DIRECTORS GENERAL OF CIVIL AVIATION-MIDDLE EAST REGION

Fourth Meeting (DGCA-MID/4)
(Muscat, Oman, 17-19 October 2017)

Agenda Item 4:   **Air Navigation**

MID REGION FLIGHT PROCEDURE PROGRAMME (MID FPP)

(Presented by the Secretariat)

SUMMARY
This paper provides a progress report on the MID Region Flight Procedure Programme (MID FPP); and presents the Final version of the Project Document for the meeting review and signature by participating States. Action by the meeting is at paragraph 3.
References – MAEP Board/3 Report – MIDANPIRG/16 Report

1.   **INTRODUCTION**

1.1   The MID FPP main objective is to assist States to develop sustainable capability in the instrument flight procedure (IFP) design, Performance Based Navigation (PBN) airspace design and PBN OPS approval, including regulatory oversight, so as to meet their commitments under Assembly Resolutions A37-11 for PBN implementation and the regional requirements, and comply with ICAO provisions related to flight procedure design and PBN.

1.2   The MIDANPIRG/16 meeting (Kuwait, 13-16 February 2017) was apprised of the outcome of the MAEP Board/3 meeting (Cairo, Egypt, 16-18 January 2017) and the Global Ministerial Aviation (GMA) Summit (Riyadh, Saudi Arabia, 29 - 31 August 2016) related to MID FPP.

1.3   The GMA Summit supported the MID FPP as reflected in the following Recommendation:

MID FPP Recommendation:

a.   *States are encouraged to sign the MID FPP Project Document; and*

b.   *States and Stakeholders are encouraged to support:*

i.   *the establishment of MID FPP through the provision of cash and/or in-kind contributions; and*

ii.   *the MID FPP activities through the assignment of experts to be part of the MID FPP pool of resources*

2.   DISCUSSION

2.1   The meeting may wish to recall that based on the survey carried out by the ICAO MID Regional Office in January 2016, eight (8) States indicated their willingness to support the MID FPP. The result of the survey are at **Appendix A**. The following is to be highlighted:

- <u>Willing to support</u>: Bahrain, Egypt, Iran, Jordan, Lebanon, Qatar, Sudan and UAE

- <u>Not willing to support</u>: Kuwait and Saudi Arabia

- <u>No response received by the deadline</u>: Iraq, Libya, Oman, Syria and Yemen.

2.2   The meeting may wish to note that, as a follow-up action to the outcome of the MAEP Board/2 meeting related to the evaluation of the hosting offers of the MID FPP Office, the Evaluation Team established by the MAEP Board/2 meeting reviewed the offers and selected Lebanon as the hosting State for the MID FPP based on the agreed hosting criteria.

2.3   The MIDANPIRG/16 meeting recognized that in order to move forward, a Project Document (ProDoc) should be signed by Lebanon with ICAO. Thereafter, States willing to join the Programme should sign the ProDoc with ICAO and meet their obligations as detailed in the ProDoc. Accordingly, the meting encouraged States to join the MID FPP through the signature of the MID FPP ProDoc, once finalized.

2.4   It is to be highlighted that the MID FPP will be implemented on the basis of the Project Document signed by the Host (*Lebanon)* and ICAO and to which any State wishing to participate may sign on. Upon signature onto the Project Document, such State becomes a Participating State. Participating States are grouped into three (3) groups:

- **Active States:** All Participating States that commit to funding the programme by means of an annual financial contribution in line with an approved budget become an Active State. The Host (*Lebanon)* is considered an Active State, based on the in-kind contribution provided to the programme.

- **User States:** All States that are not Active State are User States.

- **Observer States**: Participating States who are not Active States or User States are Observer States.

2.5   It was highlighted that the establishment of the MID FPP requires the availability of funds to cover the expenses related to the MID FPP Manager at least for the first year to initiate the recruitment process by ICAO. In this respect, the meeting noted that ICAO would endeavor to find and secure voluntary cash-contributions to cover the first year expenses. However, the running cost of the programme for the remaining period should be covered by States through cash-contributions or voluntary contributions from donors or sponsors.

2.6   The MIDANPIRG/16 meeting agreed that the funding mechanism of the Programme (budget, contribution by Participating States, sponsorship, etc.) would be defined by the MID FPP Steering Committee after the establishment of the Programme, taking into consideration the number of active States, confirmed voluntary contributions, etc. The first meeting of the MID FPP Steering Committee is planned to be held in December 2017.

