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

THIRTY SECOND MEVA TECHNICAL MANAGEMENT GROUP MEETING

MEVA/TMG/32

FINAL REPORT

HAVANA, CUBA, 10 TO 12 MAY 2017

Prepared by the Secretariat

June 2016

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HISTORICAL

ii.1 Place and Date of the Meeting

The Thirty second MEVA Technical Management Group Meeting (MEVA/TMG/32) was held at the Hotel Nacional de Cuba in Havana, Cuba from 10 to 12 May 2017.

ii.2 Opening Ceremony

Mr. Julio Siu, Deputy Regional Director of the North American, Central American and Caribbean (NACC) Office of the International Civil Aviation Organization (ICAO), thanked Cuba for hosting this important meeting for the region and expressed the benefits that the MEVA network provides to the States. Likewise, he thanked the presence of each State in the NAM/CAR/SAM Regions and the work done during 2016, stating that MEVA is an example to be followed in other ICAO Regions. Mr. Siu introduced the recently appointed NACC Regional Officers Communications, Navigation and Surveillance,
Mrs. Mayda Avila.

Ms. Dulce Rosés, MEVA III TMG Coordinator, expressed the importance of the MEVA network in the region and welcomed the participants to the Meeting. Finally, Mr. Carlos Radamés Pérez Andino, Cuban Civil Aviation Institute (IACC) Vice President, commented on the importance of the MEVA III Network in the regional air navigation infrastructure; he thanked the MEVA Members for their active participation, welcomed the participants and officially opened the MEVA/TMG/32 Meeting.

ii.3 Officers of the Meeting

Ms. Dulce Rosés was the Chairperson of the Meeting, and Mrs. Mayda Ávila acted as Secretary.

ii.4 Working Languages

The working language of the Meeting was English and all the working papers, information papers, presentations and draft report of the meeting were available to participants in this 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 16:00 hours daily with adequate breaks. Ad hoc meetings were held apart from the plenary 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: 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)

Agenda Item 3: Operation and Performance of the MEVA III Network

3.1 MEVA Network operation and performance: 05/2016-05/2017
3.2 Results of MEVA III 2016 annual maintenance visits
3.3 Improvements to MEVA III node performance
3.4 MEVA III monitoring and reporting

Agenda Item 4: Network Interconnection Activities and New Circuits

4.1 MEVA III – REDDIG II interconnection
4.2 MEVA III – Eastern Caribbean (E/CAR) Aeronautical Fixed Service (AFS) Network Interconnection
4.3 New MEVA node installation proposal
4.4 Requirement for new MEVA III circuits/services

Agenda Item 5: ICAO Position for the International Telecommunication Union World Radiocommunication Conference 2019 (ITU WRC-19)

Agenda Item 6: Other Business

ii.7 Attendance

The Meeting was attended by 12 States/Territories from the NAM/CAR/SAM Regions, 1 International Organization, 1 representative from the Industry, and the MEVA III Service Provider, totalling 39 delegates as indicated in the list of participants.

ii.8 List of Conclusions

The Meeting recorded its activities as Conclusions as follows:

CONCLUSIONS: Activities approved by the MEVA Members

Appendix A presents the list of Conclusions from the MEVA/TMG/32 Meeting.

ii.9 List of Working and Information Papers and Presentations

Refer to the Meeting web page:
http://www.icao.int/NACC/Pages/meetings-2017-mevatmg32.aspx

WORKING PAPERS

Number	Agenda Item	Title	Date	Prepared and Presented by
WP/01 REV.	1	Provisional Agenda, Work Method and Schedule of the Thirty Second MEVA Technical Management Group Meeting (MEVA/TMG/32)	02/05/17	Secretariat
WP/02	2	Review of Previous Valid Conclusions	10/05/17	Secretariat
WP/03		CANCELLED		
WP/04	3.3	Experience of the MEVA III Node Performance	12/04/17	MEVA III TF Rapporteur
WP/05	3.4	Statistics Study for the Voice Switched Lines and Recommendations	04/05/17	Cuba
WP/06	4.2	MEVA III Interconnection Matters	24/04/17	United States
WP/07	4.3	New MEVA Node Request from British Virgin Islands (BVI)	17/04/17	MEVA TMG Coordinator
WP/08		CANCELLED		

WORKING PAPERS

Number	Agenda Item	Title	Date	Prepared and Presented by
WP/09	5	The ITU World Radiocommunication Conference 2019 (WRC-19)	25/04/17	Secretariat
WP/10		CANCELLED		
WP/11		CANCELLED		
WP/12	6	Progress with Legacy X.25 AFTN Support	21/04/17	United States
WP/13	4.1	MEVA III – REDDIG II Interconnection Matters	02/05/17	MEVA TMG Coordinator
WP/14	3.1	Additional Bandwith Charge on MEVA Invoices	04/05/17	COCESNA

INFORMATION PAPERS

Number	Agenda Item	Title	Date	Prepared and Presented by
IP/01	--	List of Working, Information Papers and Presentations	09/05/17	Secretariat
IP/02		CANCELLED		
IP/03	4.4	A Simple Way to Verify Locally Skywan and LNB	04/05/17	Cuba

PRESENTATIONS

Number	Agenda Item	Title	Presented by
1		CANCELLED	
2	2	Follow-up to MEVA TMG Conclusions	Frequentis
3	3.1-3.4	Operation and Performance of the MEVA III Network	Frequentis
4	4.1-4.3	Network Interconnection Activities and New Circuits	Frequentis
5	4	Space-based ADS-B data distribution through MEVA III	Aireon

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

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

Agenda Item 2: **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)**

2.1 Under WP/02, the Meeting reviewed the valid conclusions of the Third NAM/CAR Air Navigation Implementation Working Group Meeting (ANI/WG/03) related to the MEVA Network recommending that conclusion ANI/WG/3/6 – *AMHS IMPLEMENTATION PROCESS IN THE CAR REGION* items a) and b) be considered as completed. Moreover, regarding the conclusions from the MEVA/TMG/31 meeting, the following were considered as completed:

