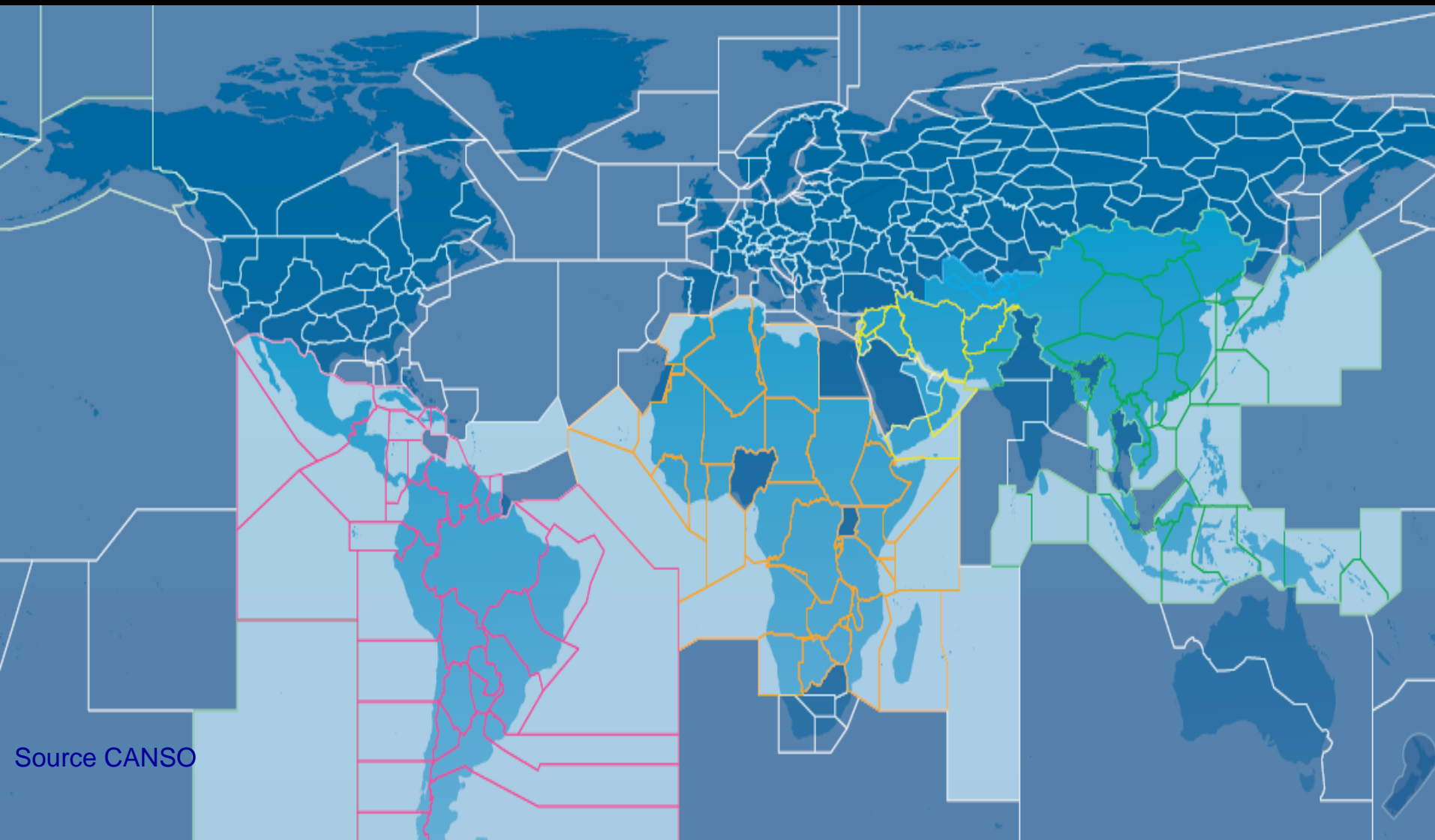
The implementation of ANS: main legal drivers

- ≡ National sovereignty
- ≡ States' obligations under art. 28 of the Chicago Convention
- ≡ Public service considerations
 - ✎ Integrity
 - ✎ Reliability
 - ✎ Continuity



Historical Model

- ≡ Governmental Agency
- ≡ Funded by public taxation
- ≡ ANS as a sovereign public service function
- ≡ Within the limits of State's national boundaries



Source CANSO





National vs. Operational Boundaries

- ⌘ "The delineation of airspace wherein air traffic services are to be provided, should be related the nature of the route structure and the need for efficient service rather than to national boundaries"
 - ✎ Chicago Convention , Annex 11, "Air Traffic Services" 12th ed. (1998) § 2.9.1.

