

FOURTH MEETING OF THE ALLPIRG/ADVISORY GROUP

(Montreal, 6 – 8 February 2001)

Agenda Item 6: Technical cooperation issues

STATUS REPORT ON THE COMPLETION OF PHASE II OF PROJECT RLA/98/003

(Presented by the Secretariat)

SUMMARY

The results of Phases I and II indicate that significant savings can be achieved through the immediate implementation of RNAV routes on most of the flows studied and suggest that pre-operational trials be undertaken on these new flows. In preparation for Phase IV of the project, which consists of the development of a detail plan and schedule for the implementation of the CNS/ATM systems, the project has initiated the development of the tools to facilitate the planning and evaluation of alternative implementation scenarios (see ALLPIRG/4-WP/15). In addition, the project foresees the need to include in the team a specialist on institutional matters to investigate institutional issues and propose approaches to implementation.

1. FOREWORD

1.1 As a result of a conclusion adopted by the Fifth Meeting of Civil Aviation Authorities of the SAM Region and endorsed by GREPECAS, ICAO, with the support of the CAR/SAM States, established a new project to assist States in the planning and implementation of CNS/ATM. One of the purposes of Project UNDP/ICAO RLA 98/003 is to conduct, in consultation with States concerned, the analysis of all the different traffic flows identified by GREPECAS and to propose ways and means of planning and implementing CNS/ATM systems in the regions.

2. INTRODUCTION

2.1 It is recalled that Project RLA/98/003 has, among other tasks, been asked to evaluate each of the eighteen traffic flows contained in the CAR/SAM Air Navigation Plan for the implementation of the CNS/ATM systems with a view to identifying future requirements, proposing

technical and operational solutions and performing the necessary cost/benefit and sensitivity analyses to substantiate the evolutionary introduction of CNS/ATM facilities and procedures.

2.2 It is also recalled that the project activities have been organized into four phases:

- **Phase I** consisted of the development of the detailed work programme for the project, the establishment of working procedures and beginning of a detailed study of three of the 18 traffic flows, as determined by GREPECAS (approximately from July 1999 till the end of 1999).
- During **Phase II**, six more traffic flows were evaluated. Questionnaires were sent to States for the collection of data (approximately from March 2000 till the end of 2000).
- **Phase III** will complete the analyses of the remaining nine flows identified in the CAR/SAM Regional Plan and will tabulate the results (approximately from the end of 2000 till mid-2001).
- **Phase IV** will focus on consolidation. This phase will go about solidifying the ATM requirements and their related CNS services on a regional or sub-regional basis. With this phase, it will be possible to determine optimum operational and technical solutions and suggest implementation strategies (this fourth and last phase is expected to be completed in early 2002).

3. **PHASE I**

3.1 The result of **Phase I** concluded that, while still preparing for the eventual introduction of CNS/ATM systems, large benefits could be achieved on each of the traffic flows studied mainly by the immediate introduction of RNAV RNP routes. These savings result mainly from reduced flying time and the capability of aircraft operators to fly at their requested flight levels. The summary of those annual savings is:

• TF9	Sao Paulo - Rio de Janeiro – Miami	\$5,863,960.00
• TF10	Sao Paulo – Rio de Janeiro – New York	\$2,232,785.00
• TF11	Buenos Aires – New York	\$1,023,465.00

4. **PHASE II**

4.1 Phase II of the project has completed the evaluation of six more traffic flows that includes 9 routes over 52 FIRs and 31 checkpoints. The results of the analysis indicate that, by eliminating shortcomings, improving civil/military coordination and ATC procedures and reducing separation minima, immediate savings can be achieved while still moving towards the gradual implementation of CNS/ATM systems. The expected annual savings on the flows are:

• TF4	Sao Paulo – Rio de Janeiro – Europe	\$31,028,145.00
• TF6	Santiago – Lima – Los Angeles	\$962,161.00
• TF7	Santiago – Lima – Miami	\$4,530,171.00
• TF8	Sao Paulo – Rio de Janeiro – Los Angeles	\$3,667,271.00
• TF12	Buenos Aires – Miami	\$3,239,601.00

- TF15 Mexico – Dallas \$2,239,413.00
 - México – Houston \$634,630.00
 - México – Miami \$2,718,539.00
 - México – Los Angeles *No significant savings.*

4.2 The appendix to this paper presents additional details on the make-up of the savings for both Phases I and II. The main elements of the cost savings worksheets are:

- a) conventional and direct route distances:
- b) type of traffic (scheduled and non-scheduled);
- c) operating cost resulting from reduced flying time for the different category of aircraft; and
- d) fuel cost savings associated with the ability of aircraft operators to fly at their requested flight levels (for these calculations, it has been assumed that only 20% of the flight would be at less than optimum flight level and that the efficiency loss would be 8%).

5. PHASE III

5.1 During the Phase II session, work on Phase III has been initiated. The routes on the nine remaining traffic flows have been determined, checkpoints identified and correspondence with State initiated. The traffic survey on the routes is scheduled to be carried out at the end of January 2001. The flows concerned span over 35 FIRs and include some 24 checkpoints. The evaluation of the following flows will be completed by June 2001:

- TF1 Buenos Aires – Santiago
- TF2 Buenos Aires – Sao Paulo – Rio de Janeiro
- TF3 Santiago – Sao Paulo – Rio de Janeiro
- TF5 Lima – Sao Paulo – Rio de Janeiro
- TF13 North Central America - Europe
- TF14 Mexico – Europe
- TF16 Central America – Europe
- TF17 Buenos Aires – South Africa
Sao Paulo – Rio de Janeiro – South Africa
- TF18 Santiago – Easter Island – Papetee

5.2 In addition to the above, the development of planning and evaluation tools had been done and, in consultation with States, data has been collected on existing facilities and services used or to be used for the creation of associated databases. A separate paper provides more information on the subject.

6. **PHASE IV**

6.1 Phase IV is the phase where it all comes together. This is where, through the analysis of scenarios, viable options can be retained for further investigation and consultation with States and international organizations concerned. It goes without saying that, in the process, many institutional issues will be raised. As such, the project will be required to liaise with States and investigate institutional issues (political, financial, legal, etc.) as necessary, with a view to suggesting solutions and providing the necessary forum for negotiations.

7. **ACTION BY ALLPIRG**

7.1 The meeting is invited to note the information.

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