



Agenda Item 1: Follow-up to the Conclusions of GREPECAS, MR/2 and ALLPRIG/5 Meetings on the integration/interconnection of the VSAT MEVA II and REDDIG networks

**FOLLOW-UP TO THE CONCLUSIONS RELATED TO THE
INTEGRATION/INTERCONNECTION/INTEROPERABILITY OF THE VSAT MEVA II AND
REDDIG NETWORKS**

(Presented by the Secretariat)

SUMMARY

This working paper presents an analysis of the GREPECAS Conclusions follow-up, as well as to the MR/2 and ALLPIRG/5 Meetings related to the integration, interconnection and interoperability of the VSAT MEVA II and REDDIG networks.

References:

- Report on the MEVA II / REDDIG Coordination Meeting, held in Lima, from 20 to 22 March 2006.
- Report of the MEVA II / REDDIG Interconnection Task Force Meeting. (Mexico City, Mexico, 3 – 5 May 2006).

1. Introduction

1.1 The GREPECAS/10 Meeting, through its Conclusion 10/27, adopted a preliminary material on interconnection of aeronautical communication digital networks. Also, through Conclusion 10/28 indicated the need for capacity provision for the massive exchange of information through digital aeronautical communication networks.

1.2 The GREPECAS/12 Meeting, highlighted the importance of continuing with efforts to achieve homogeneous inter-connection and inter-operability among regional and inter-regional digital communications networks in the CAR/SAM Regions, taking into account current and future voice and data communications requirements, therefore formulated Conclusion 12/39 – *Additional Inter-Connection Points for Regional and Inter-Regional Digital Networks*.

1.3 The GREPECAS/13 Meeting formulated Conclusion 13/70 (*Establishment of Agreements to achieve the MEVA II – REDDIG interconnection/interoperation*).

1.4 The MEVA II / REDDIG Interconnection Task Force Meeting, held in Mexico City from 3 to 5 May 2006, among other aspects followed-up the three Conclusions related to the integration/interconnection of the VSAT MEVA II and REDDIG networks formulated by the MEVA II REDDIG Coordination Meeting, held in Lima, Peru from 20 to 22 March 2006. The results of the work carried out by the mentioned meeting are presented in **Appendix A** to this working paper.

1.5 Also, the mentioned Meeting reviewed the Conclusion 5/16 - *Implementation of very small aperture terminals (VSATs)*, as well as Conclusion 5/17 - *Provisions for digital communication networks*, which were formulated by the Fifth Meeting of the ALLPIRG/Advisory Group (ALLPIRG/5) held in ICAO Headquarters, Montreal Canada from 23 to 14 March 2006, related to the issues associated to the VSAT networks implementation. **Appendix B** to this paper presents the texts of these Conclusions.

2. Discussion

2.1 The Meeting is invited to review the work carried out by the Task Force in respect to the follow-up of the conclusions related to the development, integration, interconnection and interoperability of the VSAT networks formulated by the Second MEVA II / REDDIG Coordination Meeting shown in Appendix A to this paper. Additionally, the Meeting should note the conclusions related to the VSAT networks which were formulated by the ALLPIRG/5 Meeting presented as Appendix B.

2.2 Also, the Meeting should follow-up the conclusions formulated by GREPECAS related to this matter. To facilitate this task, **Appendix C** to this paper presents the texts and an analysis of the GREPECAS conclusions follow-up.

3. Suggested action

3.1 The Meeting is invited to:

- a) take note of the information contained in this working paper;
- b) based in Appendix A to this note, review the follow-up status of the conclusions formulated by the Second MEVA II / REDDIG Coordination Meeting;
- c) take note of the Conclusions formulated by the ALLPIRG/5 meeting presented in Appendix B to this paper; and
- d) review the follow-up status of the conclusions formulated by GREPECAS, considering Appendix C to this working paper.