- ⌘ "Particular efforts should be made to dissociate the limits of the sectors from national boundaries, whenever this is operationally beneficial"
 - ✎ "ECAC Strategy for the 1990's", Appendix 3, § 8.

- ⌘ "Airspace structures can no longer only be based on national and domestic considerations. Major efficiency gains will be attained through global integration rather than rigid boundary structures. In order to achieve this goal, there is a need to focus on international rather than on purely national requirements."
 - ✎ Assad KOTAITE, "Global Challenges and Expectations, ATC Maastricht Conference, 23-24 February 2000, p.2.



The Single European Sky

- ≡ Creation of a "physical" single European sky:
 - ✎ Airspace organisation independent from national boundaries
 - ✎ Cross-border airspace blocks: "*Functional Airspace Blocks*" (FAB)
- ≡ "Separation of regulatory and service provision functions"
- ≡ ANS providers' certification
- ≡ ANSP designation
- ≡ Civil – military relationship
- ≡ Interoperability



Functional Airspace Block: Definition

- ≡ "An airspace block based on operational requirements, reflecting the need to ensure more integrated management of the airspace **regardless of existing boundaries**"
 - ✎ Regulation (EC) No 551/2004 of the European Parliament and of the Council of 10 March 2004 on the organisation and use of the airspace in the single European sky (the airspace Regulation)

- ≡ "An airspace block based on operational requirements and established **regardless of State boundaries**, where the provision of air navigation services and related ancillary functions are optimised and/or integrated"
 - ✎ Draft EC Regulation SES II (state 29 March 2009)

What is a FAB...?

- ✎ 1. Member States shall take all necessary measures in order to ensure the establishment of functional airspace blocks as soon as possible and at the latest by the end of 2012...
- ✎ 2. Functional airspace blocks shall, in particular:
 - ✎ be supported by a safety case;
 - ✎ enable optimum use of airspace, taking into account air traffic flows;
 - ✎ be justified by their overall added value, including optimal use of technical and human resources, on the basis of cost-benefit analyses;
 - ✎ ensure a smooth and flexible transfer of responsibility for air traffic control between air traffic service units;
 - ✎ ensure compatibility between the different airspace configurations;
 - ✎ comply with conditions stemming from regional agreements concluded within the ICAO; and
 - ✎ respect regional agreements in existence on the date of entry into force of this Regulation, in particular those involving European third countries.

✎ Regulation (EC) No 550/2004 on the provision of air navigation services in the Single European Sky, new Article 9



Functional Airspace Block: Pragmatic Definition

- 1 Common Operational Concept
 - 1 Common optimised airspace structure and network
 - 1 Common dynamic airspace management concept
 - 1 Common performance management scheme
 - 1 Common technical infrastructure
 - 1 Common Safety Management System
 - 1 Common route charging system
 - 1 Common cross-border military training concept
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- 1 Single ANSP?



Challenges

- ≡ Sovereignty
- ≡ How to move from the legacy model to the ideal model?
- ≡ Institutional set-up
- ≡ Vested interests
- ≡ Regulation and supervision
- ≡ FAB to FAB Interface



**Map of FAB initiatives
01/01/2008**

Source EUROCONTROL
Performance Review Commission



Conclusions

- ≡ The concept of Functional Airspace Blocks aims to optimise the performance of ANS
- ≡ It makes full sense in regions with many small/medium size countries
- ≡ It challenges the historical model for the organisation of ANS
- ≡ The challenges are of political nature rather than operational and technical

