



Agenda item 3: Analysis of the administrative/institutional actions to implement the recommended option for the integration/interconnection of the MEVA II and REDDIG networks

ADMINISTRATIVE/INSTITUTIONAL ARRANGEMENTS PROPOSED FOR THE INTEGRATION/INTERCONNECTION OF THE VSAT MEVA II AND REDDIG NETWORKS

(Presented by the Secretariat)

SUMMARY
This working paper presents for the consideration of the Meeting the proposals for the administrative/institutional arrangements for the implementation of the options to integrate or interconnect the VSAT MEVA II and REDDIG networks that have been developed by the MR/2 and MR TF/1 Meetings.
References: <ul style="list-style-type: none">• Report of the MEVA II / REDDIG Coordination Meeting (Lima, Peru, 20 to 22 March 2006)• Report of the MEVA II/ REDDIG Interconnection Task Force Meeting (Mexico City, Mexico, 3 to 5 May 2006).

1. Introduction

1.1 Based on the Report of the Second MEVA II / REDDIG Coordination Meeting (MR/2), held in Lima, from 20 to 22 March 2006; and on the Report of the MEVA II/ REDDIG Interconnection Task Force Meeting (MR TF/1), held in Mexico City from 3 to 5 May 2006; this working paper describes the proposals for the administrative/institutional arrangements for the implementation of the options to integrate or interconnect the MEVA II and REDDIG networks, which are described in Agenda Item 3 of the MR TF/1 Meeting.

2. Proposal for the MEVA II/REDDIG administrative/institutional arrangements

2.1 The MR TF/1 Meeting reviewed the administrative arrangements proposed in order to implement the recommended options of a total homogeneous interconnection / interoperability or partially homogeneous interconnection / interoperability, including the establishment of a Memorandum of Understanding and administrative arrangements and other institutional aspects necessary for these MEVA II and REDDIG implementations. The arrangements considered by the Task Force for the options studied are the following:

Institutional arrangement for the integration of homogeneous VSAT MEVA II and REDDIG networks implementation

2.2 The Task Force Meeting noted the proposal for the adoption of two types of institutional arrangements to achieve the implementation of an integrated-homogeneous network resulting from the integration of VSAT MEVA II and REDDIG networks, which would be implemented in two stages described as follows:

- a) Initial Stage: Elaboration of a Memorandum of Understanding (MoU) between REDDIG and MEVA II States, Territories and International Organization, which would be applied during the first 5 years of the MEVA II Service Provider contracts with the network Members, with the purpose of establishing the different levels of the “Integrated American Network” organization, resulting from the MEVA II / REDDIG integration, as well as the involved responsibilities, maintaining the actual MEVA II and REDDIG service providers.
- b) Consolidation Stage: Will consist in the establishment of a Multiregional Organization (OMR), composed by the network’s States, Territories and International Organization, which would hire the operation and outsourcing services of the Telecommunications Integrated Network to one service provider to be agreed.

Applicable arrangements in the Initial Stage

2.3 The MoU would established that States, Territories and International Organization Members of the MEVA II and REDDIG to be at the highest level of the Integrated Network as partners, equal in voice and vote. In addition, given the number of Members involved, a Directive Council should be elected. In this manner, work would be carried out in line with GREPECAS, receiving support from this Regional group with the consequent achievement of objectives to which both, VSAT MEVA II and REDDIG were created.

2.4 The services providers would be at a second level of the Integrated Network, being in this case, the MEVA II Service Provider (AGS) and the REDDIG Administrator, through the Regional project RLA/03/901. The Directive Council would have the option, among other mechanisms to request the ICAO Technical Cooperation Bureau to supervise both providers for the compliance of agreements or other mechanism.