Conclusions	Status
TMG/31/1 - MEVA SERVICE PROVIDER-FINAL ORGANIZATION STRUCTURE	Completed The MEVA/TMG/32 Service Provider submitted its organization structure.
TMG/31/2 - COMPLETION OF CONTRACTUAL MATTERS WITH THE NEW SERVICE PROVIDER	Completed Completed by the MEVA Service Provider who presented an update during the MEVA/TMG/32 Meeting.
TMG/31/5 - UPDATE OF OPERATIONAL DOCUMENT OF MEVA III	Completed The MEVA Service Provider and the MEVA III TF updated the document.
TMG/31/7 - E/CAR AFS - MEVA III NETWORK INTERCONNECTION TROUBLESHOOTING MANAGEMENT AND COORDINATION PROCEDURE	Completed The MEVA Service Provider and the MEVA III TF completed the document.
TMG/31/8 - IMPROVEMENT TO OPERATION OF ORAL VOICE CIRCUITS OF THE E/CAR AFS - MEVA III NETWORK INTERCONNECTION	Completed The MEVA Service Provider and the E/CAR AFS completed the task.
TMG/31/12 - REVIEW OF CAR/SAM eANP VOLUME II CNS REQUIREMENTS	a) Completed b) Completed The CAR/SAM eANP was reviewed.
TMG/31/13 - INPUTS TO MEVA III NETWORK PRESENTATION FOR THE GLOBAL MINISTERIAL CONFERENCE	Completed. ICAO collected input from the MEVA Members for the global Ministerial Conference.

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

Agenda Item 3: Operation and Performance of the MEVA III Network

3.1 MEVA Network Operation and Performance: 05/2016-05/2017

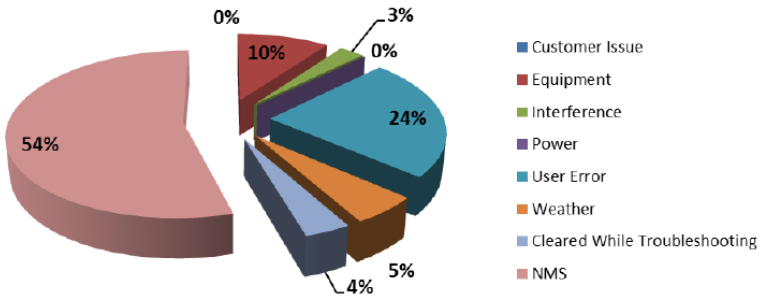
3.1.1 During the meeting the provider gave the following technical information about the service given to the MEVA network:

a. Network Transmission:
   i. IP-/ Data Circuits (Radar, AMHS/AFTN)
   ii. Voice Circuits (Air Traffic Services (ATS), Permanent Assigned Multiple Access (PAMA), Demand Assignment Multiple Access (DAMA))

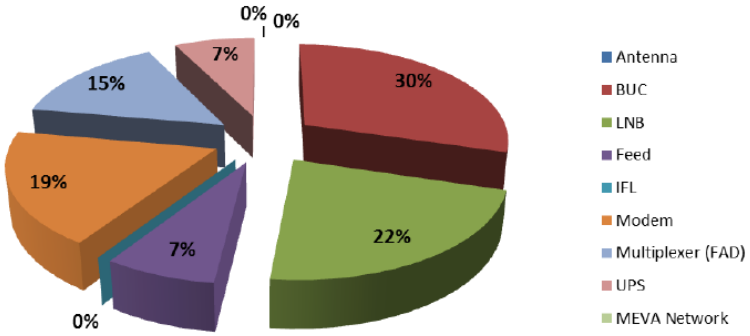
b. Network Topology:
   i. Meshed/Fully Meshed (Multiple Frequency - Time Division Multiple Access (MF-TDMA))

c. Network Availability:
   i. 99,90%

Reason for Outages (RFO) Breakdown



RFO Equipment Breakdown



3.1.2 During the period from May 2016 to April 2017, the MEVA III service provider, the Service MEVA Provider, performed satisfactorily with no major outage on the network, as evidenced in the respective monthly network reports, which were shared with all the MEVA users.

3.1.3 The MEVA Service Provider informed that the line 2400 was activated for reporting all the breakdown services. When reporting a service ticket will be provided to the user.

ADDITIONAL BANDWITH CHARGE ON MEVA INVOICES

3.1.4 Under WP/14, the Meeting took note of a report presented by COCESNA on an increase had been made in an invoice without previous notification from the service provider. In previous meetings, the MEVA users agreed that when an increase in bandwidth occurs due to new circuits, the cost of the increase would be shared among all MEVA users.

3.1.5 MEVA Members agreed that the MEVA service provider should submit formal communication to all MEVA users of the cost they are currently charged for bandwidth, and notify the users from now on every time the monthly amount charged in the invoice changes, especially if the increase affects all users. The supplier will inform each of the MEVA members of the change of the invoice and details of the invoice changed amount. In this sense, the following conclusion was agreed:

CONCLUSION
MEVA TMG/32/1 INVOICE DETAILS

That, to improve the understanding of the monthly MEVA III invoice, particularly on charge changes, the MEVA Service Provider:

a) submit a formal communication to all MEVA users of the cost they are currently charged for bandwidth;

b) notify the users henceforth every time the monthly amount charged in the invoice changes, especially if the increase affects all users; and

c) provide a formal communication and the breakdown of the invoice to all MEVA Members by **July 2017**.

3.1.6 The Meeting also discussed the modifications to be made in the contract with the replacement of Aeronautical Fixed Telecommunication Network (AFTN) with Aeronautical Message Handling System (AMHS). There was a general agreement on the need to revise the process taking into consideration the following:

i. The underlying pricing model for the MEVA III network is based on the requested circuits in the tender for the contract duration of 60 months (where extensions are possible).

ii. The contracted MEVA III network does not include any decommissioning agreements or address per-circuit pricing, but only a pricing scheme in place for

additional circuits.

iii. The proposal for new AFTN to AMHS replacements is to offer one-time non-recurring cost (NRC) charges and no additional service charges.

iv. Service charges for decommissioned AFTN circuits would effectively transfer to their AMHS replacements.

v. If needed, any additional bandwidth/hardware will incur monthly recurring costs per the contract for the remaining contract duration.

3.2 Results of MEVA III 2016 Annual Maintenance Visits

3.2.1 Information about the Service Level Agreement (SLA), duties on going, operational issues and the status of the maintenance that will be made in 2017. The update of the annual maintenance visit is presented in **Appendix C**.

