



International Civil Aviation Organization

**The Twentieth Meeting of the Regional Airspace Safety Monitoring
Advisory Group (RASMAG/20)**

Bangkok, Thailand, 26-29 May 2015

Agenda Item 5: Airspace Safety Monitoring Activities/Requirements in the Asia/Pacific Region

BRAZILIAN SYSTEM OF RVSM COMPLIANCE ENFORCEMENT

(Presented by the Secretariat)

SUMMARY

This paper presents information from the Tenth Meeting of the Regional Monitoring Agencies Coordination Group (RMACG/10, Bangkok, Thailand, 18-22 May 2015) regarding the Brazilian process of enforcement action for non-compliant RVSM aircraft operations for consideration and discussion by the Asia/Pacific Region.

1. INTRODUCTION

1.1 In 2013 APANPIRG/24 agreed to strengthen regional policy to manage the problem of repetitive non-RVSM operations:

3.3.47 Recognising the serious risk to safety, as well as the continued non-compliance by some operators with RVSM requirements over many years, RASMAG/18 endorsed a Draft Conclusion. APANPIRG's adopted the following Conclusion:

Conclusion 24/26: Repetitive Non-RVSM Approved Aircraft Operating as RVSM Approved Flights

That, Asia/Pacific States should, except where a specific non-RVSM operation is authorised, deny entry to operate within RVSM airspace for aircraft that have been confirmed as non-RVSM approved over a significant length of time, or by intensive checking.

2. DISCUSSION

2.1 The RMACG/10 meeting was informed of the Brazilian process for managing non-complaint Brazilian registered aircraft within Brazilian airspace, focused on specific monitoring from within their Air Traffic Flow Management (ATFM) unit and their enforcement process.

2.2 RMACG/10/WP180 is appended at **Attachment A**.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) consider how the Asia/Pacific can assist Brazil and learn from Brazil's experience; and
- c) discuss any relevant matters as appropriate.

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International Civil Aviation Organization
WORKING PAPER

**REGIONAL MONITORING AGENCIES (RMA)
TENTH RMA COORDINATION GROUP MEETING**

Bangkok, Thailand, 18 to 22 May 2014

Agenda Item 5: Monitoring systems and Regional infrastructure

**ALTERNATIVE MEANS OF ENFORCING RVSM COMPLIANCE IN THE
AIRSPACE MONITORED BY CARSAMMA**
(Presented by CARSAMMA)

SUMMARY

This paper presents a new approach to monitoring and enforcement applied to Brazilian aircraft operators which are not RVSM approved but keep filling W and flying in the RVSM airspace.

1. Introduction

- 1.1- There's always a concern by the monitoring agencies of the improper use of the RVSM airspace by aircraft which are not RVSM approved. There is also concerns regarding the fact that CAAs are or are not taking the proper actions to minimize the issue of non-approved aircraft flying in RVSM airspace.
- 1.2- In the RMACG/9 this concern was raised and it was observed that the issue remained unresolved. ICAO then issued a State Letter in order to inform State authorities on the seriousness of the problem (State Letter AN 13/11.1 – 14/38, of July 29th of 2014 refers).
- 1.3- Annex 6 requests each authority responsible for aircraft approval to apply the necessary actions when operators do not follow the procedures for flying in the RVSM airspace.

- 1.4-A recent restructuring in the Brazilian CAA created some obstacles in the communication between the Caribbean and South American Monitoring Agency (CARSAMMA) and the CAA. However due to the good relationship between CARSAMMA and the Brazilian ANSP parallel procedures were established to guarantee that the RVSM monitoring and safety of operations were not affected.
- 1.5-In Brazil a body responsible for the analysis, judgment and, if necessary, defining fines to aircraft operators in case of violations of the national rules of the air, the Aeronautical Judgment Joint (JJAER), was created. This way, communications with and actions against those aircraft operators violating the rules of the air became more efficient.
- 1.6-The procedure regarding RVSM consists in analyzing the filing of “W” in flight plan by non-approved operators or operators with no information regarding monitoring flights following the same procedure of those who do not comply with any other of the rules of the air.

2. The Process

- 2.1- As part of the monitoring process CARSAMMA performed the analysis of the operations in the RVSM airspace in October 2014, and the results are shown in Figure1 below.

