

**International Civil Aviation Organization  
UNDP/ICAO Regional Project RLA/98/003  
Transition to the CNS/ATM Systems in the CAR and SAM Regions**

**INTERNATIONAL CIVIL AVIATION ORGANIZATION  
SOUTH AMERICAN REGIONAL OFFICE**

**Second Meeting/workshop of Air Traffic Management (ATM) Authorities and Planners**  
(Lima, Peru, 14 to 18 May 2001)

**Agenda Item 2: Definitive implementation of the RNAV routes UT 780, UT 795 and UT 799 and analysis of new pre-operational trials and demonstrations in such routes.**

(Presented by the Secretariat)

**Summary**

This working paper presents some comments on the activities which the GREPECAS ATS Subgroup has carried out with respect to RNAV routes, as well as an analysis on the convenience, or not, to initiate a proposal for amendment to the CAR/SAM Basic Air Navigation Plan of RNAV routes subject to pre-operational trials and demonstrations, UT780, (Santiago de Chile-Lima/Miami) and UT795/ut799 (Sao Paulo-Rio de Janeiro/Miami).

**References:**

- ATS/SG/9 Meeting Report
- CAR/SAM/3 RAN Meeting Report

1. **Background**

1.1. During the CAR/SAM/3 RAN Meeting, the CAR/SAM regions ATS route network was included in the Basic Air Navigation Plan for the CAR/SAM Regions.

1.2. Within the framework of Project RLA/98/003, pre-operational trials and demonstrations were carried out in RNAV routes UT780 (Santiago de Chile-Lima/Miami) and UT795/UT799 (Sao Paulo-Rio de Janeiro/Miami).

1.3. These pre-operational trials and demonstrations routes are not part of the CAR/SAM Regions ATS network until they are included in the Basic ANP.

1.4. This meeting shall assess the result of the referred pre-operational trials and demonstrations with a view to examine whether the conditions for use of the aforementioned routes comply with all the necessary requirements to be considered stable and decide on its definitive implementation.

## 2. Analysis

2.1. As it may be recalled, the GREPECAS ATS Subgroup (now ATM Committee of the ATMS/CNS Subgroup) has thoroughly examined the ATS routes network in and identified necessary RNAV routes to respond to each one of the air traffic flows contained in the CAR/SAM FASID ATM Evolution Tables.

2.2. In a general sense, the ATS Subgroup has used the concept of trunk RNAV routes for main flows, as per the operations volume of each flow, taking notice that these trunk or main RNAV routes may be joined by secondary RNAV routes connecting some cities with the trunk route. The latter routes might be established as RNAV national or SID/STARs RNAV routes, at the States' convenience and thus reply all the requirements identified in the CAR/SAM Regions.

2.3. The ATS Subgroup, during its last meeting, considered that the Plan of RNAV routes network, which were examined and proposed by the RNAV Task Force, was appropriate for its application in the CAR/SAM Regions. It was also recognized that, in order to propose an amendment to the Basic ANP and incorporate this new RNAV routes network to the ANP a more accurate and detailed description of the mentioned routes would be necessary. It is expected that this description and the corresponding proposal for amendment will be ready by mid 2002.

2.4. As a result of the aforementioned, the ATS Subgroup established 3 phases for the finalization of its tasks:

- Phase 1:** Approval of the RNAV routes Project (Task already developed).
- Phase 2:** Development of a detail of RNAV routes and its significant points to prepare a Draft Proposal for Amendment to the ANP (Task under development. The Final result would be presented to the ATM/CNS/SG/1 Meeting in June 2001).
- Phase 3:** An implementation phase where full detail of RNAV routes would be prepared, with information such as: FIR entry and exit points, geographical coordinates,

track, distance, etc (Task to be developed through implementation mechanisms (i.e. Project RLA/98/003, Informal Meetings, etc).

2.5. When examining the phases approved by the ATS Subgroup, the meeting could notice that the process of pre-operational trials and demonstrations currently being carried out in the CAR/SAM Regions, would be frames within the strategy approved by the ATS Subgroup for the implementation of RNAV routes in both regions.

2.6. On the other hand, there is also a strategy as regards the process of proposals for amendment of the CAR/SAM air navigation plan, which consists in including the RNAV routes network in a global manner, including of course the current RNAV trials and demonstrations RNAV being discussed which would undoubtedly facilitate the amendment process.

2.7. In consideration to the aforementioned, the meeting should evaluate whether it would be appropriate to initiate the amendment process to include in a definitive manner routes UT780 and UT795/UT799 or wait to process the amendment in a global manner.

2.8. In case the meeting considers it appropriate to initiate as soon as possible, the amendment process for inclusion of the referred routes, without expecting the global amendment of the plan, this working paper presents in its **Appendix A**, a model of proposal for amendment to the Basic ANP for its consideration.

### 3. **Action suggested**

3.1. The meeting is invited to:

- a. Take note of the information provided and decide on the convenience, or not, to wait for the global proposal for amendment to include the RNAV routes network to the CAR/SAM Regional Basic Air Navigation Plan or to initiate as soon as possible the process of amendment and definitive implementation of the RNAV trials and demonstrations routes RNAV UT780 and UT795/UT799; and
- b. If applicable, examine the model of proposal for amendment to the Basic Air Navigation Plan shown in **Appendix A** to this working paper, for its approval.



## Appendix A

### **Model of proposal for amendment to incorporate routes UT 780 and UT 795/UT799 to the Basic ANP**

**Note:** The routes designators of the referred routes shall be modified according to Appendix 1 of Annex 11.

**Subject:** Proposal for amendment to the CAR/SAM Air Navigation Plan (Serial N° SAM or CAR XX/XX-ATS)

a) **Plan:** CAR/SAM, Doc. 8733

b) **Proposal for Amendment:** Inclusion of RNAV routes XXX, XXX y XXX in the CAR/SAM Regions Basic Air Navigation Plan.

c) **Originated by:** (Indicate States originating the proposal)

d) **Reasons of the originator for the amendment:**

1. Within the framework of ATM Evolution as approved by the Third CAR/SAM Regional Air Navigation Meeting (RAN CAR/SAM/3) the States which originate this proposal for amendment have carried out pre-operational trials and demonstrations in RNAV routes RNAV XXX, XXX and XXX duly coordinated with users.
2. The result of these pre-operational trials and demonstrations has been highly satisfactory, reason for which it is considered that these routes are stable enough to be incorporated to the ATS routes network of the Basic CAR/SAM ANP.

e) **Proposed date for implementation:** Immediately after the proposal for amendment be approved by ICAO Council.

**f) Proposal circulated to the  
following States/Territories and Organizations:**

(Include States//Territories and Organizations to whom the proposal will be circulated)

**g) Comments of the Secretariat:**

1. The inclusion of routes XXX, XXX and XXX in the Basic Air Navigation Plan for the CAR/SAM Regions is framed within the ATM evolution process in the CAR and SAM Regions, as approved by GREPECAS and further addressed through CAR/SAM/3 RAN Recommendations 5/14, 5/15 and 5/16.
2. The trajectories have been configured keeping in mind the need to save fuel and air operations economy and its inclusion in the ANP will permit a wider use of such routes, favoring a greater number of the mentioned airspace users.