3.3 Improvements to MEVA III node performance

EXPERIENCE OF THE MEVA III NODE PERFORMANCE

3.3.1 The former MEVA Service Provider, Comsoft underwent insolvency proceedings and was acquired by The Service MEVA Provider in 2015. However, the transition was rather smooth and did not affect neither the performance of the network nor the service that was provided by the new service provider.

3.3.2 New service was improved:

a. New Uninterruptible Power Supply (UPS) installations in Atlanta and San Juan.
b. New AMHS services established.
c. New Voice Shout Down (VSD) (4-wire voice channel always online) line Cuba/Miami established.
d. Redundancy behaviour Frame Relay Access Devices (FADs) improved.

3.3.3 The result of the MEVA network improvements is presented in **Appendix D**.

3.3.4 Participants agreed that Member States continue monitoring the performance of the network and notify the Task Force Rapporteur for updates accordingly.

3.3.5 The Meeting also noted that many States are assigned with voice and data circuits which are not in operation like hotlines/shoutlines/radar. This causes an unnecessary recurring cost to the States in bandwidth not being used. Therefore, the following conclusions were formulated:

CONCLUSION
MEVA TMG/32/2 VOICE AND DATA CHANNEL WITHOUT OPERATION

That,

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

b) States carry on the necessary test and operational agreements to ensure that the channels will be operational by the **end of 2017**.

CONCLUSION
MEVA TMG/32/3 NON OPERATIONAL CHANNEL

That, if the necessary actions are not taken to carry out the activities under Conclusion MEVA/TMG/32/2, the State analyse if channels are not required and request to the MEVA Coordinator to cancel the channel by **15 December 2017**.

CONCLUSION
MEVA TMG/32/4 DEDICATED VOICE CIRCUITS-HOTLINES/SHOUTLINES/RADAR

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**.

3.4 MEVA III Monitoring and Reporting

STATISTICS STUDY FOR THE VOICE SWITCHED LINES AND RECOMMENDATIONS

3.4.1 The performance of the switched voice network in the MEVA network has proven to be an effective and non-expensive way to communicate.

3.4.2 In October 2015 the number of switched lines was increased from 5 to 6 lines to meet the blocking of 5% contracted.

3.4.3 To keep the service at the limit contracted it is necessary to monitor how the net is working through statistics.

3.4.4 According to the analysis made by Cuba, it was concluded that it is necessary to increase one line in the MEVA III switching system, which will be enough to have a service under 5% blocking calls. This is additional 25,2 K bandwidth allocation for this service. The results of this analysis were agreed by the Service Provider, who indicated that another trunk line would be added at no extra cost for the MEVA users.

3.4.5 In this sense, the following conclusions were agreed:

CONCLUSION
MEVA/TMG/32/5 FAULT REPORTING AND TROUBLESHOOTING PROCEDURES

That,

a) States use the 2400 line to check the fault reporting and troubleshooting procedures implemented by The Service MEVA Provider through this service line; and

b) States report their results of operation to the Task Force Coordinator for follow-up on its correct functioning by **31 October 2017**.

CONCLUSION
MEVA TMG/32/6 MEVA SWITCHING SYSTEM LINE INCREASE

That, in order to maintain the Service Level Agreement (SLA) for switched lines:

a) the MEVA Service Provider add another trunk line at no extra cost for the MEVA Members by July 2017; and

b) Cuba and the MEVA Service Provider evaluate the switched line performance once the additional trunk line is added and report it to the MEVA/TMG by December 2017.

Agenda Item 4: Network Interconnection Activities and New Circuits

4.1 MEVA III – REDDIG II Interconnection

MEVA III – REDDIG II INTERCONNECTION MATTERS

4.1.1 During the last MEVA TMG/31 Meeting held in Kingston, Jamaica from 24 to 26 May 2016, the TMG reviewed and adopted the revised Memorandum of Understanding (MoU) between States/Territories/International Organizations members of MEVA III and REDDIG II project organization for the coordination and cooperation process for the MEVA III REDDIG II interconnection network.

4.1.2 The Meeting also confirmed the performance and completion of the interconnection related circuits, some of the circuits that were already implemented and it also identified the future interconnection requirements shown in the following table:

No	Circuit Requirement	Implementation Estimate
1	ATS line between Maiquetia ACC and San Juan ACC	Already implement (August 2016).
2	AMHS channel connection between Panama and Colombia	Implement on going 2017 Actually, over test.
3	AMHS channel between Brazil and the FAA, IP channel of 64Kbps.	The FAA is analysing the proposed solution. During 2017.
4	AMHS channel between Peru and the FAA, IP channel of 64Kbps.	Peru is analysing to make the proposal to the FAA during 2017.
5	AMHS channel between COCESNA and Trinidad y Tobago	COCESNA made the proposal to Trinidad and Tobago. Currently under T & T analysis. Last quarter of 2017, or early 2018.
6	AMHS channel between COCESNA and Colombia	COCESNA made the proposal to Colombia. Colombia has not answered yet.

4.1.3 In this sense, the following conclusion was agreed:

CONCLUSION
MEVA TMG/32/7 MEVA III-REDDIG II NEW INTERCONNECTIONS

That, Trinidad and Tobago, United States and COCESNA inform on any progress made on the MEVA III-REDDIG interconnection and take a decision by **December 2017**.

MEVA III – REDDIG II INTERCONNECTION

4.1.4 Interaction MEVA III PM & REDDIG PM:

- A good relationship has been established
- All work questions/coordination are performed in harmony

Colombia:

Voice circuits

-No notable outages

PAD circuits

-No notable outages (Lima)
-Manaus successfully tested (March 9th 2016)
-Circuit still not operational

IP VLAN data test with Panama

-VLAN tagging works fine
-Connected routers can PING each other
-End-to-end test for application outstanding (Luis Alejos)

Venezuela:

Voice circuits

-No notable outages

PAD circuits

-From time to time the circuits locked in one direction (sync).
-Control mechanism PAD (every packet needs to be acknowledged) – no "autoreset" function available – manual intervention by FRQ NOC needed

COCESNA:

No notable outages

E/CAR voice lines issues:

Coordinated line testing
-Problems to coordinate trouble shooting when customer complains arrives
-Contact persons
-Common database
-ticketing system, hotline, etc.

SPACE-BASED ADS-B DATA DISTRIBUTION THROUGH MEVA III

4.1.5 Under P/05, the company AIREON made a presentation about providing Automatic dependent surveillance - broadcast (ADS-B) satellite data using the MEVA network to reach the Air Navigation Service Providers (ANSP) that so require in the NAM/CAR regions.

