INTERNATIONAL CIVIL AVIATION ORGANIZATION
NORTH AMERICAN, CENTRAL AMERICAN AND CARIBBEAN OFFICE

THIRTIETH MEVA TECHNICAL MANAGEMENT GROUP MEETING

(MEVA/TMG/30)

FINAL REPORT

ORANJESTAD, ARUBA, 27 TO 29 MAY 2015

Prepared by the Secretariat

May 2015

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HISTORICAL

ii.1 Place and Date of the Meeting

The Thirtieth MEVA Technical Management Group Meeting (MEVA/TMG/30) was held in the Aruba Surfside Marina, Oranjestad, Aruba, from 27 to 29 May 2015.

ii.2 Opening Ceremony

Mr. Julio Siu, Regional Officer, Communications Navigation and Surveillance of the North American, Central American and Caribbean (NACC) Office of the International Civil Aviation Organization (ICAO) provided an overview of the activities and deliverables to be accomplished from this MEVA/TMG/30 Meeting emphasizing the successful and timely implementation of the MEVA III Network. Mr. Nilknarf Koch, CEO Air Navigation Services Aruba (ANSA) provide some opening remarks, emphasizing the regional example of collaboration manifested with the MEVA III Network and thanked the participants for attending this Meeting, Mr. Edwin Kelly, Director of Civil Aviation Aruba, welcomed the participants and officially opened the meeting.

ii.3 Officers of the Meeting

The MEVA/TMG/30 Meeting was chaired in meeting plenary by Ms. Dulce Roses, MEVA TMG Coordinator. Mr. Julio Siu, CNS Regional Officer of the ICAO NACC Regional Office served as Secretary of the Meeting.

ii.4 Working Languages

The working language of the Meeting was English and working papers, information papers and draft 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 9:00 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: Review of Conclusions and Actions from Previous MEVA/TMG Meetings

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

- 3.1 Final status of MEVA II matters
- 3.2 MEVA Network Performance and Maintenance: 04/2015-05/2015
- 3.3 Review of Transition Issues
- 3.4 MEVA III Monitoring and Reporting

Agenda Item 4: Overview of MEVA III Implementation Activities

- 4.1 MEVA III Task Force Report and Activities
- 4.2 MEVA III Documentation Status
- 4.3 MEVA III Interconnection Matters
- 4.4 MEVA III *Go-Teams*

Agenda Item 5: World Radiocommunication Conference (2015) (WRC-2015) Activities

Agenda Item 6: Other Matters

- 6.1 Support to the ANI/WG/2 Meeting

ii.7 Attendance

The Meeting was attended by 10 MEVA members, the E/CAR/NTG Rappporteur, and the MEVA III Service Provider from 10 States/Territories from the NAM/CAR/SAM Regions and 2 International Organizations, totalling 29 delegates as indicated in the list of participants.

ii.8 List of Conclusions

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

CONCLUSIONS: Activities approved by the MEVA Members

ii.9 List of Working and Information Papers and Presentations

Refer to the Meeting web page:
http://www.icao.int/NACC/Pages/meetings-2015-mevatmg30.aspx

WORKING PAPERS

Number	Agenda Item	Title	Date	Prepared and Presented by
WP/01	1	Provisional Agenda; Work Method and Schedule of the Thirtieth MEVA Technical Management Group Meeting (MEVA/TMG/30)	21/04/15	Secretariat
WP/02	2	Review of Previous Valid TMG Conclusions	30/04/15	TMG Coordinator
WP/03	3.1	MEVA /TMG/30 Presentation		
WP/04	3.2 3.3 3.4	MEVA III Maintenance Service Plan MEVA III Monthly Report	20/05/15	COMSOFT
WP/05	4.1	MEVA III Task Force Report and Activities	08/05/15	Task Force Rapporteur
WP/06	4.2	MEVA III Documentation Status	12/05/15	Task Force Rapporteur
WP/07	4.3	MEVA III Interconnection Matters: MEVA – REDDIG and MEVA-E/CAR	15/05/15	Secretariat
WP/08	4.4	Results and Achievements of the MEVA III Technical Assistance Missions *Go-Teams*	15/05/15	Secretariat
WP/09	5	MEVA TMG pending activities regarding ICAO Position for the International Telecommunication Union (ITU) World Radiocommunication Conference (WRC-2015)	15/05/15	Secretariat
WP/10	6.1	Follow-up to MEVA TMG support to the Regional Air Navigation Implementation Group (ANI/WG)	15/05/15	Secretariat
WP/11	6	MEVA III Website Migration from ICAO Secure Portal	15/05/15	Secretariat
WP/12	3.3	Proposed Procedure for Cost Sharing for New MEVA III Circuits Implementation and Follow-Up to Pending MEVA III circuits Implementation	11/05/15	Task Force Rapporteur
WP/13	3.3	Follow-Up to MEVA TMG Support to the Regional Air Navigation Implementation Group (ANI/WG)	22/05/15	Jamaica
WP/14	3.3	FAA experience of the MEVA III installation	12/05/15	United States

INFORMATION PAPERS

Number	Agenda Item	Title	Date	Prepared and Presented by
IP/01	---	List of Working, Information Papers and Presentations	22/05/15	Secretariat

PRESENTATIONS

Number	Agenda Item	Title	Presented by
1	4.5	SNMP Workshop	COMSOFT

LIST OF PARTICIPANTS

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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 with minor changes, 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.

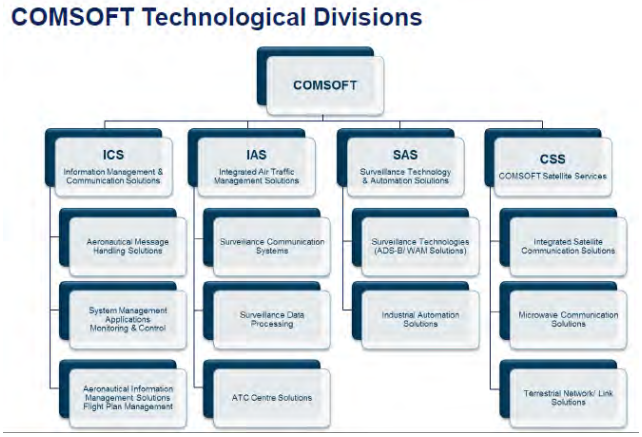
Agenda Item 2 Review of Conclusions and Actions from Previous MEVA/TMG Meetings

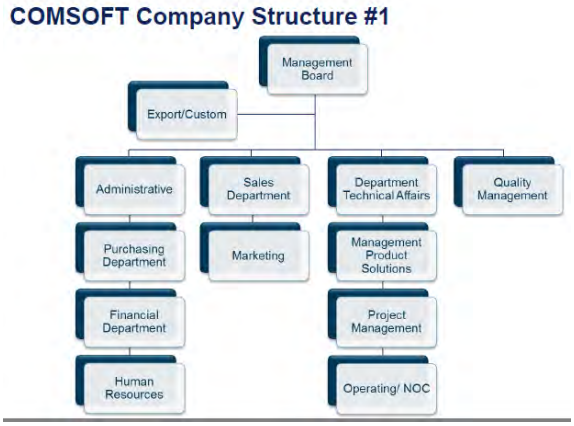
2.1 Under WP/02, the Meeting reviewed the valid conclusions from the MEVA TMG/29 Meeting and followed-up on their progress. In summary, all conclusions were considered completed or superseded. Follow-up of these conclusions is presented in **Appendix A**.

