



Agenda Item 3: Implementation of performance-based navigation (PBN) in the SAM Region

RNP AR OPERATIONS

(Presented by LATAM Airlines)

SUMMARY The new edition of ICAO Doc 9613, PBN Manual, incorporates some modifications that clarify the use of, and issuance of clearances for, RNP AR operations. It is critical to develop a common criterion on this topic amongst RNP AR operators of the Region.	
REFERENCES: <ul style="list-style-type: none">• ICAO Doc 9613, PBN Manual, Advance fourth edition (unedited)	
ICAO Strategic Objectives:	<i>A - Safety</i> <i>C - Environmental protection and sustainable development of air transport</i>

1 Background

1.1 Since its publication, ICAO Doc 9613, PBN Manual, has become the main document of reference and consultation for implementation of performance-based navigation worldwide. The wide range of topics it contains and the possibility of providing clear and concise guidance on different topics to regulators, air traffic service providers, and operators have given huge added value to this material delivered by ICAO.

1.2 As operators interested in the development and implementation of PBN in the Region, we have taken note of the new edition of the PBN Manual published by ICAO, and we believe it is important to draw some aspects concerning the implementation of RNP AR approaches to the attention of those involved in these processes.

2 Discussion

2.1 In general, RNP AR approaches have been seen as a method to approach geographically challenging locations. There are many examples of runways confined by hilly terrain and lacking instrument procedures that have been provided with RNP AP procedures. They are models to follow, especially in our region, which is crossed from north to south by the Andes mountain range.

2.2 Notwithstanding, for an RNP AR operator that has invested in aircraft equipment and crew training with a high level of complexity, it is desirable to obtain all the benefits offered by this type of approaches, including the possibility of shorter IMC approach paths, similar to VMC, through the implementation of visual approaches that, in many cases, avoid deviations of 10 to 15 NM to go back to the published instrument approach.

2.3 An RNP AR approach can be highly effective, reducing the flight path through the incorporation of RF segments in all approach segments, including vertical guidance in the final segment. Accordingly, the new edition of the PBN Manual, Chapter 6, Vol. II "Implementing RNP AR APCH" now reads: ***"6.1.1.1 The RNP AR APCH specification represents the ICAO global standard for developing instrument approach procedures to airports where limiting obstacles exist and/or where significant operational efficiencies can be gained"***, which reflects a change of vision in the use and potential implementation of this type of approach in terminals where traffic and aircraft equipment make it feasible and where complicated natural obstacles do not exist.

2.4 Likewise, the operational approval requirements for this type of approach are somewhat different now, depending on the State where it is conducted. A key notion of PBN implementation is the certification of activities and requirements so that operators will apply similar processes, regardless of the State where they take place. Apparently, the guidance for the issuance of an RNP AR approval to an operator has been understood with different nuances.

2.5 The new edition of the PBN Manual explains the spirit of the approval, stating: ***"6.3.2.2 Any operator with an appropriate operational approval may conduct RNP AR APCH instrument approach procedures, in a similar manner that operators with the proper authorization may conduct CAT II and CAT III ILS operations. This authorization may be in the form of a single approval for all RNP AR APCH procedures within a State, separate approvals for each RNP AR APCH procedure, or a combination of these methods (for example, State-wide approval for all procedures except those in highly challenging operational environments"***, which means that each State can and must assess how and why shall it issue the approval in one way or other, depending on the characteristics of the operator and RNP AR procedures involved.

3. **Suggested action:**

3.1 The Meeting is invited to take note of the new version of ICAO Doc 9613 (fourth edition), paying attention to the changes introduced by ICAO concerning the implementation and approval of RNP AR procedures, so that both operators and air traffic services may benefit from the improvement potential provided by these approaches. The Meeting is also invited to assess the existing approval processes so that the decision of an operator to choose this type of procedure will not become an unreachable goal due to its requirements, which in many cases replicate the initial approval process for each of the RNP AR procedures to be executed, including the execution of 50 or 100 VMC flights prior to the approval of each approach, which, in many cases, exceeds what is required from the point of view of the complexity of the implemented procedures, especially in the case of processes developed under public criteria, without special requirements, in areas with no challenging obstacles, and operated by aircraft that meet all equipment requirements for these procedures.