4.1.6 Among the benefits listed by Aireon are:

- Augments current radar systems with oceanic and remote air space coverage
- Delivers true pole-to-pole global coverage, with near real-time delivery of "ADS-B Out" data to ANSPs
- No additional aircraft equipage by using 1090 MHz ES
- Adheres to all current and future ADS-B standards

4.1.7 AIREON services request:

1. To connect to the MEVA III network at Miami (TP) by Ethernet
2. AIREON to deploy a Service Delivery Point (SDP) by Multi-protocol label Switching (MPLS) Ethernet connections from AIREON system to the SDP
3. AIREON to send the SDP data for the region that would need to be sent to the correct ANSP
4. AIREON SDP would connect to the MEVA III Network and provide Multicast data to each specific ANSP.

4.1.8 The MEVA Service Provider indicated that they can provide the proposed ADS-B service to AIREON without degrading any of the services currently provided in the MEVA network. Likewise Frequentis indicated that the service provided would not incur additional costs to the users of the MEVA network since the cost of bandwidth required for this service would be 100% covered by the State requesting the data.

4.1.9 The Secretary reminded the MEVA users to keep in mind that the MEVA network is a network created by the Region for the services to boost communications, data and other communication needs in the Region at low cost and excellent quality.

4.1.10 That providing an additional service, especially by a third party, cannot be seen as an alliance of the MEVA communications provider with the third party, but rather, as providing a service through the MEVA network, in this case ADS-B through MEVA .

4.1.11 Curaçao indicated that it required the use of the ADS-B data mentioned by AIREON for its use of air traffic control. The Meeting took note of the request.

4.1.12 Based on the above, a study of the new service performance will be conducted and led by the rapporteur of the MEVA Task Force, including States wishing to participate and ICAO NACC Regional Office to carry out this analysis and that can be presented to the directors of the civil aviation organizations of the States for approval. Therefore, the Meeting formulated the following conclusion:

CONCLUSION
MEVA TMG/32/8 IMPLEMENTATION OF THIRD PARTY SERVICES

That, the Rapporteur of the MEVA Task Force, States wishing to participate, and ICAO:

a) carry out an analysis of the request made by Curaçao with the aim of determining the technical and operational requirements necessary to use the MEVA network as means of communication to provide the ADS-B data to the States;

b) analyse and determine the role that the service provider of the communications service will play in the implementation of third party services; and

c) present the study by **August 2017** to the directors of the Civil Aviation Authorities of the States for approval.

4.2 MEVA III – Eastern Caribbean (E/CAR) Aeronautical Fixed Service (AFS) Network Interconnection

4.2.1 Since the last Technical Management Group (TMG) Meeting, United States (Federal Aviation Administration (FAA)) initiated and/or continued coordination with Brasilia, Brazil, Lima, Peru, Trinidad and Tobago and Caracas, Venezuela for testing and implementing AMHS. Ratification of bilateral Technical Letter between States identifying agreement and necessary steps that must be finalized prior to implementation has been completed by most States. Other States have already transitioned to AMHS.

4.2.2 A teleconference was held between the CAR Region and Venezuela on December 2015 to reactivate the coordination and agreements made on several topics, as follows:

1. Trinidad and Tobago and Atlanta: This circuit will be interconnected through the MEVA III/REDDIG II Node in COCESNA (Tegucigalpa, Honduras) and not through Venezuela or Colombia.
2. Trinidad and Tobago and Georgetown: Trinidad and Tobago indicated that the AFTN circuit to Georgetown, which is now through Maiquetia but originally a direct connection PIARCO - Georgetown is requested.
3. Radar Data Exchange.
4. The FAA is supporting the exchange of Radar between Sint Maarten and Trinidad and Tobago through an interconnection of the E/CAR Network to the MEVA III Network at the San Juan (ZSU) CERAP.
5. PIARCO-San Juan hotline: The FAA and Trinidad and Tobago Civil Aviation Authority (TTCAA) have agreed on the implementation of the hotline as indicated in the Caribbean Initiative.

4.2.3 United States and CAR States, Sint Maarten, Trinidad and Tobago and COCESNA will coordinate the AMHS implementation, radar data sharing, and voice communication channel and inform on any progress made on the MEVA III-REDIG II interconnection to the Task Force Rapporteur.

4.3 New MEVA node installation proposal

4.3.1 Under the WP/07, the meeting reviewed the British Virgin Islands request to be part of the MEVA network. The meeting recalled that The Document of Agreement (DoA) on the joint participation, administration, improvement and implementation of services of the Third Generation of the Very Small Aperture Terminal (VSAT) Satellite Aeronautical Telecommunications Services Network (MEVA III) was signed by all its Members in 2015.

4.3.2 DoA Article II - *Rights and Conditions for Participating in the Network*, Section 3 - *Addition of new Parties to the Network* specifies that the Parties agree that from time to time new parties having a requirement for Network services recommended by ICAO, and that are within the satellite coverage area, shall be allowed to participate in the established MEVA III network without discrimination.

4.3.3 The Secretariat and the coordinator of the Meeting requested the vote to be taken by the participants, whether or not they approved the request made by British Virgin Islands (BVI). The application was 100% approved by the whole assembly, who formulated the following:

CONCLUSION
MEVA TMG/32/9 INTEGRATION OF BRITISH VIRGIN ISLANDS ON MEVA

That, ICAO communicate by **30 June 2017** the British Virgin Islands (BVI) the approval by the Meeting of its integration to the MEVA network.

4.4 Requirement for New MEVA III Circuits/Services

A SIMPLE WAY TO VERIFY LOCALLY SKYWAN AND LNB

4.4.1 In order to have references in the ordinary work of the nodes, the recommendation is not to depend just on external help to know if the problems are or not *in situ*.

4.4.2 Different units that might cause the same symptom are found in the MEVA nodes, for example if a green led is lost at the skywan, this may be the LNB, the LNB external power supply, the BUC, the skywan , Intermediate Fix (IF) cables or the antenna feeder. The use of a computer with a Management Information Base (MIB) browser and an inexpensive sat-finder can help to trace that kind of problems.

4.4.3 The Members were invited to take note of the information contained in the IP/03 regarding to resolve network failures.

