



ICAO

International Civil Aviation Organization  
North American, Central American and Caribbean Office

# Thirty Third MEVA Technical Management Group Meeting

**(MEVA/TMG/33)**

## Final Report

Willemstad, Curaçao, 29 to 31 May 2018

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## HISTORICAL

### **ii.1 Place and Date of the Meeting**

The Thirty Third MEVA Technical Management Group Meeting (MEVA/TMG/33) was held at the Renaissance Curacao Resort & Casino in Willemstad, Curaçao, from 29 to 31 May 2018.

### **ii.2 Opening Ceremony**

Ms. Micilia Albertus-Verboom, Director General, Air Navigation Services Provider, Curaçao, wished a productive meeting and the achievement of all the expected objectives.

Mrs. Mayda Avila, Regional Officer, Communications, Navigation and Surveillance of the North American, Central American and Caribbean (NACC) Office of the International Civil Aviation Organization (ICAO) provided opening remarks and thanked Curaçao for hosting the meeting.

Ms. Dulce Roses, MEVA/TMG Coordinator, expressed her satisfaction for the hard work done so far and for the challenges to be faced by the group in the future.

Mr. Hans de Jong, Director General, Curaçao Civil Aviation Authority (CCAA) spoke about the development of the MEVA network since MEVA I to the present, and emphasized the importance of this network for the Region. Mr. Jong, expressed the benefits that the MEVA network provides to the States and invited all participants to work together to improve safety in the region. Mr. Jong welcomed the Meeting to Curaçao and officially opened the Meeting.

### **ii.3 Officers of the Meeting**

The MEVA/TMG/33 Meeting was held with the participation of Ms. Dulce Roses, MEVA TMG Coordinator, Federal Aviation Administration (FAA), United States, and Mr. Derrick Grant, CNS Engineer, Jamaica Civil Aviation Authority and MEVA III Task Force Rapporteur. Mrs. Dulce Roses chaired the meeting and Ms. Mayda Avila, RO/CNS served as Secretary of the meeting.

### **ii.4 Working Languages**

The working language of the Meeting was English and the working papers, information papers and report of the meeting were available to participants in said language.

### **ii.5 Schedule and Working Arrangements**

It was agreed that the working hours for the sessions of the meeting would be from 09:00 to 16:30 hours daily with adequate breaks. Ad hoc Groups were created during the Meeting to do further work on specific items of the Agenda.

## ii.6            **Agenda**

**Agenda Item 1:            Approval of Meeting Agenda, Work Method and Schedule**

**Agenda Item 2:            Operation and Performance of the MEVA III Network**

- 2.1    MEVA Network operation and performance: 05/2017-04/2018
- 2.2    Improvements to MEVA III node performance
- 2.3    MEVA III monitoring and reporting
- 2.4    Aeronautical Message Handling System (AMHS) connections
- 2.5    Surveillance data sharing

**Agenda Item 3:            New Challengers (Services, Aeronautical Information Management (AIM), Air Traffic Flow Management (ATFM), System Wide Information Management (SWIM) and Automatic Dependent Surveillance – Broadcast (ADS- B) Satellite)**

- 3.1    Update the different States on SWIM, AIM and ATFM
- 3.2    Strategy to face these new challenges
- 3.3    Proposal of an Action Plan for the next two years

**Agenda Item 4:            ICAO Position for the International Telecommunication Union World Radiocommunication Conference 2019 (ITU WRC-19)**

- 4.1    Follow-up for the different States
- 4.2    New challenges
- 4.3    Activities for 2018 and 2019

**Agenda Item 5:            Administration Activities**

- 5.1    Review of the new connection procedures
- 5.2    Third party service procedure
- 5.3    Invoice procedures

**Agenda Item 6:            Other Business**

## ii.7            **Attendance**

The Meeting was attended by 9 States/Territories from the NAM/CAR Regions, and 3 International Organizations, totalling 31 delegates as indicated in the list of participants.

**ii.8 List of Conclusions and Decisions**

The Meeting recorded its activities as Conclusions and Decisions as follows:

**CONCLUSIONS:** Activities approved by the MEVA Members

Number	Title	Page
33/1	<b>IMPROVE MAINTENANCE</b>	2-2
33/2	<b>GENERAL PROCEDURE TO REQUEST A NEW CHANNEL</b>	2-2
33/3	<b>INCREASE SWITCHED CIRCUIT</b>	2-3
33/4	<b>MEVA-III DISASTER RECOVERY</b>	2-4
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33/10	<b>INVOICES PAYMENT PROCEDURE</b>	5-2
33/13	<b>NEW ROTATION SCHEDULE FOR 2020-2024</b>	6-2

**DECISIONS:** Activities agreed by the MEVA Members

Number	Title	Page
33/11	<b>THIRD PARTY PROCEDURE</b>	5-3
33/12	<b>UPDATE OF MEVA TMG TERMS OF REFERENCE (ToRs)</b>	6-1

An executive summary of conclusions/decisions is presented in **Appendix A** to this report.

**ii.9 List of Working and Information Papers and Presentations**

**Refer to the Meeting web page:**

<https://www.icao.int/NACC/Pages/meetings-2018-tmg33.aspx>

***The final list of documentation will be included in the final version of the Report.***

**WORKING PAPERS**

Number	Agenda Item	Title	Date	Prepared and Presented by
WP/01	1	Provisional Agenda, Work Method and Schedule of the Thirty Third MEVA Technical Management Group Meeting (MEVA/TMG/33)	24/05/18 Rev. 1	Secretariat
WP/02	1	Review of Conclusions and Actions from previous MEVA/TMG Meetings and from NACC/WG Meetings	24/04/18	Secretariat

<b>WORKING PAPERS</b>				
<b>Number</b>	<b>Agenda Item</b>	<b>Title</b>	<b>Date</b>	<b>Prepared and Presented by</b>
WP/03	3.3	New Communications needs	04/05/18	Secretariat
WP/04	4.3	ICAO WRC-19 Position Update	04/05/15	Secretariat
WP/05	2.4	Progress with AMHS Transition and legacy X.25 AFTN support	15/04/18	United States
WP/06	2.1	Statistics study for the voice switched lines and recommendations	11/05/18	Cuba
WP/07	6	MEVA III Technical Management Group Terms of Reference (ToRs)	08/05/18	TMG Coordinator
WP/08	2.2 2.3	MEVA-III Disaster Recovery Recommendation MEVA III Flyaway Antenna	15/04/18	United States
WP/09	3.2	AIM, ATFM, SWIM Updates	16/05/18	United States
WP/10	2.5	Data Radar sharing between Cuba and Jamaica	21/05/18	Cuba
WP/11	4.1	Report on participation in the ITU Regional Workshop on WRC-19 for Region 2	21/05/18	Cuba
WP/12	5.2	Third Parties Services using MEVA Communications Network	15/04/2018	TMG Coordinator
WP/13	6	MEVA Technical Management Group (TMG) Meeting Rotational Schedule	22/05/2018	Secretariat
WP/14	4.1	Update from the different States	29/05/2018	Task Force Rapporteur
WP/15	3.1	Update different States SWIM, AIM and ATFM	29/05/18	Task Force Rapporteur

<b>INFORMATION PAPERS</b>				
<b>Number</b>	<b>Agenda Item</b>	<b>Title</b>	<b>Date</b>	<b>Prepared and Presented by</b>
IP/01 Rev. 1	1	List of Working, Information Papers and Presentations	29/05/2018	Secretariat
IP/02	2.5	Radar Data and VHF communications provision from COCESNA to JAMAICA	15/05/2018	COCESNA

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<b>PRESENTATIONS</b>			
<b>Number</b>	<b>Agenda Item</b>	<b>Title</b>	<b>Presented by</b>
1	2.1	MEVA Network Operation and Performance	Frequentis
2	3.1	MEVA Network capabilities for carrying new services	Frequentis
3	5.1	Contact Information for Administrative Issues	Frequentis
4	5.2	Third party using MEVA networks	Frequentis
5	3.2	Surveillance, Aeronautical Messaging and AIM	Frequentis
6	5.2	Space-based ADS-B Progress Update	Aireon



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**Agenda Item 1      Approval of Meeting Agenda, Work Method and Schedule  
Review of Conclusions and Actions from Previous MEVA/TMG Meetings and  
from the Third NAM/CAR Air Navigation Implementation Working Group  
Meeting (ANI/WG/03)**

1.1            Under WP/01, the Meeting approved the provisional agenda, the working method and schedule of the meeting, referring to IP/01 Rev.1 with the list of associated documentation. The approved meeting agenda is presented in the historical section of this report.