Agenda Item 3 **Operation and Performance of the MEVA III Network and Pending Transition Matters**

3.1 Final status of MEVA III matters

3.1.1 Under WP/3 and WP/04, Comsoft presented information on the company Technological Division, company structure, as well as responsibilities of key personnel from Comsoft and its associated Company NewCom. This information was requested by MEVA Members.





Responsibilities of Key Personnel

Responsibility	Key Personnel
Project Management (PM)	Markus Tenbeck
Deputy Project Management (Deputy PM)	Victor Pabon
Safety Manager (SE)	Lutz Krane
Quality Management (QM)	Jochen Burkhard
Quality Engineering (QE)	Markus Tenbeck
Configuration Management (CM) and Training	Dr. Wolfgang Wünderlich
Commercial and Financial Manager (CFM)	Dominik Koch
Export and Billing	Christine Klein
Working Groups:	
Software Development (SW)	Frank Kulasik
Hardware Procurement/Assembly	Andreas Gutekunst
Preventive Maintenance	Bobsmei Narciso Bontilao
Maintenance	"Local Partner"
Training Coordination	Susanne Dastig

3.1.2 Comsoft also presented an overview of the network indicating that dates for the Block Up Converter (BUC) replacement programme installation are listed per State. Comsoft alerted the Members that there is a risk changing the dates depending on customs clearance delays. Also, Comsoft is in the process of updating the required as-built diagrammes and other documentation.

3.1.3 The presentation provided a status update of each MEVA Member State, including the site acceptance test, On-the-Job Training (OJT), BUC replacement and circuit. Following the presentation, each Member State provided the following update on their current status:

a) Aruba - OJT was not properly conducted. Schematic documents have not been delivered and power strip were not acceptable. Question – they are paying for a redundant configuration but only have one BUC, not redundant for the month of April. Will they be reimbursed?
b) Atlanta - Defective BUC. FAA requested Comsoft to implement both CPIs in Atlanta as final solution instead of replacing with Terrasat. Scheduled outage will be 5 hours to be coordinated with Members.
c) Bahamas – Freeport - Antenna requires alignment.
d) Bahamas – Nassau - Antenna realignment scheduled for Friday, power injector inserted, modem needs to be replaced. Site acceptance test on red.
e) Cayman Islands- Site Acceptance Tests (SAT) completed but not signed; completed document was not received by Cayman Islands. Antenna requires alignment. LNB filter not installed. No issues calling the National Operations Centre (NOC).
f) COCESNA - BUC replacement still pending. Circuits are all operational. Have not called the NOC.
g) Colombia - Pending PAD shipment; installation scheduled for next week.
h) Cuba - Comsoft giving Cuba a new cable to see is the Aeronautical Message Handling System (AMHS) problem is fixed. BUC has not been delivered. 2400 maintenance line works fine.
i) Curacao - BUC already replaced. OJT completed. Called 2400 line and was transferred to answering machine. Called the 305 area code and was also transferred to answering machine.
j) Dominican Republic - OJT was incomplete due to technician limited time. OJT will be repeated and rescheduled for a later date. No issues with NOC– use 2400 line with no problems.
k) Haiti - Low Noise Block (LNB) needs to be replaced. At the moment site is fully operational with one CPI and one Terrasat LNB. Manuals were not specific to the site, technician was not aware of specifications for the sites. LNB changes are not scheduled as of now. Propose consider implementation of LNB during maintenance early next year. Used the 2400 line during the week-end when the BUC was replaced and call was transferred to Lima.
l) Jamaica- No issues with network. Called NOC only once and was placed on hold for a long time and the NOC called Markus Tenbeck for guidance. Jamaica recommends Comsoft to do quality checks with NOC.
m) Panama - OJT was not done and needs to be rescheduled. New station implemented but the Delegate could not provide information on the replacement of the BUC at this time, only that a Comsoft Tech will be arriving next week. No issues reported regarding the NOC.
n) Puerto Rico - OJT has not been completed. Comsoft will contact the site for OJT scheduling.
o) St Maarten - Working on final BUC configuration.
p) Venezuela - AFTN not operational, waiting for equipment PAD arrival which per Comsoft information should be arriving next week.

3.1.4 In conclusion, the status of these matters is shown in **Appendix B**.

MEVA III Final Carrier Configuration and NAT Completion

3.1.5 Comsoft commented on the preparation for the final carrier configuration: Due to the need for parallel running MEVA II and MEVA III during the transition phase, a low coding was used for the Network carrier and now that transition phase is completed, Comsoft will change the carrier to a higher code rate (8-PSK ¾). There will be no impact on the provided network data rate but space consumption will be cut in half. The Meeting agreed that the transition to final carrier configuration shall be done on 3 June 2015 at 04:00 UTC.

3.1.6 Comsoft informed that the Network Acceptance Test (NAT) will be completed two weeks after network transition to the final carrier configuration with the MEVA III Master NCC to Slave NCC switching. The following conclusion was agreed:

CONCLUSION
MEVA/TMG/30/1 MEVA III MASTER/SLAVE SWITCHING- NETWORK ACCEPTANCE TEST

That in order to complete the NAT for the MEVA III, Comsoft report the actions scheduled for the MST/Slave switching by **9 June 2015**:

MEVA III OJT

3.1.7 MEVA Members reported incomplete OJT by Comsoft during installation. The following discussions were held:

- Comsoft to coordinate with sites where OJT was not acceptable such as Aruba, Dominican Republic and Puerto Rico. Aruba and Dominican Republic agreed to reschedule OJT during yearly maintenance next year. Comsoft will provide a one day OJT free of charge to all MEVA Members during the annual maintenance visit.
- Disagreement between FAA and Comsoft as of why Puerto Rico OJT was not completed. It was agreed by both the United States and Comsoft that the OJT training in Puerto Rico can be conducted during the next yearly maintenance event.
- Panama indicated that the Comsoft technicians doing the implementation were longer than normal and allowed no time for OJT. Comsoft does not agree with Panama, will confirm and report back to Panama.