DECOMMISSIONING OF MEVA CIRCUITS

4.4.4 Considering that the job that the MEVA Service Provider has to do in decommissioning is almost 50% of that one of commissioning, the proposed NRC is US$ 1,000.00 that is almost 50% of the cost for a commissioning.

4.4.5 As an example: in the future there might be a need for MEVA Member to transition the existing AFTN circuit into an AMHS circuit; The Service MEVA Provider will then offer that circuit with no additional costs for service (75 USD/month), but will only request the fixed one time charge for installation and, if needed, additional bandwidth or hardware.

	T0	T1		T2			
AMHS Circuit Commissioning		NRC US$ 2,100.00					
		MRC US$ 110.70 (75.00 + 35.70)	MRC US$ 110.70	MRC US$ 110.70	MRC US$ 110.70	MRC US$ 110.70	MRC US$ 110.70
AFTNS Circuit Decommissioning				NRC US$ 1,000.00			
				MRC US$ (-75.00)	MRC US$ (-75.00)	MRC US$ (-75.00)	MRC US$ (-75.00)

4.4.6 The US$ 1,000.00 NRC can be paid at the moment of the decommissioning or the State for 13 months (US$75.00 monthly per decommission) can pay this amount and then start with the US$ 75 reduction in their invoices.

CONCLUSION

MEVA TMG/32/10 REPLACEMENT OF AFTN WITH AMHS LINES

That, in order to formalize the decommissioning cost, the MEVA Service Provider officially provide MEVA Members the proposed cost and process for decommissioning AFTN lines replacing them with AMHS by **July 2017**.

Agenda Item 5: ICAO Position for the International Telecommunication Union World Radiocommunication Conference 2019 (ITU WRC-19)

5.1 Under WP/09, ICAO informed that the ICAO Air Navigation Commission examined the proposal of the frequency spectrum management group and ICAO position at the next World Radiocommunication Conference (WRC-19) of the International Telecommunication Union (ITU) to be held in 2019. In this sense, ICAO is open to receive comments from the States and International Organizations of the document proposed at the next meeting of the ITU.

5.2 It is important that States and International Organizations providing air traffic control services analyse the ITU WRC-19 agenda to ensure:

1. that the radio frequency spectrum that is required to meet current and future demand for communications, navigation and surveillance services will be available.
2. opposition to the reassignment of frequencies currently used for aeronautical services.
3. that ITU has carried out the necessary studies to support the proposed changes and that States ensure that these changes do not affect communications for air traffic services. In this regard, States should support ICAO's position on this agenda.
4. that search and rescue services are not affected.
5. that frequency bands are identified for the future development of International Mobile Telecommunications (IMT) that could impact aviation systems.
6. that the proposed changes do not affect the servicing of aviation systems in the frequencies of 5150-5250 MHz, 5350-5470 MHz, 5850-5925 MHz.
7. that the assignment of the international, national, air-ground, air-to-air, frequency bands of navigation systems and bands already assigned for future aeronautical development are not affected.

5.3 The Meeting agreed the following:

CONCLUSION
MEVA TMG/32/11 ACTIONS BEFORE THE ITU WORLD RADIOCOMMUNICATION CONFERENCE 2019 (WRC-19)

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.

5.4 The plan should contain at least the following activities:

1. Each State shall communicate to the national entity information on the necessary frequencies used for civil aviation, ensuring its protection at the national level before December 2017 and report the action to ICAO.
2. Encourage the participation at the national level of a representative at the ITU 2019 assembly, to ensure the protection of aeronautical frequencies.

3. Support the proposal made by ICAO to ensure that frequencies are available for air navigation services.
4. Each State follow up the protection of the aeronautical frequencies in their own countries and report ICAO in the next MEVA meeting of the actions that they did to support the protection of aeronautical frequencies.

Agenda Item 6: Other Business

PROGRESS WITH LEGACY X.25 AFTN SUPPORT

6.1 Under WP/12, United States reported on progress toward decommissioning its X.25 network and support for international AFTN X.25 connections. All internal users have now been migrated to IP connections and only international X.25 connections remain. United States' X.25 network is close to its end-of-life and has no active vendor maintenance support. Continuing sustainment is increasingly difficult.

6.2 Substantial progress has been made in AMHS transition and the following progress table was presented. The Meeting noted that seven MEVA members are yet to declare a transition schedule for migration to AMHS.

Operational AMHS	
Dominican Republic	(MEVA)
Cuba*	(MEVA)
Fiji	(Landline)
COCESNA*	(MEVA)
Japan	(Landline)
New Zealand*	(Landline)
Sint Maarten*	(MEVA)
Trinidad and Tobago*	(Landline)
U.K. NATS	(Landline)

In Transition	
Aruba	(MEVA)
Canada	(Landline)
Cayman Is.	(MEVA)
Jamaica	(MEVA)
Portugal	(Landline)

AFTN/X.25	
Australia[o]	(Landline)
Bahamas[2]	(MEVA)
Bermuda[2]	(Landline)
Brazil	(MEVA)
Curacao[2]	(MEVA)
Haiti[2]	(MEVA)
Mexico[o]	(Landline)
Panama[o]	(MEVA)
Peru	(MEVA)
Venezuela	(MEVA)

* Country transitioned to AMHS since MEVA TMG 31, 2016.
[o] Makes outgoing X.25 calls to FAA only (the operation will change in future)
[2] Makes and receives X.25 calls (the operation will change in future)

6.3 Since several MEVA III users are expected to continue to need X.25 AFTN support after the decommissioning of the FAA's network and in advance of their migration to AMHS, the United States has deployed a temporary COTS TCP/IP to X.25 conversion solution (using CISCO equipment) allowing a local TCP/IP connection, originated from their Aeronautical Fixed Telecommunication Network (AFTN) switch, to be converted into an outgoing X.25 Switched Virtual Circuit (SVC) connection. To migrate to this solution, existing X.25 configuration and connection procedures may have to change, because United States will not be able to receive X.25 connections. Therefore, the Meeting formulated the following:

CONCLUSION
MEVA TMG/32/12 DECOMMISSIONING OF X.25 NETWORK IN UNITED STATES

That, in order to allow United States to complete the decommissioning of its X.25 network, the remaining States using X.25:

a) share their anticipated schedule for AMHS transition with the MEVA/TMG Coordinator by **30 June 2017**;

b) work with United States to determine whether transition to temporary X.25 support is required; and

c) begin plans for appropriate testing as required.

