



AP/ATM/11
WP/04
16/09/05

**International Civil Aviation Organization
South American Regional Office**

**ELEVENTH MEETING/WORKSHOP OF ATM AUTHORITIES AND PLANNERS IN
THE CAR/SAM REGIONS
(AP/ATM/11)**

(Lima, Peru, 28 to 30 September 2005)

**Agenda Item 1: Review of the RNAV/RNP Task Force and analysis of the actions
adopted by the Task Force**

RNAV/RNP Questionnaire

(Presented by the Secretariat)

Summary

This working paper presents the questionnaire on RNAV/RNP as adopted by the Fourth Meeting of the GREPECAS ATM/CNS Subgroup ATM Committee.

References

- ATM/CNS/SG/4 Meeting Report.

1. History

1.1 Keeping in mind the need to obtain information to endorse RNAV/RNP implementation in the CAR/SAM Regions, the Fourth Meeting of the GREPECAS ATM/CNS Subgroup ATM Committee analysed a RNAV/RNP questionnaire which could be evaluated by the ATM, OPS/AIR and SAM Task Forces, in order to verify whether all the information required is shown in the same.

2. Analysis

2.1 The RNAV/RNP questionnaire, includes among others, the following:

- a) CNS infrastructure evaluation taking into account as well the information available at a regional level;

- b) the navigation capacity of the fleet operating in the CAR/SAM Regions;
- c) airports which might obtain operational benefits with the use of the RNAV and/or RNP for approach and instrument departure and those airports that already have these procedures;
- d) WGS-84 implementation status; and
- e) routes connected with SID and STARs.

2.2 The first step to identify air operations in the CAR/SAM Regions was taken through the collection of traffic data in the upper airspace, where the CAR/SAM States and International Organizations are requested to send statistical data allowing the analysis of the aircraft type, operators, flight levels, flight origin and destination.

2.3 The ATM Committee adopted Draft Conclusion ATM/4/2 – RNAV/RNP Questionnaire requesting ICAO to collect from States/Territories and International Organizations the information corresponding to the RNAV/RNP questionnaire, and that the same be presented by **31 January 2006**.

2.4 In view of the above, the ATM/WG, OPS/AIR/WG and SAM/WG could examine the referred questionnaire and if applicable, propose pertinent amendments. If a modification to the questionnaire is necessary, a revised RNAV/RNP questionnaire would be presented to GREPECAS/13.

3. **Suggested action**

3.1 The meeting is invited to:

- a) take note of the information provided in this working paper,
- b) guide ATM/WG, OPS/AIR/WG and SAM/WG to revise the RNAV/RNP questionnaire shown in **Appendix A** to this working paper, and
- c) if such were the case, propose the corresponding amendments.

APPENDIX A
RNAV/RNP QUESTIONNAIRE

The objective of this survey is to:

- i) collect information of the available CNS infrastructure in each State of the CAR/SAM Regions, with the corresponding coverage;
- ii) collect information related with the aircraft fleet operating the ATS Route Network of the CAR/SAM Regions and their RNAV/RNP capacity;
- iii) find out administrations' plans on RNP Implementation and their airworthiness and operations approval capacity;
- iv) find out airports that could obtain operational benefits by using RNAV and/or RNP for approach and instrument exit procedures and those airports that already have these procedures;
- v) find out the WGS-84 implementation status in each States of the CAR/SAM Regions;
- vi) collect existing SID and STARs information in each State of the CAR/SAM Regions, connecting the International Airports to the ATS Routes.

This information would allow the RNAV/RNP Task Force (RNAV/RNP/TF) of the ATM Committee of the GREPECAS ATM/CNS Subgroup to update and carry out tasks foreseen in the Action Plan for RNAV/RNP Implementation in the CAR/SAM Regions.

Mark with a cross the corresponding answer. If required or if you consider pertinent, you could include comments. If necessary, use additional sheets.

1. Report the VHF antennas, DME equipments and radars (primary and secondary) location with each equipment coverage. Attach the coverage chart of these equipments. Use the following table as an example:

Equipment	Location	Geographical Coordinates	Coverage
DME XXX	Brasilia Airport	22 ⁰ 10' 20''N/045 ⁰ 10' 20''W	120 NM
Primary and Secondary Radar XXXXX	xxxxxxx (City)	22 ⁰ 10' 20''N/045 ⁰ 10' 20''W	Primary Radar – 120 NM Secondary Radar – 200 NM
VHF Antenna	xxxxxxx (City)	22 ⁰ 10' 20''N/045 ⁰ 10' 20''W	80 NM

2. Does your administration have the capacity and/or experience in RNAV and/or RNP airworthiness and operational approvals?

YES

NO

Comments:

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3. Is any airspace under your State management that can benefit with the RNAV and/or RNP implementation, taking into account the need of applying reduced horizontal separations between aircraft and/or between aircraft and obstacles? If affirmative, indicate the airspace(s) and its(their) foreseen RNAV criteria and/or RNP value(s). Has your Administration planned the application of RNAV/RNP concepts in those airspaces?

YES

NO

Comments:

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4. Has your Administration data on aircraft operating in the airspace under its jurisdiction that have RNAV and/or RNP capacity? If affirmative indicate the aircraft fleet and the approved RNAV criteria and/or RNP value(s). Use the following table as an example:

ACFT Registry	ACFT Type	ACFT Operator	Approved RNAV Criteria or RNP Value	Domestic or International Documentation Used
PTLJK	LJ35	General Aviation	RNAV-5	EUROCONTROL TGL 2
PPVJK	B767	VARIG	RNP 10 and RNAV-5	FAA ORDER 8400.12A / Brazil IAC 3508
FAB 2716	B707	Military	RNP 10	FAA ORDER 8400.12A / Brazil IAC 3508

YES

NO

Comments:

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5. Has your Administration implemented the World Geodetic System 1984 – WGS 84 in the airspace under its jurisdiction? If negative, indicate the date foreseen for the implementation. If partially implemented, indicate the status of implementation.

YES

NO

PARTIALLY

Comments:

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6. Are SID and STAR implemented to link RNAV and “conventional” routes to International and/or Domestic Aerodromes? If affirmative, which were the criteria (documentation) applied in the SID and STAR development (ICAO – Doc 8168, FAA, EUROCONTROL)

YES

NO

PARTIALLY

Comments:

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7. Are aircraft certification criteria and/or operational approval implemented for using existing RNAV routes? If negative, which are the aircraft authorized to fly in international and/or domestic RNAV routes? If affirmative, has any documentation for aircraft certification and/or operational approval been published?

YES

NO

PARTIALLY

Comments:

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