CONCLUSION
MEVA/TMG/30/2 MEVA III ON-THE-JOB TRAINING

That in order to improve and complete the OJT for MEVA III, Comsoft:

a) provide a one day OJT free of charge to all MEVA Members during the 2016 annual maintenance visit; and

b) inform Panama on the OJT provision by **6 June 2015.**

Additional Cost for Work Hours

3.1.8 Some Members indicated that their local technician assisted Comsoft technicians during installation and Comsoft should not charge them for additional hours during installation. Comsoft indicated that these charges will be removed. However, this does not include removing charges for antenna realignment on Member States that need such action. In this regard the following Conclusion was adopted:

CONCLUSION
MEVA/TMG/30/3 REMOVAL OF BILLS DUE TO ADDITIONAL HOURS DURING INSTALLATION

That considering the clarifications made by the MEVA Members:

a) remove all bills to the MEVA Members related to the additional hours during installation; and

b) MEVA Members be aware of item a) and refuse any bill related to this concept.

3.1.9 Comsoft commented the Meeting that several MEVA Members have not paid their MEVA III bills. In this regard, the following conclusion was adopted:

CONCLUSION
MEVA/TMG/30/4 PAYMENT OF MEVA III SERVICE BILLS

That MEVA Members, who have not yet done so, review and make the necessary payments for the MEVA III Service bills, contacting Comsoft for this coordination by **5 June 2015**.

BUC Replacement and Other Installation Credits

3.1.10 Considering the lack of BUC redundancy in Aruba, and the alternative use of the Terrasat BUC in Dominican Republic and COCESNA, Comsoft informed that Aruba, Dominican Republic and COCESNA will receive a 25% credit for equipment leased cost until replacement of BUC or installation of the 2nd BUC. Aruba commented the missing provision of the power strip for their MEVA III node. Similarly, Dominican Republic claimed on the costs paid by them for the cable and connectors used in the MEVA III Installation. In this regard the following conclusions were adopted:

CONCLUSION
MEVA/TMG/30/5 CREDITS FOR BUC REPLACEMENT AND INSTALLATION MATERIALS

That, considering the pending actions to complete the MEVA III installation, Comsoft

a) provide Aruba, Dominican Republic and COCESNA a 25% credit for the equipment leased cost until the final CPI BUC is installed or the installation of 2nd BUC;

b) provide new power strip to Aruba MEVA node by the next annual maintenance visit; and

c) provide an answer on material reimbursement for Dominican Republic by **12 June 2015**.

CONCLUSION
MEVA/TMG/30/6 CPI BUC REPLACEMENT

That in order to ensure that the MEVA III BUCs are the final updated versions from CPI manufacturer; Comsoft inform and publish in the MEVA III Website the BUC serial numbers by **6 June 2015.**

Other Installation Pending actions

3.1.11 Following the pending installation matters, the following conclusions were adopted by the Meeting:

CONCLUSION
MEVA/TMG/30/7 AERONAUTICAL MESSAGE HANDLING SYSTEM (AMHS) DATA CIRCUIT STRESS TEST

That, in order to ensure the correct operation and capacity performance of the AMHS circuit, Dominican Republic and United States coordinate a Stress test for the AMHS Data Circuit by **30 June 2015,** with the support of Comsoft.

3.1.12 Comsoft provided an overview of the MEVA III webpage, the interpretation of the color meaning, the explanation of the different folders and windows and the NOC and Trouble Ticket management.

3.2 MEVA Network Performance and Maintenance: 04/2015-05/2015

3.2.1 COMSOFT has identified the following issues relevant to maintenance:

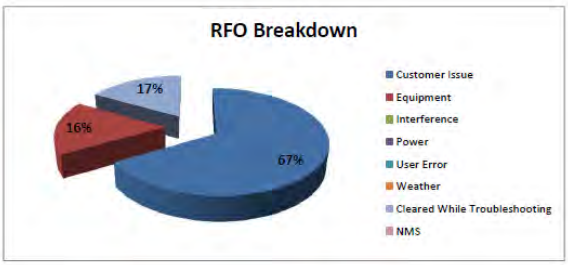
- one defective RJ45 card of the RSS switches at Miami FAA: Customer has replaced defective part by spare usage
- one defective LNB in the dual chain at Haiti: Technician has replaced it by available Terrasat LNB

3.2.2 United States commented on an existing failure with one of the Terrasat BUC in Atlanta. Considering that the Terrasat BUCs are to be replaced with the CPI BUCs and to keep any maintenance window at a minimum, the following conclusion was agreed by Comsoft:

CONCLUSION
MEVA/TMG/30/8 BUC REPLACEMENT IN ATLANTA

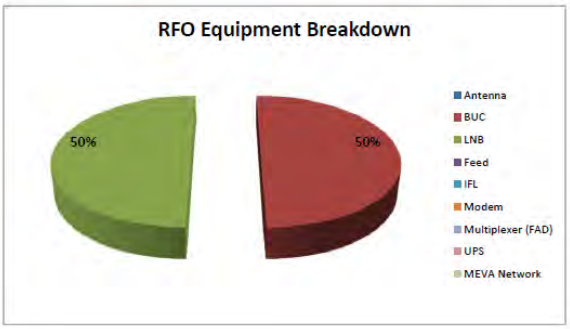
That, in order to restore the redundancy and final configuration of the Atlanta MEVA III Node, Comsoft and United States coordinate the 5-hour maintenance window needed to replace all the Terrasat BUCs with CPI final BUCs by **6 June 2015**.

3.2.3 MEVA III Service Provider presented the Monthly Report for the month of April 2015. The Meeting noted that the provided statistics and graphics did not reflect the full MEVA III operation considering that several nodes were still not operational like Mexico or, lately implemented, Colombia. The following results were highlighted:



RFO Breakdown

RFO	#	Equipment	#
Customer Issue	4	Antenna	
Equipment	1	BUC	1
Interference		LNB	1
Power		Feed	
User Error		IFL	
Weather		Modem	
Cleared While Troubleshooting	1	Multiplexer (FAD)	
NMS		UPS	
		MEVA Network	



3.2.4 The Meeting recalled the need for information on Erlang B Block probability and bandwidth availability to be presented in each monthly report. Comsoft committed on the following conclusion:

CONCLUSION
MEVA/TMG/30/9 ERLANG B BLOCK PROBABILITY INFORMATION

That, in order to provide accurate information on the MEVA III Erlang Block Probability, Comsoft:

a) draft a method for this calculation by **30 July 2015**;

b) submit the method to the MEVA III TF for its corresponding review and approval; and

c) include the bandwidth availability and the Erlang B Block probability by the August 2015 Monthly report.

