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INFORMATION PAPER

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(NACC/WG/4)**

Ottawa, Canada, 24 to 28 March 2014

**Agenda Item 3: Follow-up on the NAM/CAR Regional Performance-Based Air Navigation
Implementation Plan (NAM/CAR RPBANIP) Progress**
3.1 Global/Regional air navigation developments

**IMPLEMENTATION OF ICAO AVIATION SYSTEM BLOCK UPGRADES (ASBUS)
METHODOLOGY**

(Presented by the Secretariat)

EXECUTIVE SUMMARY	
<p>This informative paper presents an overview of the ASBUS implementation methodology and the efforts ongoing of ICAO and States for Air navigation implementation under this strategy.</p>	
<i>Strategic Objectives:</i>	<ul style="list-style-type: none">• Safety• Air Navigation Capacity and Efficiency• Environmental Protection
<i>References:</i>	<ul style="list-style-type: none">• Doc 10007 - <i>Report of the Twelfth Air Navigation Conference</i> (2012)• Doc 9750 – <i>Global Air Navigation Plan</i>• ICAO Regional NAM/CAR Workshop on the Aviation System Block Upgrades (ASBU) Framework: Planning, Implementation and Monitoring, Mexico City, Mexico, 22 – 26 July 2013• Worldwide Air Transport Conference (ATCONF/6), Montreal, 18 to 22 March 2013• Establishment of a multi-disciplinary working group to address the challenges linked to the implementation of the aviation system block upgrade (ASBUS), Ref.: EC2/104-13/73

1. Introduction

1.1 The Twelfth Air Navigation Conference (AN-Conf/12) obtained consensus, commitments and made recommendations to achieve a globally harmonized air navigation system for international civil aviation and optimize the opportunities in technology and maturity of work programmes towards common global goals. Likewise, the Conference gave Stakeholders an opportunity to join around the main issues, setting priorities and the path to follow based on the lessons learned. Special attention was given to the use of existing capacity to enable systems and planning for their expansion considering user requirements. In this regard the concept of the Aviation system block upgrades (ASBU) was supported.

1.2 Similarly, the 4th edition of the Global Air Navigation Plan (GANP) was adopted based on the implementation/planning scheme of the ASBUs. The Block upgrade global framework looks to ensure that aviation safety, as well as maintain and enhance it, that ATM improvement programmes are effectively harmonized, and that barriers to future aviation efficiency and environmental gains can be removed at reasonable cost.

1.3 The block upgrades coordinate clear air and ground based operational objectives together with the avionics, data link and ATM system requirements needed to achieve them. The overall strategy serves to provide industry wide transparency and essential investment certainty for operators, equipment manufacturers and Air Navigation Service Providers (ANSPs).

1.4 The ASBU core of the concept is linked to four specific and interrelated aviation performance Improvement Areas:

- a) airport Operations,
- b) globally-interoperable systems and data,
- c) optimum capacity and flexible flights and d Efficient Flight Path; and
- d) performance Improvement Areas and the ASBU Modules associated, which have been organized into a series of four blocks (Blocks 0, 1 2 and 3) based on timelines for the various capabilities they contain.

1.5 The detailed explanation of the ASBU modules is included in the Appendix of the AN-Conf/12 Report and Doc 10007 - *Report of the Twelfth Air Navigation Conference* (2012) and in Appendix 2 of the GANP.

2. Implementation of ICAO Aviation System Block Upgrade (ASBUs) Methodology

2.1 Following the ANConf/12 Recommendation 1/2 — *Implementation*, ICAO through its regional offices, is providing guidance and practical assistance to States, regions and sub-regions for implementing ASBUs blocks or individual modules; establish a group or an improved mechanism for interregional cooperation to ensure ATM harmonization; and to assist States and regions in terms of training and enhance the capacity for the implementation of the appropriate ASBUs modules.

2.2 In this respect to assist in the familiarization of States, regulators, service providers, airline operators, military and international organizations with the implementation of ASBUs, ICAO conducted a workshop on ASBU implementation for the States/Territories of the North American/Caribbean Regions (NAM/CAR) from 22 to 26 July 2013 in the ICAO NACC Regional Office in Mexico City, Mexico, to provide the required training on the development of the performance based framework for air navigation systems using ASBU methodology. Similarly, other related Regional workshops like Implementation of ATS Messages Handling Systems (AMHS) (Sep 2014), Automatic Dependent Surveillance-Broadcast (ADS-B) (May 2014), Performance-Based Navigation (PBN) (Sep 2014) and automation of ATC systems (April 2014) will be held.

2.3 By adopting the ASBUs and the follow-up to regional implementation plans undertaken by the regional working groups, all the air navigation regional plans and implementation activities are being updated. This task is being undertaken by the NAM/CAR Air Navigation Implementation Working Group (NAM/CAR ANI/WG) and under subregional implementation groups.

2.4 As indicated in the ANConf/12 Recommendation 6/1 – *Regional performance framework – planning methodologies and tools*, in the implementation of the ASBU, particularly Block 0, the NAM/CAR implementation groups will use the electronic regional air navigation plans (eANP) as the primary tool to assist in the implementation of the agreed regional planning framework for air navigation services and facilities; procuring to involve regulatory and industry personnel during all stages of planning and implementation of ASBU modules and develop action plans to address the identified impediments to air traffic management modernization as part of ASBU planning and implementation activities;

2.5 The ICAO Assembly in its 38 session concurred in the recommendations of the AN CONF/12 for the adoption of ASBU implementation and in accordance with *A 38-14 – Consolidates statement of continuing ICAO policies in the air transport field*, requesting the Council to develop guidance on funding of air transport infrastructure, appropriate oversight functions and financing of the air transport system, including mechanisms to support operational improvements as described in the ASBU modules; and continue to develop and update the necessary tools and guidance to assess the benefits associated with ATM improvements, and assess the environmental benefits associated with the implementation of the ASBU strategy.

2.6 From the recommendations of the Sixth Worldwide Air Transport Conference (ATCONF/6) under agenda item 2.7, Recommendation 2.7/1 – *Modernization of the Air Transport System*. ICAO, in cooperation with States, international organizations and the industry, has established a multi-disciplinary working group (MDWG-ASBU) to consider the challenges associated with the establishment of operational and economic incentives, such as service priority, to allow early benefits of new technologies and procedures, as described in the aviation system block upgrade (ASBUs) modules, to support operational improvements, while maximizing safety, capacity and overall system efficiency, taking into account the specific needs expressed at the Twelfth Air Navigation Conference (AN-Conf/12). To this extend, ICAO requested the nomination qualified and experienced expert for membership on the MDWG-ASBUs, Ref.: EC2/104-13/73.

3. Conclusion

3.1 The consensus-driven for the ASBUs strategy aims for more integrated aviation planning at both levels, regional and State level and addresses available solutions, for which an increasing importance of collaboration and partnership is stressed.

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