

**Twenty First Meeting of the  
Informal South Pacific ATS Co-ordinating Group (ISPACG/21)**

Auckland, New Zealand, 6-8 March 2007

Agenda Item 3: Review relevant work conducted since the last meeting.

**MANUAL ON PERFORMANCE BASED NAVIGATION**

(Presented by the ICAO Asia/Pacific Regional Office)

**SUMMARY**

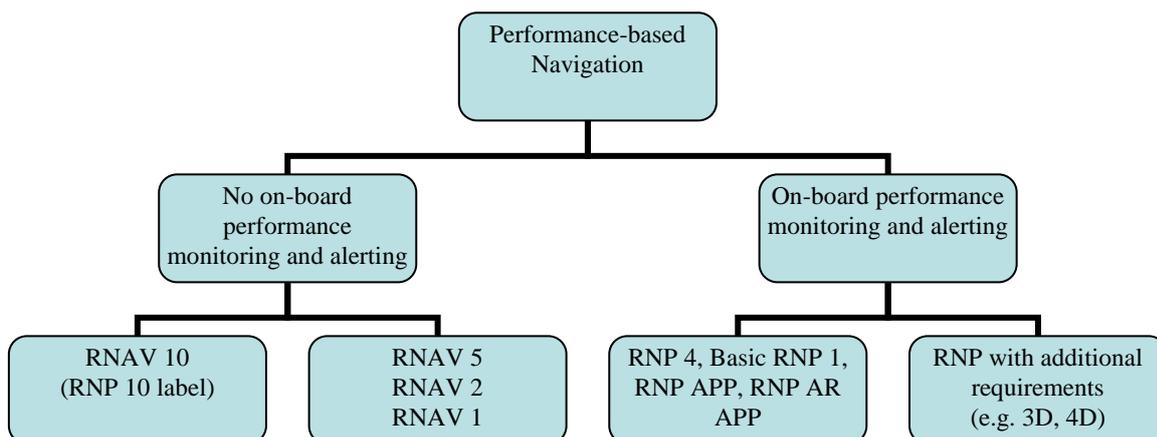
This paper highlights the work of the RNP Special Operational Requirements Study Group (RNPSORG) and the availability of Working Draft 4.1 of the ICAO PBN Manual for review.

**1. INTRODUCTION**

1.1 In order to address the lack of global harmonization resulting from the differing required navigation performance (RNP) and area navigation (RNAV) naming conventions and proliferation of navigation specifications, ICAO, with the assistance of the RNP Special Operational Requirements Study Group (RNPSORSG), commenced work to ensure a common global understanding of RNP/RNAV and the relationship between RNP and RNAV system functionality.

**2. DISCUSSION**

2.1 Considering that navigation containment is based on accuracy, functional integrity, continuity and systems availability, the RNPSORSG agreed on the need to specify future applications of performance based navigation **without** a requirement for on-board performance monitoring and alerting, to **be designated as RNAV**, and applications **with** a requirement for on-board performance monitoring and alerting, to **be designated as RNP**, as follows:



2.2 As well as the harmonized navigation specifications, some new navigation specifications were developed for terminal area and approach applications. Work was complete on navigation specifications for RNAV 10 (RNP 10), RNP 4, RNAV 5, RNAV 1, Basic RNP 1, RNP Approach and RNP AR Approach.

2.3 The Separation and Airspace Safety Panel (SASP) was in the process of drafting an amendment to Annex 11 – *Air Traffic Services*, Attachment B, “*Method of establishing ATS routes for use by RNAV-equipped aircraft*”, and its work included updating relevant guidance material on safety and separation.

2.4 Also, related amendments to Annex 6 – *Aircraft Operations* and a revised *Performance Based Navigation Manual* would be presented in due course. A copy of the PBN Manual Working Draft 4.1 (250+ pages) is available as a soft copy attachment to this working paper

2.5 ICAO PBN Workshops have tentatively been planned for the Asia/Pacific region from 10-14 September 2007 at the Regional Office (Bangkok) and 17-21 September 2007 in New Delhi, India. Invitation letters would be issued in due course and States were urged to participate in the workshops.

### **3. ACTION BY THE MEETING**

3.1 The meeting is invited to note the information presented in this paper.

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