International Civil Aviation Organization

Middle East Regional Monitoring Agency Board

Twelfth Meeting (MIDRMA Board/12)
(Kuwait, 17–19 December 2012)

Agenda Item 4: RVSM Monitoring and Related Technical Issues

MID RVSM SAFETY MONITORING ACTIVITY

(Presented by the Secretariat)

SUMMARY

The aim of this paper is to review the outcome of MIDANPIRG/13 related to RVSM safety monitoring activity, and take follow-up action, as appropriate.

Action by the meeting is at paragraph 3.

REFERENCES

- MIDANPIRG/13 Report
- MIDRMA Board/11 Report

1. INTRODUCTION

1.1 The meeting may wish to recall that the duties and responsibilities of the MIDRMA include the development of RVSM Safety Monitoring Reports, with a view to verify that the defined safety levels continue to be met. States are requested to provide required data on a regular basis and in a timely manner to the MIDRMA for the achievement of this task. Data includes mainly:

i) approval of operators and aircraft for RVSM operations (on monthly basis);
ii) Large Height Deviation report (LHD) for deviations exceeding 300ft (on monthly basis);
iii) traffic data (as requested by the MIDRMA Board); and
iv) radar data as, when and where required.

2. DISCUSSION

2.1 The meeting may wish to recall that the ICAO Doc. 9574, Manual on Implementation of a 300 m (1000 ft) Vertical Separation Minimum between FL 290 and FL 410 Inclusive, calls for regional review of Altitude Deviation Reports (large height deviations) occurring in airspace where RVSM has been implemented.

2.2 The meeting may wish to recall that, MIDANPIRG/13 noted with concern that Iraq and Yemen have not been providing required data to the MIDRMA on a regular basis and in a timely manner, and accordingly, the meeting agreed to the inclusion of Iraq and Yemen in the MIDANPIRG List of Air Navigation Deficiencies.

2.3 MIDANPIRG/13 noted with concern that the MIDRMA is still facing difficulties related to the provision of required data by States. The meeting recognized that the non-compliance with the requirement for reporting of data to the MIDRMA is a longstanding shortcoming in the MID Region, which needs to be addressed seriously. In this respect, it was agreed that the lack of awareness about the requirements for RVSM safety assessment activity is a major contributing factor.

2.4 The meeting may wish to recall that data collection, processing, storage and reporting are fundamental to the performance-based approach and forms part of performance monitoring and management.

2.5 It's to be noted that for the development of the MID RVSM SMR 2011-2012, radar data from three radars: Amman, Bahrain and Kuwait, was used for the determination of the Horizontal Frequency Overlap (HOF) using the RADAC System. In accordance with the Recommendations of the SMR 2010, and considering the MID Region ATS route network and traffic data, it was agreed that the horizontal frequency overlap should be determined in Muscat in Oman, HIL in Saudi Arabia, and TAZ in Yemen, in addition to Amman, Bahrain and Kuwait.

2.6 With regard to the methodology used for the assessment of RVSM operations in the MID Region, it's to be highlighted that the MIDRMA, since its establishment, has been using the Collision Risk Model provided by EUROCONTROL. In this respect, MIDANPIRG/13 recalled that the MID RVSM Safety Assessment Seminar held in Bahrain from 22 to 24 February 2010, addressed the subject and agreed that the MIDRMA initiate action for the development/purchase of suitable Vertical Collision Risk (VCR) software, for the MID Region, which should be presented to and validated by the Second MID RVSM Safety Assessment Seminar, planned to be organized by the MIDRMA in coordination with ICAO, in Bahrain, 9-11 October 2012. The meeting may wish to note that the Seminar was cancelled due to very low level of confirmation of attendance.

2.7 Based on the above, MIDANPIRG/13 developed the following Conclusions:

CONCLUSION 13/64: REPORTING OF LARGE HEIGHT DEVIATIONS (LHD)

That, in order to simplify and standardize the reporting of Altitude/Height Deviations and Coordination Failures, in accordance with the ICAO Doc 9937:

*a) the Form at **Appendix 5.2A** to the Report on Agenda Item 5.2 be used for the reporting of Altitude/Height Deviations and Coordination Failures; and*

b) the monthly submission of LHD replaces the monthly submission of ADRs and CFRs.

CONCLUSION 13/65: PROVISION OF REQUIRED DATA TO THE MIDRMA

That, considering the on-going requirement for RVSM safety monitoring in the MID Region:

a) States provide the required data to the MIDRMA on a regular basis and in a timely manner. The data includes, but is not necessarily limited to:

i) approval of operators and aircraft for RVSM operations (on monthly basis or whenever there's a change);

ii) Large Height Deviations (LHD) (on monthly basis);

iii) traffic data (as requested by the MIDRMA Board); and

iv) radar data as, when and where required.

b) States not providing the required data to the MIDRMA on a regular basis and in a timely manner:

i) be included in the MIDANPIRG list of air navigation deficiencies; and
ii) might not be covered by the RVSM SMRs.

CONCLUSION 13/66: SECOND MID RVSM SAFETY ASSESSMENT SEMINAR

That, with a view to raise the awareness related to the requirements for sustained RVSM safety assessment activity and improve the knowledge of all involved parties, in particular with respect to the Vertical Collision Risk Methodology and Altimetry System Errors, the MIDRMA, in coordination with ICAO, organize a Second MID RVSM Safety Assessment Seminar, in the last quarter of 2012.

