



INTERNATIONAL CIVIL AVIATION ORGANIZATION

Seventh Meeting of the APIRG Airspace and Aerodrome Operation Subgroup (AAO/SG7)

(Nairobi, 12-16 August 2024)

Agenda Item 4: Regional Air Navigation Plan

Status of implementation of ASBU Elements pertaining to ATM/SAR

(Presented by Secretariat)

SUMMARY	
This paper provides the status of the implementation of Aviation System Block Upgrades (ASBU) elements in air traffic management and search and rescue up to December 2023. Actions by the Meeting is in paragraph 3	
REFERENCES • APIRG Procedural Handbook • AFI Annual Air Navigation Report, First Edition	
Strategic Objectives	<i>A – Safety, B – Air Navigation Capacity and Efficiency, D – Economic Development of Air Transport, and E – Environmental Protection.</i>

1 INTRODUCTION

- 1.1 The APIRG procedural handbook requires that the group shall monitor and report the progress on the implementation by States of the GANP, and the regional objectives and priorities.
- 1.2 The Volume III of the Air Navigation Plan contains information on the status of implementation of ASBU elements applicable in the AFI Region. In addition, first edition of the annual air navigation report for the AFI region was published in December 2023. The report contains information on the status of implementation of ASBU elements in ATM and SAR as provided by States which are aligned with information in ANP Volume III. Information in the Volume III of the ANP forms the baseline for future analysis of the progress made by States in the implementation of ASBU elements applicable to the region.

2 DISCUSSIONS

- 2.1. ASBU elements pertaining to ATM and SAR scrutinized include ACAS – Airborne Collision Avoidance System, APTA – Improve arrival and departure operations, FRTTO - Improved operations through enhanced en-route trajectories, SNET - Ground-based Safety Nets.
- 2.2. Figures indicate an overall implementation average of 100% for ACAS, 53% for APTA, 46% for FRTTO and 66% for SNET for the AFI region. Detailed information on the status of implementation of ASBU elements for ATM and SAR per States in ESAF and WACAF are respectively in appendices A and B of this working paper.
- 2.3. Information in ANP Volume III as reported by States do not cover all ASBU elements in ATM and SAR applicable to the AFI region. Some elements were not reported due to lack or incomplete information received from States and stakeholders.
- 2.4. The maintenance of ANP volume III strongly relies on State's support through the regular information on the status of implementation of ASBU elements at national level. Information to be provided may be in the form of infrastructure and services project implemented, being implemented or planned that will be related to relevant ASBU elements at secretariat level. Furthermore, the second edition of the annual air navigation report, which is due in December 2024, is expected to provide an in depth to the ASBU framework and implementation in the region. Inputs from States are expected to feed the ANP Volume III and the annual report and make them meaningful.

3 ACTION BY THE MEETING

- 3.1. The meeting is invited to:
 - a) Note the information provided in this working paper; and
 - b) Encourage the States and stakeholders to contribute to the effective update of ANP volume III and the publication of the second edition of the annual air navigation report, especially by providing data and information related to ASBU.

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APPENDIX A

STATUS OF ATM/SAR ASBU ELEMENTS IN ESAF

I = Implemented

NI = Not implemented

IP = In progress

N/A = Not applicable

Essentials services (BBBs) to be implemented <i>(List the required essential services)</i>	RANP requirements (eANP Vol I & Vol II refer) <i>(Provide the corresponding regional requirements)</i>	Angola	Botswana	Burundi	Comoros	Djibouti	Eritrea	Eswatini	Ethiopia	Kenya	Lesotho	Madagascar	Malawi	Mauritius	Mozambique	Namibia	Rwanda	Seychelles	Somalia	South Africa	South Sudan	Uganda	United Rep. of Tanzania	Zambia/Zimbabwe	Zimbabwe
ACAS	B0-ACAS Improvement (ACAS II -TCAS version 7.1)	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
FRT0	B0/1 Direct Routing (DCT)	I	I	NI	NI	NI	I	I	I	I	NI	I	I	I	I	I	I	I	NI	I	NI	I	I	NI	I
	B0/2 Airspace planning and Flexible Use of Airspace (FUA)	NI	NI	NI	NI	NI	NI	NI	I	I	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
	B0/3 Pre-validated and coordinated ATS routes to support flight and flow	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
	B0/4 Basic conflict detection and conformance monitoring.	NI	NI	NI					I	I		I	NI	I	NI	NI	NI	NI	NI	NI	NI	I	NI	I	NI
	B1/1 Free Route Airspace (FRA)	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	I	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
	B1/2 Required Navigation Performance (RNP) routes	NI	NI	NI	NI	NI	NI	NI	I	I	NI	NI	NI	I	I	NI	NI	I	NI	I	NI	I	I	I	NI
	TOTAL IMPLEMENTATION	33%	33%	17%	17%	17%	33%	33%	83%	83%	17%	50%	33%	83%	50%	33%	33%	50%	17%	50%	17%	67%	50%	50%	33%
APTA	B0/1 PBN Approaches (Basic)	I	I	I	I	I	I	NI	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I