2.5 At the initial stage, both MEVA II and REDDIG Managements will continue with its respective Service Provider, i.e, REDDIG would keep with RLA/03/901 project and MEVA II with AGS during the complete initial stage. Under this regulatory framework, the Meeting also proposed that a joint agreement should be established between AGS and the REDDIG Administrator under ICAO's coordination, as regards to the network control, either through the applications of one of the following alternatives:

- a) One alternation, for a determined period of time, between the main NCC and the alternate NCC.
- b) AGS be the main NCC and the REDDIG be the alternate NCC.
- c) REDDIG be the main NCC and the AGS alternate NCC.

Note: The AGS Representative informed the Meeting that the only option they could support was item b).

2.6 Also, the MR TF/1 Meeting noted that this would be as long as the benefits at least maintain themselves and the costs for the provision of services are equal or less to the current ones for the MEVA II and REDDIG partners. In addition, it is important to take into consideration that the availability of the network is kept for it to have possibility to exchange information between the administrations; in the case of REDDIG, this is ensured through the equipment redundancy and a ground backup network. In the case of MEVA II, the Meeting was informed that the availability is ensured by a specialized service provider which capacity, organization and VSAT networks experience is worldwide recognized.

2.7 Likewise, the alternation referred in pa. 2.5 a) should be complemented through the establishment of a general agreement between AGS and the MEVA II Members, to define responsibilities when the main NCC is REDDIG's. In a similar manner, an addendum to the REDDIG Project Document would be required to define when the main NCC is MEVA II.

2.8 During the analysis of alternatives a), b) and c) expressed in paragraph 2.5, resulting from the Meeting's request, AGS stated the following comments:

Alternative a): Means that AGS and REDDIG overtake the network's management main and alternate responsibilities on or for a pre-determined period. On this AGS declared:

1. AGS cannot overtake or give in the MEVA II administrative or operational supervision due to its SLA. The SLA indicated in the MEVA II RFP, as it is contracted between AGS and the Members stipulates penalties or credits in case that a network or a node remains out of service. This means that AGS should maintain the network and/or its operation management, generally called Network Control Centre, which consists in maintaining the Sun Linkway work stations (main and alternate), the MRT, the AMRT and the NMS to access these systems and the remote nodes ensuring that the general availability is kept.
2. The Network Control Centre or the Network Management Centre (NCC/NMC) for AGS consist also in solving the personnel management and the problems or service interruptions reports. The timely solution by the personnel also affects the SLA.

Alternative b): Means the Network Control Centre or the Network Management Centre (NCC/NMC) main in AGS and the REDDIG alternate in NCC. In this respect AGS declared:

1. From a supportive point of view this is possible. This means that REDDIG could be the alternate NCC/NMC and assist the REDDIG nodes problems and only in emergency situations take control of the network operations.
2. For AGS the Network Control Centre or the Network Management Centre (NCC/NMC) consist in personnel management and to solve the failure reports or “service outage”. The timely solution of failures from the personnel also impacts the SLA. The REDDIG Members could have more knowledge and control on the configuration and operation of its nodes, since they own them and AGS will not be responsible of the availability of those equipments.

Alternative c): Means that the main NCC in REDDIG and the alternate in AGS. In this respect AGS declared:

1. This is not an option for the same reason discussed in Alternative a), paragraphs 1 and 2.

2.9 Also, the Meeting noted the information presented by the United States, which explained that the safety requirements requested by the FAA had to be complied by the MEVA II Service Provider. Additionally, the Meeting noted that if the REDDIG Administration assumes certain responsibilities in respect to the MEVA II network, it would also have to comply with the FAA requirements for this network.

Consolidation Stage applicable arrangements

2.10 The Task Force Meeting noted that once the MEVA II first contract with AGS fixed for a 5 year period is finalized, it would pass to the Consolidation Stage consisting in the creation of a Multiregional Organization (OMR), to hire the telecommunications integrated network operation services and “outsourcing” to only one services provider entity. Likewise, the OMR would coordinate the planning and development of aeronautical communication services in the regions, as well as the respective implementations and the telecommunication integrated network as the platform.