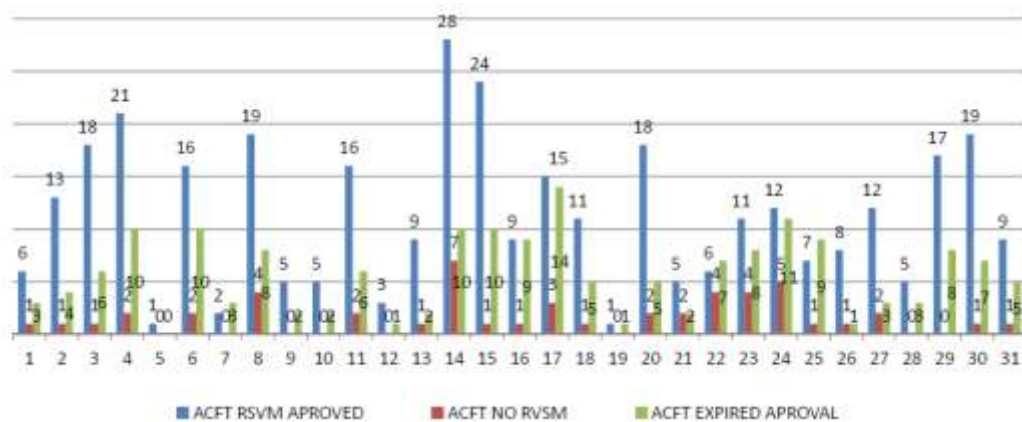
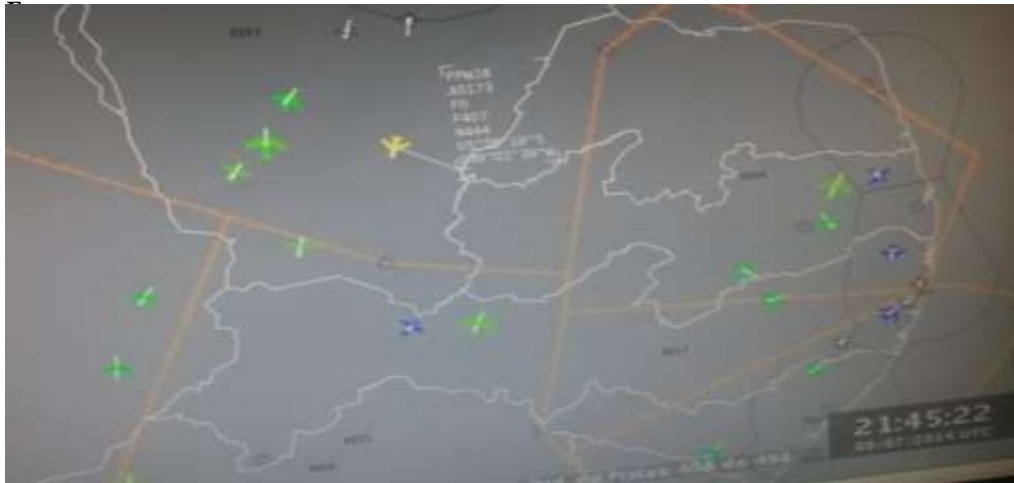


Figure 1- General Aviation movement between October 1st and 31st 2014.

Source: SIGMA

- 2.2-The **first step** consists of monitoring and selecting operators not compliant with the RVSM approval process, based on the CARSAMMA database, and by radar observation. Such analysis is held by the ATFM unit team.
- 2.3-The movement shown in blue represents the RVSM approved aircraft which is the CARSAMMA database and informed by the CAA. The green represents the ones whose approval date has expired but is still in the CARSAMMA database. The red ones comprise the aircraft operators which are not in the database. These data were collected from SIGMA, a system used for air traffic flow management in the Brazilian airspace.

Figure 2 – Aircraft in the RVSM airspace, radar view.



2.4- The percentage of domestic aviation operating in the Brazilian RVSM airspace is 93%, as showed in the Figure 3 below. Hence, the actions would be effective once it would be affecting most of the flights.

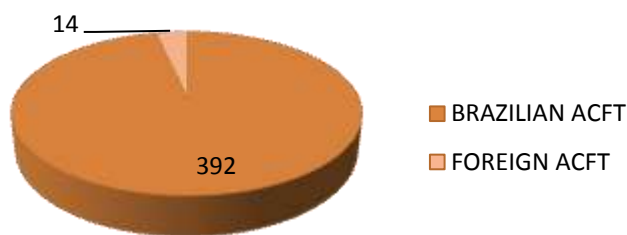


Figure 3- Percentage of domestic and international flights in the RVSM airspace. Sample of the period from October 01st to 31st 2014.