Next MEVA TMG Meeting

6.4 According to Conclusion MEVA TMG/29/19 – *MEVA TMG MEETING ROTATIONAL SCHEME*, Curaçao confirmed that they will host the MEVA/TMG/33 Meeting, to be held in the last week of May 2018.

APPENDIX A
EXECUTIVE LIST OF CONCLUSIONS/DECISIONS

Number	Conclusion/Decision	Responsible for action	Deadline
32/1	**INVOICE DETAILS** That, to improve the understanding of the monthly MEVA III invoice, particularly on charge changes, the MEVA Service Provider:		
	a) submit a formal communication to all MEVA users of the cost they are currently charged for bandwidth;	MEVA Service Provider	
	b) notify the users henceforth every time the monthly amount charged in the invoice changes, especially if the increase affects all users; and	MEVA Service Provider	
	c) provide a formal communication and the breakdown of the invoice to all MEVA Members by July 2017.	MEVA Service Provider	July 2017
32/2	**VOICE AND DATA CHANNEL WITHOUT OPERATION** That,		
	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	States	30 August 2017
	b) States carry on the necessary test and operational agreements to ensure that the channels will be operational by the end of 2017.	States	End of 2017
32/3	**NON OPERATIONAL CHANNEL** That, if the necessary actions are not taken to carry out the activities under Conclusion MEVA/TMG/32/2, the State analyse if channels are not required and request to the MEVA Coordinator to cancel the channel by 15 December 2017.	States	15 December 2017

Number	Conclusion/Decision	Responsible for action	Deadline
32/4	**DEDICATED VOICE CIRCUITS-HOTLINES/SHOUTLINES/RADAR** 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.	Aruba, Curacao, Dominican Republic, Jamaica and ICAO	August 2017
32/5	**FAULT REPORTING AND TROUBLESHOOTING PROCEDURES** That,		
	a) States use the 2400 line to check the fault reporting and troubleshooting procedures implemented by The Service MEVA Provider through this service line; and	States	
	b) States report their results of operation to the Task Force Coordinator for follow-up on its correct functioning by 31 October 2017.	States	31 October 2017
32/6	**MEVA SWITCHING SYSTEM LINE INCREASE** That, in order to maintain the Service Level Agreement (SLA) for switched lines:		
	a) the MEVA Service Provider add another trunk line at no extra cost for the MEVA Members by July 2017; and	MEVA Service Provider	July 2017
	b) Cuba and the MEVA Service Provider evaluate the switched line performance once the additional trunk line is added and report it to the MEVA/TMG by December 2017.	Cuba and the MEVA Service Provider	December 2017
32/7	**MEVA III-REDDIG II NEW INTERCONNECTIONS** That, Trinidad and Tobago, United States and COCESNA inform on any progress made on the MEVA III-REDDIG interconnection and take a decision by **December 2017**.	Trinidad and Tobago, United Staes and COCESNA	December 2017
32/8	**IMPLEMENTATION OF THIRD PARTY SERVICES** That, the Rapporteur of the MEVA Task Force, States wishing to participate, and ICAO		
	a) carry out an analysis of the request made by Curaçao with the aim of determining the technical and operational requirements necessary to use the MEVA network as means of communication to provide the ADS-B data to the States;	The Rapporteur of the MEVA Task Force, States, and ICAO	

Number	Conclusion/Decision	Responsible for action	Deadline
	b) analyse and determine the role that the service provider of the communications service will play in the implementation of third party services; and	The Rapporteur of the MEVA Task Force, States, and ICAO	
	c) present the study by August 2017 to the directors of the Civil Aviation Authorities of the States for approval.	The Rapporteur of the MEVA Task Force, States, and ICAO	August 2017
32/9	**INTEGRATION OF BRITISH VIRGIN ISLANDS ON MEVA** That, ICAO communicate by 30 June 2017 the British Virgin Islands (BVI) the approval by the Meeting of its integration to the MEVA network.	ICAO	30 June 2017
32/10	**REPLACEMENT OF AFTN WITH AMHS LINES** That, in order to formalize the decommissioning cost, the MEVA Service Provider officially provide MEVA Members the proposed cost and process for decommissioning AFTN lines replacing them with AMHS by July 2017.	MEVA Service Provider	July 2017
32/11	**ACTIONS BEFORE THE ITU WORLD RADIOCOMMUNICATION CONFERENCE 2019 (WRC-19)** 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.	ICAO and the MEVA TMG	By the MEVA/TMG/33
32/12	**DECOMMISSIONING OF X.25 NETWORK IN UNITED STATES** That, in order to allow United States to complete the decommissioning of its X.25 network, the remaining States using X.25:		
	a) share their anticipated schedule for AMHS transition with the MEVA/TMG Coordinator by 30 June 2017;	States using X.25	30 June 2017
	b) work with United States to determine whether transition to temporary X.25 support is required; and	States using X.25	
	c) begin plans for appropriate testing as required.	States using X.25	

FOLLOW UP TO VALID CONCLUSIONS FROM THE MEVA TMG/32 MEETING
COMPLETE

Conclusions	Description	Remarks	Status
TMG/31/7 - E/CAR AFS - MEVA III NETWORK INTERCONNECTION TROUBLESHOOTING MANAGEMENT AND COORDINATION PROCEDURE	That, in order to improve the coordination and management actions for trouble shooting failures involving the interconnection of E/CAR AFS and MEVA III Network, the MEVA III TF, the MEVA Service Provider and the E/CAR/NTG Rapporteur develop by 30 July 2016, a draft Troubleshooting management and coordination procedure for approval of the MEVA Members and the E/CAR AFS Members.	MIII Task Force, MEVA Service Provider, and E/CAR/NTG Rapporteur A draft trouble shooting procedure is being develop by T&T and should be finalized by end of June 2017	VALID