2.7   In connection with the above, the MIDANPIRG/16 meeting noted with appreciation that the airspace users may be willing to sponsor the MID FPP. Accordingly, the meeting agreed that, AACO and IATA to approach their members and indicate to the ICAO MID Regional Office, if any of their member(s) is/are willing to provide sponsorship to the MID FPP.

2.8   Considering the time needed for the signature of the ProDoc and the recruitment of the MID FPP Manager, the start of operation date of the MID FPP would be **1 January 2018.**

3.   ACTION BY THE MEETING

3.1   The meeting is invited to:

a) encourage States to join the MID FPP through the signature of the ProDoc;

b) agree that the MID FPP starts operation in January 2018; and

c) encourage States and Stakeholders to:

  i. support the establishment of MID FPP through the provision of cash and/or in-kind contributions; and through the assignment of experts to be part of the MID FPP pool of resources; and

  ii. participate in the First Meeting of the MID FPP Steering Committee that will be held in December 2017.

Ref: AN 6/33 – 16/023   26 January 2016

Subject: **ICAO MID Region Flight Procedure Programme**

Action required: **Reply not later than 15 February 2016**

Sir,

      I have the honour to refer to the outcome of the Second meeting of the MID Region ATM Enhancement Programme Steering Committee (MAEP SC/2), Cairo, Egypt, 20-22 October 2015, in particular to the following Draft Conclusion:

> *DRAFT CONCLUSION 2/2:   MID FPP SURVEY*
>
> *That, the ICAO MID Regional Office carry out a survey related to the MID FPP establishment and the identification of flight procedures design and PBN implementation capabilities in the MID Region.*

      The attached questionnaire was developed in order to seek States' willingness to join the MID FPP, identify the States' needs and determine the flight procedures design and Performance Based Navigation (PBN) capabilities in the MID Region.

      The MID FPP objective is to assist States to develop sustainable capability in the Instrument Flight Procedure (IFP) design, PBN Airspace Design and PBN OPS Approval, including regulatory oversight, so as to meet their commitments under ICAO General Assembly Resolutions A37-11 and the regional requirements (MID Region Air Navigation Strategy, MID Region PBN Implementation Plan and the Doha Declaration on Aviation Safety and Air Navigation in the MID Region) for the PBN implementation. Accordingly, the MID FPP will support States to overcome the following challenges, which have been identified as the main impediments faced by States in meeting the agreed global and regional PBN Performance Targets:

– insufficient number of procedure designers;

– insufficient procedure design work in some States to attain or maintain proficiency;

– lack of airspace and procedure design training: initial, OJT, and/or recurrent;

– lack of knowledge to integrate procedure design efficiently into airspace design;

../.

- insufficient expertise in procedure design organization to provide adequate Quality Assurance of procedures;

- lack of operational approval expertise to obtain proper operational approval and to oversee operators for PBN operations;

- lack of regulatory expertise to oversee the process leading to procedure publication; and

- lack of service provision for ATC/ATM training for PBN implementation.

The MID FPP Concept Document at **Attachment A** provides insight into the objectives, outputs, and resource, hosting and office minimum requirements of the MID FPP. ICAO is presently developing a more comprehensive document "the MID FPP Project Document", which will include additional detail on project milestones, work plan, personnel resources and financial commitments. The Project Document will be finalized based on the Survey results and coordinated with your Administration at a later stage.

The questionnaire results will be presented to the Second meeting of the Performance Based Navigation Sub-Group (PBN SG/2), Sharm El Sheikh, Egypt, 22-25 February 2016. Therefore, you are kindly requested to complete the questionnaire at **Attachment B** and send it back to the ICAO MID Regional Office as soon as possible, preferably, not later than **15 February 2016**.

Accept, Sir, the assurances of my highest consideration.