2.11 Also, during this consolidation stage, the OMR would supervise the compliance of the “Service Level Agreement” (SLA) with the services provider entity.

2.12 With respect to the conditions described in the two above-mentioned paragraphs, the Task Force Meeting concurred that this integration expected for the consolidation stage is the goal to be achieved as soon as possible; this would be the VSAT MEVA II and REDDIG networks integration in order to achieve a communications platform totally integrated which facilitates the AFS communications implementation, as well as the required performance levels required for the ICAO air navigation systems/services for the CAR, NAM and SAM regions.

Administrative arrangements for the implementation of interconnection/interoperability partially homogeneous options of the VSAT MEVA II and REDDIG networks

2.13 Based in WP/04 paragraph 4, the Meeting analyzed the following aspects of the three options related to supervision and control, space segment control, maintenance and administration of spare parts of the technical configuration for a partially homogeneous interconnection:

- Option A: Addition of MEVA II Linkway MODEMs in REDDIG node involved
- Option B: Addition of REDDIG Linkway MODEMs in MEVA II node involved
- Option C: Addition of mixed Linkway MODEMs

2.14 As per the results of the cost-benefit analysis of the partially homogeneous interconnection/interoperability options contained in the Report on Agenda Item 2, the meeting agreed that between the three options presented, Option C presented most benefits; therefore, the Meeting focused its attention to the necessary administrative arrangements analysis for Option C's implementation, described in **Appendix A** to this working paper. The administrative arrangements proposed for Options A and B are shown in **Appendix B** to this paper.

General considerations on the administrative arrangements for the partially homogeneous interconnection solution.

2.15 The Meeting expressed the general considerations in order to solve the partially homogeneous interconnection as follows:

- a) Agreed that for this option's implementation would only be required the described administrative arrangements, without the need to apply other institutional arrangements.
- b) The implementation of this option would not involve substantial modifications to the technical and operational management of the MEVA II and REDDIG networks and both networks control.
- c) The partially homogeneous interconnection solution would contribute to fulfil all the NAM/CAR/SAM AFS inter-regional requirements, nevertheless, due to its partially solution nature, initially it would not represent a total integration solution. Therefore this solution should be provisional towards achieving the total integration of the two networks.
- d) The safety requirements established by FAA for MEVA II should also be fulfilled by the REDDIG Administration as it is with MEVA II.
- e) The application of administrative arrangements described for this solution would need the application of operational administrative procedures, so that the availability of requirements on both networks has no unfavourable impact.

2.16 As a result of the review of this item, the Meeting formulated the following Draft Conclusion:

DRAFT**CONCLUSION 1/3:****ACTION PROPOSALS FOR THE ADOPTION OF AN INTEGRATION/INTERCONNECTION AND INTER-OPERABILITY MODALITY OF THE MEVA II AND REDDIG NETWORKS.**

That, based on the results of technical-operational and cost-benefit analysis, the options mentioned in conclusions 1/1 and 1/2, are feasible and would require that:

- a) Members of States/Territories/International Organization inform their requirements for the mentioned options;*
- b) the MEVA II Service Provider analyze in regards to the costs, operational and administrative arrangements analysis for the mentioned solutions;*
- c) the REDDIG Administrator prepares a detailed application of action b) detailed above;*
- d) for each adopted recommendation prepare an appropriate MoU; and*
- e) actions a), b) and c) expressed in the above-mentioned paragraphs are comply before 9 June 2006.*

Note: *The Meeting should update the date indicated in item e) of this Draft Conclusion.*

3. Discussion

3.1 The Meeting should review the proposals for the administrative/institutional arrangements for the integration or interconnection of the VSAT MEVA II and REDDIG networks developed by the MR TF/1 Meeting, that are presented in section 2 of this working paper. Also, taking into account the results of the analysis made under Agenda Item 2, the Meeting should agree to make the necessary arrangements for the aforementioned purpose.