***Review of Conclusions and Actions from previous MEVA/TMG Meetings and from NACC/WG Meetings***

1.2            Under WP/02, the Meeting reviewed the valid conclusions of the Fifth North American, Central American and Caribbean Working Group Meeting (NACC/WG/5) related to the MEVA Network and the conclusions from the Thirty first MEVA Technical Management Group Meeting (MEVA/TMG/31). The following were considered as completed:

<b>Conclusions</b>	<b>Status</b>
CONCLUSION MEVA/TMG/32/5    FAULT            REPORTING            AND TROUBLESHOOTING PROCEDURES	<b>Completed</b> All MEVA Members indicated that the procedure is working properly.
CONCLUSION MEVA TMG/32/6    MEVA SWITCHING SYSTEM LINE INCREASE	<b>Completed</b> A seventh switched voice circuit was added and performance of the switched lines has been improved as requested.
CONCLUSION MEVA TMG/32/8    IMPLEMENTATION OF THIRD PARTY SERVICES	<b>Completed</b> Procedure was developed by the FAA and ICAO and sent to the MEVA members for comments. (Procedure included in Appendix A of WP/12)
CONCLUSION MEVA TMG/32/9    INTEGRATION OF BRITISH VIRGIN ISLANDS ON MEVA	<b>Completed</b> State Letter Ref: E.OSG - NACC67278 dated 28 June 2017 was sent to British Virgin Islands.
CONCLUSION MEVA TMG/32/10    REPLACEMENT OF AFTN WITH AMHS LINES	<b>Completed</b> Conclusion completed by the MEVA Service Provider.
CONCLUSION ANI/WG/3/3 - PROTECTION AND RECOGNITION OF C BAND SPECTRUM USAGE	<b>Superseded</b> According to the conclusion of the MEVA/TMG/33/9 – <i>Protection of the frequencies needed for aviation.</i>

MEVA/TMG/33  
Report on Agenda Item 1

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<b>Conclusions</b>	<b>Status</b>
CONCLUSION TMG/31/6 - FOLLOWUP TO IMPLEMENTATION OF MEVA III - REDDIG II INTERCONNECTION CIRCUIT REQUIREMENTS	<b>Completed</b> A new IP connection was established. (a) PAD equipment issues were resolved; (b) States continue with cooperation; (c) superseded by an alternate link and; (d) progress reported as directed.
CONCLUSION TMG/31/7 - E/CAR AFS - MEVA III NETWORK INTERCONNECTION TROUBLESHOOTING MANAGEMENT AND COORDINATION PROCEDURE	<b>Completed</b> A trouble shooting procedure has been developed by Trinidad and Tobago and approved by MEVA Members.  International Standard Operations Procedure Available at: <a href="https://www.icao.int/NACC/Documents/Meetings/2018/TMG33/MEVATMG33-IntSOP.pdf">https://www.icao.int/NACC/Documents/Meetings/2018/TMG33/MEVATMG33-IntSOP.pdf</a>
CONCLUSION TMG/31/9 - ACTION PLAN AND AGREEMENT FOR MIGRATION OF AFTN LINES TO AMHS LINES	<b>Completed</b> Conclusion completed by the MEVA Service Provider.
CONCLUSION TMG/31/10 - IMPLEMENTATION OF NEW MEVA III CIRCUITS	<b>Completed</b> Conclusion completed by the MEVA Members.
CONCLUSION TMG/31/12 - REVIEW OF CAR/SAM eANP VOLUME II CNS REQUIREMENTS	<b>Superseded</b> New version of the RPBANIP is under development.
CONCLUSION NACC/WG/5/23 ACTIVE SUPPORT FROM STATES FOR ICAO ITU WRC-2019 POSITION	<b>Superseded</b> Superseded with Conclusion MEVA TMG/33/8 - Protection of the Frequencies needed for Aviation.
CONCLUSION MEVA TMG/32/1 INVOICE DETAILS	<b>Completed</b> Conclusion completed by the MEVA Service Provider.
CONCLUSION MEVA TMG/32/7 MEVA III-REDDIG II NEW INTERCONNECTIONS	<b>Completed.</b> All the activities were completed by the MEVA Members
CONCLUSION MEVA TMG/32/12 DECOMMISSIONING OF X.25 NETWORK IN UNITED STATES	<b>Superseded</b> Superseded with Conclusion MEVA TMG/33/8 Protection of the Frequencies needed for Aviation.
CONCLUSION ANI/WG/3/6 - AMHS IMPLEMENTATION PROCESS IN THE CAR REGION	<b>Completed</b> Provider was updated in MEVA/TMG/33 by United States
CONCLUSION TMG/31/3 - OPERATIONAL USE OF MEVA III CIRCUITS	<b>Completed</b> All the activities were completed by the MEVA Members.
CONCLUSION TMG/31/4 - COMPLETION OF MEVA III NODE INFRASTRUCTURE IN MIAMI	<b>Completed</b> Provider was updated in MEVA/TMG/33 by United States.

1.3            **Appendix B** presents the follow-up made to the conclusions that are not completed.

**Agenda Item 2                      Operation and Performance of the MEVA III Network**

**2.1                      MEVA Network operation and performance: 05/2017-04/2018**

2.1.1                      Under P/01, the MEVA Service Provider presented the operation of the network during the period 2017-2018, the results of maintenance visits, the weaknesses identified and an overall conclusion based on maintenance and monitoring of the network.

2.1.2                      From monitoring the network with the new operational circuits, the MEVA Service Provider summarized the increase in required bandwidth and the process of adding space segment portions of 100 kHz.

Upgrade Stage	Upgrade Start	Type of Service	Date of Implementation	Station A	Station B	Nominal Bandwidth	DAMA Factor	Weighted Bandwidth towards Satellite	Coding & FEC	Symbol Rate	TDMA Overhead	Occupied Bandwidth Summary per Stage	Additional Satellite Bandwidth	Occupied Bandwidth Summary	Additional Costs
1	Dec-16	VSD	Q4/2016	San Juan	Curacao	25,20 kbps	1	25,20 kbps	QPSK 6/7	14,70 kHz	15,00%	114,76 kHz	100 kHz		USD 500
1	Dec-16	VSD	Q4/2016	Miami	Cuba	25,20 kbps	1	25,20 kbps	QPSK 6/7	14,70 kHz					
1	Dec-16	AMHS transfer	Q1/2016	Atlanta	St Maarten	108,80 kbps	0,3	32,64 kbps	QPSK 6/7	19,04 kHz					
1	Dec-16	AMHS transfer	Q3/2015	Atlanta	Cuba	108,80 kbps	0,3	32,64 kbps	QPSK 6/7	19,04 kHz					
1	Dec-16	AMHS transfer	Q1/2017	Atlanta	Aruba	89,60 kbps	0,3	26,88 kbps	QPSK 6/7	15,68 kHz					
2	Sep-17	AMHS transfer	Q4/2016	Atlanta	COCESNA	108,80 kbps	0,3	32,64 kbps	QPSK 6/7	19,04 kHz	15,00%	105,10 kHz	100 kHz	404 kHz	USD 500
2	Sep-17	AMHS transfer	Q2/2017	Atlanta	Jamaica	108,80 kbps	0,3	32,64 kbps	QPSK 6/7	19,04 kHz					
2	Sep-17	AMHS transfer	Q3/2017	Atlanta	Panama	108,80 kbps	0,3	32,64 kbps	QPSK 6/7	19,04 kHz					
2	Sep-17	AMHS transfer	Q3/2017	Atlanta	Cayman	108,80 kbps	0,3	32,64 kbps	QPSK 6/7	19,04 kHz					
3	?	AMHS transfer	?	Atlanta	Caracas	108,80 kbps	0,3	32,64 kbps	QPSK 6/7	19,04 kHz	15,00%	105,10 kHz	100 kHz	USD 500	
3	?	AMHS transfer	?	Atlanta	Bogota (Jama)	108,80 kbps	0,3	32,64 kbps	QPSK 6/7	19,04 kHz					
3	?	AMHS transfer	?	Atlanta	Bogota (Marau)	108,80 kbps	0,3	32,64 kbps	QPSK 6/7	19,04 kHz					
3	?	AMHS new	?	Panama	Bogota	108,80 kbps	0,3	32,64 kbps	QPSK 6/7	19,04 kHz					
4	?	AMHS transfer	?	Atlanta	Nassau	108,80 kbps	0,3	32,64 kbps	QPSK 6/7	19,04 kHz	15,00%	78,83 kHz	100 kHz	USD 500	
4	?	AMHS transfer	?	Atlanta	Haiti	108,80 kbps	0,3	32,64 kbps	QPSK 6/7	19,04 kHz					
4	?	new 64k circuit	?	COCESNA	Jamaica	108,80 kbps	0,3	32,64 kbps	QPSK 6/7	19,04 kHz					
4	?		?					0,00 kbps	QPSK 6/7	0,00 kHz					