FOLLOW UP TO VALID CONCLUSIONS FROM THE MEVA TMG/32 MEETING
VALID

Conclusions	Description	Remarks	Status
ANI/WG/3/3 - PROTECTION AND RECOGNITION OF C BAND SPECTRUM USAGE	That, in order to take the technical and regulatory actions to support existing and future operation of the fixed satellite service earth stations within the band 3 400 – 4 200 MHz, as an aid to the safe operation of aircraft and reliable distribution of meteorological information in some States, NAM/CAR States take the appropriate measures in order to ensure the protection of the satellite C-band operated by the National and Regional VSAT networks: a) registration of the aeronautical VSAT frequencies in the States register held by the national authorities of regulation of telecommunication; and b) follow-up with the concerned authorities in the States to further register the frequencies in the ITU Master International Frequency Register (MIFR) by February 2017.	MEVA Members will act and follow-up with their National Spectrum Authority	VALID Derrick Grant

Conclusions	Description	Remarks	Status
ANI/WG/3/6 - AMHS IMPLEMENTATION PROCESS IN THE CAR REGION	c) carry on with the additional task of testing the transmission of XML data through AMHS system, coordinating these activities with the AMHS TF.	MEVA TMG Coordinator to keep the MEVA Members involved on the need for MEVA Network capabilities and circuits . ANI/WG/3/6(c) – AMHS Implementation Process in the CAR Region (c) carry on with the additional task of testing the transmission of XML data through the AMHS system, coordinating these activities with the AMHS TF. 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 propose an AMHS profile to transport XML data as an AMHS File Transfer Body Part (FTBP) – akin to an email attachment. Since TMG31, the FAA has verified 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. 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. The FAA is ready to test with partners using non-operational systems. Looking toward future implementation, there is concern regarding use of FTBP in a mixed AFTN/AMHS network, since any routing (including alternate routing) via an AFTN node will block the FTBP transport.	c) Valid

Conclusions	Description	Remarks	Status
TMG/31/3 - OPERATIONAL USE OF MEVA III CIRCUITS	That, in order to ensure the operational use of all the contracted MEVA III circuits (SDD listed), all the MEVA Members with pending circuits to be operational, perform the necessary actions (operational agreement, procedure, etc.) and report the completion of this task or its progress status to the MEVA TMG Coordinator and ICAO by 30 September 2016.	All Members to report	VALID Derrick Grant – Task Force
TMG/31/4 - COMPLETION OF MEVA III NODE INFRASTRUCTURE IN MIAMI	That, in order to complete the necessary infrastructure in the MEVA III node in Miami, United States coordinate with the MEVA Service Provider to conduct the arrangement to complete the full independency of the T1 lines and report the MEVA/TMG/32 Meeting accordingly.	United States (FAA) As of today, Frequentis is providing three T-1 lines where two are used operational. The third T-1 diversity problem has not been resolved.	VALID
TMG/31/6 - FOLLOWUP TO IMPLEMENTATION OF MEVA III – REDDIG II INTERCONNECTION CIRCUIT REQUIREMENTS	That, in order to conduct a follow-up of the MEVA III-REDDIG II Interconnection circuits requirements, a) MEVA Service Provider resolve the problems identified in the PAD equipment; 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; 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 d) the progress and updates to this implementation be reported to the MEVA/TMG/32, applying the MEVA III additional circuit process.	Frequentis; Curacao, Panama, United States, COCESNA, and Trinidad & Tobago The provider indicates that: • The PAD packet transfer relies on proper packet acknowledgement by end-user equipment – nothing to update on PAD configuration. • Inconsistent window size programming on PAD still in place. Adapting put on hold in agreement with FAA for Aruba PAD.	VALID
TMG/31/7 - E/CAR AFS - MEVA III NETWORK INTERCONNECTION TROUBLESHOOTING MANAGEMENT AND COORDINATION PROCEDURE	That, in order to improve the coordination and management actions for trouble shooting failures involving the interconnection of E/CAR AFS and MEVA III Network, the MEVA III TF, the MEVA Service Provider and the ECAR NTG Rapporteur develop by 30 July 2016, a draft Troubleshooting management and coordination procedure for approval of the MEVA Members and the E/CAR AFS Members.	MIII Task Force, MEVA Service Provider, and ECAR NTG Rapporteur. A draft trouble shooting procedure is being developed by Trinidad and Tobago, which should be finalized by the end of June 2017.	VALID

Conclusions	Description	Remarks	Status
TMG/31/9 - ACTION PLAN AND AGREEMENT FOR MIGRATION OF AFTN LINES TO AMHS LINES	That, in order to optimize the cost and use of the network bandwidth, without violating the original contracts of the network, for those Members that are requesting that existing AFTN lines to migrate to AMHS circuits, the MEVA III TF develop a draft Action Plan and Agreement to allow this migration by 30 September 2016.	MEVA III Task Force Frequentis will provide a copy of draft agreement on migration of AFTN lines to AMHS by June 2017 to be reviewed by MEVA Members .	VALID
TMG/31/10 - IMPLEMENTATION OF NEW MEVA III CIRCUITS	That, in order to ensure the operational need and a realistic date for the implementation of the new circuits listed in Table 3 of the MEVA TF/31 Report, the MEVA Members involved in the new circuits: a) evaluate these needs with their corresponding operational counterparts; b) apply the "MEVA III Additional circuit" procedure; and c) inform the MEVA/TMG/32 Meeting.	MEVA Members	VALID Derrick Grant
TMG/31/11 - CHANGING X.25 CONFIGURATION TO X.25 SVC CONNECTIONS	That, considering that United States X.25 network is beyond the end of life and has no active vendor maintenance with difficult continued sustainment and to complete decommissioning of its X.25 network, a) MEVA III TF evaluate the impact for the change (X.25 configuration to receive X.25 SVC connections) reporting the MEVA Members by 30 August 2016; and b) CAR States having legacy X.25 AFTN circuit migrate to a TCP/IP to X.25 conversion capability by 30 November 2017.	MEVA Members	VALID
TMG/31/12 - REVIEW OF CAR/SAM eANP VOLUME II CNS REQUIREMENTS	That, in order to ensure that the CAR/SAM eANP Volume II has the CNS requirements reflecting the best practices and updates identified in the MEVA III Network, the MEVA III TF: c) conduct a revision of these requirements, particularly on the ATN architecture and A/G and G/G Communications; and d) report their recommendations to the MEVA TMG/32 Meeting.	MEVA III Task Force	VALID