4. Suggested action

4.1 The Meeting is invited to:

- a) take note of the information contained in this working paper;
- b) review the proposals for the administrative/institutional arrangements for the integration/interconnection of the VSAT MEVA II and REDDIG networks presented in section 2, including Appendixes A and B of this paper;
- c) based on the results of the revisions described in item b) above and on the results of the analysis to Agenda Item 1, the Meeting should adopt the administrative/institutional arrangements for the implementation of the integration/interconnection of the VSAT MEVA II and REDDIG networks; and
- d) consider and adopt other actions deemed necessary.

APPENDIX A

ADMINISTRATIVE ARRANGEMENTS FOR THE ADDITION OF MIXED LINKWAY MODEM AND OTHER SPARE PARTS IN THE TWO NETWORK'S NODES

1. This option would represent that in some MEVA II nodes requiring it, a Linkway MODEM and other REDDIG devices would be added and in other REDDIG nodes MEVA II spare parts would be added. The Meeting analyzed the aspects related to the supervision and control, space segment and maintenance arrangements which results are described as follows:

Supervision and control

2. For this configuration, MEVA II MODEM in REDDIG nodes supervision and control will be carried out through MEVA II NCC while REDDIG MODEM supervision and control at MEVA II nodes will be carried out by the REDDIG NCC. All REDDIG MODEMs will be synchronized from the Manaus, Brazil ACC with Ezeiza NCC as alternate, while the MEVA II MODEMs installed in the REDDIG nodes will be synchronized by the Alexandria NCC with Miami NCC as alternate.

Space segment arrangements

3. The carriers, as well as the band width requirement for communications among REDDIG nodes will be the same currently leased with Panamsat. Payment of the space segment to Panamsat will continue being carried out through the ICAO Technical Cooperation, who will be in charge of collecting contributions from each SAM State member of REDDIG.

4. The carriers, as well as the band width requirement for communications among MEVA II nodes will be carried out through the MEVA II provider. MEVA II States will pay for the band width consumption to the MEVA II provider.

5. Band width requirements for communications between REDDIG nodes having MEVA II MODEM (Colombia and Venezuela) would be administrated by the MEVA II service provider. Band width consumption for the mentioned States will be measured by the MEVA II provider, and the respective payment to the provider will be made through the ICAO Technical Cooperation (RLA/03/901 Project).

6. Band width requirements for communications between MEVA II nodes having REDDIG MODEM (COCESNA and Puerto Rico) would be administrated by the REDDIG. Band width consumption for the mentioned States will be measured by the REDDIG Administrator, and the respective payment to the provider will be made through the ICAO Technical Cooperation (RLA/03/901 Project).

Maintenance

7. The additional equipment to be installed at each of the REDDIG nodes with communications requirements with MEVA II nodes, will be maintained by the respective REDDIG States, under the coordination of the REDDIG Administrator. The additional equipment to be installed in the REDDIG nodes would be purchased by the REDDIG members.

8. Upon failure in a MEVA II MODEM in a associated REDDIG node, the person in charge of the REDDIG node maintenance will inform of the event to the REDDIG Administrator, who will coordinate with the MEVA II Administrator to carry out appropriate procedures. Also, if the MEVA II Administrator detects a failure in a REDDIG node where a MEVA II MODEM is installed, he will inform so to the REDDIG Administrator for the carrying out of respective procedures for the repair. As possible, there will be no direct contact between the REDDIG node having a MEVA II MODEM installed there, with the MEVA II Administrator.

9. The additional equipment to be installed in each MEVA II nodes with REDDIG nodes communications requirements, would be maintained by the MEVA II service provider. The additional equipment installed in the MEVA II nodes would be purchased by the MEVA II members (States, Territories, International Organization or the service provider AGS).

