International Civil Aviation Organization
North American, Central American and Caribbean Office

WORKING PAPER

NACC/DCA/5 — WP/13
22/04/14

Fifth North American, Central American and Caribbean Directors of Civil Aviation Meeting (NACC/DCA/5)

Port-of-Spain, Trinidad and Tobago, 28 to 30 April 2014

Agenda Item 5: Air Navigation

5.4 NAM/CAR Regional Performance Based Air Navigation Implementation Plan (RPBANIP) Version 3.1

U.S. IMPLEMENTATION OF THE AVIATION SYSTEM BLOCK UPGRADES (ASBU) BLOCK 0 MODULES

(Presented by United States)

EXECUTIVE SUMMARY	
This paper presents information on the United States' implementation status of the ICAO Aviation System Block Upgrades (ASBUs) in support of the Global Air Navigation Plan (GANP).	
Strategic Objectives:	• Safety • Air Navigation Capacity and Efficiency • Economic Development of Air Transport • Environmental Protection
References:	• ICAO Doc 9750-AN/963, 4th Edition, 2013, *Global Air Navigation Plan 2013-2028* • ICAO *Working Document for the Aviation System Block Upgrades, the Framework for Global Harmonization* (28 March 2013) • ICAO SIP/ASBU/MEXICO/2013-WP/21, *Summary Table of Aviation System Block Upgrades (ASBU) Block 0 Modules* • ICAO SIP/2012/ASBU/Dakar-WP32A, SAMPLE TEMPLATE, AIR NAVIGATION REPORT FORM (ANRF)

1. Introduction

1.1 The Global Air Navigation Plan (GANP) and the Aviation System Block Upgrades (ASBUs) concept and documents were developed to provide the framework and strategic direction for global and harmonized aviation system. With endorsement and approval from the 12th Air Navigation Conference and the 38th Assembly, the GANP and ASBUs provide the strategic direction and define measurable operational improvements for the next 15 years and include key civil aviation policy principles to assist ICAO Regions, sub-regions and States with the preparation and implementation of their air navigation plans.

2. Information on U.S. ASBU Block 0 Implementation Status

2.1 With the GANP and ASBUs now in place, the United States and other Member States are addressing the steps toward implementation. The objective of this working paper is to provide the U.S. implementation status of the ASBUs in support of the GANP. To date, the United States has implemented all of the modules in Block 0. Based on the needs and requirements in our National Airspace System (NAS), the Federal Aviation Administration (FAA) has implemented some modules and capabilities across the NAS, and some modules and capabilities have been implemented at select locations.

2.2 Tables show the list of ASBU Block 0 modules and their Elements to be implemented. The FAA has identified 47 Elements for 18 Block 0 modules. For each PIA tables, the first column shows the module acronyms. The second column describes the Elements and the last column presents the implementation status. The implementation status of "Implemented" may means "Implemented and no additional work is planned", or "Implemented and ongoing" or "Implemented and may enhance in the future."

Table 1 describes the PIA 1, Airport Operations. PIA 1 consists of 5 modules and 15 Elements.

PIA 1: Airport Operations		
B0 Module	**Elements**	**Status**
WAKE	1: 6-category wake vortex separation	Implemented
	2: Increasing aerodrome arrival operational capacity	Implemented
	3: Increasing aerodrome departure operational capacity	Implemented
APTA	1: APV with Baro VNAV	Implemented
	2: APV with SABA(WAAS)	Implemented
	3: APV with BVAS	Implemented
SURF	1: International aerodromes with at least one cooperative surface surveillance system such as Surface Movement Radar, Secondary Surveillance Radar Mode S, ADS-B, and Multilateration	Implemented
	2: International aerodromes with a cooperative transponder systems on vehicles	Implemented
	3: Alerting	Implemented
ACDM	1: International aerodromes with Airport CDM	Implemented
	2: Certified international aerodromes	Implemented
	3: International aerodromes with Rescue and Fire Fighting equipment as per Annex 14	Implemented
RSEQ	1: AMAN and time-based metering	Implemented
	2: Departure management	Implemented
	3: Point merge	N/A

Table 1: Implementation Status of PIA 1 - Airport Operations

Table 2 describes the PIA 2, Globally Interoperable Systems and Data. PIA 2 consists of 3 modules and 14 Elements.

PIA 2: Globally Interoperable Systems and Data		
B0 Module	**Elements**	**Status**
FICE	1: ATS units with AIDC	Implemented
	2: Implementation of AMHS/IPS	Implemented
DATM	1: Implementation of AIXM	Implemented
	2: Implementation of eAIP	Initiated, on-going
	3: Implementation of Digital NOTAM	Implemented
	4: Implementation of WGS-84	Planning
	5: Implementation of eTOD	Initiated, on-going
	6: Implementation of QMS for AIM	Implemented
AMET	1: WAFS	Implemented
	2: IAVW	Implemented
	3. Tropical cyclone watch	Implemented
	4. Aerodrome warnings	Implemented
	5. Wind sheer warnings and alerts	Implemented
	6. SIGMET and other operational meteorological (OPMET) information	Implemented

Table 2: Implementation Status of PIA 2 - Globally Interoperable Systems and Data

Table 3 describes the PIA 3, Optimum Capacity and Flexible Flights. PIA 3 consists of 7 modules and 13 Elements.

PIA 3: Optimum Capacity and Flexible Flights		
B0 Module	**Elements**	**Status**
FRTO	1: Airspace planning	Implemented
	2: Flexible use of airspace (FUA) Time segregated airspaces are available for civil operations in the State	Implemented
	3: Flexible routing	Implemented
NOPS	1: ATS units using ATFM services	Implemented
ASUR	1: International aerodromes with ADS-B implemented	Implemented
	2: Multilateration system implemented	Implemented
ASEP	1: ATSA-AIRB	Implemented
	2: ATSA-VSA	Implemented
OPFL	1: Aircraft used ITP	Implemented
ACAS	1: Aircraft with ACAS logic V7.1	Implemented
SNET	1: Short Term Conflict Alert implementation (STCA)	Implemented
	2: Area Proximity Warning (APW)/ Minimum Safe Altitude Warning (MSAW)	Implemented
	3: Medium Term Conflict Alert (MTCA)	Implemented

Table 3: Implementation Status of PIA 3 - Optimum Capacity and Flexible Flights

Table 4 describes the PIA 4, Efficient Flight Path. PIA 4 consists of 5 modules and 5 Elements.

PIA 4: Efficient Flight Path		
B0 Module	**Elements/Indicator**	**Status**
CDO	1: International aerodromes with CDO implemented	Implemented
	2: International aerodromes/TMAs with PBN STARs implemented	Implemented
TBO	1: Number of ADS-C/CPDLC procedures available over oceanic and remote areas	Implemented
CCO	1: International aerodromes with CCO implemented	Implemented
	2: International aerodromes with PBN SIDs implemented	Implemented

Table 4: Implementation Status of PIA 4 - Efficient Flight Path

3. Conclusion

3.1 In order to coordinate the modernization of the global air navigation system, it is important to have a harmonized plan for aviation regulators, operators and industry to follow. The planning, development, training and implementation of a globally harmonized system are contingent on a framework that includes scalable plans and provides operational, economic, and safety benefits.

4. Suggested Actions

4.1 The Meeting is invited to:

a) note the contents of this working paper; and

b) support efforts that promote regional implementation of the ASBUs.

— END —