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RESULTS OF MEVA III 2017 ANNUAL MAINTENANCE VISITS

Site	Circuit Status (i.e.: FXS, E&M, AFTN)	Protocol	On-the-Job Training	Comment	Date on Site
Aruba Dual Chain Configuration	All circuits operational. **Status Green**	Signed **Status Green**	N/A	Replaced antenna feed-window **Status Green**	April 10th 2017 **Status Green.**
Cuba Single Chain Configuration	All circuits operational. **Status Green**	Scheduled for May 9th 2017 **Status Orange**	Scheduled for May 9th 2017 **Status Orange**	BUC and spares available on site **Status Green**	Plan: May 8th 2017 **Status Orange**
Atlanta Dual Chain Configuration	All circuits operational. **Status Green**	Signed **Status Green**	N/A	Installed 2nd AC power line between UPS and ODU. Redundancy switch over tested. **Status Green**	April 18th 2017 **Status Green.**

Site	Circuit Status (i.e.: FXS, E&M, AFTN)	Protocol	On-the-Job Training	Comment	Date on Site
Miami Dual Chain Configuration	All circuits operational. **Status Green**	**Status Green**	N/A	AM done at Teleport **Status Green** 2nd UPS installed **Status Green**	Februar 2nd 2017 **Status Green**
Dominican Republic Dual Chain Configuration	All circuits operational. **Status Green**	Signed **Status Green**	N/A	No comments **Status Green**	**Status Green.**
Haiti Dual Chain Configuration	All circuits operational. **Status Green**	Signed **Status Green**	N/A	Replaced defective WG switch (RX) and 1 LNB due to water leak **Status Green**	April 26th 2017 **Status Green.**

Site	Circuit Status (i.e.: FXS, E&M, AFTN)	Protocol	On-the-Job Training	Comment	Date on Site
Miami Dual Chain Configuration	All circuits operational. **Status Green**	**Status Green**	N/A	AM done at Teleport **Status Green** 2nd UPS installed **Status Green**	Februar 2nd 2017 **Status Green**
Dominican Republic Dual Chain Configuration	All circuits operational. **Status Green**	Signed **Status Green**	N/A	No comments **Status Green**	**Status Green.**
Haiti Dual Chain Configuration	All circuits operational. **Status Green**	Signed **Status Green**	N/A	Replaced defective WG switch (RX) and 1 LNB due to water leak **Status Green**	April 26th 2017 **Status Green.**

Site	Circuit Status (i.e.: FXS, E&M, AFTN)	Protocol	On-the-Job Training	Comment	Date on Site
Jamaica Single Chain Configuration	All circuits operational. **Status Green**	Signed **Status Green**	N/A	Replaced antenna feed window **Status Green**	April 24th 2017 **Status Green.**
Grand Cayman Single Chain Configuration	All circuits operational. **Status Green**	Signed **Status Green**	N/A	Replaced antenna feed window **Status Green**	April 2nd 2017 **Status Green.**
COCESNA (Honduras) Single Chain Configuration	All circuits operational. **Status Green**	Signed **Status Green**	N/A	No comments **Status Green**	April 4th 2017 **Status Green.**

Site	Circuit Status (i.e.: FXS, E&M, AFTN)	Protocol	On-the-Job Training	Comment	Date on Site
Bahamas-Freeport Single Chain Configuration	All circuits operational. **Status Green**	Signed **Status Green**	N/A	Installed new antenna **Status Green** After 3 days of operation BUC starts to inherit. 2nd visit for BUC swap planned for May 4th **Status Green**	March 25th 2017 **Status Green.**
Bahamas-Nassau Single Chain Configuration	All circuits operational. **Status Green**	Signed **Status Green**	N/A	Spare FAD 8400 lost (maybe during hurricane 2016) **Status Green**	April 26th 2017 **Status Green.**
Mexico-Merida Single Chain Configuration	All circuits operational. **Status Green**	Schedule open **Status Red**	OJT provided to customer **Status Green**	Station installed October 31st 2016. **Status Green**	Schedule open **Status Red**

Site	Circuit Status (i.e.: FXS, E&M, AFTN)	Protocol	On-the-Job Training	Comment	Date on Site
Curacao Single Chain Configuration	All circuits operational. **Status Green**	Signed **Status Green**	N/A	FAD 8400 missing on spare stock – ready for repair awaiting cust. response **Status Orange**	April 11th 2017 **Status Green.**
Panama Single Chain Configuration	All circuits operational. **Status Green**	Signed **Status Green**	N/A	Antenna reflector shows wholes – reason most probably ext influence.. **Status Orange**	April 6th 2017 **Status Green.**
Puerto Rico Dual Chain Configuration	All circuits operational. **Status Green**	Signed **Status Green**	N/A	Installed 2nd UPS Only one AC cable available between IDU & ODU **Status Green**	April 24th 2017 **Status Green.**

Site	Circuit Status (i.e.: FXS, E&M, AFTN)	Protocol	On-the-Job Training	Comment	Date on Site
Venezuela Indoor Unit only	All circuits operational. **Status Green**	Schedule open **Status Red**	Schedule open **Status Red**	Because of political situation postponed **Status Red**	Schedule open **Status Red**
Colombia Indoor Unit only	All circuits operational. **Status Green**	Signed **Status Green**	N/A	No comment **Status Green**	April 7th 2017 **Status Green.**
St. Maarten Single Chain Configuration	All circuits operational. **Status Green**	Signed **Status Green**	N/A	No comment **Status Green**	April 12th 2017 **Status Green.**

Annual Maintenance:

- All protocols are available for review at MEVA Webpage
  - Documents/Annual Maintenance/2017/Protocol
- Caracas postponed due to actual political situation
- Cuba to be done upfront TMG/32

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Improvements to MEVA III node performance

Improvements:

- Late 2016 / Early 2017 sun-outage
  - Whole outages within expected period
- PAD Colombia
  - Lima (online)
  - Manaus still not operational (link is ready to use…)

- Monthly Report
  - ERLANG B calculation
    - two calculation methods introduced “closed system” vs “open system”
    - 5% blocking rate on „open system“ calculation method overstepped several times
      - continued at Agenda item #3.4

Improvements reached (cont.):

- Successfull VLAN tagging test for circuit REDDIG (Panama/Colombia)
  - VLAN can be used to provide additional IP circuits
  - Usage of available FAD Ethernet port

- Introduction of AFTN/AMHS decommissioning agreement

Improvements to be reached in near future:

- Q & A
  - FRQ to clarify questions on
    - Unpaid invoices
    - AIREON services (ADS-B) through MEVA III network