10. Likewise, upon failure in a REDDIG MODEM, the person in charge of the MEVA II node maintenance will inform of the event to the MEVA II Administrator, who will coordinate with the REDDIG Administrator to carry out appropriate procedures. Also, if the REDDIG Administrator detects a failure in a MEVA II node where a REDDIG MODEM is installed, he will inform so to the MEVA II Administrator for the carrying out of respective procedures for the repair. As possible, there will be no direct contact between the MEVA II node having a REDDIG MODEM installed there, with the REDDIG Administrator.

Spare parts management

11. The spare parts for the additional equipment to be installed at the REDDIG nodes with MEVA II MODEM requirements, will be purchased by REDDIG and will form part of the spare parts lot existing in REDDIG.

12. Spares for the additional equipment to be installed at MEVA II nodes with REDDIG MODEM requirements shall be purchased from the MEVA II

APPENDIX B

ADMINISTRATIVE ARRANGEMENTS FOR OPTIONS A AND B

OPTION A

Supervision and control

The MEVA II MODEM supervision and control at REDDIG nodes will be carried out by the MEVA II NCC.

The MEVA II MODEMs installed at REDDIG nodes would be synchronized from the Alexandria (Virginia) NCC with Miami (Florida) NCC.

The communications between REDDIG and MEVA II nodes and vice versa will be controlled by the MEVA II NCC.

Space segment arrangements

The carriers, as well as the bandwidth between MEVA II nodes will be in charge by the MEVA II service provider.

The REDDIG States with communications requirements with MEVA II will only pay consumptions measured by the MEVA II service provider to the ICAO Technical Cooperation, who will be in charge of paying said amount to the MEVA II service provider.

Maintenance

The additional equipment to be installed in each REDDIG nodes with communication requirements with MEVA II nodes, MEVA will be purchased and maintained by the REDDIG corresponding States.

Upon failure in a MEVA II MODEM in REDDIG node, the person in charge of node maintenance will inform of the event to the REDDIG Administrator, who will coordinate with the MEVA II Administrator to carry out appropriate procedures.

Also, if the MEVA II Administrator detects a failure in a REDDIG node where a MEVA II MODEM is installed, he will inform so to the REDDIG Administrator for the carrying out of respective procedures for the repair.

As possible, there will be no direct contact between the REDDIG node having a MEVA II MODEM installed with the MEVA Administrator.

Spare parts management

The spare parts for the additional equipment to be installed at the REDDIG nodes with MEVA II MODEM requirements will be purchased by REDDIG and will form part of the spare parts lot existing in REDDIG.

OPTION B

Supervision and control

The REDDIG MODEM supervision and control at MEVA II nodes will be carried out by the REDDIG NCC.

The REDDIG MODEMs installed in the MEVA II nodes will be synchronized by the NCC installed in Manaus, with Ezeiza NCC as alternate.

The communications between the REDDIG and MEVA II nodes and vice versa will be carried out by the REDDIG NCC.

Space segment arrangements

The carriers, as well as the communications bandwidth between MEVA II and REDDIG nodes will be administrated by the REDDIG service provider.

MEVA II members with communications requirements with REDDIG nodes will pay their respective consumptions measured by the REDDIG Administrator, to the ICAO Technical Cooperation, (Project RLA/03/901).

Maintenance

The additional equipment to be installed in each MEVA II node with communications requirements with REDDIG nodes will be maintained by the MEVA II provider.

Upon failure in a REDDIG MODEM in the MEVA II node, the person in charge of the node maintenance will inform of the event to the MEVA II Administrator, who will coordinate with the REDDIG Administrator to carry out appropriate procedures. Also, if the REDDIG Administrator detects a failure in a MEVA II node where a REDDIG MODEM is installed, he will inform so to the MEVA II Administrator for the carrying out of respective procedures for the repair.

As possible, there will be no direct contact between the MEVA II node having a REDDIG MODEM installed there, with the REDDIG Administrator.

Spare parts management

The spare parts for the additional equipment to be installed at the MEVA II nodes with REDDIG MODEM requirements will be purchased by MEVA II and will form part of the spare parts lot existing in MEVA II.