



International Civil Aviation Organization

**Performance Based Navigation/Global Navigation Satellite System
Task Force (PBN/GNSS TF)**

Fifth Meeting
(Cairo, Egypt, 15 - 17 April 2013)

Agenda Item 6: Future Work Programme

FUTURE WORK PROGRAMME

(Presented by the Secretariat)

<p style="text-align: center;">SUMMARY</p> <p>The aim of this paper is to review and update the task list, and Terms of Reference. The paper also proposes the tentative dates, and venue for PBN/GNSS TF/6 meeting.</p> <p>Action by the meeting is at paragraph 3.</p>
<p style="text-align: center;">REFERENCES</p> <ul style="list-style-type: none"> - MIDANPIRG/13 Meeting Report - MIDANPIRG Procedural Handbook

1. INTRODUCTION

1.1 MIDANPIRG/13 Meeting was held in Abu Dhabi, UAE, from 22 to 26 April 2012. The meeting adopted 71 Conclusions and Decisions of which seventeen (17) Conclusions are considered relevant to the work of the PBN/GNSS TF.

1.2 In accordance with the MIDANPIRG Procedural Handbook, the Task Force Meeting is expected to decide on the dates, and venue for its next meeting.

2. DISCUSSION

2.1 The meeting may wish to recall that the Task Force had developed task list that are reviewed and updated to keep track for the progress of the work done by the Task Force as at **Appendix A** to this working paper. Furthermore, the updated Terms of Reference and Work Programme of the PBN/GNSS Task Force are at **Appendix B** to this working paper.

2.2 The meeting may wish to note that CNS/ATM/IC SG/7 will be held in September 2013 and MIDANPIRG/14 will be held in December 2013 consequently the meeting may wish to recognize that the dates of the next meeting could be in the first or second quarter of 2014. Accordingly, may wish to agree that the secretariat to coordinate with other activities of the ICAO MID Regional Office, and accordingly agree that the ICAO MID Office will do the necessary arrangements in this regard. The venue will be Cairo, unless a State is willing to host the meeting.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) update the list of task in **Appendix A**; and the TOR in **Appendix B** to this working paper; and
- b) agree on action in para. 2.2 concerning dates and venue for PBN/GNSS TF/6 Meeting.

APPENDIX A

No.	Associated GPI	Tasks PBN/GNSS/2	Objective	Deliverables	Target Date	To be delivered by	Supporting Parties	Status
1	GPI-5, GPI- 7, GPI-10, GPI-11, GPI-12, GPI-20, GPI-21	Draft Current Status & Forecast: Aircraft fleet readiness status Section of PBN Regional Plan	To facilitate update of the of the Regional Plan	Draft document	PBN/GNSS/4	IATA	States, States	Ongoing JUN 2012
2	GPI-5, GPI- 7, GPI-10, GPI-11, GPI-12, GPI-20, GPI-21	Draft Appendix A – Practical Example of tangible benefits Section of PBN Regional Plan	To facilitate the update of the Regional Plan	Draft document	PBN/GNSS/4	MID Office MID PBN support team (MPST)	–	Ongoing JAN 2012
3	GPI-5, GPI- 7, GPI-10, GPI-11, GPI-12, GPI-20, GPI-21	Study and assess the Region RNAV and RNP requirements using PBN methodology	To facilitate the update of the Regional Plan	Draft document	PBN/GNSS/4	ARN TF	–	Reassigned
4	GPI-5, GPI- 7, GPI-10, GPI-11, GPI-12, GPI-20, GPI-21	Initially focus assistance on States that may require support on development of State PBN implementation plans	To facilitate timely harmonized implementation	Draft provided	PBN/GNSS/4	PBN/GNSS Task Force MPST	States	Done during TF/2 Ongoing
5	GPI-5, GPI- 7, GPI-10, GPI-11, GPI-12, GPI-20, GPI-21	Identify priority runways for Approach Procedures with Vertical Guidance (APV) to be implemented based on the ICAO RNP APCH navigation specification (APV/Baro-VNAV)	To facilitate implementation efficiency and early operational benefits	Draft document	PBN/GNSS/4	States	IATA	Ongoing JUN 2012
6	GPI-5, GPI- 7, GPI-10, GPI-11, GPI-12, GPI-20, GPI-21	Develop an amendment proposal to the MID Regional Supplementary Procedures concerning the implementation of PBN in the Region	To facilitate harmonized implementation	Doc 7030 amendment proposal	Dec 2010	ARN TF and MID Regional Office	–	Ongoing Completed
7	GPI-5, GPI- 7, GPI-10, GPI-11, GPI-12, GPI-20, GPI-21	Follow up on the developments in ICAO affecting the Global Plan and PBN in particular, in order to update the Regional plans accordingly	To facilitate planning updates and global harmonization	Information and action items for PBN/GNSS Task Force	Ongoing	MID Regional Office PBN/GNSS TF	-	Ongoing