Improvement on MEVA III NOC Service

3.2.5 The Meeting commented the different problems encountered by MEVA Members when calling the Comsoft NOC located in Miami, United States, such as calls being transferred to Lima, Peru on week-ends, where operators do not speak English and do not know what MEVA is. In this regard Comsoft proposed several improvements when calling the NOC:

- Comsoft will implement a dedicated phone line in Miami, United States NOC for MEVA by **2 June 2015**
- once the call is placed, the operator will ask for the preferred language (English or Spanish) and will be directed to the proper one
- operator will ask if calling for MEVA, and the call will be directly connected to engineer in Miami, United States
- complete guidelines to be submitted by Comsoft to Members by **2 June 2015**

CONCLUSION
MEVA/TMG/30/10 MEVA NOC IMPROVEMENTS

That, in order to resolve the different difficulties encountered in the NOC service, COMSOFT, by **2 June 2015**:

a) implement a dedicated phone line in Miami, United States NOC for MEVA;

b) implement the proposed improvements;

c) complete guidelines and submit them to Members by **2 June 2015**; and

d) implement a Quality assurance procedure for the NOC performance and the results of this procedure be shown in the monthly reports for two months.

3.2.6 The MEVA III Service Provider presented the MEVA III Maintenance Plan. The Meeting noted that the Tentative Annual Maintenance schedule for 2016 is included in the MEVA III website.

3.3 Review of Transition Issues

3.3.1 In the Presentation, the MEVA III Service Provider presented the status of the various MEVA III implementation activities that are still pending. The Meeting noted the relevant pending Transition Issues as shown in Appendix B.

3.3.2 Under WP/12, the MEVA III Task Force Rapporteur presented a proposed Procedure for Cost Sharing for New Additional MEVA III Circuit. This procedure was developed as assigned by the TMG/29 Meeting under Conclusion MEVA TMG/29/07 - *Procedure for MEVA III Management for Additional MEVA III Circuits*. Members reviewed and commented on the procedure. During the meeting, the Task Force amended the procedure in accordance with the comments. The amended procedure is presented in **Appendix C.**

CONCLUSION
MEVA/TMG/30/11 COST SHARING PROCEDURE FOR ADDITIONAL MEVA III CIRCUITS

That Members approve the Procedure for Cost Sharing for new Additional MEVA III Circuits as presented in Appendix D to this report.

3.3.3 Members also reviewed the price and conditions document that Comsoft prepared in response of Conclusion TMG/29/05 - *Additional Circuit Document*. The Members reviewed the

document and requested that changes be made to the presentation of the information. The MEVA III Task Force will work with Comsoft to present the information so as to render the calculation of pricing per individual member.

CONCLUSION
MEVA/TMG/30/12 COMPLETION OF PRICING ASSOCIATED DOCUMENT TO COST SHARING PROCEDURE

That in order to complement the pricing and conditions for new additional MEVA III circuit implementation, Comsoft provides the updated Price and Conditions document to the MEVA III Task Force by **5 June 2015**.

3.3.4 Under WP/13 and WP/14, Jamaica and United States presented their experience of the MEVA III installation, highlighting the need to improve Comsoft coordination and communication, as well the knowledge and qualified technical staff of Comsoft. In this regard Comsoft committed on the following action:

CONCLUSION
MEVA/TMG/30/13 COMSOFT IMPROVEMENT TO MEVA III COORDINATION, COMMUNICATION AND QUALITY TECHNICIAN SUPPORT

That, in order to improve the coordination and communication by Comsoft on the provision of the MEVA III service, Comsoft:

a) continuously train its technical staff related to the MEVA III on the MEVA III equipment and services; and

b) implement an internal quality system in order to measure the technical competence of its NOC staff.

CONCLUSION
MEVA/TMG/30/14 RESTORATION OF JAMAICA SKYWAN SPARE MODEM

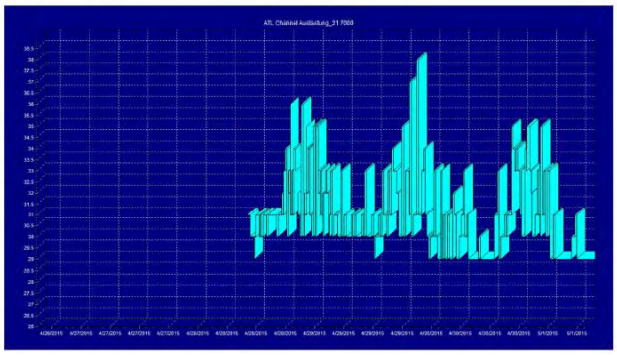
That, in order to restore the Jamaica local spare pool, Comsoft contact the freight forwarder to get the written proof of successful delivery by **3 June 2015**.

3.4 MEVA III Monitoring and Reporting

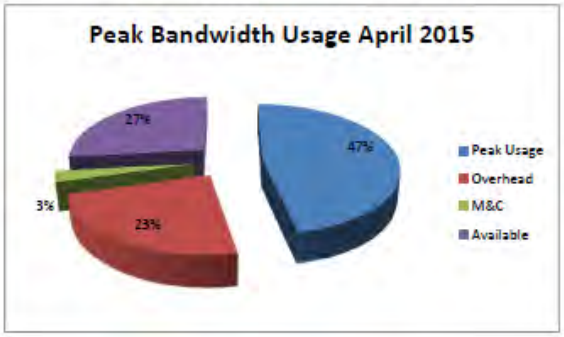
3.4.1 Under WP/03 and WP/04, the MEVA III Service Provider presented the architecture of the MEVA III NMS along with bandwidth usage and voice utilization statistics.

Channel Utilization:

Channel: Network Traffic (%)
Peak Usage: 38%

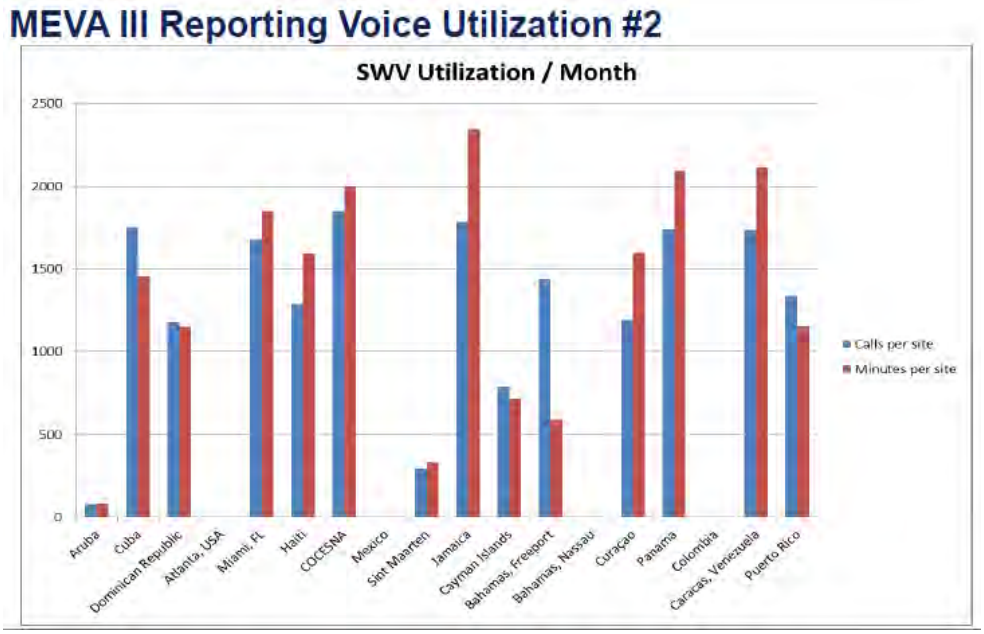


	Data Rate	Percent
Allotted Information Rate	1.820,00 kbps	100%
Peak Usage	855,00 kbps	47%
Overhead	430,00 kbps	24%
M&C	50,00 kbps	3%
Available	485,00 kbps	27%



Call Statistik

	Aruba	Cuba	Dominican Republic	Atlanta, USA	Miami, FL	Haiti	COCESNA	Mexico	Sint Maarten	Jamaica	Cayman Islands	Bahamas, Freeport	Bahamas, Nassau	Curaçao	Panama	Colombia	Caracas, Venezuela	Puerto Rico	Total Outgoing calls
Aruba		0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	76	0	79
Cuba	0		1	0	25	140	944	0	0	95	556	0	0	0	0	0	0	0	1761
Dominican Republic	0	0		0	389	249	0	0	0	0	0	0	0	35	0	0	0	535	1208
Atlanta, USA	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Miami, FL	0	48	824	0		21	0	0	0	0	0	782	0	0	0	0	0	0	1675
Haiti	0	81	908	0	15		0	0	0	218	0	0	0	73	1	0	0	0	1296
COCESNA	0	435	0	0	0	0		0	0	315	52	0	0	0	1045	0	0	0	1847
Mexico	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0
Sint Maarten	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	301	301
Jamaica	0	29	0	0	0	288	343	0	0		3	0	0	367	756	0	0	0	1786
Cayman Islands	0	682	0	0	0	0	105	0	0	19		0	0	0	0	0	0	0	806
Bahamas, Freeport	0	0	0	0	1436	0	0	0	0	0	0		0	0	0	0	0	0	1436
Bahamas, Nassau	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
Curaçao	0	0	275	0	0	16	0	0	0	159	0	0	0		0	0	685	56	1191
Panama	0	0	0	0	0	0	1372	0	0	365	0	0	0	0		0	0	0	1737
Colombia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0
Caracas, Venezuela	100	0	0	0	0	0	0	0	0	0	0	0	0	1357	0	0		277	1734
Puerto Rico	1	0	914	0	1	0	0	0	7	0	0	0	0	129	0	0	286		1338
Total Incoming Calls	101	1275	2922	0	1866	714	2764	0	7	1171	611	782	0	1964	1802	0	1047	1169	


MEVA III Reporting Voice Utilization #2
SWV Utilization / Month
2500
2000
1500
1000
500
0
Aruba
Cuba
Dominican Republic
Atlanta, USA
Miami, FL
Haiti
COCESNA
Mexico
Sint Maarten
Jamaica
Cayman Islands
Bahamas, Freeport
Bahamas, Nassau
Curaçao
Panama
Colombia
Caracas, Venezuela
Puerto Rico
Calls per site
Minutes per site

Agenda Item 4 Overview of MEVA III Implementation Activities

4.1 MEVA III Task Force Report and Activities

4.1.1 Under WP/05, the MEVA III Task Force Rapporteur reported on MEVA III Task Force work in support of the MEVA III Network implementation. The current Task Force members are Cuba, Haiti, Jamaica, Mexico, Panama, United States, COCESNA and ICAO.

4.1.2 The Task Force maintained fluid communication with the MEVA III Service Provider through 6 teleconferences held during and after the transition to MEVA III. During that time, several documents related to the transition were reviewed by the MEVA III Task Force and the results were communicated to the MEVA III Service Provider. The MEVA III Task Force also monitored implementation issues such as shipping, custom clearing, SAT and Network Acceptance Test (NAT) testing, training coordination, Go-Teams, pending installation issues, monthly report, As-Built documentation, operational documentation, and programme management issues.

4.1.3 The following deliverables were completed by the MEVA III TF:

a) followed-up on the review of the various parts of the MEVA III System Design Document (SDD), requested changes as needed, recommending them for approval;
b) collected the Points-of-Contact (PoCs) for inclusion in National Operations Centre (NOC) phone book, and forwarded the information to Comsoft as indicated in Conclusion MEVA/TMG/29/10 — *MEVA III PoCs for NOC Troubleshooting*;
c) finalized a draft of the MEVA III – REDDIG II interconnection/integration document as per Conclusion MEVA/TMG/29/11 — *MEVA III- REDDIG II Interconnection*. These documents were presented during the MEVA III/REDDIG II Coordination Interconnection Meeting;
d) coordinated the implementation of the MEVA III/REDDIG II interconnection Packet Assembler Disassembler (PAD);
e) kept track of post-implementation issues such as BUC replacement, LNB Power Injector, circuits not yet implemented, etc; and
f) addressed Programme Management deficiencies noted during and after the Network implementation;

4.1.4 The Meeting noted the successful work performed and congratulated the Task Force for the outstanding work done.

4.2 MEVA III Documentation Status

4.2.1 Under WP/06, the MEVA III Task Force Rapporteur presented the status of completion of the various chapters of the MEVA III SDD and of other operational documents. The status of the SDD documentation is as follows:

Description	Status of approval	Reference/ comments
Group 1: Documentation directly related with system design, particularly, for equipment ordering and that may affect the schedule of the project:		
Chapter 1: Network Design Document and its Annexes		
VSAT-SDD - Chapter 1_SDD - Network Design Document_V1.7	Approved	V1.7 with annexes included submitted by Comsoft on May 18, 2015
VSAT-SDD_MEVA III_Annex - SkyWAN System Description_V1.1	Approved	
VSAT-SDD_MEVA III_Annex - Reddig Interconnection_V1.0	Under review	
VSAT-SDD_MEVA III_Annex - PAD_V1.0	Under review	
Chapter 2: Network Drawings		
SAT-SDD - Chapter 2_MEVA III_Network-Overview_v1.10	Approved	V1.10 Submitted by Comsoft on May 18, 2015
Chapter 4: Wiring and Interconnection Plan		
VSAT-SDD - Chapter 4_MEVA III_Port Connections_V1.5	Approved	V1.6 submitted by Comsoft on May 18, 2015
Chapter 5: Equipment Rack Drawings		
VSAT-SDD - Chapter 5_MEVA III - Rack Drawings_V1.3	Approved	Under update by Comsoft based on installation experience
Drawings of the front and back of the MEVA III Cabinets (updated)	Approved	Under update by Comsoft based on installation experience
Chapter 6: Project Implementation Schedule		
VSAT-SDD - Chapter 6_MEVA III_Project Implementation Schedule_V5.9	Approved	Under update by Comsoft based on installation experience
Group 2: Documentation that may be worked out during the shipping and preparation activities of the installations:		
Chapter 3: Link Budget	Approved	V1.1 submitted by Comsoft on May 18, 2015
Chapter 7: Transition Plan	Approved	V1.3 submitted by Comsoft on May 19, 2015
Chapter 8: Training Plan	Approved	V1.3 submitted by Comsoft on May 19, 2015
Chapter 9: Security Plan	Under review	
Chapter 10: Reporting	Approved	New version submitted by Comsoft on May 20, 2015
Chapter 11: Test Documentation FAT/SAT/SAT	Approved	
Chapter 12: MEVA III Website	Approved	
Chapter 13: Glossary	Under review	New version submitted by Comsoft on May 20, 2015

4.2.2 The status of other documents related to the MEVA III operational matters is as follows:

Description	Status of approval	Reference/ comments
Maintenance Plan (Preventive & Corrective)	Under review	
Troubleshooting Ticket System Manual	Under review	New version submitted by Comsoft on May 20, 2015
Webpage Manual		To be provided by ComSoft
Monitoring Interface Guide	Under review	Comsoft indicated that the Webpage Manual will be uploaded to the MEVA III Webpage by the end of the week
As-Built Documentation	Under review	Due 45 days after the implementation of the network
NOC Operational Manual	Under review	New version submitted by Comsoft on May 20, 2015
Contingency Procedure	Under review	New version submitted by Comsoft on May 20, 2015

4.2.3 The Task Force mentioned that during the First MEVA III/REDDIG II Interconnection Coordination Meeting (MIII-RII/INTERCON/01) held in Oranjestad, Aruba, from 25 to 26 May 2015, Comsoft provided an update to the NOC PoC list including the REDDIG Administration accounts information.

4.2.4 Based on this progress, the Meeting agreed on the following actions:

a) Comsoft to upload all the latest SDD documentation on the MEVA III website;
b) Comsoft to upload the NOC PoC list on the MEVA III Website;
c) the Task Force to conclude the review of the SDD Documentation Chapter 9 – *Security Plan*, Chapter 13 – *Glossary, Maintenance Plan, As-Built Documentation, NOC Operational Manual, Contingency Procedures* by **19 June 2015**;
d) the Task Force to review the MEVA/REDDIG Interconnection documents (Chapter 1 Annexes 2 and 3) as soon as the Interconnection is completed and documented;
e) Comsoft to provide the Erlang B calculation and the Task Force to review and recommend for approval by the end of **July 2015**; and
f) ensure that the NAT is performed and documented (NAT tentatively scheduled for 26 June 2015).

4.2.5 The Meeting noted that the Task Force work is not completed and agreed on the following conclusions:

CONCLUSION
MEVA/TMG/30/15 MEVA III DOCUMENTATION REVIEW

That, in order to make the MEVA III final documentation available, and to complete the revision of the pending MEVA III documents, Comsoft:

a) upload all the latest SDD documentation and the NOC PoC list to the MEVA III website by **12 June 2015**;

b) provide the final MEVA III/REDDIG II Interconnection documents (SDD Chapter 1 Annex 2 and 3) as soon as this Interconnection is completed and documented by **12 June 2015** for the MEVA III Task Force review; and

c) provide the Erlang B calculation to the MEVA III Task Force for review and recommend approval by **24 July 2015.**

CONCLUSION
MEVA/TMG/30/16 MEVA III TASK FORCE PENDING TASKS

That, in order to follow-up the pending implementation tasks, the MEVA III Task Force:

a) conclude the review of the SDD Documentation (Chapter 9 – *Security Plan*, Chapter 13 – *Glossary, Maintenance Plan, As-Built Documentation, NOC Operational Manual, Contingency Procedures*) by **19 June 2015**; and

b) ensure that NAT is performed and documented (NAT tentatively scheduled for **26 June 2015**).

CONCLUSION
MEVA/TMG/30/17 BAHAMAS POINT-OF-CONTACT FOR NOC OPERATION

That, in order to complete and have all the necessary contact information for the MEVA III NOC Operation and coordination, Bahamas send its Point of Contact information to Comsoft by **12 June 2015**.

4.3 MEVA III Interconnection Matters

MEVA III – REDDIG II Interconnection Matters

4.3.1 Under WP/07, the Meeting was informed of the different interconnection matters with MEVA III. The Meeting was briefed on the working papers presented by the MEVA III Coordinator and the REDDIG Administration during the First MEVA III/REDDIG II Interconnection Coordination Meeting (MIII-RII/INTERCON/01) held in Oranjestad, Aruba, from 25 to 26 May 2015, proposing amendments to the MEVA/REDDIG Interconnection Memorandum of Understanding based on the changes that have occurred in both Networks. The Members created an Ad-hoc Group to reconcile the proposed changes into a single document. The Ad-hoc Group was formed by representatives of United States, COCESNA, REDDIG Administration, the MEVA III service provider and ICAO. Following the work of the Ad-hoc Group, the Meeting adopted Conclusion MIII-RII/INTERCON/01/03 stating:

That the States/Territories/International organisations members of MEVA III and REDDIG II project adopt the Memorandum of Understanding (MoU) between States/Territories/International organisations members of MEVA III and REDDIG II project organisation for the coordination and cooperation process for the MEVA III REDDIGII interconnection network presented as Appendix of this Agenda Item.

4.3.2 The amended MEVA/REDDIG Interconnection Memorandum of Understanding was presented and reviewed by the TMG Members as shown in **Appendix D** to this report.

4.3.3 The MIII-RII/INTERCON/01 Meeting also confirmed the performance and completion of the interconnection related circuits and identified future interconnection requirements. These requirements are shown in Table 1:

NO	Circuit requirement	Implementation estimate
1	Radar Data sharing between Curacao-Venezuela (1 radar data circuit)	Prior to 2017
2	Radar Data sharing between Colombia - Panama	By mid 2016
3	SAM AMHS circuit implementation with Atlanta • Caracas - Atlanta • Brasilia - Atlanta • Lima - Atlanta • Bogotá – Panama	2016-2017
4	AMHS circuit Atlanta- PIARCO-- planned thru COCESNA REDDIG	2016
5	AFTN Data circuit PIARCO- Curacao	After June 19 2015

Table 1 - Proposed new circuits

4.3.4 In this regard the Meeting agreed on the following conclusions to track the commitments made in the MEVA III-REDDIG II Interconnection Meeting:

CONCLUSION
MEVA/TMG/30/18 FOLLOW-UP TO MEVA III-REDDIG II INTERCONNECTION MEMORANDUM OF UNDERSTANDING

That MEVA Members approve the MEVA III/ REDDIG II Interconnection Memorandum of Understanding as presented in Appendix D and monitor the proper implementation of this commitment.