2.1.3                      The network availability during that period was maintained with the key exception of unavoidable damage due to hurricanes and associated weather at Jamaica, Sint Maarten, and Puerto Rico.

2.1.4                      The MEVA Service Provider indicated that each 100kHz increase in bandwidth affects the billing for all members and that a general procedure of how these incremental costs are reflected in the billing is missing. Therefore, the meeting adopted the following conclusions:

**CONCLUSION  
MEVA TMG/33/1**

**IMPROVE MAINTENANCE**

That, in order to improve the quality of MEVA equipment maintenance by the MEVA Member States:

- a) the MEVA Service Provider send a quote to ICAO by the end of **July 2018**, to be distributed to the MEVA Members, for an optional additional day during the next annual maintenance in order to provide OJT (On Job Training); and
- b) MEVA Members notify the acceptance of the proposal by **September 2018**.

**CONCLUSION  
MEVA TMG/33/2**

**GENERAL PROCEDURE TO REQUEST A NEW CHANNEL**

That, in order for the General procedure to request a new channel to be efficient, the Meeting agreed the following:

- a) New channel circuit: The MEVA Members will coordinate directly with the MEVA Service Provider for the implementation of new channels and when ready for operation, the MEVA Service Provider will inform ICAO for its records and ICAO will inform the other MEVA Members;
- b) In the case that a new channel requires additional satellite bandwidth, the MEVA Service Provider will provide ICAO with details of the increase and the incremental monthly cost to be paid by each State. ICAO will send this information to the States to support their administrative processes in order to proceed with the payment according to the information provided; and
- c) MEVA Members will report by **30 July 2018**, if this procedure is acceptable or needs to be modified.

***Statistics Study for the Voice Switched Lines and Recommendations***

2.1.5 Under WP/06, the Statistics study for the voice switched lines and recommendations were presented, Cuba made a follow-up analysis and summary regarding Conclusion MEVA/32/6 - *Switching System Line Increase*. During the Thirty second MEVA Technical Management Group Meeting (MEVA/TMG/32) held in Havana, Cuba, from 10 to 12 May 2017, the Meeting agreed through Conclusion MEVA/32/6, to increase the switched circuits by one more line from 6 to 7 to meet the contractual blocking limit of 5%. Cuba and the Service provider will evaluate the switched performance once the additional trunk line is added.

2.1.6 The MEVA Service Provider added the line at the end of May 2017; the result is reflected in the following Table.

Monh	Calls during busy hour	Av. call dur. (busy hour)	ERLANG (open system)	Reserved Lines (Oct 2015)	Blocking	Reserved Lines (May 2017)	Blocking	Blocking limit
May 17	130	56,22	2,03	6	1,28%	7	0,37%	5,00%
June 2017	149	56,72	2,35	6	2,25%	7	0,75%	5,00%
July 2017	147	61,97	2,53	6	2,95%	7	1,05%	5,00%
August	166	70,34	3,24	6	6,62%	7	2,98%	5,00%
September 2017	113	72,95	2,29	6	2,05%	7	0,66%	5,00%
October 2017	113	79,41	2,49	6	2,79%	7	0,98%	5,00%
November 2017	126	68,76	2,41	6	2,46%	7	0,84%	5,00%
December 2017	138	72,38	2,77	6	4,05%	7	1,58%	5,00%
January 2018	144	75,97	3,04	6	5,43%	7	2,30%	5,00%
February 2018	135	59,63	2,24	6	1,87%	7	0,59%	5,00%

2.1.7 The increase of line 7 was enough to compensate for the increase in switched voice traffic to date t. The switched lines use is continuing to grow. For links with heavy traffic it may be better to have direct shout down lines, which are more reliable for radar transfers and air traffic voice coordination. Therefore, the Meeting adopted the following:

**CONCLUSION**

**MEVA TMG/33/3**

**INCREASE SWITCHED CIRCUIT**

That, in order to maintain the Service level for switched lines, the MEVA Service Provider make an analysis of the data of the rest of the year 2018, and indicate when it will be necessary to increase the switched circuits again. The result of this analysis will be presented by the MEVA/TMG/34 Meeting.

**2.2 Improvements to MEVA III node performance**

**2.3 MEVA III monitoring and reporting**

**MEVA-III DISASTER RECOVERY RECOMMENDATION**

**MEVA III FLYAWAY ANTENNA**

2.2.1 Under WP/08, the need for a revised MEVA-III Contingency Plan was highlighted. During the recent hurricane season, an inoperable and aging flyaway antenna was identified. As a result, many of the requirements set forth in the Draft Contingency Planning for MEVA-II are unobtainable as the next hurricane season quickly approaches.

2.2.2 It is necessary to review the MEVA-III Emergency Antenna Commercial Offer of the MEVA Service provider and agree on how to face this need during the hurricane season.

2.2.3 The MEVA Service Provider has a proposal for a smaller and lighter antenna compatible with the current MEVA III Network. The antenna and its components would be available in Miami, in case of an emergency; the MEVA Service Provider will be responsible for restoring operational service where an antenna is damaged by seasonal hurricanes. Therefore, the Meeting formulated the following:

**CONCLUSION**

**MEVA TMG/33/4**

**MEVA-III DISASTER RECOVERY**

That, in order to ensure that the MEVA service is restored as soon as possible, in the event that an antenna of any of the Member State suffers hurricane damage, the Meeting agreed the following:

- a) The MEVA Service Provider will prepare a quotation, based on the current proposal indicating the monthly cost to be charged to each State for the MEVA Service Provider to assume the responsibility for temporary antenna restoral when required. This information is to be sent to ICAO by **30 June 2018**; and
- b) the MEVA Members to evaluate the quotation and provide an answer by **30 August 2018**.

***Progress with AMHS Transition and Legacy X.25 AFTN Support***

2.2.4 Under WP/05, United States presented the progress of the FAA transition to Aeronautical Message Handling System (AMHS) and intended support for remaining legacy X.25 AFTN connections after decommissioning its X.25 network.

2.2.5 United States indicated that the current X.25 network is beyond the End of Life and has no active vendor maintenance. The network will be finalized in 2018. Similarly, the FAA's AFTN messages switch will not support X.25 interfaces beyond 2018, so essential server upgrades can be performed.