Mohamed Smaoui
A/Regional Director, Cairo

Attachments

Programme Concept Document

Background: The DGCA-MID/2 meeting (Jeddah, Saudi Arabia, 20 - 22 May 2013) noted that there is a shortage of expertise in the field of flight procedure design, which is a critical element of PBN and recognized the need for cooperation and exchange of experience between MID States in this field. MIDANPIRG/14 meeting, based on the outcome of its relevant subsidiary bodies, agreed that a MID Flight Procedure Programme to be implemented under the framework of the MID Region ATM Enhancement Programme (MAEP).
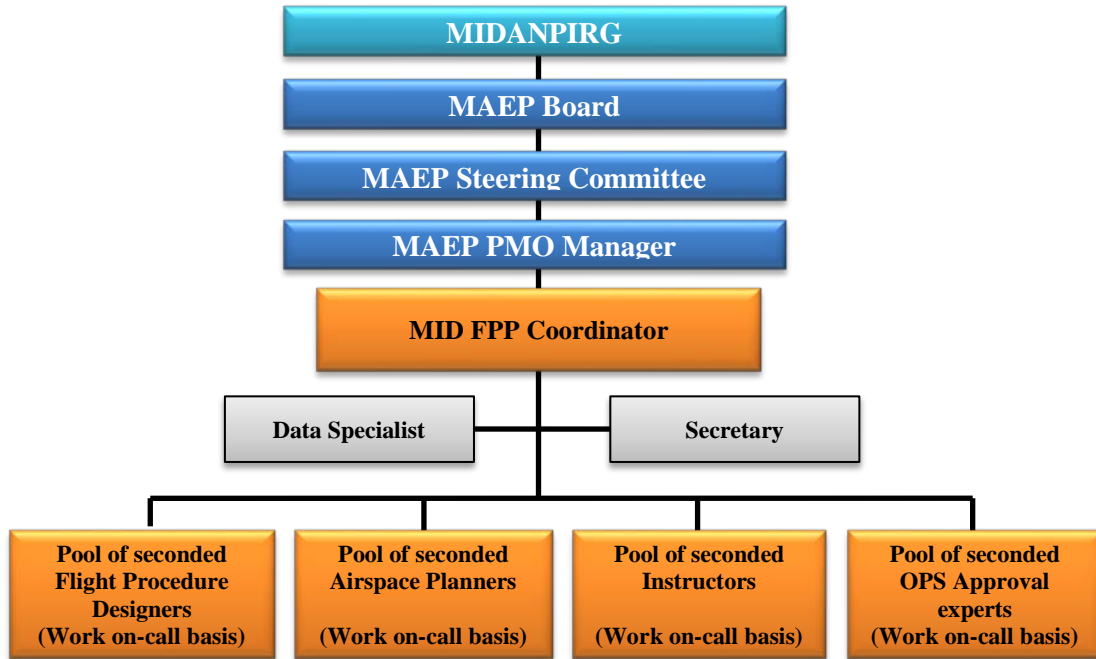
Programme Duration: Three years with the option of renewal for a second three-year term.

Programme Concept: The MID Flight Procedure Programme is envisioned as a not-for-profit programme of excellence in the field of performance-based navigation implementation. The programme will be based on the creation of an ICAO programme office in a host State, which will utilize best practices in training, automation and quality assurance. The programme will foster all aspects of PBN implementation including training, procedure design, validation and quality assurance, airspace design, and operational approval.

Programme Goal: The goal of the programme is to foster the implementation of safe and efficient flight procedures with specific attention on PBN procedures and airspace design techniques to facilitate benefits of PBN including approaches with vertical guidance. Inter alia the following support activities are envisaged:

- training and support for local airspace and procedure designers;
- design of IFR procedures for those States without procedure design capability;
- training about regulatory processes to approve procedures (including PBN procedures);
- training about validation and quality assurance process;
- PBN training for ATC; and
- training and support on PBN operational approval for aircraft operators.

Resource Requirements: The Civil Aviation Administrations in the MID Region are invited to participate by signing the MID FPP Project Document and by making contributions including the possibility of financial or in-kind contributions. From the start of the programme, the FPP Office will build its capacity to provide assistance, training, quality assurance, procedure and airspace design, and OPS approval support to the Participating States. Additional staff will be requested as necessary to meet the demand. The MID FPP proposed organizational structure is reflected in the Graph below, the Manager of the MAEP Project Management Office (PMO) will be recruited through the MAEP project, acts as the manager of the MID FPP and reports to the MAEP Steering Committee, which recommends appropriate actions to the MAEP Board. The progress of the MAEP projects is reported to MIDANPIRG. Table 1 provides a breakdown of resource requirements and responsibilities:

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              ┌─────────────────────────────┐
              │         MIDANPIRG            │
              └─────────────────────────────┘
                            │
              ┌─────────────────────────────┐
              │         MAEP Board           │
              └─────────────────────────────┘
                            │
              ┌─────────────────────────────┐
              │  MAEP Steering Committee     │
              └─────────────────────────────┘
                            │
              ┌─────────────────────────────┐
              │     MAEP PMO Manager         │
              └─────────────────────────────┘
                            │
              ┌─────────────────────────────┐
              │     MID FPP Coordinator      │
              └─────────────────────────────┘
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| Data Specialist | | Secretary |

| Pool of seconded Flight Procedure Designers (Work on-call basis) | Pool of seconded Airspace Planners (Work on-call basis) | Pool of seconded Instructors (Work on-call basis) | Pool of seconded OPS Approval experts (Work on-call basis) |