CONCLUSION 13/67: TRAINING ON RVSM SAFETY ASSESSMENT

That, with a view to raise the awareness related to the requirements for sustained RVSM safety assessment activity and improve the knowledge of the ATC and Air Operators personnel:

a) the MIDRMA include in its work programme regular missions to the Member States, during which briefings on the MIDRMA activities and RVSM safety assessment requirements be provided to concerned personnel; and

b) for improved effectiveness, the MIDRMA visit to a State be conducted, to the extent possible, back-to-back with the GMU height monitoring mission related to the air operator(s) based in this State.

CONCLUSION 13/68: VERTICAL COLLISION RISK SOFTWARE

That,

a) the MIDRMA initiate action for the development/purchase of a suitable VCR software for the MID Region; and

b) the VCR Software be presented to and validated by the Second MID RVSM Safety Assessment Seminar, to be held in October 2012.

2.8 The meeting may wish to recall that further to the amendment of Annex 6 Part I and Part II concerning long term monitoring requirements for height keeping performance, as of 18 November 2010, the State of Registry that had issued an RVSM approval to an operator would be required to establish a requirement which ensures that a minimum of two aeroplanes of each aircraft type grouping of the operator have their height-keeping performance monitored, at least once every two years or within intervals of 1000 flight hours per aeroplane, whichever period is longer. If an operator aircraft type grouping consists of a single aeroplane, monitoring of that aeroplane shall be accomplished within the specified period.

2.9 Based on the Minimum Monitoring Requirements (MMR) for each of the MID States consolidated by the MIDRMA and on the database of RVSM approvals, MIDANPIRG/13 urged States to enforce the implementation of the MMR Tables to ensure that minimum monitoring requirements for all MID RVSM approved aircraft are continuously met. Accordingly, the meeting agreed to the following Conclusion:

CONCLUSION 13/69: RVSM APPROVALS

That,

a) States be urged to take necessary measures to:

*i) ensure that, **before 30 June 2012**, their aircraft operators fully comply with Annex 6 provisions related to long term height monitoring requirements, based on the MIDRMA MMR Tables;*

*ii) withdraw the RVSM approvals for their registered aircraft that would not be compliant with Annex 6 provisions related to long term height monitoring requirements; **after 30 June 2012**;*

iii) ban any aircraft without confirmed RVSM approval status from entering the RVSM airspace; and

iv) report any case of handover at an RVSM Flight Level of an aircraft without confirmed RVSM approval status from adjacent ACCs to the MIDRMA and the ICAO MID Regional Office.

b) the MIDRMA Board Members in coordination with the MID RVSM Programme Managers monitor and follow up this subject at the national level, in order to ensure efficient implementation.

2.10 MIDANPIRG/13 was apprised of the MIDRMA GMU activities and noted the difficulties which hindered the MIDRMA to purchase 2 GMU Units from the CSSI Company, as agreed by the MIDRMA Board through Draft Conclusion 10/6. The meeting agreed, that as an alternate solution, the MIDRMA should sign the Service Agreement with CSSI for the use of 2 GMUs for height-keeping monitoring in the MID Region (with the condition that the processing of recorded data is done by CSSI). In addition, the meeting agreed that it became necessary to plan for the implementation of HMUs in the Region in order to be used for height-keeping monitoring and through Conclusion 13/70 endorsed the revised version of the MID Region height-keeping monitoring Strategy as at **Appendix A** to this working paper.

2.11

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) review and update the status of provision of data by States and urge those that have not yet provided the required data to the MIDRMA to do so;

b) agree on the list of States to be included in the MIDANPIRG list of air navigation deficiencies for non provision of required data to the MID RMA, on a regular basis and in a timely manner;

c) review and update, as necessary, the MID Region height-keeping monitoring Strategy;and

d) agree on the follow-up actions to be proposed to MIDANPIRG on the Conclusions and Decisions related to RVSM safety monitoring.

APPENDIX A

MID REGION HEIGHT-KEEPING MONITORING STRATEGY

Considering:

a) The status of implementation of RVSM in the MID Region;
b) the ICAO requirements for height-keeping monitoring contained in Annex 6, Annex 11, Doc 9574 (RVSM Manual) and Doc 9937;
c) the duties and responsibilities of the MIDRMA; and
d) the sustained need for height-keeping monitoring of aircraft operating within the MID RVSM airspace

Recognizing:

i) that an important number of Middle East region aircraft do not have known monitoring results; and
ii) the necessity to develop a MID Region Height monitoring infrastructure

Agreed:

That the MID Region height-keeping monitoring Strategy is as described below:

1) <u>Short Term (2011-2014):</u>

- States to follow up with concerned aircraft operators to carry out necessary height keeping monitoring for the aircraft identified by the MIDRMA; and

- States encountering difficulties to get the necessary height monitoring results to coordinate with the MIDRMA for the conduct of GPS Monitoring Unit (GMU) monitoring for the identified operators' aircraft.

2) <u>Medium and Long Term (2014 – 2020) :</u>

- MIDRMA continue to conduct GMU monitoring for identified operators' aircraft, as required.

- the use of the Bahraini and Omani Multi-lateration-based Height Monitoring Units (HMUs), or any other HMU that becomes available in the MID Region, as a means of conducting height-keeping monitoring; and

- the use of a MID Region HMU infrastructure as the main mean of height-keeping monitoring in the Region.

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