2.2.6 The following Table presents the current X.25 line working in the region.

<b>REMAINING (X.25)</b>	
Bahamas <sup>2</sup>	(MEVA)
Brazil	(MEVA)
Curacao <sup>2</sup>	(MEVA)
Haiti <sup>2</sup>	(MEVA)
Peru	(MEVA)
Venezuela	(MEVA)

2.2.7 The meeting discussed on the need to have the correct AMHS information addressed in all the AMHS systems in the region. Therefore, the Meeting adopted the following:

**CONCLUSION**  
**MEVA TMG/33/5**

**DECOMMISSIONING OF FAA X.25 NETWORK**

That, in order to ensure continual exchange of aeronautical messages:

- a) Bahamas, Curacao and Haiti work directly with United States to agree on an action plan and ensure the availability of aeronautical message exchange before decommissioning of the X.25 network. They will present the action plan to ICAO for follow-up by **30 August 2018**; and
- b) that the ICAO NACC Regional Office inform the SAM Region by 30 June 2018 on the impact that this action will have on Brazil, Peru, and Venezuela .

***Surveillance Data Sharing***

2.2.8 Under IP/02 and WP/10, information about the process of radar data sharing between the MEVA Members of Cuba, Jamaica, and COCESNA was presented. Jamaica-COCESNA indicated successful implementation, but in the case of Cuba-Jamaica, the frame information does not allow correct integration.

2.2.9 ICAO indicated that it is necessary that States improve the process of radar data sharing. This process improves safety in the region, and is also the first step to be completed before AIDC implementation. Therefore, the Meeting adopted the following:

**CONCLUSION**  
**MEVA TMG/33/6**

**RADAR DATA SHARING-CUBA INFORMATION**

That, in order to improve radar data sharing between Cuba and Jamaica, both MEVA Members continue working together and send an update of the status of radar data sharing implementation to ICAO by **30 August 2018**.

**CONCLUSION**  
**MEVA TMG/33/7**

**AMHS SYSTEM TABLE ADDRESSING**

That, in order to update the AMHS addressing database to avoid problems in sending and receiving aeronautical messages, ICAO provide information on the uses of the ATS Messaging Management Centre (AMC) addressing tables by **15 September 2018**.

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**Agenda Item 3                    New Challengers (Services, Aeronautical Information Management (AIM), Air Traffic Flow Management (ATFM), System Wide Information Management (SWIM) and Automatic Dependent Surveillance – Broadcast (ADS- B) Satellite)**

**3.1            Update the different States on SWIM, AIM and ATFM**

3.1.1            Under P/02, the MEVA Service provider indicated that the MEVA network could be adapted to carry out additional Internet Protocol (IP) based data sharing services for Air Traffic Management (ATM), Aeronautical Information Management (AIM), System Wide Information Management (SWIM), among other IP based applications.

3.1.2            Under WP/15, the MEVA Rapporteur presented information about different States' plans and progress in implementing SWIM, AIM and ATFM using the MEVA III Network. As a result, it was indicated that the MEVA III network is on a mature stage in terms of its operation and stability. It is expected to continue operating in the same way and to use Transport Control Protocol (TCP)/IP technology that will form an excellent platform to provide new services

3.1.3            Under WP/03, the Secretariat presented an introduction to the future needs of Air Traffic Services and the challenges that our regions are facing. In accordance with the air traffic statistical analysis, it is expected that for 2034 the current aviation operations will be duplicated, this new challenge demands a more complex air traffic control to satisfy the security and efficiency needs demanded by aviation. Additionally, external factors that normally affect aviation must be incorporated into this need, such as security (cybersecurity), environment (solar storms, volcanic eruptions, and hurricanes), economical resources and other factors.

3.1.4            The Secretariat indicated that our region has the same needs and implementation requirements regarding the systems and mechanisms, to allow exchange of information and decision- making based on quality and real time information. The technology and communications infrastructure of the region will be the mechanism that supports the implementation of many services, such as: SWIM/AIM, Air Traffic Flow Management (ATFM), Search and Rescue (SAR), among others and could determine the quality of the information shared and serve as a platform to promote the security mechanisms and efficiency required for decision-making based on situational awareness.

3.1.5            Many of the NAM/CAR States already have the user-level systems and applications to start sharing information. However, the lack of an adequate communications infrastructure causes different users to seek external companies that can provide them with the necessary communication to share data. The data sharing resources and technology from companies that are non-aviation users are not focused on the security and operational needs that aviation requires, apart from the additional costs. It was suggested that a new phase of the MEVA network is needed, that integrates an IP-based ATN network IP-based, which complies with the availability, security, efficiency and low cost requirements. Therefore, the Meeting formulated the following:

**CONCLUSION**  
**MEVA TMG/33/8**

**ANALYSIS OF NEW MEVA PHASE**

That, in order to ensure the correct and safe implementation of the new services in the region, the Meeting agreed to:

- a) provide to the MEVA rapporteur with their action plan and status for ATFM, ADS-B satellite and SWIM implementation by **25 June 2018**; and
- b) create a MEVA Ad hoc Group integrated by Dominican Republic, Trinidad and Tobago, United States and COCESNA with the objective of developing technical/operational requirements for a new platform of IP-communication to support the new services and develop an action plan for execution in the next two years, as follows:
  - The Ad hoc Group will be led by COCESNA and supported by ICAO.
  - It will propose a new phase of MEVA network to support the new communications needs to be presented at the MEVA/TMG/34 Meeting.

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**Agenda Item 4                    ICAO Position for the International Telecommunication Union World Radiocommunication Conference 2019 (ITU WRC-19)**

**4.1        Follow-up for the different States**

4.1.1            Under WP/14, the MEVA Rapporteur addressed the status of different States in registering their MEVA III node with the ITU through their local Spectrum Management Authority according to Conclusion MEVA TMG/32/11 - *Actions before the ITU World Radiocommunication Conference 2019 (WRC-19)*.

4.1.2            For the protection of aeronautical frequencies, States must take the necessary actions in their own administrations to register the aeronautical Very Small Aperture Terminal (VSAT) frequencies with their local Spectrum Management Authorities and follow-up to ensure the frequencies are included in the ITU Master International Frequency Register (MIFR).

**4.2        New challenges**

4.2.1            Under WP/11, Cuba reported its participation in the Regional Workshop of International Telecommunication Union (ITU) World Radiocommunication Conference (2019) (WRC-19) for Region 2, that was held in Havana, Cuba, from 21 to 23 March 2018.

4.2.3            Important aspects that impact the organization and protection of the radio spectrum were discussed, as well as the existing demands for sharing, and the allocation of new frequency bands according to the development of novel technologies such as:

1. Unmanned aircraft
2. Satellite platforms for temporary use
3. Marine and aeronautical distress and safety systems
4. Possible affects to aeronautical bands comprising the use of Distance Measuring Equipment (DME) and altitude meters in aircraft
5. Aerospace vehicles that operate as aircraft in the Earth's atmosphere and as a spaceship in space.
6. Evolving intelligent transport systems and others

4.2.4            The ICAO Posture is to ensure that there are no changes in the regulatory provisions and spectrum attributions that adversely affect the ability of search and rescue aircraft to effectively communicate with ships during disaster relief operations, ensure that no regulatory provision adversely affects compliance with the ICAO Standards and Recommended Practices (SARPS) by satellite systems of the Aeronautical Mobile Service (Ruts) and support studies to identify any regulatory changes that are necessary for the implementation of the Global Aeronautical Distress and Safety System (GADSS) in accordance with ICAO requirements and the measures taken by the WRC-19 to integrate such changes in the radio regulations.

### **4.3 Activities for 2018 and 2019**

4.3.1 Under WP/04, the Secretariat presented relevant information about the Radiocommunication Conference 2019 (ITU-WRC-19) and others to ensure the correct management and protection of the frequencies for aviation.

4.3.2 The highest level of Spectrum Management takes place at the ITU World Radiocommunication Conferences (WRCs), held every four years with the objective to provide maintenance of the International provisions for Spectrum Management, contained in the ITU Radio Regulations (RR), this includes maintenance of the Table of frequency allocations. As a consequence, the aviation frequency managers need to develop, and lobby for an aviation position on frequency spectrum use, before the WRC.

4.3.3 The Secretariat informed that the Aeronautical Frequency Spectrum Management requires coordination of aviation position for ITU World Conference in three different levels: national level, regional level and international level. Aviation representatives may not be allowed to speak up as the National Frequency Spectrum Authority has only “one official position”. ICAO is allowed to participate.