AVRG
PER
MODULE

100%

41%

	B0/2 PBN SIDS and STAR procedures (Basic)	I	I		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	
	B0/3 SBAS/GBAS CAT I precision approach procedures	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	
	B0/4 CDO (Basic)	NI	NI	NI	NI	NI	NI	NI	I	I	NI	NI	NI	I	NI	NI	NI	NI	NI	I	NI	I	NI	NI	NI	
	B0/5 CCO (Basic)	NI	NI	NI	NI	NI	NI	NI	I	I	NI	NI	NI	I	NI	NI	NI	NI	NI	I	NI	I	NI	NI	NI	
	B0 - TBO (Datalink - CPDLC/ADS-C)	I	NI	N/A	N/A	N/A	NI	N/A	NI	I	N/A	I	N/A	I	NI	N/A	N/A	I	I	I	NI	N/A	NI	N/A	N/A	
	TOTAL IMPLEMENTATION	67%	50%	40%	60%	60%	50%	40%	83%	100%	60%	67%	60%	100%	50%	60%	60%	67%	67%	100%	50%	100%	50%	60%	60%	65%
SNET	B0/1 STCA	NI	I	NI	I	NI	NI	NI	I	I	NI	I	I	I	I	I	I	I	I	I	NI	I	I	I	I	
	B0/2 MSAW	NI	I	NI	I	NI	NI	NI	I	I	NI	I	I	I	I	I	I	I	I	I	NI	I	I	I	I	
	B0/3 APW	NI	I	NI	I	NI	NI	NI	I	I	NI	I	NI	I	I	NI	NI	I	I	I	NI	I	I	I	I	
	B0/4 APM	NI	I	NI	I	NI	NI	NI	I	I	NI	I	NI	I	I	NI	NI	I	I	I	NI	I	I	I	I	
	TOTAL IMPLEMENTATION	0%	100%	0%	100%	0%	0%	0%	100%	100%	0%	100%	50%	100%	100%	50%	50%	100%	100%	100%	0%	100%	100%	100%	100%	65%

APPENDIX B

STATUS OF ATM/SAR ASBU ELEMENTS IN WACAF

I = Implemented

NI = Not implemented

IP = In progress

N/A = Not applicable

Essentiels services (BBBs) to be implemented <i>(List the requiered essential servivices)</i>	RANP requirements (eANP Vol I & Vol II refer) <i>(Provide the corresponding regional requirements)</i>	Benin	Burkina Faso	Cameroon	Cabo Verde	CAR	Chad	Congo	Cote d' Ivoire	DRC	Equatorial Guinea	Gabon	Gambia	Ghana	Guinea	Guinea Bissau	Liberia	Mali	Mauritania	Niger	Nigeria	Sao Tome and Principe	Senegal	Sierra Leone	Togo
ACAS	B0-ACAS Improvement (ACAS II -TCAS version 7.1)	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
FRTO	B0/1 Direct Routing (DCT)	I	IP	IP	I	NI	I	I	I	NI	NI	IP	I	I	NI	I	NI	I	I	I	I	NI	I	I	I
	B0/2 Airspace planning and Flexible Use of Airspace (FUA)	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
	B0/3 Pre-validated and coordinated ATS routes to support flight and flow	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
	B0/4 Basic conflict detection and conformance monitoring.	I	I	I	I	NI	I	I	I	I	NI	I	NI	I	NI	I	NI	I	I	I	I	NI	I	I	I
	B1/1 Free Route Airspace (FRA)	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
	B1/2 Required Navigation Performance (RNP) routes	I	I	I	I	I	I	I	I	I	NI	I	NI	I	NI	I	NI	I	I	I	I	NI	I	NI	I
	TOTAL IMPLEMENTATION	67%	50%	50%	67%	33%	67%	67%	67%	50%	17%	50%	33%	67%	17%	67%	17%	67%	67%	67%	17%	67%	50%	67%	67%
	B0/1 PBN Approaches (Basic)	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	NI	I	I	I

AVRG
PER
MODULE

100%

52%

APTA	B0/2 PBN SIDS and STAR procedures (Basic)	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	NI	I	I	I		
	B0/3 SBAS/GBAS CAT I precision approach procedures	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI		
	B0/4 CDO (Basic)	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI		
	B0/5 CCO (Basic)	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI		
	B0 - TBO (Datalink - CPDLC/ADS-C)	N/A	N/A	N/A	I	N/A	I	I	I	I	N/A	N/A	N/A	I	NI	N/A	NI	I	I	I	I	N/A	I	NI	N/A	
	TOTAL IMPLEMENTATION	40%	40%	40%	50%	40%	50%	50%	50%	50%	40%	40%	40%	50%	33%	40%	33%	50%	50%	50%	50%	0%	50%	33%	40%	42%
SNET	B0/1 STCA	I	I	I	I	NI	I	I	I	NI	NI	I	NI	I	NI	I	NI	I	I	I	I	NI	I	NI	I	
	B0/2 MSAW	I	I	I	I	NI	I	I	I	NI	NI	I	NI	I	NI	I	NI	I	I	I	I	NI	I	NI	I	
	B0/3 APW	I	I	I	I	NI	I	I	I	NI	NI	I	NI	I	NI	I	NI	I	I	I	I	NI	I	NI	I	
	B0/4 APM	I	I	I	I	NI	I	I	I	NI	NI	I	NI	I	NI	I	NI	I	I	I	I	NI	I	NI	I	
	TOTAL IMPLEMENTATION	100%	100%	100%	100%	0%	100%	100%	100%	0%	0%	100%	0%	100%	0%	100%	0%	100%	100%	100%	100%	0%	100%	0%	100%	67%