



**INTERNATIONAL CIVIL AVIATION ORGANIZATION
AFI PLANNING AND IMPLEMENTATION REGIONAL GROUP
TWENTIETH MEETING (APIRG/20)
Yamoussoukro, Cote d'Ivoire (30 November – 2 December 2015)**

Agenda Item 2: Performance Framework for Regional Air Navigation Planning and Implementation

2.2 Air Traffic Management and Search and Rescue (ATM/SAR)

AFI PBN IMPLEMENTATION REGIONAL PLAN

(Presented by South Africa)

SUMMARY	
This working paper proposes a revision to the AFI PBN Implementation Regional Plan. The text of the A36-23 as amended by the 37th Session of the Assembly, read with the text of the PBN Manual (Doc 9613), might necessitate guidance to States in order to accurately interpret the Resolution.	
REFERENCE(S): APIRG 17 - RECOMMENDATION 17/46, 17/47 and 17/48 –AFI PBN Implementation Regional Plan	
<i>Strategic Objective(s)</i>	This Working Paper is related to Strategic Objectives A, B and C.

1. INTRODUCTION

1.1 APIRG 17 noted that the AFI Regional PBN Implementation Plan had been successfully developed to guide the Region in meeting the goals outline in Assembly Resolution A36-23. However, the issues of the GNSS Strategy in order to support PBN implementation, in particular, sensors relating to approach with vertical guidance (APV) were deliberated on considerably.

1.2 In order to support States' efforts to develop their National PBN Implementation Plans and to progress with implementation, the Group endorsed a template for national plans and encouraged the use of tools provided by the PBN Task Force for the purpose, and adopted the following Conclusions:

That States:

- **Use the Regional PBN implementation plan template for the development of a national PBN implementation plan and consider the action planning provided by the Joint PBN/GNSS/I Task Forces Meeting to support planning;**

- **Provide feedback to the ESAF and WACAF Regional Offices by 30 October 2010 regarding progress in the development of their national plans; indicating any challenges, if any, that are delaying the development of the plan, as well as measures taken or to be taken to overcome such challenges; and**
- **Complete their National PBN plans as soon as possible.**

2. DISCUSSION

2.1 The first meeting of the Performance Based Navigation/Global Navigation Satellite System Task Force (PBN/GNSS TF/1) was held at the Silver Springs Hotel, Nairobi, Kenya from 12-14 October 2010.

2.2 The Task Force took a decision to limit its number of Conclusions and Decisions from its deliberations.

2.3 As a result of these deliberations Draft Conclusion 1/01 NATIONAL PBN IMPLEMENTATION PLAN was agreed upon with the following instructions to States:

- States that have not already done so, complete their national PBN implementation plans as a matter of urgency,
- consider the use of planning tools provided by the PBN/GNSS Task force, as well as project management software, and
- Provide updates to Regional Offices.

2.4 The Second meeting of the AFI Performance Based Navigation/Global Navigation Satellite System Task Force (PBN/GNSS TF/2) was held at the Conference hall of ASECNA Headquarters in Dakar, Senegal, from 13 to 15 June 2011.

2.5 Conclusion 17/46, 17/47 and 17/48 of APIRG 17 were proposed to be updated and merged by PBN/GNSS TF/1 Draft Conclusion 1/01.

2.6 The AFI Regional PBN Implementation Plan was further presented as WP4_APPENDIX 4A at the ATM/AIM/SAR SG/14 April 2015 and has proposed amendments as follows:

2.7 Paragraph 23 (Summary Table mid-Term (2013-2016))

Airspace	Nav. Specifications	Nav. Specifications where Required	Operationaly
En-Route Oceanic	RNAV 10	RNP 4	
En-Route Remote Continental	RNAV 10	RNP 4	
En-Route Continental	RNAV 2, RNAV 5	RNAV 1	
TMA Arrival/Departure	Expand RNAV 1, or RNP-1 application Mandate RNAV 1, or RNP-1 in high density TMA's		

Approach	Expand RNP APCH with (Baro-VNAV or Augmented GNSS Supplemented with LNAV only procedures (See note below) Implement RNP AR APCH where there are operational benefits.	
<p>Note: Where altimeter settings does not exist and where aircraft of maximum certificated take-off mass of 5700kg or more, using an aerodrome are not suitably equipped for APV operations.</p>		

2.8 Paragraph 24 (Mid Term Implementation Targets)

- a) RNP APCH (APV) (Baro-VNAV or Augmented GNSS) in 100% of instrument runways where practical, by 2016.
- b) RNP APCH (LNAV only) in 100% of instrument runways by 2016.
- c) RNAV 1 or RNP 1 SID/STAR for 100% of international airports by 2016.
- d) RNAV 1 or RNP 1 SID/STAR for 70% of busy domestic airports where there are operational benefits.
- e) Implementation of additional RNAV/RNP Routes as required.
- f) Continue to promote straight-in LNAV only procedures for instrument runways where there is no local altimeter setting available & where aircraft MTOM 5 700 kg or more are not suitably equipped for APV operations.

2.9 Whilst South Africa supports the proposed amendments to the PBN Implementation Regional Plan, it is proposed that the following additional changes be effected prior to adoption:

2.9.1. That the text ***“where practical”*** is inserted in the table contained in Paragraph 23 as annotated below.

Approach	Expand RNP APCH with (Baro-VNAV or Augmented GNSS <i>“where practical”</i> Supplemented with LNAV only procedures <i>“where practical”</i> (See note below) Implement RNP AR APCH where there are operational benefits.	
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2.9.2. That Paragraph 2.8 Points (a) and (b) are merged and refined to read as follows:

- a) ***RNP APCH (LNAV) in 100% of instrument runways and RNP APCH (APV) (Baro-VNAV or Augmented GNSS) where practical by 2016.***

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) Note the information herein;
- b) Adopt the amendments as proposed in Paragraph 2.8 above; and
- c) Recommend that ICAO inform States via a State Letter, to align their PBN Implementation plans with the adopted changes as detailed herein.

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