4.3.4 It is necessary that all States take action to ensure that the radio spectrum used for current and future air navigation services is available. In this sense, the region must ensure that it integrates standardization and harmonization criteria for the protection of the frequencies necessary for air navigation systems and communications, including air-to-air and air-to-ground systems, in addition to the frequencies required by our users, airlines.

4.3.5 The ITU conference and ITU regulation development has a cycle, every four years. The next one is in 2019 and another in 2023. It is critical that the CAR Region has an active participation in protecting and certifying the availability of the frequencies that aviation needs in the region. Therefore, the Meeting adopted the following:

#### **CONCLUSION**

**MEVA TMG/33/9**

#### **PROTECTION OF THE FREQUENCIES NEEDED FOR AVIATION**

That, in order to establish continuous evaluation of the radio electric spectrum for aviation, the Meeting agreed to create an Ad hoc Group, led by Haiti and integrated by Cuba and Dominican Republic, to create and provide guidelines based on ICAO regulations to address actions to be taken by States to guarantee the protection and availability of frequencies for the current and future aviation needs. Their first activity will be to prepare the MEVA Members for the ITU-WRC19 and report in the MEVA/TMG in May 2019.

**Agenda Item 5 Administration Activities**

**5.1 Review of the new connection procedures**

5.1.1 Under P/03, the MEVA Service Provider presented the Points of Contact (PoCs) for administrative issues as follows:

**FREQUENTIS administrative contacts as of 2018:**

Function/Item	Key Personnel	Name/Email/Address	Phone/Fax Number
Project Management (PM) / Operations Management (OM)	Markus Tenbeck	<a href="mailto:markus.tenbeck@frequentis.com">markus.tenbeck@frequentis.com</a>	+49 (6103) 30086 35 (Phone)
			+49 (170) 9160277 (Mobile)
Deputy Project Management	Rudolf Hajek	<a href="mailto:Rudolf.Hajek@frequentis.com">Rudolf.Hajek@frequentis.com</a>	+43 (1) 81150 3742 (Phone)
Head of Project Management	Thomas Ruth	<a href="mailto:Thomas.RUTH@frequentis.com">Thomas.RUTH@frequentis.com</a>	+43 (1) 81150 3386 (Phone)
Commercial and Financial Manager (CFM)	Maria Magdits	<a href="mailto:Maria.MAGDITS@frequentis.com">Maria.MAGDITS@frequentis.com</a>	+43 (1) 81150 1122 (Phone)
Sales (key account) / Contract Management	Matthias Gerlich	<a href="mailto:Matthias.GERLICH@frequentis.com">Matthias.GERLICH@frequentis.com</a>	+43 (1) 81150 3846 (Phone)
Regional Sales Director (SD)	Gerd Groebminger	<a href="mailto:Gerd.Groebminger@frequentis.com">Gerd.Groebminger@frequentis.com</a>	+43 (1) 81150 3103 (Phone)
<b>Working Groups</b>			
Hardware Procurement	Rudolf Hajek	<a href="mailto:Rudolf.Hajek@frequentis.com">Rudolf.Hajek@frequentis.com</a>	+43 (1) 81150 3742 (Phone)
Preventive Maintenance / Maintenance	VSAT ResQ		
Export	Dubravka Maglicic	<a href="mailto:Dubravka.MAGLICIC@frequentis.com">Dubravka.MAGLICIC@frequentis.com</a>	+43 (1) 81150 4624 (Phone)

5.1.2 The MEVA Service Provider stated that, as of today, there are outstanding invoices for MEVA Members in the amount of EUR 115,052.31.

5.1.3 The MEVA Service Provider expressed frustration because this is a continual problem and asked for a better mechanism to ensure compliance with invoice payments by States. Therefore, the Meeting formulated the following:

**CONCLUSION**

**MEVA TMG/33/10**

**INVOICES PAYMENT PROCEDURE**

That, to improve efficiency through direct communication so that States can make timely payment of invoices, the Meeting agreed the following:

- a) each MEVA Member will provide by 30 June 2018, an administrative Point of Contact (PoC), responsible for making the Invoice payments to Frequentis;
- b) Frequentis will send, starting July 2018, a copy of the invoice directly to both, the Technical and Administrative Representatives of the State, with the aim that, through direct receipt of information, the corresponding invoice payment can be made on time; and
- c) Cuba, Panama and ICAO will implement a mechanism by **July 2018**, to ensure that the Invoice payments of these States are on time.

**5.2 Third party service procedure**

5.2.1 Under WP/12, the MEVA/TMG Coordinator presented the Third Parties Services procedure that will be used for a MEVA Member and the MEVA Service Provider to implement a new third-party service through MEVA Network.

5.2.2 The increase in air traffic operations requires implementation of new services. The MEVA Service Provider indicated its consent, availability, and technical capacity to provide these services, highlighting the benefits of using the MEVA infrastructure for new services.

5.2.3 Any company requiring the use of the MEVA infrastructure to provide its services must follow the above-mentioned procedures. Likewise, the MEVA service provider will have the responsibility of managing new services according to the procedure guidelines.

5.2.4 The MEVA/TMG/TF emphasized that the MEVA Communications Network is a mean for providing communications to support the services in the region in a safe and efficient way at a low cost for the benefit of all MEVA members.

5.2.5 The Secretariat informed that the Procedure for Third Party Services provision using the MEVA Telecommunications was sent to all MEVA State Member on 13 April 2018, under State Letter Ref. E.OSG - NACC72869, asking for comments and modifications by **30 April 2018**. In the event that the views of the Administrations had not received by that date, approval would be presumed and the document was processed accordingly. Only United States provided comments and accepted the procedure.

5.2.6 Under P/04 and P/05, both the MEVA Service Provider and AIREON indicated how their companies are going to comply with the procedure requirements, especially with the items 2.2 and 2.3. The Meeting followed up on both presentations, clarifying questions, and adopted the following conclusion:

**DECISION**  
**MEVA TMG/33/11**

**THIRD PARTY PROCEDURE**

That,

- a) according to the information provided, the Meeting validated and accepted the Procedure, so that it can be used by a third party to provide services to a MEVA Member according to the requirements, responsibilities stipulated in the document;
- b) however, the document will remain as an open document and will be evaluated accordingly by **15 July 2018** to add any comment proposed by the State; and
- c) the MEVA Service Provider will officially inform how the bandwidth that AIREON contracts for the implementation of ADS-B Satellite data will be used, and in how the bandwidth that is not used by AIREON will be used to support other MEVA according with the AIREON propose, the rest of bandwidth could be used to support MEVA services without any additional charges, Frequentis will informed about the use of the bandwidth by **December 2018**.

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**Agenda Item 6            Other Business**

6.1            Under WP/07, the MEVA/TMG Coordinator presented an update of the MEVA III Technical Management Group Terms of Reference (ToRs).

6.2            The MEVA Technical Management Group (TMG) originated from the MEVA Informal Working Group (1998), as a standing group to address issues concerning the MEVA Network. The MEVA/TMG was formally established in accordance with Conclusion 7/17 - *Terms of Reference, Work Programme, Composition and Rapporteur assigned to the MEVA Technical Management Group*, of the Seventh MEVA Network Meeting (MEVA/7) (Grand Cayman, Cayman Islands, from 15 to 17 May 2000).

6.3            The MEVA Members developed and approved the TMG ToRs and its Work Programme since May 2000. Since then, new technology and requirements have been implemented and a review and update of the ToRs and work programme was made (**Appendix C**) to ensure that the TMG properly evaluates existing and future requirements and implementations. The MEVA Website shall also be updated accordingly. Therefore, the meeting adopted the following:

**DECISION**

**MEVA TMG/33/12**

**UPDATE OF MEVA TMG TERMS OF REFERENCE (ToRs)**

The MEVA TMG Terms of Reference and Work Programme were updated and approved by the Meeting as presented in Appendix C.

6.4            Under WP/13, the Secretariat presented the MEVA Technical Management Group (TMG) Meeting Rotational Schedule.

6.5            According to the Meeting Host Rotational schedule, the next meeting in 2019 will be hosted by United States.