APPENDIX A

FOLLOW UP TO THE CONCLUSIONS OF THE MEVA II / REDDIG COORDINATION MEETING

CONCLUSION	ACTION FOR	REMARKS AND FOLLOW-UP	STATUS/TARGET DATE
<p>CONCLUSION 2/1 - IMPLEMENTATION OF COMMUNICATIONS INTEROPERATION REQUIREMENTS AMONG THE CAR, NAM AND SAM REGIONS SUPPORTED BY VSAT NETWORKS</p> <p>That, taking into account current and future communications interoperation requirements among the CAR, NAM and SAM regions, whose summaries are presented in Appendices A and B to this part of the Report, and taking advantage of the hemispheric coverage of the satellites available, CAR/SAM States, Territories and International Organizations should implement the mentioned requirements through a simple MEVA II and REDDIG VSAT digital network integration/interconnection solution, to provide high performance at low cost and avoid the use of multiple VSAT networks.</p>	States, Territories and International Organizations	Considering this Conclusion and Conclusion 5/16 of the ALLPIRG/5 Meeting, efforts should continue aimed at integrating the MEVA II and REDDIG networks simply with an operational control (centralized).	Valid / Feb. 2007
<p>CONCLUSION 2/2 - STUDY OF OPTIONS 1 AND 2 ON INTEGRATION/INTERCONNECTION AND INTEROPERABILITY SOLUTIONS</p> <p>That, the members of MEVA II and REDDIG networks, with the aim of broadening studies regarding implementation of either Options 1 or 2 described in this part of the Report, for the integration/interconnection and interoperability between MEVA II and REDDIG networks:</p> <p>a) establish a Task Force on Interconnection of MEVA II and REDDIG Networks composed by the following States, International Organization and enterprise: Argentina, Brazil, Colombia, United States, Venezuela, COCESNA, Americom Government Services (AGS), and the REDDIG Administrator, under the coordination of ICAO, to mainly analyze aspects related with control and technical-operational management, financial, security, technical-operational and other institutional aspects;</p>	MEVA II and REDDIG Members and Task Force	This MEVA II / REDDIG Interconnection Task Force Meeting should perform its tasks in accordance with this Conclusion.	Valid / May 2006

CONCLUSION	ACTION FOR	REMARKS AND FOLLOW-UP	STATUS/ TARGET DATE
b) propose the preliminary text of the Memorandum of Understanding presented in Appendix 3D to this part of the report; c) hold a meeting of the Task Force in the ICAO NACC Regional Office in Mexico, tentatively from 3 to 5 May 2006; and d) distribute the results of the mentioned Task Force meeting to the MEVA II and REDDIG parties involved, through the corresponding ICAO NACC and SAM Regional Offices.			
<p>CONCLUSION 2/3 - ANALYSIS OF INSTITUTIONAL ARRANGEMENTS PROPOSED FOR AN INTEGRATION/INTERCONNECTION OF MEVA II AND REDDIG VSAT NETWORKS</p> <p>That, the Task Force created under Agenda Item 3 of this Meeting, as part of its work, takes into account the institutional arrangements:</p> <p>a) established for MEVA II and REDDIG networks, whose summaries are being presented in Appendices A and B to this part of the Report, and</p> <p>b) proposed for the integration/interconnection of MEVA II and REDDIG networks presented in Appendix C to this part of the Report.</p>	MEVA II / REDDIG Task - Force	This MEVA II / REDDIG Interconnection Task Force Meeting should propose institutional arrangements for the integration/interconnection of the MEVA II / REDDIG networks in accordance with this Conclusion.	Valid / May 2006

APPENDIX B

RELEVANT CONCLUSIONS OF THE ALLPRIG/5 MEETING

Conclusion 5/16: – Implementation of very small aperture terminals (VSATs)

That PIRGs:

- a) discourage the proliferation of VSAT networks where one/some of the existing ones can be expanded to serve the new areas of interest;
- b) work towards integrated regional/interregional digital communication networks with a single (centralized) operational control and preferably based on the Internet Protocol (IP); and
- c) give due consideration to managed network services (e.g. a virtual private network (VPN)), subject to availability and cost-effectiveness.

Conclusion 5/17: – Provisions for digital communication networks

That ICAO:

- a) expedite the development of provisions relating to the use of the Internet Protocol Suite (IPS) in the aeronautical telecommunication infrastructure; and
- b) initiate the development of provisions governing the end-to-end performance of digital communication networks, irrespective of the technologies and protocols utilized therein.

