



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

**Fourth Meeting/Workshop of Air Traffic Management (ATM) Authorities and Planners
(AP/ATM/4)**

Santa Cruz, Bolivia, 27-31 January 2003

Agenda Item 2: Review of the Action Plan for the Implementation of RNP 10 Pre-Operational Trials in parallel routes UL 780 and UL 302 in the Santiago de Chile/Lima segment

(Presentada por la Secretaría)

Summary

In this Working Paper the meeting is proposed to carry out a review of the Action Plan for the implementation of RNP 10 Pre-operational Trials in parallel routes UL 780 and UL 302 in the Santiago de Chile/Lima segment and, if it is the case, make the necessary corrections.

References

- Report of the Tenth Meeting of the CAR/SAM Planning and Implementation Regional Group (GREPECAS/10), (Las Palmas, Canary Islands, Spain 23-27 October 2001).
- Report of the Third Meeting/Workshop of Air Traffic Management Authorities and Planners (AP/ATM/3) (Lima, Peru, 20 to 24 May 2002)

1 Introduction

1.1 GREPECAS/10 meeting (Las Palmas, Canary Islands, Spain, 23 to 27 October 2001), considering convenient to initiate RNP Pre-operational trials in the airspace from Santiago de Chile to Miami, along route UL780 and its parallel route, approved an Action Plan and agreed Conclusion 10/17 – RNP 10 Pre-operational Trials in the CAR/SAM Regions, requesting the support of RLA/98/003 Project.

1.2 Within the framework of RLA/98/003 Project “Transition to CNS/ATM Systems in the CAR/SAM Regions”, the Third Meeting of Air Traffic Management Authorities and Planners (AP/ATM/3), (Lima-Peru, 20 to 24 May 2002) was held, in which, among other matters, it was agreed to initiate the implementation of RNP 10 Pre-operational trials Programme in the Santiago de Chile/Lima segment of parallel routes UL 780 and UL 302.

2 Analysis

2.1 To carry out the implementation of such Programme, the AP/ATM/3 meeting approved the Action Plan shown as **Appendix A**, presenting the activities to be performed by all the parties involved: Chile, Peru, IATA/Users and ICAO NACC and SAM Regional Offices.

2.2 In order to evaluate the status of application of such Action Plan, it is proposed to indicate in the corresponding column if the respective activity has been **completed**, if it is **in progress**, **pending** or has been **replaced** by another activity, as follows:

Status of application of the activity	
Completed:	That has already been performed
In progress:	That is still being carried out or has not yet finished
Pending:	Which date is overdue, but no action has been made for its implementation
Replaced:	That has been replaced by another activity or which dates of initiation and/or termination have been modified

3 Action Suggested

3.1 The meeting is invited to review the Action Plan for the Implementation of RNP 10 Pre-operational trials and demonstrations Programme in the Santiago de Chile/Lima segment of routes UL 302 and UL 780 indicated in **Appendix A** and evaluate the status of application of each of the activities according the methodology proposed in paragraph 2.2 of this Working Paper.

Appendix A

ACTION PLAN FOR THE IMPLEMENTATION OF A RNP 10 PRE-OPERATIONAL TRIALS PROGRAMME IN RNAV ROUTES UL 780 AND UL 302

Activities	Responsible Area	Starting date	Finalization date	Status of application	Remarks
1. Regional Agreement for: - RNAV Route parallel to route UL 780; and - RNP 10/50 NM.	GREPECAS	23.10.01	27.10.01	COMPLETED	During GREPECAS 10 it was achieved a regional agreement in order to implement the programme and the parallel routes.
2. Identification of operational needs.	GREPECAS	23.10.01	27.10.01	COMPLETED	During the AP/ATM/2 Meeting, Lima, Peru, 14 to 18 May 2001, involved States identified the need to establish a pre-operational RNP 10 Implementation Programme in order to acquire experience in such implementation and in related procedures.
3. Establishment of a Monitoring Agency.	GREPECAS	23.10.01	27.10.01	COMPLETED	GREPECAS 10 decided that while a regional agreement is achieved, the monitoring agency will be in charge of Brazil.
4. Dissemination of Information.	States	June 2002	Permanent activity		Most of the information related to the pre-operational trials plan will ensure the success of the implementation in the target date.

