



WORKING PAPER

TWELFTH AIR NAVIGATION CONFERENCE

Montréal, 19 to 30 November 2012

Agenda Item 4: Optimum capacity and efficiency – through global collaborative ATM

TITLE

**The Importance of Access and Equity in the Implementation
of the Global Air Navigation Plan**

Presented by the International Council of Aircraft Owner and Pilot Associations
(IAOPA)

SUMMARY

This paper presents the International Council of Aircraft Owner and Pilot Associations (IAOPA) considerations for implementation of the aviation system block upgrades (ABSUs) related to the provisions of access and equity.

If done correctly, the implementation of ABSUs worldwide have the opportunity to improve safety, efficiency, and make all forms of air transport more environmentally friendly. If done incorrectly, they have the potential to unnecessarily exclude large segments of the air transport population and create insurmountable obstacles to safely and efficiently accessing airspace.

When States implement the ABSUs they must be mindful of the impacts of these decisions on the key performance indicator Access and Equity and ensure that all airspace users have the right of access to ATM resources needed to meet their specific operational requirements; and that the continued shared use of the airspace for different airspace users can be achieved safely.

Action: The Conference is invited to agree to the recommendation in paragraph 3.

1. INTRODUCTION

- 1.1 Implementation of Performance Based Navigation (PBN) and the block upgrade process by Member States offers the potential of improving the safety and efficiency of all airspace users and offers the promise of increased all weather access to many locations not previously obtainable. However, implementation of PBN and block upgrades without consideration and input from all stakeholders has the potential to unnecessarily exclude certain airspace users and establish artificial barriers that would prohibit equitable access to ANS services by all airspace users.

2. BACKGROUND

2.1 Key Performance Areas (KPA) access and equity text taken from Appendix D of the Global Air Traffic Management Operational Concept (Doc 9854) states:

Access and equity. A global air navigation system should provide an operating environment that ensures that all airspace users have the right of access to ATM resources needed to meet their specific operational requirements; and ensures that the shared use of the airspace for different airspace users can be achieved safely. The global air navigation system should ensure equity for all airspace users that have access to a given airspace or service. Generally, the first aircraft ready to use the ATM resources will receive priority, except where significant overall safety or system operational efficiency would accrue or national defense considerations or interests dictate by providing priority on a different basis.ⁱ

2.2 The objective of improved access should be part of any airspace modernization plan and the principles of access and equity must be considered in the choices and decisions that air navigation service providers make. Planning documents published by the FAA and EuroControl have realized this concept and provided guidance that quantifies the objective and each is establishing performance metrics to capture this principle. Improving access measurements can be further defined as:

- Ensuring that shared use of airspace and airports by different classes of airspace users will be significantly improved (classes defined by type of user, type of aircraft type of flight rule);
- Where shared use is conflicting with other performance expectations (safety, security, capacity, etc.), ensuring that viable airspace and airport alternatives will be provided to satisfy the airspace users' needs, in consultation with all affected stakeholders.ⁱⁱ

2.3 Performance Based Navigation procedures have the opportunity to improve access into airfields currently not served with ground based equipment such as ILS's thereby reducing the impact on the primary air carrier airport resulting in an overall capacity increase for the area served. Certain guidelines should be used by States when developing PBN procedures that will result in improved efficiency including:

1. RNAV everywhere, RNP where needed or beneficial – Most general aviation aircraft cannot reasonably equip with higher level requirements of RNP (such as RNP.3 with RF Legs) or commit to the ongoing training and certification requirements required by AR approaches. More significantly, RNP is not needed everywhere. RNAV and RNP are two different tools designed to address two unique challenges. Even air carriers have expressed a desire to “restrict” RNP to those locations where terrain, congestion, etc. make RNP a good choice.
2. Opportunity to improve, not replace – Specifically, airways. In the United States they are in the very beginning process of replacing Victor Airways with T-Routes. In some cases, the T-routes are more direct, navigate around SUA, or address enroute conflicts, etc. This situation represents improvements that can be made with PBN procedures and improves efficiency for all airspace users. However, in other cases, the process is simply removing a Victor airway and replacing it with a T-route represents a lost opportunity to potentially improve the system once it is no longer reliant on ground based NAVAIDs.
3. NAVAID transition – Recognizing the inherent difficulties in a satellite-based navigation system (outages, jamming, testing, etc.) and the fact that not all aircraft are GPS equipped, there must be: a.) sufficient infrastructure in place during the transition, and, b.) a suitable backup means of navigation in the event of a GPS outage.

4. Plan for Mixed Equipage – While the desire of all Air Navigation Service Providers (ANSP) is to ultimately standardize equipage of aircraft flying within their service areas, there are aircraft from many stakeholder groups, low end GA, military, etc., that will never be able to attain the highest level of equipage envisioned in many PBN plans. Alternative procedures will need to be developed and maintained for the foreseeable future and ANSP's should plan accordingly.
5. Accommodate unscheduled operations – One of the major advantages for using general aviation over scheduled operations is the ability to dictate one's own schedule and modify it accordingly as changes occur. This may mean changes in times, routings, and destinations at a moment's notice. Equitable planning and on-going access for unscheduled operators should be designed into airspace modernization efforts at all phases of development.

3. CONCLUSIONS

3.1 The Conference is invited to agree on the following recommendations:

1. Encourage all States as part of the ASBU implementation to ensure that the principles of access and equity are included in all airspace modernisation and redesign efforts.
2. Encourage all States and ANSP's to implement RNP procedures only where absolutely necessary and utilize other PBN procedures such as RNAV in most instances where appropriate.
3. Encourage all States as part of their ASBU implementation plan to detail how they will monitor the service providers to ensure that they are providing fair, equitable, and efficient access to their services for general aviation operators.
3. Urge States to recognize the importance of collaboration with all stakeholders during each phase of ASBU implementation to ensure that improvements in airspace efficiency are beneficial for all and do not come at the expense of others.

- END -

ⁱ ICAO – Manual on Global Performance of the Air Navigation System, First Edition - 2009

ⁱⁱ EuroControl – ATM Performance Strategies for Europe, 27-11-2008