APPENDIX C

FOLLOW-UP TO THE RELEVANT CONCLUSIONS OF GREPECAS

CONCLUSION	ACTION FOR	COMMENTS AND FOLLOW-UP	STATUS/ DATE TARGET
<p>CONCLUSIÓN 10/27 - PRELIMINARY MATERIAL ON INTERCONNECTION OF AERONAUTICAL COMMUNICATION DIGITAL NETWORKS</p> <p>That States/International Organisations take into account the guidance material to begin aeronautical communication digital network interconnectivity and interoperability studies set out in Appendix M.</p>	States, Territories and International Organizations	It is considered that the States, Territories and International Organizations have taken note of this Conclusion.	Completed
<p>CONCLUSION 10/28 - CAPACITY PROVISION FOR THE MASSIVE EXCHANGE OF INFORMATION THROUGH DIGITAL AERONAUTICAL COMMUNICATION NETWORKS</p> <p>That States/International Organizations, when promoting the development, implementing or enhancing private digital voice and data aeronautical communication networks, take into account the advantages that may be obtained by implementing multi-services/multi-protocol networks of modern and adequate available technology and planning the inclusion of the new services resulting from CNS/ATM implementation in the CAR/SAM Regions with massive information transmission capacity, giving access priority to that information related with security in support of multiple aeronautical applications, including those corresponding to CNS/ATM systems.</p>	States, Territories and International Organizations	It is considered that the States, Territories and International Organizations have taken note of this Conclusion.	Completed

CONCLUSION	ACTION FOR	COMMENTS AND FOLLOW-UP	STATUS/ DATE TARGET
<p>CONCLUSIÓN 12/39 - ADDITIONAL INTER-CONNECTION POINTS FOR REGIONAL AND INTER-REGIONAL DIGITAL NETWORKS</p> <p>That, CAR/SAM States/Territories/International Organizations, with the aim of achieving a digital platform that provides homogeneous inter-operability in the CAR/SAM Regions among Regional and Inter-Regional digital communications network, consider implementing the following additional inter-connection points:</p> <p>a) <i>Merida, Mexico.</i> Implementation of a MEVA II node at this site, which would interconnect the Mexican network with MEVA II, CAMSAT, and the NAM networks;</p> <p>b) <i>Barranquilla or Bogotá, Colombia.</i> That a proposal be made to implement a MEVA II node, which would facilitate the interconnection and interoperability of the REDDIG and the Colombian network with MEVA II, CAMSAT and the NAM networks;</p> <p>c) <i>Buenos Aires, Argentina.</i> Implementation of a CAFSAT node, meaning another REDDIG interconnection point with CAFSAT. In addition, a ground digital link would be implemented connecting the Buenos Aires and Recife CAFSAT nodes, to be a back-up to the aforementioned network interconnections; and</p> <p>d) other points of interconnection that might be considered between the MEVA II and the REDDIG networks, and between these and other networks. Among these, there is a need to study the implementation of another interconnection point of the E-CAR network with neighbouring networks.</p>	States, Territories and International Organizations	The Council invited the corresponding States to establish the additional nodes indicated to improve the interoperability. Argentina has implemented its CAFSAT node.	Valid 2006

CONCLUSION	ACTION FOR	COMMENTS AND FOLLOW-UP	STATUS/ DATE TARGET
<p>CONCLUSIÓN 13/70 ESTABLISHMENT OF AGREEMENTS TO ACHIEVE THE MEVA II – REDDIG INTERCONNECTION/INTEROPERATION</p> <p>That, the MEVA II and REDDIG Networks Team Management Groups carry out a coordination meeting before 31 March 2006, coordinated through the NACC and SAM Regional Offices, aimed at studying and proposing the establishment of technical and institutional agreements for MEVA II and REDDIG interconnection/interoperation taking into consideration the feasibility analysis of the following alternatives:</p> <p>a) establishment of a Memorandum of Understanding (MOU) to achieve homogeneous interoperation between the indicated digital networks, taking into consideration the objectives and principles specified in Appendix AR to this part of the Report;</p> <p>b) analyze the convenience of establishing the following additional interconnection/interoperations:</p> <ul style="list-style-type: none"> • A REDDIG node in Tegucigalpa (COCESNA), Honduras. • A dedicated ground digital circuit between a MEVA II node (Honduras or San Juan, Puerto Rico) and a REDDIG node (Bogotá or Maiquetía). • A MEVA II node in Maiquetía (Venezuela). • Other possible solutions. 		<p>The Conclusion is in a follow-up process.</p> <p>The Second MEVA II / REDDIG Coordination Meeting held in Lima, Peru from 20 to 22 March 2006.</p> <p>This Third Meeting also continues this Conclusion's follow-up.</p>	Valid 2007