6.6            According to the new needs of the region and the objective of rotating of the meetings between Members, it is necessary to schedule the next MEVA meetings at States, where the infrastructure of the CNS teams and the experiences of the State contribute to the new MEVA objectives.

6.7            Likewise, the ICAO NACC Regional Office is available so that, meetings can be held at its facilities in Mexico City, Mexico, if necessary. Therefore, the meeting formulated the following:

**CONCLUSION**

**MEVA TMG/33/13**

**NEW ROTATION SCHEDULE FOR 2020-2024**

That, in order to improve the planning and organization of the MEVA TMG Meetings, taking in consideration the benefits of conducting the meetings in MEVA locations:

- a) United States confirms that they will host the MEVA/TMG/34 in May 2019; and
- b) the MEVA Members approve the following MEVA TMG Meeting Rotational scheme;

MEVA Member	Year
COCESNA	2020
Dominican Republic	2021
Bahamas	2022
Cayman Islands	2023
British Virgin Island	2024

- c) the MEVA Members apply the same rule for the previous rotation schedule, and
- d) the MEVA Members confirm the hosting of MEVA TMG Meetings presented in letter b) by the next MEVA TMG/34 Meeting.

**APPENDIX A  
EXECUTIVE LIST OF CONCLUSIONS/DECISIONS**

Number	Conclusion/Decision	Responsible for action	Deadline
<b>CONCLUSION MEVA/TMG/33/1</b>	<b>IMPROVE MAINTENANCE</b>  That, in order to improve the quality of MEVA equipment maintenance by the MEVA Member States:	MEVA Member States	
	a) the MEVA Service Provider send a quote to ICAO by the end of July 2018, to be distributed to the MEVA Members, for an optional additional day during the next annual maintenance in order to provide OJT (On Job Training); and	The MEVA Service Provider	end of July 2018
	b) MEVA Members notify the acceptance of the proposal by September 2018.	MEVA Members	September 2018
<b>CONCLUSION MEVA/TMG/33/2</b>	<b>GENERAL PROCEDURE TO REQUEST A NEW CHANNEL</b>  That, in order for this procedure to be efficient, the Meeting agreed the following:	MEVA/TMG/33 Meeting	
	a) <u>New channel circuit:</u> The MEVA Members will coordinate directly with the MEVA Service Provider for the implementation of new channels and when ready for operation, the MEVA Service Provider will inform ICAO for its records and ICAO will inform the other MEVA Members;	MEVA Members, the MEVA Service Provider and ICAO	
	b) In the case that a new channel requires additional satellite bandwidth, the MEVA Service Provider will provide ICAO with details of the increase and the incremental monthly cost to be paid by each State. ICAO will send this information to the States to support their administrative processes in order to proceed with the payment according to the information provided; and	the MEVA Service Provider and ICAO	



Number	Conclusion/Decision	Responsible for action	Deadline
	a) Bahamas, Curacao and Haiti work directly with United States to agree on an action plan and ensure the availability of aeronautical message exchange before decommissioning of the X.25 network. They will present the action plan to ICAO for follow-up by 30 August 2018; and	Bahamas, Curacao and Haiti work directly with the FAA	30 August 2018
	b) that the ICAO NACC Regional Office inform the SAM Region by 30 June 2018 on the impact that this action will have on Brazil, Peru, and Venezuela .	ICAO NACC Regional Office	30 June 2018
<b>CONCLUSION MEVA/TMG/33/6</b>	<b>RADAR DATA SHARING-CUBA INFORMATION</b>  That, in order to improve radar data sharing between Cuba and Jamaica, both MEVA Members continue working together and send an update of the status of radar data sharing implementation to ICAO by 30 August 2018.	Cuba and Jamaica	30 August 2018
<b>CONCLUSION MEVA/TMG/33/7</b>	<b>AMHS SYSTEM TABLE ADDRESSING</b>  That, in order to update the AMHS addressing database to avoid problems in sending and receiving aeronautical messages, ICAO provide information on the uses of the ATS Messaging Management Centre (AMC) addressing tables by 15 September 2018.	ICAO	15 September 2018
<b>CONCLUSION MEVA/TMG/33/8</b>	<b>ANALYSIS OF NEW MEVA PHASE</b>  That, in order to ensure the correct and safe implementation of the new services in the region, the Meeting agreed to:	MEVA/TMG/33 Meeting	
	a) provide to the MEVA rapporteur with their action plan and status for ATFM, ADS-B satellite and SWIM implementation by 25 June 2018; and	MEVA/TMG/33 Meeting	25 June 2018

Number	Conclusion/Decision	Responsible for action	Deadline
	<p>b) create a MEVA Ad hoc Group integrated by Dominican Republic, Trinidad and Tobago, United States and COCESNA with the objective of developing technical/operational requirements for a new platform of IP-communication to support the new services and develop an action plan for execution in the next two years.</p> <ul style="list-style-type: none"> <li>• The Ad hoc Group will be led by COCESNA and supported by ICAO.</li> <li>• It will propose a new phase of MEVA network to support the new communications needs to be presented at the MEVA/TMG/34 Meeting.</li> </ul>	MEVA/TMG/33 Meeting	MEVA/TMG/34 Meeting
<p><b>CONCLUSION MEVA/TMG/33/9</b></p>	<p><b>PROTECTION OF THE FREQUENCIES NEEDED FOR AVIATION</b></p> <p>That, in order to establish continuous evaluation of the radio electric spectrum for aviation, the Meeting agreed to create an Ad hoc group, led by Haiti and integrated by Cuba and Dominican Republic, to create and provide guidelines based on ICAO regulations to address actions to be taken by States to guarantee the protection and availability of frequencies for the current and future aviation needs. Their first activity will be to prepare the MEVA Members for the ITU-WRC19 and report in the MEVA/TMG in May 2019.</p>	MEVA/TMG/33 Meeting	MEVA/TMG/34 Meeting
<p><b>CONCLUSION MEVA/TMG/33/10</b></p>	<p><b>INVOICES PAYMENT PROCEDURE</b></p> <p>That, to improve efficiency through direct communication so that States can make timely payment of invoices, the Meeting agreed the following:</p> <p>a) each MEVA Member will provide by 30 June 2018, an administrative Point of Contact (PoC), responsible for making the Invoice payments to Frequentis;</p>	<p>MEVA/TMG/33 Meeting</p> <p>Each MEVA Member</p>	<p>30 June 2018</p>

Number	Conclusion/Decision	Responsible for action	Deadline
	b) Frequentis will send, starting July 2018, a copy of the invoice directly to both, the Technical and Administrative Representatives of the State, with the aim that, through direct receipt of information, the corresponding invoice payment can be made on time; and	Frequentis	starting July 2018
	c) Cuba, Panama and ICAO will implement a mechanism by July 2018, to ensure that the Invoice payments of these States are on time.	Cuba, Panama and ICAO	July 2018
<b>DECISION MEVA/TMG/33/11</b>	<b>THIRD PARTY PROCEDURE</b>  That,		
	a) according to the information provided, the Meeting validated and accepted the Procedure, so that it can be used by a third party to provide services to a MEVA Member according to the requirements, responsibilities stipulated in the document;	MEVA/TMG/33 Meeting	
	b) however, the document will remain as an open document and will be evaluated by 15 July 2018 to add any comment proposed by the State; and		15 July 2018
	c) the MEVA Service Provider will officially inform how the bandwidth that AIREON contracts for the implementation of ADS-B Satellite data will be used, and in how the bandwidth that is not used by AIREON will be used to support other MEVA according with the AIREON propose, the rest of bandwidth could be used to support MEVA services without any additional charges, Frequentis will informed about the use of the bandwidth by December 2018.	the MEVA Service Provider and Frequentis	December 2018