No.	Associated GPI	Tasks PBN/GNSS/2	Objective	Deliverables	Target Date	To be delivered by	Supporting Parties	Status
8	GPI-5, GPI- 7, GPI-10, GPI-11, GPI-12, GPI-20, GPI-21	Coordinate with other ICAO Regions as necessary to address implementation interface issues	To facilitate harmonized implementation	Information and action items for PBN/ GNSS Task Force	Ongoing	MID Regional Office PBN/GNSS TF	States	Ongoing
9	GPI-5, GPI- 7, GPI-10, GPI-11, GPI-12, GPI-20, GPI-21	Undertake other functions relevant to implementation of PBN as assigned by the ATM/SAR/AIS SG , CNS/ATM/IC SG or MIDANPIRG	To facilitate implementation of PBN	As per assignments	Ongoing	PBN/ GNSS TF	-	Ongoing
10	GPI-5, GPI- 7, GPI-10, GPI-11, GPI-12, GPI-20, GPI-21	Report to the CNS/ATM/IC SG and keep ATM/SAR/AIS SG and CNS SG closely briefed	To facilitate efficiency and effectiveness	Task Force reports	Ongoing	PBN/ GNSS TF	–	Ongoing
11	GPI-5, GPI- 7, GPI-10, GPI-11, GPI-12, GPI-20, GPI-21	Identify guidance material and training needs/gap	To determine required complementary guidance material	Draft document	PBN/GNSS/4	PBN/ GNSS TF MPST	–	Ongoing
12	GPI-5, GPI- 7, GPI-10, GPI-11, GPI-12, GPI-20, GPI-21	Review of Operational Approval Guidance from other Regions for use in the MID Region	To support States' development of harmonized approvals	Draft document	PBN/GNSS/4	IATA		ongoing
13	GPI-5, GPI- 7, GPI-10, GPI-11, GPI-12, GPI-20, GPI-21	Assess possibilities of future PBN Seminar	To assist States in their planning and implementation	Working Papers, Information Papers	On-going	PBN/GNSS TF MPST	States UAE , IATA	On going
14	GPI-5	Keep track on the States PBN implementation status	Updated Status of implementation	Status of implementation report	On-going	CNS/ATM/IC SG	States/ IATA DB ON FORUM	On going

No.	Associated GPI	Tasks PBN/GNSS/2	Objective	Deliverables	Target Date	To be delivered by	Supporting Parties	Status
15	GPI-5	Prepare progress report on the PBN implementation plan	Updated Status of implementation	Status of implementation report	On going	PBN/GNSS TF MPST	States /IATA	On going

