



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

PROPOSALS TO CORRECT THE ASBU BLOCK IMPLEMENTATION TIMELINES

(Presented by the Russian Federation)

EXECUTIVE SUMMARY

This paper presents a brief analysis of the readiness of the Standards and Recommended Practices (SARPs), Procedures for Air Navigation Services (PANS) and manuals necessary for the implementation of the ASBU modules by States. A series of recommendations is presented to correct the ASBU block implementation timelines.

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

1. INTRODUCTION

1.1 ICAO Assembly Resolution A37-15, Consolidated statement on the continuing ICAO policies and associated practices related specifically to air navigation, Appendix A, paragraph 4 establishes the procedure for developing Standards and Recommended Practices (SARPs) and Procedures for Air Navigation Services (PANS). According to this procedure, it is advisable for ICAO, when developing SARPs, procedures and guidance material, to utilize to the maximum extent possible the results of the work of other recognized aviation organizations/standards developers, provided that they have been adequately tested and verified. Meanwhile, if the Council views the material as appropriate from the perspective of meeting ICAO requirements, ICAO documentation shall contain references to the material prepared by these other organizations/standards developers.

1.2 The provisions of paragraph 7 of Appendix A referenced above establish the requirements for the applicability dates of amendments to the SARPs and PANS. In accordance with these requirements, the applicability dates of these amendments shall be so established as to allow the Contracting States sufficient time for their implementation.

2. BACKGROUND

2.1 An analysis of the content of the conceptual model of the aviation system block upgrade (ASBU) shows that as of today, there remain unresolved questions concerning support for the transition to the ASBU modules in the form of the required packages of SARPs, PANS and guidance material necessary for States to implement the proposed modules.

2.1.1 Specifically, for the Block B0 modules, only about half of the Standards and manuals exist, and approximately thirty per cent of the documents defining procedures for air navigation services. For twenty-five per cent of the remaining modules, references to RTCA/EUROCAE, EUROCONTROL and ETSI certificates and manuals are provided. At the same time, there are no Standards or manuals for twenty-five per cent of the modules, and more than half of the modules lack procedures for air navigation services.

2.1.2 For the modules in Block B1, and not to mention Blocks B2 and B3, there are, for all practical purposes, no Standards, manuals or procedures.

2.1.3 The appendix to this document presents a complete list of the Standards, manuals, and procedures for air navigation services and indicates their readiness for implementing the ASBU modules.

2.2 With the above in mind, it is necessary to establish timelines for the implementation of each ASBU block that take into account the completion of the development of SARPs and PANS for the modules of that block, and to establish them such that Contracting States have enough time to prepare for their implementation.

2.2.1 If ICAO documents drafted on the basis of the ASBU, including the new edition of the Global Air Navigation Plan, contain references to verified standards set by third-party organizations/standards developers, States should have free access to these standards.

3. CONCLUSION

3.1 The Conference is invited to agree to the following recommendation:

Recommendation 1/x – Timelines for implementation of the aviation system block upgrades

That the Conference:

- a) recommend that ICAO establish timelines for the implementation of each aviation system block upgrade that take into account the completion of the development of Standards and Procedures for Air Navigation Services for the modules of that block. Establish these timelines in such a manner as to allow the Contracting States sufficient time to prepare for their implementation; and
- b) request that if ICAO documents drafted on the basis of the aviation system block upgrades contain references to the verified standards of third-party organizations/standards developers, these standards be posted on the ICAO website.

APPENDIX

Readiness of standards, manuals and procedures for air navigation services (PANS) for ASBU module implementation

Number	Module title	Standards		Manuals		Procedures		Endorsing documents	
		exist	ready	exist	ready	exist	ready	exists	ready
B0-05	Improved Flexibility and Efficiency in Descent Profiles (CDOs)	yes		yes		no	TBD	yes	
B0-10	Improved Operations through Enhanced En-Route Trajectories	yes		yes		no	TBD	yes	
B0-101	ACAS Improvements	yes		yes		yes		no (only RTCA/EUROCAE, EASA, FAA)	TBD
B0-102	Increased Effectiveness of Ground-Based Safety Nets	no (only Eurocontrol)	TBD	no (only Eurocontrol)	TBD	yes		no	TBD
B0-105	Meteorological information supporting enhanced operational efficiency and safety	yes		yes		no	TBD	no	TBD
B0-15	Improve traffic flow through runway sequencing (AMAN/DMAN)	no	TBD	no (only SESAR/NEXTGEN and RTCA)	TBD	no	TBD	no	TBD
B0-20	Improved Flexibility and Efficiency in Departure Profiles	no	TBD	in part	TBD	yes		in part	TBD
B0-25	Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration	yes		yes		no	TBD	no	TBD
B0-30	Service Improvement through Digital Aeronautical Information Management	no	TBD	yes		no	TBD	no	TBD
B0-35	Improved Flow Performance through Planning based on a Network-Wide view	no	2013	no	TBD	no	2013	no	2013
B0-40	Improved Safety and Efficiency through the initial application of Data Link En-Route	no (only RTCA/EUROCAE)	TBD	in part	TBD	no	TBD	no (only RTCA/EUROCAE and FAA)	TBD
B0-65	Optimisation of approach procedures including vertical guidance	yes		yes		yes		yes	
B0-70	Increased Runway Throughput through Wake Turbulence Separation	no	2013	no	TBD	no	2013	in part	2013