Number	Conclusion/Decision	Responsible for action	Deadline												
<b>DECISION</b> <b>MEVA/TMG/33/12</b>	<b>TERMS OF REFERENCE (ToRs)</b>  The MEVA TMG Terms of Reference and Work Programme were updated and approved by the Meeting as presented in Appendix C.	MEVA/TMG/33 Meeting.	MEVA/TMG/33 Meeting.												
<b>CONCLUSION</b> <b>MEVA/TMG/33/13</b>	<b>NEW ROTATION SCHEDULE FOR 2020-2024</b>  That, in order to improve the planning and organization of the MEVA TMG Meetings, taking in consideration the benefits of conducting the meetings in MEVA locations:														
	a) United States confirms that they will host the MEVA/TMG/34 in May 2019; and	United States	MEVA/TMG/34 Meeting in May 2019												
	b) the MEVA Members approve the following MEVA TMG Meeting Rotational scheme; <table border="1" data-bbox="594 1016 951 1381" style="margin-left: 40px;"> <thead> <tr> <th>MEVA Member</th> <th>Year</th> </tr> </thead> <tbody> <tr> <td>COCESNA</td> <td>2020</td> </tr> <tr> <td>Dominican Republic</td> <td>2021</td> </tr> <tr> <td>Bahamas</td> <td>2022</td> </tr> <tr> <td>Cayman Islands</td> <td>2023</td> </tr> <tr> <td>British Virgin Island</td> <td>2024</td> </tr> </tbody> </table>	MEVA Member	Year	COCESNA	2020	Dominican Republic	2021	Bahamas	2022	Cayman Islands	2023	British Virgin Island	2024	the MEVA Members	
MEVA Member	Year														
COCESNA	2020														
Dominican Republic	2021														
Bahamas	2022														
Cayman Islands	2023														
British Virgin Island	2024														
	c) the MEVA Members apply the same rule for the previous rotation schedule, and	the MEVA Members													
	d) the MEVA Members confirm the hosting of MEVA TMG Meetings presented in letter b) by the next MEVA TMG/34 Meeting.	the MEVA Members	MEVA TMG/34 Meeting												

**APPENDIX B  
FOLLOW UP TO VALID CONCLUSIONS FROM THE MEVA TMG/32 AND NACC/WG/5 MEETINGS  
NAM/CAR AIR NAVIGATION IMPLEMENTATION**

**MEVA TMG/32 AND ANI/WG/3 MEETINGS**

Conclusions	Description	Remarks	Status
<b>CONCLUSION MEVA TMG/32/2 VOICE AND DATA CHANNEL WITHOUT OPERATION</b>	<p>That,</p> <p>a) States with assigned channels that are not operational promote within their State the use of the same and their commissioning as soon as possible, for this they will forward the implementation plan for the services to the MEVA Coordinator no later than 30 August 2017; and</p> <p>b) States carry on the necessary test and operational agreements to ensure that the channels will be operational by the end of 2017.</p>	<p>It is necessary that States review this Appendix with the objective of reviewing the channels that need to be updated. All according to the needs and real capacity of each State.</p> <p>Each MEVA Member must review the MEVA Service Provider website and provide information regarding the implementation of the channels by <b>15 June 2018</b>.</p>	Valid
<b>CONCLUSION MEVA TMG/32/3 NON OPERATIONAL CHANNEL</b>	<p>That, if the necessary actions are not taken to carry out the activities under Conclusion MEVA/TMG/32/2, the State analyze if channels are not required and request to the MEVA Coordinator to cancel the channel by 15 December 2017.</p>		Valid
<b>CONCLUSION MEVA TMG/32/4 DEDICATED VOICE CIRCUITS- HOTLINES/SHOUTLINES/RADAR</b>	<p>That, considering that several dedicated voice circuits are not fully operational in the MEVA Network and to provide the use of these circuits, Aruba, Curacao, Dominican Republic, Jamaica and ICAO review and complete the use of the hotlines/shoutlines that are not in use by August 2017.</p>	<p>Aruba, Curacao Dominican Republic and Jamaica, will provide an action plan to ICAO by <b>30August 2018</b>.</p>	Valid
<b>CONCLUSION MEVA TMG/32/11 ACTIONS BEFORE THE ITU WORLD RADIOCOMMUNICATION CONFERENCE 2019 (WRC-19)</b>	<p>That, ICAO and the MEVA TMG carry out an action plan to ensure that States develop the protection of frequencies necessary in their territories to maintain current and future aeronautical services before the ITU World Radiocommunication Conference 2019, to be presented at and followed-up by the MEVA/TMG/33.</p>		Valid

Conclusions	Description	Remarks	Status
<p>ANI/WG/3/6 - AMHS IMPLEMENTATION PROCESS IN THE CAR REGION</p>	<p>That, to streamline the AMHS operational use, the CAR States/Territories</p> <p>a) update accordingly the CAR Region Implementation Matrix by December 2016;</p> <p>b) take advantage of the ATSN Data Link Implementation Application Workshop scheduled for 18 to 21 April 2016 in St Maarten to exchange information and progress on the implementation; and</p> <p>c) carry on the additional task of testing the transmission of XML data through the AMHS system, coordinating these activities with the AMHS TF, informing the NACC/WG and GREPECAS Meetings.</p>	<p>MEVA TMG Coordinator to keep the MEVA Members involved on the need for MEVA Network capabilities and circuits.</p> <p>ANI/WG/3/6(c) – AMHS Implementation Process in the CAR Region</p> <p>(c ) carry on the additional task of testing the transmission of XML data through the AMHS system, coordinating these activities with the AMHS TF, informing the NACC/WG and GREPECAS Meetings.</p> <p>The FAA has previously demonstrated the transport of XML data in the AMHS message body (i.e. the equivalent of the AFTN message body). Recent recommendations from Europe proposed an AMHS profile to transport XML data as an AMHS File Transfer Body Part (FTBP) – akin to an email attachment. Since MEVA/TMG/31 Meeting, the FAA has provided support for FTBP in its test systems. It should be noted that FTBP is a feature of “AMHS Enhanced Services”, but it should be clarified that support for FTBP does not imply support of other enhances Services features.</p> <p>Demonstration of XML transport using FTBP should ideally be conducted using XML data supplied by a Met group since the transport of IWXXM information is expected to be the first requirement.</p> <p>The FAA is ready to test with partners using non-operational systems.</p>	<p>Closed</p> <p>Update provided by MEVA/TMG/33  <b>TMG/31/6 - FOLLOWUP TO IMPLEMENTATION OF MEVA III – REDDIG II INTERCONNECTION CIRCUIT REQUIREMENTS</b>  <b>Description:</b>  That, in order to conduct a follow-up of the MEVA II REDDIG II Interconnection circuits requirements,</p> <p>a) MEVA Service Provider resolve the problems identified in the PAD equipment;</p> <p>b) Curaçao, Panama and United States continue the operational/technical coordination with Colombia, Venezuela and the respective SAM States for the implementation of the radar data sharing and AMHS circuits;</p> <p>c) Trinidad and Tobago and COCESNA follow-up on the cost/technical aspects for deciding the best solution for the implementation of the PIARCO-Atlanta AMHS circuit, including Letter of agreement updates as needed; and</p> <p>d) the progress and updates to this implementation be reported to the MEVA/TMG/32, applying the MEVA III additional circuit process.</p> <p><b>Remarks:</b>  Curaçao, Panama, Trinidad and Tobago United States, COCESNA and Frequentis</p> <p>The provider indicated that: The PAD packet transfer relies on proper packet acknowledgement by end-user equipment – nothing to update on PAD configuration.</p> <p>Inconsistent window size programming on PAD still on place. Adapting put on hold in accordance with the agreement with FAA for Aruba PAD.</p>

