



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

**Tenth Meeting/Workshop of ATM Authorities and Planners
in the CAR/SAM Regions
(AP/ATM/10)**

(Lima, Perú, from 10 to 14 May 2005)

Agenda Item 3: Review of RVSM issues in the CAR/SAM Regions

a) ATC Operations Working Group (ATC/WG)

RVSM Operations Follow-up Program

(Presented by Brazil)

Summary

The aim of this working paper is to present the Status of RVSM Operations in Brazil, taking into consideration the information recollected through RVSM Operations Follow-up Program, that involves all Brazilian ACCs

1. Introduction

1.1. The option made by Brazil for a non exclusive RVSM airspace lead to the necessity of a close follow-up of the RVSM operations, with the objective to identify failures in the several elements of the Air Traffic Control, that could cause a reduction in the safety in the Brazilian Airspace.

1.2. Thus, the Brazilian Administration developed a RVSM Operations Follow-up Program, trough the establishment of periodic reports to be fulfilled by the ACC, with the objective of obtaining information that allow the immediate action, in order to avoid the reduction in safety.

1.3. Besides, the RVSM Operations Program was established with the objective of opening a communication channel between the Air Traffic Controller and the group responsible by RVSM implementation, in order to obtain suggestion for the improvement of the RVSM Operations.

2. RVSM Operations Follow-up Program

2.1. The RVSM Operations Follow-up Program was constituted by periodic reports, that involve the following items:

2.1.1. Mistakes made by Air Traffic Controllers, due to RVSM application, particularly for the accommodation of non RVSM approved aircraft.

2.1.2. ATC incidents occurred due to RVSM application, particularly for the accommodation of non RVSM approved aircraft.

2.1.3. Specific situation of accommodation of non RVSM approved aircraft, that must be analyzed by ATC

2.1.4. Non RVSM approved aircraft that couldn't be accommodated in the RVSM Airspace.

2.1.5. Suggestion of:

- Changing in the Rules and Procedures
- Changing in the Letters of Agreement.
- Changing in the ACCs Standard Procedures.
- New Requirements for the ATC Systems.

2.2. So far, Department of Airspace Control (DECEA) has received the reports of the following periods:

- 20/21 January 2005 (Transition Report)
- 22 to 27 January 2005
- 28 January to 04 February 2005
- 05 February to 20 February 2005
- 21 February to 20 March 2005
- 21 March to 20 April 2005

3. Summary of data obtained through the ACCs Reports

3.1. Mistakes made by Air Traffic Controllers

3.1.1. The only mistake made by Air Traffic Controller was the no individual coordination of non RVSM approved aircraft in the RVSM Airspace, independently of the automatic transfer of the aircraft between adjacent sector/ATC facilities. This error was corrected in the first's days of RVSM Implementation.

3.2. **ATC incidents occurred due to RVSM application**

3.2.1. There was no ATC incidents occurred due to RVSM application

3.3. **Specific situation of accommodation of non RVSM approved aircraft, that must be analyzed by ATC.**

3.3.1. In some boundaries between FIRs (FIR AZ/FIR RE and FIR AZ/FIR BS) were detected some problems in the accommodation of non RVSM approved Aircraft, due to lack of radar coverage. The applicable procedures were adjusted in the first's days of implementation, mainly to maintain the flight level allocated to the non RVSM approved aircraft, through areas without radar coverage.

3.4. Non RVSM approved aircraft that couldn't be accommodated in the RVSM Airspace.

3.4.1 Almost all non RVSM approved aircraft were accommodated in the RVSM Airspace. Few exceptions occurred in the airspace mentioned in item 3.3.1

3.5 Air Traffic Controllers Suggestions

3.5.1 Rules and Procedures

3.5.1.1 Due to the lack of radar coverage in some areas of Brazilian Airspace, that obliged the changing in the flight level allocated to the non RVSM approved aircraft, trough areas without radar coverage, the air traffic controllers made a suggestion of changing the requirement of radar coverage to clear the entrance of non RVSM approved aircraft into RVSM Airspace.

3.5.1.2 It was observed the uncorrected use of phraseology by the pilots, mainly when informing the RVSM approval status of the aircraft. It was taken all the measures by the Brazilian Civil Aviation Authority in order to ask actions from the main Brazilian aircraft operators.

3.5.1.3 At the beginning of implementation some non RVSM Aircraft, performing international flights, were cleared to fly in the RVSM airspace, inside Brazilian Airspace. This problem was corrected and non RVSM Aircraft, performing international flights, is not being cleared to fly in the RVSM airspace.

3.5.2 New Requirements for the ATC Systems

3.5.2.1 The Air Traffic Controllers made a suggestion of changing the color applied to Non RVSM approved aircrafts, in the presentation on the radar screen.

3.5.2.2 Some failures in the tools already installed were detected. These failures were already corrected.

4. Suggested Actions

4.1 The meeting is invited to take note of the information provided in this working paper.

4.2 The CAR/SAM States and International Organizations are encouraged to make a close follow-up of the RVSM Operations, mainly that ones that made option for a non exclusive airspace.