



INTERNATIONAL CIVIL AVIATION ORGANIZATION

ICAO PERFORMANCE BASED NAVIGATION (PBN) AIRSPACE PLANNING WORKSHOP

(DAMASCUS, SYRIA, 25-28 OCTOBER 2010)

SUMMARY OF DISCUSSIONS

1. INTRODUCTION

1.1 The MID ICAO Performance Based Navigation (PBN) Airspace Planning Workshop was successfully hosted by the Syrian Civil Aviation Authority (SCAA) in Sydnaia (Damascus), from 25 to 28 October 2010. The workshop, was opened by Eng. Mohamed Eiad Zedan, Director General of the Syrian CAA who extended a warm welcome to ICAO, EUROCONTROL, the Federal Aviation Administration's (FAA) and the Participants from 10 MID States, and IATA. The list of participants is at **Attachment A**.

1.2 ICAO was represented by Mr. Jehad Faqir, the Deputy-Director of the ICAO MID Regional Office, and Mr. Saud Adhoobi, RO/ATM/SAR.

1.3 Presentations were made by:

EUROCONTROL

- 1) Mr. Alex Hendriks, Principal Advisor to the Director of Cooperative Network Design (CND)
- 2) Mrs. Franca Pavličević, Navigation Unit Manager
- 3) Mr. Mike Lissone, Senior ATM and Navigation Specialist

FAA

- 1) Ms. Barbra Cassidy, AVS Technical Special Assistant and Acting Head of the RNAV/RNP programme
- 2) Mr. Joe McCarthy was the workshop facilitator.

1.4 The workshop was convened subsequent to a discussion that took place during the *Introduction to Performance Based Navigation (PBN) Seminar*, held in the ICAO MID Regional Office, Cairo, 12-15 November 2007. The participants included air traffic controllers, airspace users (IATA), CNS experts, regulators, senior advisors and procedure designers.

1.5 The objective of the workshop was to introduce performance based navigation in order to facilitate airspace planning and implementation within the MID Region based on the following agenda:

- Agenda Item 1:** Official Welcome
- Registration
 - Opening
- Agenda Item 2:** Introduction to PBN
- Overview of PBN processes
 - what is an Airspace concept
- Agenda Item 3:** Airspace Handbook introduction
- Airspace activities
- Agenda Item 4:** Workshop introduction
- Case study
 - Activity 1,2 & 3
 - Reference scenario
- Agenda Item 5:** Safety criteria & assumptions
- Design Airspace (Routes & Holds)
 - Nav spec & procedure Design
 - Design airspace volumes
 - Validation & Implementation
- Agenda Item 6:** Wrap up and debrief

2. DISCUSSIONS

2.1 The workshop consisted of a series of presentations, which re-introduced the PBN concept, the processes for its implementation and explained in detail the contents and purpose of an airspace concept. At the end of the first day, the Airspace Concept Handbook for PBN Implementation, which has been produced by Eurocontrol, was introduced. The handbook, with its 16 activities, formed the basis for the remainder of the workshop. Accordingly, the participants were divided into two groups.

2.2 Over the three remaining days, the workshop consisted of lecture periods on a particular cluster of activities followed by a group exercise where the two groups used the activities they had been taught to work through a case study. After each working session, the two groups would compare their approaches and comment on them after which the next lecture was given on the next cluster of activities in preparation for the group exercise (this method was used repetitively for the key airspace activities). The case study used during the workshop was based on a real airport and TMA which has been renamed 'Kapitali TMA' in 'Nordland'. Challenges in this TMA included a dramatic increase in traffic, noise complaints, significant portions of reserved airspace and a local freight company wishing to introduce flights during the night curfew.

2.3 One of the principles of PBN is the need for cross-disciplinary cooperation and negotiation, which includes, *inter alia*, ATC, pilots, procedure designers and airspace planners. The success of the workshop can be directly attributed to the enthusiasm and energy of the participants and the mix of expertise in the two working groups. The complexity of the discussions during the case study working sessions revealed and confirmed the need for a cross-disciplinary approach to PBN. By the end of the workshop, both working groups had completed the case study and obtained an appreciation of a PBN airspace implementation.

2.4 In closing the workshop, Mr. Faqir expressed ICAO's appreciation and thanked the SCAA for their hospitality, EUROCONTROL and the FAA for their contributions and the participants for their attention and enthusiasm. He stressed that the success of the workshop was due to the collective efforts of all concerned.

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