International Civil Aviation Organization

TWELFTH MEETING OF THE PERFORMANCE BASED NAVIGATION IMPLEMENTATION COORDINATION GROUP (PBNICG/12)

(Beijing, China 16- 18 December 2025)

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

INITIATIVE FOR RNP (VPT) IMPLEMENTATION IN THAILAND

(Presented by name of States/Administration)

SUMMARY

This paper presents an overview of Thailand's initiative to implement RNP (VPT) instrument approach procedures at specified aerodromes.

1. INTRODUCTION

1.1 With RNP APCH coverage at 96% (25 of 26) for all international airport runway ends and 85% (44 of 52) for domestic public airports, Thailand still has a few runway ends with no instrument approach available.

1.2 To improve accessibility to as many runway ends as possible, Thailand's Performance-Based Navigation (PBN) sub-working group comprising members from the regulator, ANSPs, airlines, airport operators, and the military—has agreed to study solutions for implementing instrument approaches at runway ends that currently have none.

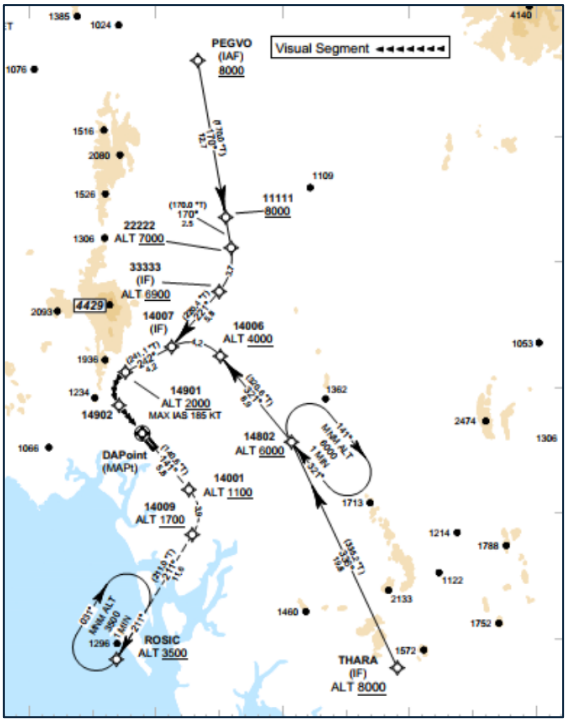
1.3 In 2023, ICAO issued Circular 359, Development of Procedures for Visual Maneuvering with Prescribed Tracks using Required Navigation Performance, providing best practices and guidance for States and operators in developing procedures that include an instrument path followed by a visual path defined by RNP waypoints to promote stabilized approaches and prescribed visual maneuvering to a designated runway.

2. DISCUSSION

2.1 Based on joint studies and discussions with relevant stakeholders, RNP (VPT) has been identified as a more suitable option than RNP AR for the following reasons:

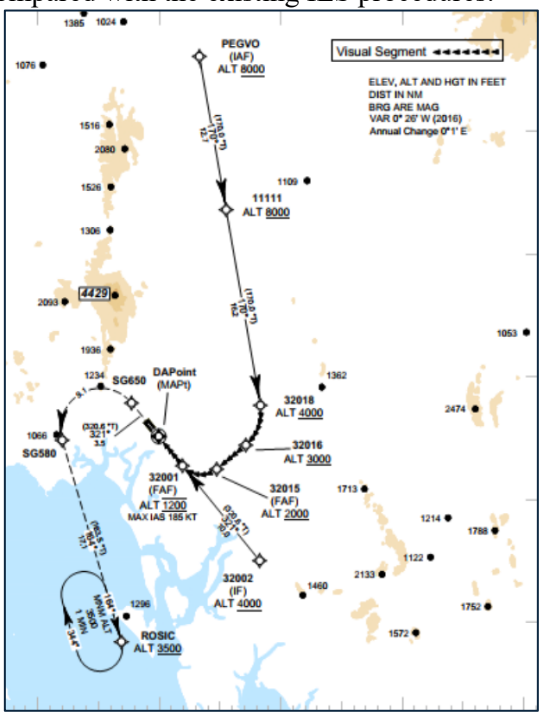
- The authorization process for RNP (VPT) is significantly simpler than for RNP AR. According to Circular 359, authorization for RNP (VPT) is not airport-specific, which reduces regulatory burdens for airlines.
- The procedure design for RNP (VPT) is based on Document 9905, which is familiar to IFPD service providers, and most qualified designers have already completed RNP AR training.

2.2 The first RNP (VPT) procedure will be established at Krabi Airport (VTSG) for runway 14, which currently has no approach procedure, and circling approaches are not authorized due to high terrain.

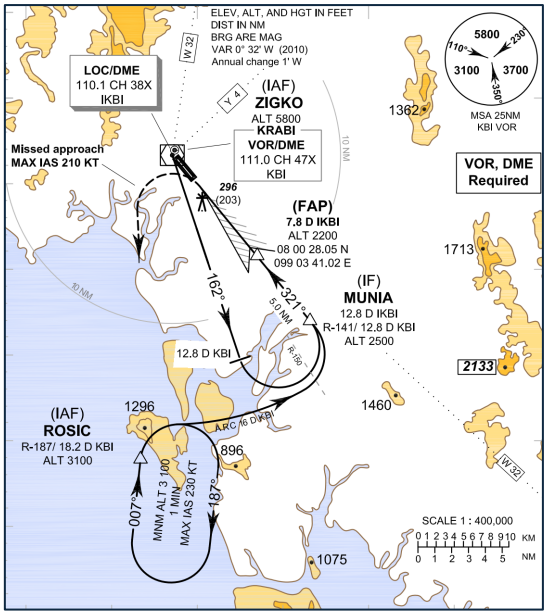


Draft RNP (VPT) for VTSG RWY 14

2.3 In addition, an RNP (VPT) procedure will also be established for runway 32 at VTSG, which could reduce track miles compared with the existing ILS procedures.



Draft RNP (VPT) for VTSG RWY 32



The existing ILS procedures for VTSG RWY 32

2.4 Since the current flight validation aircraft does not have an RF-leg function, the validation process for RNP (VPT) will consist of ground validation, include technical pilots from the airlines, and flight validation, which will require both simulator evaluation and an actual flight with a flight-validation pilot on board, in addition to normal flight validation process.

2.5 The RNP (VPT) procedure is expected to be established in 2026.

3. ACTION REQUIRED BY THE MEETING

3.1 The meeting is invited to:

a) note the information contained in this papers; and
b) discuss any relevant matters as appropriate.

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