CONCLUSION
MEVA/TMG/30/19 ADDITIONAL CIRCUITS FOR MEVA III-REDDIG II INTERCONNECTION

That, in order to start and timely prepare the technical and cost matters for the implementation of new circuits related with the MEVA III-REDDIG Interconnection:

a) MEVA Members involved in the additional circuits listed in Table 1 confirm the need of these circuits by **30 June 2015**;

b) ICAO inform the REDDIG Administration of the agreed cost-sharing procedure for additional circuits that will apply;

c) MEVA Members inform by **30 June 2015** of any additional circuit related with the interconnection; and

d) MEVA TMG coordinate through teleconferences with the REDDIG II Administration the necessary actions for the implementation of additional circuits.

4.3.5 The Meeting took note of the action Plan agreed by Colombia and COCESNA to resolve the problems for implementing the voice circuit between them, the update on the implementation of the Aeronautical Fixed Telecommunication Network (AFTN) data circuit between Brazil (Brasilia)-FAA, as well as the commitment of Comsoft to implement the PAD equipment in Colombia and Venezuela for the week of 2 June 2015. In this regard the Meeting agreed the following conclusion:

CONCLUSION
MEVA/TMG/30/20 COMPLETION OF MEVA III-REDDIG II INTERCONNECTION CIRCUIT IMPLEMENTATION

That in order to track the completion of the implementation of the MEVA III- REDDIG II circuits, United States, COCESNA and Comsoft report the MEVA Members on the progress made in this matter by **16 June 2015**.

MEVA III – E/CAR Aeronautical Fixed Service (AFS) Network Interconnection Matters

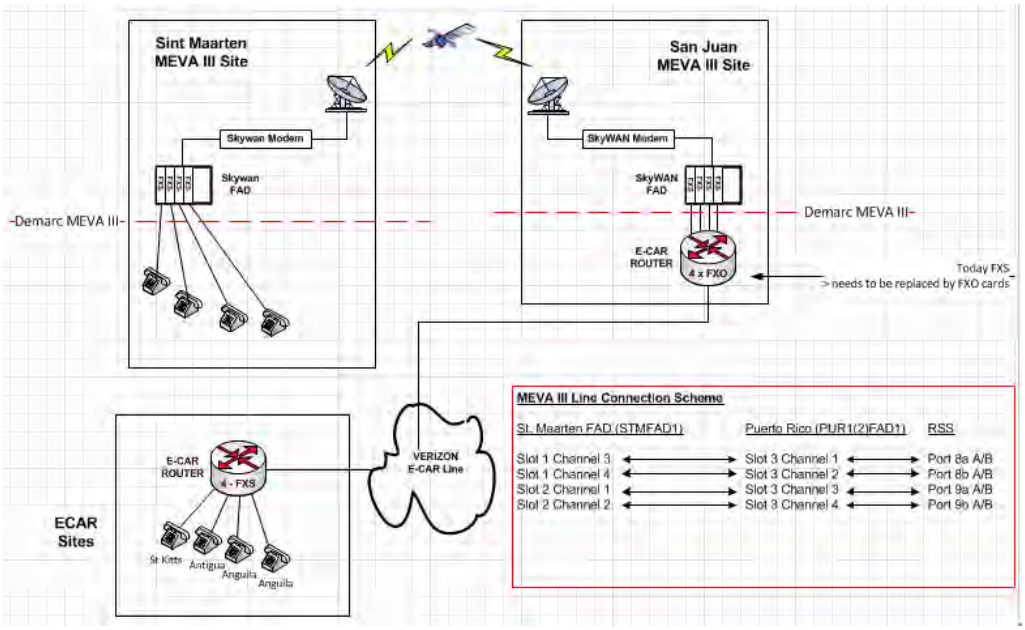
4.3.6 Regarding the MEVA III-E/CAR AFS Interconnection, from the MEVA/TMG/29 Meeting, MEVA Members noted the progress and results of the E/CAR –MEVA II interconnectivity, the final circuit requirements to be implemented in the MEVA III Sint Maarten node and the schematic illustration of the interconnection requirements as follows:

	ATS Units	**Technical details**
SINT MAARTEN/ JULIANA APP	Anguilla (Clayton J. Lloyd International)	2 PBX service from E/CAR-analogue voice line
	Antigua (V. C. Bird APP)	1 PBX service from E/CAR-analogue voice line
	Saint Kitts and Nevis (Robert L. Bradshaw TWR)	1 PBX service from E/CAR-analogue voice line
	San Juan ACC/PIARCO ACC	1 Serial line, RS232, radar circuit

4.3.7 The Meeting was informed of the follow-up made during the teleconference of 26 May 2015, where the following items were agreed upon:

- Operation Concept: 4 dedicated lines Sint Maarten-E/CAR AFS Network (2 Anguilla, 1 Antigua and 1 Saint Kitts and Nevis)
- **ACT** Trinidad and Tobago to provide 4 digit string (27-May)
- Hardware is available at MEVA III (FXS ports) and E/CAR AFS Network equipment (FXO ports available)
- **ACT** United States to implement cabling between the E/CAR AFS Network Router and MEVA III equipment after the configuration is completely defined
- **ACT** Sint Maarten to define final port connection to VCSS in Sint Maarten: 28-05
- Comsoft informed that the 2 radar lines are ready but need to test with end user equipment.
- Radar agreement under revision by FAA

4.3.8 Comsoft provided a functional diagramme based on the operational concept defined for the E/CAR voice circuits:



4.3.9 The Meeting agreed on the following conclusion to track this commitment:

CONCLUSION
MEVA/TMG/30/21 ACTIONS FOR MEVA III-E/CAR AFS NETWORK INTERCONNECTION

That, in order to track and timely assist the implementation of the MEVA III–E/CAR AFS Networks interconnections, Sint Maarten and United States inform the TMG of the accomplishment of the agreed actions of the Teleconference of 26 May 2015 by **30 June 2015.**

4.4 MEVA III Go-Teams

4.4.1 Under WP/08, the Meeting recalled the achievements and results of the MEVA III Technical assistance Go-Team missions and that the Go-Teams for MEVA III are part of the assistance provided by the ICAO Technical Cooperation Project RLA/09/801 – *Implementation of Performance-Based Air Navigation Systems for the CAR Region*.