Appendix

Number	Module title	Standards		Manuals		Procedures		Endorsing documents	
B0-75	Safety and Efficiency of Surface Operations (A-SMGCS Level 1-2)	yes		yes		yes		no	TBD
B0-80	Improved Airport Operations through Airport-CDM	no (only EUROCAE and ETSI)	2013	no (only Eurocontrol)	TBD	no	2013	in part	2013
B0-84	Initial capability for ground surveillance	yes		yes		yes		yes	
B0-85	Air Traffic Situational Awareness (ATSA)	no (only RTCA/EUROCAE)	TBD	no (only Eurocontrol)	TBD	no	2013	no (only RTCA/EUROCAE and FAA)	2012
B0-86	Improved Access to Optimum Flight Levels through Climb/Descent Procedures using ADS-B	no (only RTCA/EUROCAE)	TBD	no	TBD	no	TBD	no (only FAA)	TBD
B1-05	Improved Flexibility and Efficiency in Descent Profiles (OPDs)	no (only RTCA/EUROCAE and Boeing)	2018	no	TBD	no	TBD	no (only FAA and EASA)	2018
B1-10	Improved Operations through Free Routing	yes		yes		no	2018	in part	2018
B1-102	Ground-based Safety Nets on Approach	no (only Eurocontrol)	TBD	no (only Eurocontrol)	TBD	no	2014	no	2014
B1-105	Enhanced Operational Decisions through Integrated Meteorological Information (Planning and Near-term Service)	in part	2018	no	TBD	no	2018	no	2018
B1-15	Improved Airport operations through Departure, Surface and Arrival Management	no	2018	no (only SESAR/NEXTGEN and RTCA)	TBD	no	2018	no	2018
B1-25	Increased Interoperability, Efficiency and Capacity through FF-ICE/1 application before Departure	no (only EUROCAE)	2016	no	TBD	no	2018	no	2018
B1-30	Service Improvement through Integration of all Digital ATM Information	in part	2018	no	TBD	no	TBD	no	2018
B1-31	Performance Improvement through the application of System Wide Information Management (SWIM)	no	2016	in part	TBD	no	2016	in part	2016
B1-35	Enhanced Flow Performance through Network Operational Planning	no	2018	no	TBD	no	2018	no	2018
B1-40	Improved Traffic Synchronisation and Initial Trajectory-Based Operation	no (only RTCA/EUROCAE and Eurocontrol)	2013	in part	TBD	no	2018	no	2018
B1-65	Optimised Airport Accessibility	no	2014	yes		yes			2018

Number	Module title	Standards		Manuals		Procedures		Endorsing documents	
B1-70	Increased Runway Throughput through Dynamic Wake Turbulence Separation	no	2018	no	TBD	no	2018	in part	2018
B1-75	Enhanced Safety and Efficiency of Surface Operations (A-SMGCS/SURF-1A) and EVS	in part	2015	in part	TBD	in part	2015	in part	2015
B1-80	Optimised Airport Operations through A-CDM Total Airport Management	no	2018	no	TBD	no	2018	no	2018
B1-81	Remotely Operated Aerodrome Control	no	2018	no	TBD	no	2018	no	2018
B1-85	Increased Capacity and Efficiency through Interval Management	no (only RTCA/EUROCAE)	2014	no (only Eurocontrol)	TBD	no	2014	no	2016
B1-90	Initial Integration of Remotely-Piloted Aircraft (RPA) Systems into non-segregated airspace	no	2018	no	TBD	no	2018	no	2018
B2-05	Optimised Arrivals in Dense Airspace	no	2023	yes		no	2023	no	2023
B2-101	New Collision Avoidance System	no	2023	no	TBD	no	TBD	no	TBD
B2-15	Linked AMAN/DMAN	no	2025	no (only SESAR/NEXTGEN and RTCA)	TBD	no	2025	no	2025
B2-25	Improved Coordination through multi-centre Ground-Ground Integration: (FF-ICE/1 and Flight Object, SWIM)	no (only EUROCAE)	2018	no	TBD	no	2020	no	2020
B2-31	Enabling Airborne Participation in collaborative ATM through SWIM	no	2023	no	TBD	no	2023	no	2023
B2-35	Increased user involvement in the dynamic utilisation of the network	no	2023	no	TBD	no	2023	no	2023
B2-70	Advanced Wake Turbulence Separation (Time-based)	no	2023	no	TBD	no	2023	in part	2023
B2-75	Optimized Surface Routing and Safety Benefits (A-SMGCS Level 3-4 and SVS)	no (only RTCA/EUROCAE)	2023	in part	TBD	no	2023	no (only FAA)	2023
B2-85	Airborne Separation (ASEP)	no	2023	no	TBD	no	2023	no	2023
B2-90	Remotely Piloted Aircraft (RPA) Integration in Traffic	no	2023	no	TBD	no	2023	no	2023
B3-05	Full 4D Trajectory-based Operations	no	2025	no	TBD	no	2028	no	2028
B3-10	Traffic Complexity Management	no	2028	no		no	2028	no	2028
B3-105	Enhanced Operational Decisions through Integrated Meteorological Information (Near-term and Immediate Service)	in part	2023	no	2023	no	2023	no	2023

Number	Module title	Standards		Manuals		Procedures		Endorsing documents	
B3-15	Integration AMAN/DMAN/SMAN	no	2025	no (only SESAR/NEXTGEN and RTCA)	TBD	no	2025	no	2025
B3-25	Improved Operational Performance through the introduction of Full FF-ICE	no	2023	no	2025	no	2025	no	2025
B3-85	Airborne Self-Separation (SSEP)	no	2028	no	TBD	no	2028	no	2028
B3-90	Remotely Piloted Aircraft (RPA) Transparent Management	no	2028	no	TBD	no	2028	no	2028

— END —