



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

- a) ASBU methodology and contents**
- b) Communications roadmap**
- c) Navigation roadmap**
- d) Surveillance roadmap**
- e) Avionics roadmap**
- f) Aeronautical information management (AIM) roadmap**

THE STATUS OF THE AVIATION SYSTEM BLOCK UPGRADE

(Presented by Australia)

SUMMARY

This paper supports the aviation system block upgrade (ASBU) framework being endorsed in-principle as contained in the draft Global Air Navigation Plan (Global Plan) attached to WP/3.

The paper supports the use of ASBUs, once finalized, by regions and States in addressing the four identified performance improvement areas and to enhance global compatibility through consistent application of the ASBU modules.

The paper identifies more work needs to be done by States on the status and content of the ASBU and its modules before they are finalized and endorsed by the ICAO Council. This task should involve the Air Navigation Commission and representatives from a wide regional cross section of States, in consultation with the Secretariat.

The paper identifies that for 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 emphasises the ASBU's are not the first step in the planning process but rather a tool to be used after global air navigation safety and capacity and efficiency plans are established, followed by plans at a regional and State level. This tiered planning approach avoids a “solutioneering” approach to problems that may or may not be as relevant to specific regions or States.

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

1. INTRODUCTION

1.1 The 37th Session of the ICAO Assembly passed a resolution (A36/2) for the Council to amend the Global Air Navigation Plan (GANP) to include a framework that will allow ICAO to easily analyse the impact of the States' air navigation modernization plans on the global system and then take appropriate action as needed to ensure global harmonization.

1.2 The main feature of the draft Global Air Navigation Plan (Global Plan) circulated with WP/3. is to implement this resolution through the proposed adoption of the aviation system block upgrade (ASBU) methodology and supporting technology roadmaps. The ASBU modules have been developed by a selected technical team against a backdrop of European and US air navigation projects focussed on significant regional capacity and efficiency challenges.

1.3 Once finalized the addition of the ASBU methodology and modules will provide a valuable tool for regions and States to use in addressing the four identified performance improvement areas (i.e. airport operations, globally interoperable systems and data, optimum capacity and flexible flights, and efficient flight paths) and help enhance global compatibility through the consistent application of the ASBU modules.

2. BACKGROUND

ASBU status

2.1 ASBUs represent an important, but not the first, step in the air navigation planning process. Rather ASBUs are a tool to develop air navigation safety and capacity and efficiency plans, based on agreed objectives, policies and priorities that are established globally by ICAO and then at a regional and State level.

2.2 The tiered planning approach, i.e. the establishment by ICAO of separate global air navigation safety and global air navigation capacity and efficiency plan to inform the development of regional and then State plans avoids "solutioneering" in air navigation planning.

2.3 By first establishing global then regional objectives, policies and priorities for air navigation using a performance based approach, regions and States can best determine what goes into their plans and where finite resources should be directed in air navigation rather than being driven by externally imposed technological or modular solutions to problems that may or may not be as relevant to their specific region or State.

2.4 For many regions and States air navigation safety priorities, arising out of the currently being developed ICAO Global Aviation Safety Plan will take precedence over the capacity and efficiency focussed ASBUs.

2.5 Further work needs to be done by the States on the status of the ASBUs noting that specific time frames have been included in the draft Global Air Navigation Capacity and Efficiency Plan (Global Plan) circulated with WP/3. For example page 26 of the draft Global Plan implies that the target deadline for the availability of "various capabilities" contained within Block 0 is 2013 with implementation in the period 2103-2018. It is likely that the achievability and applicability of all of these various capabilities in that time frame is highly problematic for most States.

2.6 The status of the ASBUs in terms of their relationship with the development of standards and recommended practices and ICAO mandates needs to be clearly established. The implementation of existing SARPs might need to be confirmed as a foundation requirement for States to achieve before they even approach

all of the modules set out in Block 0. The ASBU framework has to date also generally been presented as a tool kit from which regions and States can choose when addressing their individual needs in the future.

2.7 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”.

2.8 This further work task should involve the ANC and representatives from a wide regional cross section of States, and the ICAO Secretariat. It should not be rushed and would better be completed once States have had the opportunity to assess the draft new ICAO Global Aviation Safety Plan (GASP) given safety is the highest priority when developing future regional and State air navigation plans.

ASBU Content

2.9 Many States in the Asia/Pacific and presumably other regions continue to find areas for improvement in the draft ASBU modules’ material so far circulated. The ASBU modules would therefore benefit from further peer review by other regions and States who have not been directly involved in their development by a selected technical team. The ASBU modules will also benefit from being informed by the initiatives flowing from the new ICAO GASP once completed.

2.10 Another aspect of the ASBUs that should be considered is whether the modules content is to be expanded in the future to cover other performance improvement areas in addition to the four currently covered (i.e. efficient flight paths, optimum capacity and flexible flights, global interoperable systems and data and airport operations).

2.11 There are, for example, currently eleven expectations on air traffic management outlined in the *Global Air Traffic Management Operational Concept* (Doc 9854) and some of these may be capable of being adapted into identified performance improvement areas and modular development using the ASBU framework.

2.12 Therefore the ASBUs methodology should be endorsed in-principle at the AN-Conf/12 but more work undertaken to fully develop the modules and ready them for use, as appropriate, at regional and state level.

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 ASBU modules.

3.2 However clarity and resolution of fundamental questions on ASBU status and further refinement of modular content will assist in their applicability and achievability by regions and States around the world within agreed time frames.

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

a) that the ASBU methodology be endorsed in-principle and that:

- 1) further work be completed on the final status and content of the ASBUs by the Air Navigation Commission and representatives from a wide regional cross section of States, in close consultation with the ICAO Secretariat, for final endorsement by the ICAO Council; and

- 2) once finalized, the ASBUs use by regions and States will assist in addressing the four identified performance improvement areas and to enhance global interoperability through consistent application of the ASBU modules;
- b) air navigation safety priorities arising out of the next Global Aviation Safety Plan, will take precedence over the capacity and efficiency focussed ASBUs;
- c) ASBUs are not the first step in the planning process but rather a tool to be used after air navigation safety and capacity and efficiency plans, based on agreed objectives, policies and priorities, have been established globally by ICAO, and then by individual regions and States; and
- d) a tiered planning approach be adopted to avoid a “solutioneering” approach to problems that may or may not be as relevant to specific regions or States, i.e. a planning approach based on ICAO’s global air navigation safety and capacity and efficiency plans informing the subsequent development and establishment of regional and then State plans which focus on the specific priorities of regions and States.

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