



WORKING PAPER

TWELFTH AIR NAVIGATION CONFERENCE

Montréal, 19 to 30 November 2012

Agenda Item 1: Strategic issues that address the challenge of integration, interoperability and harmonization of systems in support of the concept of “One Sky” for international civil aviation

1.1: Global Air Navigation Plan (GANP) – framework for global planning

AVIATION SYSTEM BLOCK UPGRADE – PRIORITIZATION AND CATEGORIZATION

(Presented by Australia)

SUMMARY

This paper identifies that the finalization of the prioritization of the aviation system block upgrade (ASBU) modules should involve the Air Navigation Commission and representatives from a wide regional cross section of States, in close consultation with the ICAO Secretariat.

In prioritizing the ASBU modules any proposals must be compatible with the performance-based approach to planning outlined in the Docs 9882 and 9883.

The paper identifies that the development of ASBU priorities must have regard to regional diversity and further, the establishment of timelines for the implementation of different module components and all block components should only be finalized after States have considered the implications for air navigation priorities of the new Global Aviation Safety Plan when completed.

The paper identifies that for many regions and States, air navigation safety priorities, arising out of the currently being developed Global Aviation Safety Plan, will take precedence over the capacity and efficiency focussed ASBUs.

The paper supports a simple two category (essential and desirable) system of categorization, aligning modules with ICAO’s established and internationally recognized use of standards and recommended practices.

Action: The Conference is invited to agree to the recommendations in paragraph 3.3.

1. INTRODUCTION

1.1 Following the endorsement of the *Global Air Traffic Management Operational Concept* (Doc 9854) by the Eleventh Air Navigation Conference in 2003, ICAO developed and published two companion documents: the *Manual on Air Traffic Management System Requirements* (Doc 9882), and the *Manual on Global Performance of the Air Navigation System* (Doc 9883).

1.2 Those three documents are designed to be used jointly: Doc 9854 is the vision, and the other two documents help to ensure focus on solving identified performance-problems while planning for, and taking evolutionary steps toward, the vision.

1.3 ICAO Assembly Resolution A35-15 - *Consolidated statement of continuing ICAO policies and practices related to a global air traffic management (ATM) system and communications, navigation and surveillance/air traffic management (CNS/ATM) systems* is also relevant as it:

- a) calls upon States, planning and implementation regional groups (PIRGs) and industry to use Doc 9854 as the common framework to guide planning, development and implementation of CNS/ATM systems;
- b) urges the Council to take the steps necessary to ensure that the future global ATM system is performance-based and that the performance objectives and targets for the future system are developed in a timely manner; and
- c) urges the Council to ensure the development of standards and recommended practices (SARPs) necessary to support the implementation of a global ATM system.

1.4 ICAO Assembly Resolution A37-15 – *Consolidated statement of continuing ICAO Policies and associated practices related specifically to air navigation* – also resolved:

- a) that the activity of Air Navigation Commission panels shall support a performance-based approach to SARPs development to the extent possible; and
- b) that a high degree of stability in SARPs shall be maintained to enable the Contracting States to maintain stability in their national regulations.

1.5 In addition, the 37th Session of the ICAO Assembly recommended an impact assessment be required when new SARPs are proposed (A37-WP/394, Corrigendum No 2), and it is understood that the Air Navigation Commission has been directed to conduct, and is conducting, relevant feasibility studies and trial evaluations.

1.6 The draft Global Air Navigation Plan (Global Plan) and aviation system block upgrades (ASBUs) presented at AN-Conf/12 provides a planning methodology. In recognizing that Docs 9882 and 9883 are foundational, companion documents, the draft Global Plan:

- a) intends that air navigation planners around the world conduct an appropriate analysis of the performance problems/gaps in their geographical area, consider the set of ASBU modules as a menu from which to select potential solutions, make a selection through a possibly iterative process, and update the national and regional air navigation plans accordingly (WP/3 Appendix: p.22 (airspace modernization planning), p.96-7 -Appendix 1); and
- b) notes the possibility of maximising the accrual of benefits by exploring and finding acceptable means of mitigating against lack of synchronized implementation, that itself may be due to a number of reasonable causes. (WP/3 Appendix: p.36-37, p.39, p.46).