Source: SIGMA

2.5- The monitoring indicates that there is an average of 2 flights per day in the Brazilian airspace performed by non-approved aircraft or at least aircraft from which CARSAMMA has no information regarding RVSM approval. See figure 4.

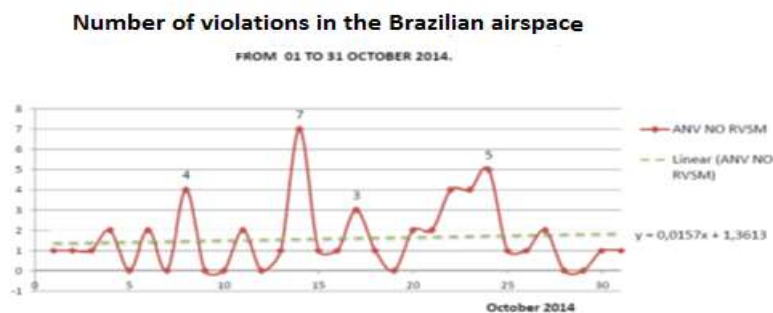


Figure 4- This figure shows the international and domestic flights in the RVSM airspace by non-approved operators or operators from which CARSAMMA has no information regarding RVSM approval status.

2.6-The **second step** of the process is to send the evidences to JJAER, according to Figure 5. The CAA is responsible for taking the appropriate actions against operators violating the rules of the air, while JJAER is responsible for analyzing, judging and recommending fines to operators violating the rules of the air which are described in the Brazilian AIP.

2.7-The process starts in JJAER with the definition of fines for the airspace user, as soon as it is proved and typified the transgression of the rules of air by the airspace user. During the analysis of the transgression, the airspace user is contacted and is requested to provide evidences of no-transgression of the rules of the air. The JJAER is formed by Air Traffic Controllers and lawyers who analyze the case and provide the solution at the end. See figure 6.

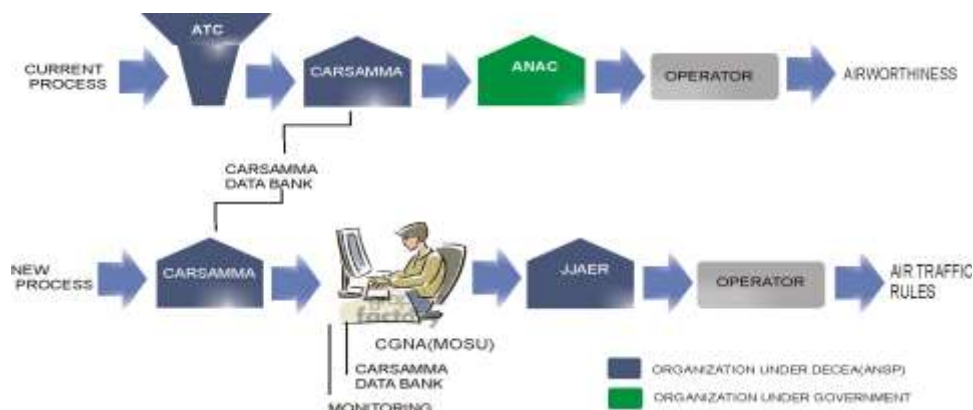


Figure 5 – The process of monitoring and action on operators that fly in the Brazilian airspace.



Figure 6 – Phases of the process in the JJAER.

2.8- Since its creation in 2010, the JJAER has already analyzed and judged over 2.900 cases of violations of the rules of the air and fined an amount of more than US\$ 4.1 millions of dollars. This involves all violations and not only the ones related to RVSM.

2.9-It is worthy to highlight that there can be two types of processes, one for airworthiness violations and another for violations of the rules of the air. They can be judged simultaneously or in separate.

3 – Meeting Action

3.1- The meeting is invited to:

- a) Review the information provided.
- b) Analyze the possibility of other RMAs adopt the same approach regarding actions on operators flying in the RVSM airspace without the necessary approval.

- c) Verify the feasibility of amending the procedures associated to monitoring of RVSM operations in order to provide clarifications on the need of evidences in case of violations by operators of the RVSM rules.
- d) Verify the need to provide better guidance for CAAs on the importance of the maintenance of the correct status of operators regarding RVSM approval and possible actions in case of violations of the RVSM requirements.