Conclusions	Description	Remarks	Status
		<p>Looking towards future implementation, there is concern regarding the use of FTBP in a mixed AFTN/AMHS network, since any routing (including alternate routing) via an AFTN node will block the FTBP transport.</p>	<p><b>PROPOSED RESOLUTION:</b></p> <p>a) The provider indicated that: The PAD packet transfer relies on proper packet acknowledgement by end-user equipment – nothing to update on PAD configuration. As FAA moves to support legacy AFTN X.25 with support of CISCO interfaces, any PAD window discrepancies on the MEVA- REDDIG links will be corrected.</p> <p>b) Panama to United States AMHS implementation is complete. United States has a plan for implementation of IP circuits to Brazil and Peru through Colombia and is waiting for cables to be deployed at Colombia by the MEVA service provider during the annual maintenance.</p> <p>c) Trinidad and Tobago has initiated alternative routing via Curacao rather than COCESNA.</p> <p>d) Report was presented at the MEVA/TMG/32 Meeting.</p>
<p><b>TMG/31/4 - COMPLETION OF MEVA III NODE INFRASTRUCTURE IN MIAMI</b></p>	<p>That, in order to complete the necessary infrastructure in the MEVA III node in Miami, United States coordinates with the MEVA Service Provider to conduct the necessary arrangements to complete the full independency of the T1 lines and inform the MEVA/TMG/32 Meeting accordingly.</p>	<p>United States</p> <p>As of today, Frequentis is providing three T-1 lines where two are operational. The third T-1 diversity problem has not been resolved.</p> <p>Updated Information provided in the MEVA/TMG/32 Meeting</p> <p><b>PROPOSED RESOLUTION:</b></p> <p>Although there are three lines, only two avoided circuits connect the MEVA antenna in Opa-Locka to the Miami Center. Recent loss of one T1, caused by a fiber break from construction, was of no impact to operation demonstrating that the circuit diversity exists.</p>	<p>Completed</p>

**NACC/WG/5 MEETING**

Conclusions	Description	Remarks	Status
<p><b>CONCLUSION NACC/WG/5/7 RADAR DATA SHARING FOR IMPROVING SAFETY OF OPERATIONS</b></p>	<p>That, to improve the safety of operations on the safety hot spots identified by the GREPECAS GTE, Curaçao-Dominican Republic-Jamaica, COCESNA-Ecuador, Mexico-Cuba begin to share radar data with the adjacent FIRs as soon as possible providing their action plan for this purpose to the ANI/WG by 31 October 2017.</p>	<p>Jamaica and COCESNA - Completed</p> <p>Curacao and Dominican Republic submit their Action plan by <b>30 August 2018</b>.</p> <p>Ecuador and COCESNA submit their Action plan by <b>30 August 2018</b>.</p> <p>ICAO will have an approach with Mexico to coordinate the following teleconferences:</p> <ul style="list-style-type: none"> <li>• between Mexico and Cuba by end of June 2018.</li> <li>• between Curacao and Venezuela by the end of July 2018</li> </ul>	<p align="center">Valid</p>
<p><b>CONCLUSION NACC/WG/5/9 XML TESTING OVER AMHS</b></p>	<p>That, in order to test the XML capacity of the CAR regional networks, Cuba, Dominican Republic and United States coordinate for XML testing over AMHS reporting their progress by Next MEVA/TMG meeting on 2019.</p>		<p align="center">Valid</p>

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**APPENDIX C**  
**TERMS OF REFERENCE (as approved by MEVA TMG/26)**

**1. Background**

The MEVA Technical Management Group (TMG) originated from the MEVA Informal Working Group (1998), as a standing group to address issues concerning the MEVA Network. The MEVA TMG was formally established in accordance to Conclusion 7/17 of the Seventh Meeting of the MEVA Network (MEVA/7) (Grand Cayman, Cayman Islands 15-17 May 2000).

**2. Terms of Reference (ToRs)**

In order to address the MEVA Network issues, the following activities are to be developed by the TMG:

- a) Review the current status of the Network (maintenance and reporting procedures, technical personnel involved, spare parts, tools for monitoring the Network status, identify common network points of failure, etc.) and submit recommendations;
- b) Assist the MEVA Members in the coordination and technical solutions of the problems presented in the operation and implementation of the AFS Services and parts of the MEVA network. Likewise, to study and recommend measures to improve the operation and implementation fulfillment;
- c) Study and propose to the MEVA Members intra and inter-regional coordination for the MEVA Network connectivity with other regional and domestic digital communications networks of the CAR and SAM Regions;
- d) Study and assist the MEVA Network Members in measures of a technical character, in order to facilitate the transition of the MEVA Network towards the ATN infrastructure and its air-ground and ground-ground subnetworks of the air navigation services, according to GREPECAS Conclusions and Recommendations, ICAO SARPs and technical guidance and the MEVA Members expectations; and
- e) Inform and advise the MEVA Network Coordinator, ICAO, if a major failure or network concern that affects the entire network occurs or may occur or an event that doesn't allow achieving the Network Service level agreement, recommending solutions for its recovery and actions by the MEVA Network Service Provider.
- f) Third Party services will be monitored using current MEVA Network tools and in accordance with established procedures, which indicate, that Third Party services shall not infringe on existing or future network demands in support of data and voice services.

**3. Work Programme**

Attached

**4. Working Methods**

- a) TMG work programme should present activities in terms of objectives, responsible and deliverables. Further details can be provided in the form of Work Breakdown Schedule (WBS);
- b) TMG will avoid duplication of work and maintain close coordination among the existing entities (like the Air Navigation Implementation Technical Group-ANI/WG), to optimize the use of available resources and experience;
- c) TMG may designate, as necessary, ad-hoc groups or task forces to work on specific topics and activities; all tasks and activities should be clearly defined with time and deliverables;
- d) TMG should coordinate and advance its works as follows to maximize efficiency and reduce costs:
  - conduct work via electronic written correspondence
  - conduct work via phone and teleconference calls
  - hold meetings as necessary and based on the work programme activities
- e) TMG will report the progress of assigned tasks to during the Directors of Civil Aviation (DCA), Central Caribbean and other DCA meetings as required.

**5. Membership**

MEVA Members: Aruba, Bahamas (Nassau and Freeport), British Virgin Islands (Tortola) Cayman Islands, Cuba, Curacao, Dominican Republic, Jamaica, Haiti, Mexico, Panama, Sint Maarten, United States (Atlanta, Miami, Puerto Rico) and COCESNA.

The REDDIG Administration representing Colombia and Venezuela are participants / users of the MEVA Network.

ICAO will act as technical adviser to the TMG.

**6. Rapporteur**

Mrs. Dulce M. Rosés (United States)

No.	Activities	Objectives	responsible	deliverables
1	To assist the MEVA Members in coordination for the solutions to problems presented in this operation, and in the implementation of services and parts.	Keep MEVA SLA Levels	TMG	MEVA assistance
2	To study and implement technical/operational measures that may be agreed upon to improve the operation and implementation of MEVA Network services, and that do not impact significant cost, investments and objectives of the Network.	Satisfactory operation and service levels	TMG	Network improvements implementation
3	Keep MEVA Members aware of network status, performance and conditions of operation.	MEVA Network Awareness	TMG	<input type="checkbox"/> Reliable MEVA Network website <input type="checkbox"/> Network Performance revision
4	Maintain current network contingency procedures with consideration towards individual state plans, service provider requirements, and CAR region general contingency plan.	Readiness for Contingencies	TMG	MEVA Contingency Procedures
5	Assist the MEVA Members, in completing the data and voice circuits implementation, according to the requirements shown in the ANP CAR/SAM.	Fulfill Air Navigation Requirements	Task Forces Ad hoc Groups	Data and voice circuit implementation

No.	Activities	Objectives	responsible	deliverables
6	To study and propose solutions for AFS connectivity of the MEVA Network with other regional and domestic CAR/SAM networks.	Fulfill Air Navigation requirements	Task Forces Ad hoc Groups	Data and voice circuit implementation
7	To review the RFP and the terms of the Services Agreement, based on the new ICAO requirements for the transitioning towards the ATN, as well as on the experience achieved, with the purpose of using them in a new Services Agreement for the MEVA Network.	Network improvements	Task Forces	Effective and efficient MEVA III Transition Process
8	Keep and validate with the MEVA Network Service Provider a procedural handbook on management, operation and maintenance of the MEVA Network telecommunication circuits.	Ensure proper MEVA Network maintenance and operation	TMG	Maintenance Procedural Handbook/Manual
9	Monitor Third Party services using current MEVA Network tools and in accordance with established procedures, which indicate, that Third Party services shall not infringe on existing or future network demands in support of data and voice services.	Ensure proper MEVA Network implementation of third party services	TMG/ Task Force	MEVA Network Third Party Services Manual