



Agenda Item 3: Review of GREPECAS Programmes and Projects

3.1 Projects under the PBN Programme (B0-APTA, B0-FRTO, B0-CDO and B0-CCO)

PBN CODES PROPOSAL FOR NEW NAVIGATION SPECIFICATIONS

(Presented by Colombia)

SUMMARY	
The purpose of this paper is to present a proposal of PBN codes for the new navigation specifications (RNP 2, RNP 1, RNP 0.3 and A-RNP).	
References:	
<ul style="list-style-type: none">• ICAO Document 4444 “Procedures for air navigation services – Air Traffic Management”.• ICAO Document 9613 “Performance Based Navigation Manual”.• SRVSOP Advisory Circulars Approval of aircraft and operators for RNAV/RNP operations.	
Strategic Objectives	A - Safety B - Air navigation capacity and efficiency

1. Introduction

1.1 ICAO through the Regional Cooperation System for Safety Oversight - SVRSOP issued Advisory Circulars AC 91.001 through 91.012 about approval of aircraft and operators for RNAV and RNP operations. The fourth Revision of PBN manual introduced new navigation specifications which do not have the respective code, so approved operators do not know how to designate in the flight plan these navigation specifications.

2. Discussion

2.1 In the latest revision of ICAO Document 9613, fourth edition of May 2013, new navigation specifications as RNP 2, RNP 1 (formerly RNP 1 basic), RNP 0.3 and A-RNP (Advanced RNP) emerged. However, the ICAO Document 4444 does not assign the codes for these navigation specifications to be used in the flight plan when the aircraft is approved. The next table lists the proposed codes for these new navigation specifications following the original sequence with new letters as M for RNP 2, P for RNP 0.3 and X for A-RNP.

Code	RNP Navigation Specifications
L1	RNP 4
M1	RNP 2
O1	RNP 1 – all sensors allowed
O2	RNP 1 GNSS
O3	RNP 1 DME/DME
O4	RNP 1 DME/DME/IRU
P1	RNP 0.3
S1	RNP APCH
S2	RNP APCH with BARO-VNAV
T1	RNP AR APCH with RF (special clearance required)
T2	RNP AR APCH without RF (special clearance required)
X1	A-RNP (Covers RNAV 5, RNAV 2, RNAV 1, RNP 2, RNP 1 y RNP APCH)

2.2 Furthermore, CARSAMMA format F5 - Aircraft Registry of PBN operations aircraft approval, still includes the B6 code corresponding to RNAV 5 with LORAN C, which was deactivated since May 2009. This code lends to confusion because any operator cannot use the Code B1 because it is defined as RNAV 5, all sensors allowed, and for obvious reason no operator can be approved with LORAN C. The problem can be solved by eliminating the code B6.

3. Conclusion

3.1 PBN Codes should be assigned to the new navigation specifications that emerged from the 2013 fourth revision of the ICAO Document 9613. This has been an inconvenient for approval to operators applying to these navigation specifications. In addition, the PBN code B6 shall be removed considering that the LORAN C system is disabled.

4. Suggested action

4.1 If it is considered appropriate, present this proposal of PBN codes designation to be included in the 4444 Document. Furthermore, B6 code removal from the CARSAMMA format F5 is left for consideration.