MID FPP organizational Structure

Resource	Responsibility	Remarks
ICAO Programme Coordinator (Chief Procedure Designers)	ICAO	One full time ICAO recruited Programme Coordinator responsible for the coordination of ICAO support and monitoring of the MID FPP. Oversees instrument approach procedure design and the provision of training
Expert Consultants	ICAO	Short term consultants to assist in the start-up of the MID Office and its functionality. (*If required*)
Procedure Designers	States Organizations	Pool of 5 to 10 Qualified PANS-OPS Instrument Procedure Designers, including both conventional and PBN designs. At least Five (5) designers qualified in Quality Assurance process.
Instructors	States Organizations	Pool of 2 to 4 Qualified Instructors to instruct on Procedure Design, Airspace Design, and Operations Approvals.
Airspace Planners	States Organizations	Pool of 3 to 5 Qualified Airspace Planners
OPS Approval	States Organizations	Pool of 2 to 4 Qualified OPS Approval experts with working experience with CAAs (Regulatory authorities)
Data Specialist	Host State States Organizations	One aeronautical information data specialist responsible for the Aeronautical Information Database. (*might be recruited with the advancement of the programme*)
Administrative and Information Technology support staff	Host State	One administrative assistant/secretary and one information technology specialist (*might be recruited with the advancement of the programme*)
Site host and Infrastructure	TBD	Office space, furniture, etc.
Automated Procedure Design Software	TBD	Includes software, funding and personnel training.

Table 1. MID FPP Resources

Criteria to be considered for the hosting of the MID FPP to be provided by the Host State

a) Provision of adequate office facilities.
b) Suitably equipped classroom(s) for MID FPP training courses.
c) Operating and maintenance expenses as related to the office facility, including, electricity, water internet connection, local and international phone connections, cleaning, office security, etc.
d) Provision of ease of movement/entry/exit and residence visas for staff and their families.
e) Provision of adequate transportation; the location must be easily accessible by air, etc.
f) Provision of a reasonable cost of living, including accommodation for staff.
g) Ability to meet satisfactory conditions for the security of staff and their families.
h) Facilitation of the provision of immunities and privileges for staff and their families.
i) Facilitation/support for the holding of meetings, including visa facilitation and the availability of hotels, transportation, etc.
j) Provision of amenable working/living environment/conditions.

The following Table presents the minimum MID FPP Office requirements:

Office Space	
1 office	• Programme Coordinator
1 office	• PANS-OPS Expert
1 room	• Lab for procedure design
1 room	• Classroom/ Meeting room (Adequate space for 20 students at least)

Furniture Equipment	
Coordinator	• Desk and chair • Storage/File cabinet • Book case • Conference table (6 persons) and chairs • Monitor/Webcam for conferences
Offices	• Standard furniture for all offices • Desk, chair, storage/file cabinet, book case – per person
Classroom OJT room	• Adequate space for 20 students • 4 drawing tables • White boards • Student tables • Projector
Meeting room	• Adequate equipment for 20 persons

IT Equipment	

	• Secure Wi-Fi internet connection
	• Desk-top phone with international services
	• 1 Mobile phone (Coordinator)
	  − Laptop computer with docking station
	  − monitor 19"
	• Data Specialist when seconded
	  − Office computer equipment (monitor 19")
	• External storage disks
	• 1 desktop multi-functional colour copier/scanner/printer

Procedure Design Equipment	
Offices	• Maps Storage cabinet • Maps A3 printer • A0 scanner • A0 printer Semi-professional • GPS • 1 server and 2 workstations (PCs)
Classroom	• Computer Data Projector • Supplies for training sessions : set squares, protractors, compasses, rulers and pocket calculators
Software	• 2 Procedure Design Software Licenses • 2 GOOGLE EARTH licenses • 2 ACROBAT READER licenses • 2 COREL DRAW licenses • 2 virtual machines (such as VMWARE) licenses for the remotely use of the Procedure Design Software

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Please complete and sent it back to the ICAO MID Regional Office by fax or email before 15 February 2016:
Fax: +20-2-2267-4843, email: icaomid@icao.int cc: ekhoury@icao.int