APPENDIX B

PROPOSED TERMS OF REFERENCE FOR PBN/GNSS TASK FORCE

1. TERMS OF REFERENCE

- a) Carry out specific studies to support the implementation of Performance Based Navigation (PBN) in the MID, in accordance with the ICAO Strategic Objectives and Global Plan;
- b) Identify issues/actions arising from the work of ICAO or for consideration by ICAO in order to facilitate regional and global harmonization of existing applications as well as future implementation of Performance Based Navigation operations.
- c) Determine and recommend, on the basis of the study, the PBN strategy and Implementation Plan for the MID Region, based on the ICAO PBN Implementation goals as reflected in assembly resolution 37-11.
- d) Assist States that may require support in the implementation of PBN, through support teams
- e) Monitor the progress of studies, projects, trials and demonstrations by the MID Region States, and other ICAO Regions.
- f) Provide a forum for active exchange of information between States related to the implementation of GNSS.
- g) Identify deficiencies and constraints that would impede implementation of GNSS, and propose solutions that would facilitate the rectification of such problems.
- h) Identify and address, to the extent possible, institutional, financial and legal matters related to the GNSS implementation in the MID Region.
- i) Develop a system of post-implementation reviews to ensure the effective and safe introduction of PBN and non-PBN GNSS operation.

2. WORK PROGRAMME

- a) Study and assess the Regional RNAV and RNP (PBN) requirements.
- b) Initially focus assistance to States that may require support on development of the State PBN implementation plans.
- c) Identify priority routes and terminal areas where RNAV and RNP should be implemented.
- d) Identify priority runways for Approach Procedures with Vertical Guidance (APV) to be implemented based on the ICAO RNP APCH navigation specification (APV/Baro-VNAV).
- e) Develop amendment proposal to the Regional Supplementary Procedures concerning the implementation of PBN in the MID Region.

- f) Identify guidance material and training needs.
- g) Follow up on the global developments in ICAO in order to update the Regional PBN plans and prepare the necessary proposal for amendment
- h) Coordinate with other ICAO Regions as necessary to address implementation interface issues.
- i) Undertake other functions relevant to implementation of PBN as assigned by the ATM/SAR/AIS SG or MIDANPIRG.
- j) Report to CNS/ATM/IC SG and keep ATM/SAR/AIS SG and CNS SG closely briefed.
- k) Monitor and follow-up the studies pertaining to the possible use of GNSS, and different augmentation systems in the MID Region.
- l) Review and identify intra and inter regional co-ordination issues related to the implementation of GNSS and where appropriate recommend actions to address those issues.
- m) Examine to what extent the GNSS including Augmentation system accessible in the Region can meet the navigational requirements of ATM service providers and aircraft operators in the Region.
- n) Identify and co-ordinate GNSS implementation priorities in the MID Region.
- o) Provide assistance to MID States in planning and implementation of GNSS, including the development of GNSS procedures.
- p) Suggest ways and means for rectifying the problems as they arise related to the implementation of GNSS.
- q) Provide necessary knowledge in GNSS operational application.

3. THE TASK FORCE SHALL IN ITS WORK BE GUIDED BY THE FOLLOWING PRINCIPLES

- a) Implementation of PBN shall follow the ICAO PBN goals and milestones.
- b) Avoid undue equipage of multiple on board equipment and/or ground-based systems.
- c) Avoid the need for multiple airworthiness and operational approvals for intra- and inter-regional operations.
- d) Continue application of conventional air navigation procedures during the transition period, to guarantee the operations by users that are not RNAV- and/or RNP-equipped.

B-3

- e) The first regional PBN Implementation Strategy and Plan should address the short term (2008-2012), medium term (2013-2016) and take into account long term global planning issues.
- f) Cognizance that the primary objective of ICAO is that of ensuring the safe and efficient performance of the global Air Navigation System, ensure that pre- and post-implementation safety assessments will be conducted to ensure the application and maintenance of the established target levels of safety.
- g) Take into account the introduction of new technologies, encourage implementation and development in GNSS.
- h) Apply ICAO guidance material and information as may be applicable to the Region to facilitate the implementation of PBN.

4. COMPOSITION OF THE TASK FORCE**STATES**

MID Region States

ORGANIZATIONS (*AS OBSERVERS*)

IATA, IFALPA, IFATCA, EUROCONTROL, ACAC, CANSO and additional representative from Industry, International/Regional Organizations may be invited when required.

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