International Civil Aviation Organization

THE ELEVENTH MEETING OF PERFORMANCE-BASED NAVIGATION

IMPLEMENTATION COORDINATION GROUP (PBNICG/10)

Bangkok, 27 – 29 March 2024

Agenda Item 4: States' PBN Implementation Progress and the challenges faced by the States and lessons learnt.

Implementation Plan of Point Merge System in Jakarta's Airspace
(Presented by Indonesia)

SUMMARY
This paper introduces the implementation plan of the Point Merge arrivals at Soekarno Hatta International Airport by June 2024.

1.   INTRODUCTION

1.1   Indonesia is focusing on implementing PBN flight procedures to enhance airspace capacity, effectively reduce the impact of complex operating environment on operational safety and efficiency, and prevent overcapacity operation in Indonesia Airports.

1.2   The PMS arrival procedures of Soekarno Hatta Intl Airport In TMA mainly to improve arrival traffic handling which is considered decentralized, distributed, and dynamic, collaboration among different controllers.
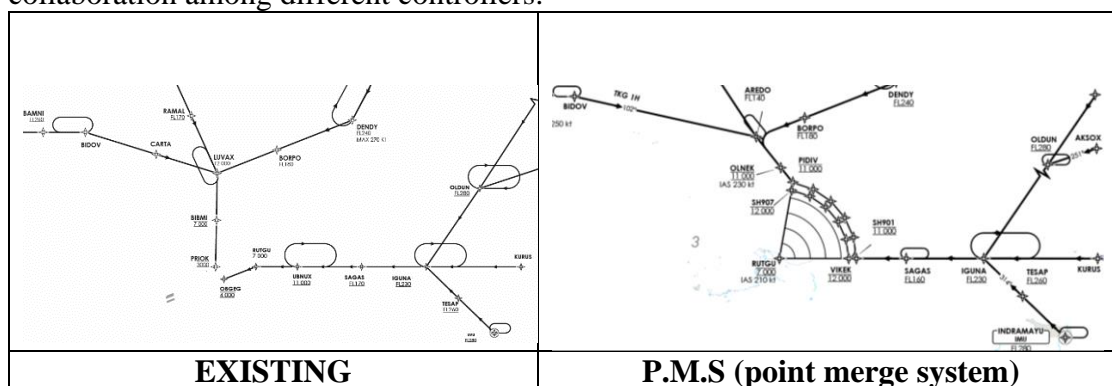

EXISTING	P.M.S (point merge system)

Figure 1. Soekarno Hatta Airport PMS

1.3   The design goals of the PMS arrivals, compatible with RNAV1 specification, are to increase the safety margin, reduce ATCO's workload, optimize the descent profile, and reduce emissions. Through the simulator practice and trial operation, ATCOs accumulated necessary experience and gradually adapted to the change of the sequencing method.

2.   DISCUSSION

2.1   **Implementation Step**

a. Feasibility Study
    In October 2023, Airnav Indonesia (ANSP) and DGCA Indonesia has visit Kuala Lumpur International Airport to discuss and sharing knowledge regarding preparation, design, implementation, traffic simulation and Operation Challenges that Malaysia Faced.
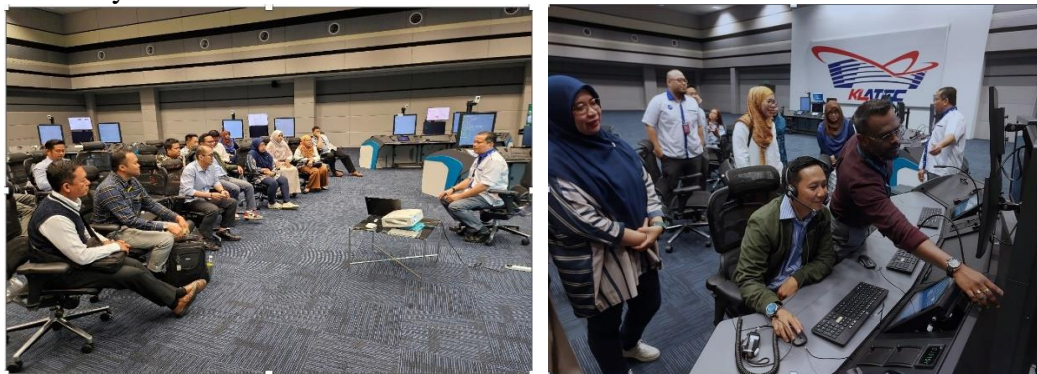

Figure 2. Sharing Session with CAAM Malaysia

b. Stakeholder Engagement
    Indonesia has established Taskforce which consist of DGCA, AirNav Indonesia, Airport, Airline and held 4 (four) times FGD (Focus Group Discussion) to gather input, address concerns and ensure a smooth transition with PMS at Soekarno Hatta Internation Airport.

Figure 3. PMS Focus Group Discussion

c. Testing and Validation

DGCA, AirNav Indonesia and Garuda Indonesia (airline operator) conduct flight simulator and enhance input and ensure with flyability.

Figure 3. Flight Simulator

d. ATC Training Program :

Develop and implement training program for ATC to ensure a seamless transition to the new system. The training has been performed by the simulator and divided into 2 parts, namely:

1) Theory

Providing Knowledge of procedures on Surveillance Service to the controller before carrying out simulator activities.

2) Practice

- Provide Training on Surveillance Simulator to improve skills in New Procedure.
- And Planned activities will be conduct in March until April 2024

e. Phased Implementation

- Implement the PMS in phases to minimize disruptions and allow for continuous monitoring and adjustment
- will be Implementing in Q3 2024

f. Post Implementation Monitoring

In order to ensure that safety risk management has been implemented and there are no further risks arising in the implementation of PMS at Soekarno Hatta International Airport.

Challenges and Lesson Learnt

2.1   Throughout the PMS Implementation, Indonesia has faced some challenges as follows:
- The strategy to increase the effectiveness of PMS
- The crossing between the SIDs and STARs
- The strategy to design a PMS that is capable of safety, capacity, efficiency, access, and environment on Jakarta Airspace

2.2   The lesson learned in facing those challenges to ensure the effectiveness of PMS Implementation is as follows:
- To conduct effective PMS Training for ATC Personnel and pilot
- In designing the PMS, Indonesia learned that by dividing the phase based on the traffic flow and operational needs would increase the effectiveness of the implementation and timeline.

3. **ACTION REQUIRED BY THE MEETING**

3.1   The meeting is invited to:
   a) Note the information contained in this paper; and
   b) Discuss any relevant matters as appropriate.

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