State:		Date:

Name and contact details for the person completing the form:

State PBN Focal Point

Name:	Title:
Administration:	Department:
Office Phone:	Fax:
Mobile:	email:
Working with:	Regulator ☐	Service Provider: ☐

Procedure Designer and Runway Information

How many trained procedure designers are there in your State?	
How many of the trained procedure designers in your State work for the State regulator?	
How many of the trained procedure designers in your State work for the State's procedure design service provider?	
How many procedure designers work for the State training organization?	
How many of the trained procedure designers in your State have successfully completed advanced training in PBN procedure design?	
Does your State use a 3rd party provider for procedure design services? Yes☐ No☐	
How many international runway ends are there in your State?	
How many domestic-only runway ends with operations of aircraft over 5700 kg are there in your State?	

Procedure Designer Training

How many class slots do you anticipate needing in the next years for the following:

	Procedure Designer training		Airspace planner	OPS approval
	Initial	Advanced (PBN)		
One year				
Two years				
Three years				

If a MID Flight Procedure Programme is established would your State use the following services :

Quality assurance of completed flight procedure design package(s)	Yes☐	No☐
Assistance with the development of PBN-related regulations	Yes☐	No☐
On-the-job training of procedure designers	Yes☐	No☐
Assistance with procedure design, including use of automation	Yes☐	No☐
Assistance with the development of Quality Assurance for flight procedure design	Yes☐	No☐
Complete design and quality assurance of procedures	Yes☐	No☐
Procedure design: Ground validation Yes☐ No ☐ Flight validation Yes☐ No ☐		
PBN procedures coding/data checking	Yes☐	No☐

Financial support of the MID Flight Procedure Programme (MID FPP)

Is your State interested in hosting the FPP? If yes, please attach details of your offer to host.	Yes☐	No☐
Will your State contribute financially to the start-up or annual operating expenses of the FPP? If yes, please attach details of your offer to provide financial support.	Yes☐	No☐
Would your State be interested in nominating procedure designer(s), Airspace Planner(s), OPS-Approval expert(s), PBN Instructor(s), to work remotely or on-call basis to support the activities of the MID FPP? If yes, please attach details of your offer, including the qualification and experience of the designated experts.	Yes☐	No☐

For any enquiry please contact Mr. Elie El Khoury RO/ATM/SAR email ekhoury@icao.int

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ICAO MID Flight Procedure Programme (FPP) Survey

State	Replied	How many trained procedure designers are there in your State?	How many of the trained procedure designers in your State work for the State regulator?	How many of the trained procedure designers in your State work for the State's procedure design service provider?	How many procedure designers work for the State training organization?	How many of the trained procedure designers in your State have successfully completed advanced training in PBN procedure design?	Would Benefit from Services	Willing to Host	Provided Hosting Offer	Willing to Support Financial to the start-up or annual operating expenses of the FPP	Expertise
Bahrain	Yes	Non	Non	Non	Non	Non	Yes	NO	N/A	Yes	NO
Egypt	Yes	10	1	10	4	8	Yes	Yes	Yes	Yes	Yes
Iran	Yes	7	2	5	4	3	Yes	Yes	Yes	Yes	Yes
Iraq	-	-	-	-	-	-	-	-	-	-	-
Jordan	Yes	3	1	2	0	3	Yes	NO	N/A	NO	Yes
Kuwait	Yes	2	0	2	2	0	Yes	NO	N/A	NO	NO
Lebanon	Yes	2	0	0	0	0	Yes	Yes	N/A	Yes	Yes
Libya	-	-	-	-	-	-	-	-	-	-	-
Oman	-	-	-	-	-	-	-	-	-	-	-
Qatar	Yes	4	0	4	N/A	3	Yes	NO	N/A	NO	Yes
Saudi Arabia	Yes	8	3	5	0	5	NO	NO	N/A	NO	NO
Sudan	Yes	4	2	4	0	4	Yes	Yes	Yes	Yes	Yes
Syria	-	-	-	-	-	-	-	-	-	-	-
UAE	Yes	8	2	7	0	8	Yes	NO	N/A	Yes	NO
Yemen	-	-	-	-	-	-	-	-	-	-	-
Results	**10**	**48**	**11**	**39**	**10**	**34**	**9 Yes 1 NO**	**Yes**	**3 offers**	**6 Yes 4 NO**	**6 Yes 4 NO**

- END -