Activities	Responsible Area	Starting date	Finalization date	Status of application	Remarks
5. Coordination with ATS providers and users.	States	June 2002	Permanent activity		Most of the dissemination of the programme will ensure the success of the implementation in the target date.
6. Study of the impact in the airspace.	States	June 2002	December 2002		The impact in airspace is essential, specially in the issues regarding the use of prohibited and/or restricted areas as well as geographic issues.
7. Cost-benefit analysis considering: - ATS services providers; and - Users.	States	June 2002	December 2002		Although economical benefits are expected, the expectations are centered in acquire experience in this type of implementation.
8. Establishment of procedures to: a) Approve the RNP 10 for aircraft; and b) RNP10 Operational Approval	a) Appropriate Aeronautical Authority; and b) Operator Status.	June 2002	December 2002		The establishment of the procedures will ensure the success of the implementation in its due time. Reference documentation: <ul style="list-style-type: none"> • FAA Order 8400.12 A for RNP 10 operation on the North Pacific route System; • CASA Civil Aviation Advisory Publication CAAP RNP 10-1 (FAA Order 8400.12A); • RNP Manual (Doc. 9689).
9. Updated establishment and maintenance of the listed RNP 10 approved aircraft	Monitoring Agency	June 2002	Permanent activity		The timely knowledge of RNP 10 approved aircraft will allow the monitor agency know the progress status of the RNP 10 approval and take pertinent actions.

Activities	Responsible Area	Starting date	Finalization date	Status of application	Remarks
10. Establishment of a minimal amount of RNP 10 approved aircraft before initiating the trials.	States	June 2002	July 2002		A minimum of 90% of the amount of aircraft that operate normally in the airspace that will be designated RNP 10 shall have to be RNP 10 approved before initiating the trials.
11. Establishment and implementation of: <ul style="list-style-type: none"> a) The organization who will evaluate safety; b) The programme to evaluate airspace safety; and c) The programme for the recollection of information for the evaluation. 	<ul style="list-style-type: none"> a) GREPECAS b) GREPECAS and the Organization in 11 a). c) States and Organization in 11 a). 	<ul style="list-style-type: none"> TBD TBD 27.10.01 	<ul style="list-style-type: none"> TBD TBD TBD 		<ul style="list-style-type: none"> a) The designated organization should have the necessary experience to carry out the safety assessment in airspace. b) Considering the goal of 5×10^{-9} (TLS) in fatal accidents by flight hour, safety assessment is a fundamental element to implement the programme. c) The required basic information to carry out the airspace safety evaluation is included in Attachment 2.

Activities	Responsible Area	Starting date	Finalization date	Status of application	Remarks
12. Amendment to Doc. 7030 SUPPS.	NACC and SAM Regional Offices	June 2002	December 2002	In progress (*)	<p>A proposal of amendment to Doc. 7030 should be approved in order to apply the RNP 10 NM in routes of the involved FIRs. This amendment is to be circulated by the NACC and SAM Regional Offices for the approval of the ICAO Council.</p> <p>(*) In case of a pre-operational implementation, it will only be necessary that States involved issue an AIP and AIC Supplement in which RNP 10 application in routes UL 780 and UL 302 is indicate, as well as the corresponding operational procedures. When definitely implemented, an amendment to Doc. 7030 will be issued.</p>
13. Publication of an AIC that informs the aeronautical community about the introduction of procedures and requirements.	States	June 2002	N/A		
14. To include in the AIP all applicable procedures and requirements.	States	June 2002	N/A		States should include in their corresponding AIPs the minimum requirements and the applicable supplementary procedures.

Activities	Responsible Area	Starting date	Finalization date	Status of application	Remarks
15. Notification to the Monitor Agency of: a) RNP 10 approved Aircraft; b) RNP10 approved operational operators.	States	June 2002	Permanent activity		Timely notification will ensure the success of the implementation in the planned date.
16. Deadline to have at least, the minimum amount of RNP 10 approved aircraft.	States	N/A	July 2003		If the deadline is not accomplished, the implementation of the programme will be delayed.
17. Progress evaluation of the WGS-84 in the involved FIRs.	NACC and SAM Regional Offices	November 2001	Permanent activity		To accomplish the success in the implementation programme of the GNSS use, involved States should implement the WGS 84.
18. Establishment and implementation of a training programme.	States and Users	June 2002	July 2003		The establishment of a training programme for CTAs and crew is essential to accomplish the success of the implementation programme.

Activities	Responsible Area	Starting date	Finalization date	Status of application	Remarks
19. Decision to continue and postpone the pre-operational trials	States	N/A	July 2003		The implementation will be continued as long as all involved parts have accomplished the tasks that have been specified in the action plan. The evaluation will be carried out through electronic means.
20. Date of implementation of the RNP 10/50 NM pre-operational trials and demonstrations.	States	N/A	4/9/03		