2. DISCUSSION

ASBU prioritization

2.1 WP/25 is valuable in starting the discussion on prioritization and categorization.

2.2 However the fundamental nature of the ASBU changes, and the narrow development mechanism used to draft the ASBUs, now requires that detailed consideration be undertaken by the ANC and representatives from a wide regional cross section of States, and the ICAO Secretariat, to help finalize the ASBU priorities.

2.3 This work should not be rushed and would be better completed once regions and States have had the opportunity to assess the draft new ICAO Global Aviation Safety Plan (GASP) given the highest priority of safety in setting future regional and State air navigation plans.

2.4 For many regions and States air navigation safety priorities, arising out of the ICAO GASP will take precedence over the capacity and efficiency focussed ASBUs noting that safety initiatives arising from the Global Aviation Safety Plan may in due course be added to the ASBUs.

2.5 Some of the considerations which might be considered in a detailed and proper examination of ASBU priorities would include:

- a) What is meant by 'minimum path'?
- b) How do the priorities and categories relate to existing terms Standards, Recommended Practices and Procedures, Supplementary Procedures, etc.?
- c) How do these priorities and categories arise from the actual application by Contracting States of the ICAO performance-based approach to planning?
- d) How do these priorities and categories relate to the diverse performance problems identified and prioritized by Contracting States and PIRGs around the world?

2.6 Further work needs to be done by the States on the status of the ASBUs noting the specific time frames included in the draft Global Plan circulated with WP/3.

2.7 For example pages 26 and 27 of the draft Global Plan imply that the target deadline for the availability of "various capabilities" contained within Block 0 is 2013. It is likely that the achievability and applicability of all of these various capabilities in the 2013 to 2018 time frame is highly problematic for most States.

2.8 The status of the ASBUs and their relationship with the development of standards and recommended practices and possible ICAO mandates also needs to be clearly established. The ASBU framework has to date generally been presented as a tool kit from which regions and States can choose from in addressing their individual needs that is applied consistently to enhance global interoperability.

2.9 However the draft Global Plan circulated with WP/3 and the categorization system in WP/25 appear to imply that various capabilities should be implemented by specific timelines and/or are classified as "essential".

ASBU categorization

2.10 WP/25 sets out a proposal for the categorization of the ASBU modules at the AN-Conf/12 with the initial focus on Block 1 and some of its modules being classified as essential.

2.11 While supporting the establishment of a categorization system to give regions and States guidance as to the importance attached by ICAO to the adoption of the various components of the modules, a simpler two category (essential and desirable) system would align the categorization of module components with ICAO's established and internationally recognized use of standards and recommended practices.

2.12 The proposed four category system in WP/25 appears overly complex. WP/25 proposes a somewhat vague “specific” category which does not give an indication of relative importance and a seemingly inappropriate “optional” category given the key role of the ASBUs in supporting the future implementation of a global, seamless air navigation system.

3. CONCLUSION

3.1 The ASBUs will assist regions and States in addressing the four identified performance improvement areas and to enhance global compatibility through the consistent application of the ASBUs.

3.2 However further work is required to determine ASBU priorities and a simpler approach to categorization is proposed to better align the modules and their capability requirements with the established and internationally recognized standards and recommended practices approach used by ICAO.

3.3 The Conference is invited to agree to the following recommendations:

- a) the endorsement in-principle of the establishment of ASBU priorities and that further work be completed on these priorities by the ANC and representatives from a wide regional cross section of States, in close consultation with the ICAO Secretariat, for consideration by the ICAO Council;
- b) that regional and State air navigation safety priorities arising out of the next GASP, will take precedence over the capacity and efficiency focussed ASBU priorities;
- c) in in prioritizing the ASBU modules any proposals must be compatible with the performance-based approach to planning outlined in Docs 9883 and 9882;
- d) the development of ASBU priorities must have regard to regional diversity and that the establishment of timelines for the implementation of different ASBU modules and Block components should only be finalized after States have considered the implications for air navigation priorities of the next GASP; and
- e) a simple two categorization approach be adopted for ASBUs (based on the terms “essential” and “desirable”) to align the categorization of modules with ICAO’s internationally recognized use of standards and recommended practices.

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