4.4.2 The Meeting also remembered Conclusion MEVA/TMG/29/18 —*Acceptance of the MEVA III Go-Team missions and SME Designation* that approved all the Go-Team missions scheduled between February and March 2015, following the Terms of Reference and deliverables. The Meeting took note that the only pending Go-team mission was the one to Merida, Mexico due to the delays in the completion of the MEVA III contract.

4.4.3 The MEVA III *Go-team* missions objectives were successfully accomplished:

- development of MEVA III Node/Network implementation gap analysis regarding implementation
- assistance on the development of an action plan on identified improvements for effective MEVA III Network implementation
- ensure that the implementation of the MEVA III node is coherent and compatible with the whole Network performance and implementation
- review that Factory Acceptance Tests (FATs) and Site Survey results are properly considered in the Site Acceptance Tests (SATs) and reflected as improvements to the MEVA III node performance
- verify that planned circuits and services are implemented
- verify antenna
- validate that the MEVA III node configuration is properly implemented and operating
- review that as-built diagrammes and other related documents are considered in the SAT
- participate to technically assist and support the SAT

4.4.4 Similarly, the Go-team identified improvements to each MEVA III installation and to streamline and optimize the performance and operation of the MEVA III Service such as:

- antenna dish maintenance and grounding circuits/connections
- training of the staff involved-OJT,
- MEVA III procedure updates
- cabling organization
- power outdoor equipment
- promotion of voice and data circuits testing for updates to as built diagrammes and MEVA III final documentation
- identification of Comsoft pending installation matters

4.4.5 The Meeting took note that the details of the results of each Go-Team mission are detailed in each MEVA Members State report.

Agenda Item 5 World Radiocommunication Conference (2015) (WRC-2015) Activities

5.1 Under WP/09 the Meeting recalled the States support for the ICAO position for the WRC-2015, particularly focusing on the follow-up on the agreed MEVA TMG pending actions with the registration and notification of interferences. ICAO submitted the ICAO position as approved by the ICAO Council through Electronic Bulletin, E3/5. 15-13/57, dated 2 July 2013.

5.2 The Meeting was briefed on the previous MEVA TMG agreements for conducting this support, particularly during the MEVA/TMG/29 Meeting (Conclusion MEVA/TMG/29/15 — *MEVA Member´s Support for ICAO WRC-2015 Position and ITU VSAT Node Registration*), where ITU provided guidance and assistance for the notification and record in the ITU Master International Frequency Register (MIFR) of the earth stations of the MEVA Network located in the Caribbean and Central American. This assistance was made in order to obtain an international recognition and protection of these frequency assignments operating in the C- band, highlighting the activities of the ITU Radiocommunication Bureau as follows:

- submission of State Letters (29 and 30 July 2014) with a set of minimum parameters required to coordinate the earth stations) to Administrations in the Caribbean and Central America with the aim to providing special assistance under Article 7 of the Radio Regulations to those Administrations facing difficulties to proceed with the coordination and notification of their earth stations
- conduction of a study to identify the coordination and potentially affected Administrations for each MEVA earth stations. The results of this study were presented to the MEVA Members, as well as a consolidation of the results (http://www. itu .int/ITU-R/go/space-preface/ en), indicating with which Administrations the coordination is required

5.3 The Meeting also recalled that ITU presented the suggested three follow-up steps to facilitate the process of coordination and notification of the involved earth stations:

a) collect all the necessary parameters associated to the earth stations and associated satellite networks based on Appendix 4 of the Radio Regulations;
b) identify coordination requirements and complete coordination among concerned Administrations; and
c) for Administrations having jurisdiction over the earth stations, to notify the earth stations to ITU.

5.4 The participation of the Civil Aviation Authorities from the CAR Region has been very poor in the different Inter-American Committee for Telecommunications (CITEL) Meetings with no one from aviation participating in the last CITEL Meeting in Medellin, Colombia. The last remaining CITEL meeting is scheduled for August 2015 in Ottawa, Canada (XXVI PCC.II). Similarly, no information has been provided by the MEVA Members on the ITU Process for the MEVA nodes registration.

5.5 Comsoft is planning to move the MEVA III network to the final carrier configuration (8-PSK) by **2 June 2015**, when the final frequencies will be configured in coordination with Intelsat.

5.6 ICAO position will be reviewed by mid-June 2015 introducing some updates in time before the WRC-15. None of the updates will however change the position, they will merely be clarifications in light of studies within ICAO and ITU-R.

5.7 Due to the above, the following conclusion is proposed:

CONCLUSION
MEVA/TMG/30/22 – STATE SUPPORT FOR ICAO WRC-2015 POSITION, ITU VERY SMALL APERTURE TERMINAL (VSAT) NODE REGISTRATION AND INTERFERENCE NOTIFICATION PROCEDURE

That, in order to protect the use of the radiofrequency spectrum for aviation usage and the timely MEVA III VSAT Node registration in ITU Master International Frequency Register (MIFR) and Frequency interference follow-up:

a) MEVA Members:
   i. to coordinate with their National Spectrum Regulator, the support to be provided to the ICAO WRC-2015 Position for the Ottawa CITEL XXVI PCC.II Meeting - August 2015 (Ottawa, Canada);
   ii. take in consideration the ITU study carried out for the MEVA III Network, coordinating with their National Spectrum Regulators; and
   iii. register their corresponding MEVA III Node in the ITU MIFR by **30 December 2015**;

b) Comsoft:
   i notify the final working frequency to each MEVA Member node by **15 June 2015**; and
   ii propose a procedure for the timely frequency interference notification and resolution for MEVA III by **30 December 2015.**

Agenda Item 6 Other Matters

Support to the ANI/WG/2 Meeting

6.1 Under WP/10, the Meeting recalled the agreement to support the ANI/WG (Conclusion MEVA/TMG/29/17 — *MEVA TMG Support for ANIWG/02 Meeting)*, requesting the active participation of MEVA Members to the ANIWG/02 Meeting and appropriate preparation of the MEVA III progress, and suggest the assistance for reporting the progress achieved by the MEVA Members on the related metrics/targets. In relation to this support, under Appendix to WP/10, the ASBU modules and its elements related to the MEVA III infrastructure and service identified were presented. It was decided that the aforementioned paper for the ANI/WG/02 include an analysis of the progress made on the elements of the ASBU modules. The MEVA III TMG Coordinator is conducting this action.

ICAO Secure Portal - MEVA III

6.2 Under WP/11, the Meeting recalled the purpose of the MEVA III implementation website activation under the ICAO Secure Portal and the proposal for migration of its content into the new MEVA III website (Comsoft). The Meeting took note that ICAO has always tried to expedite the information for all MEVA Members, through the use of its website for sharing the information and a common information source.

6.3 The website implemented by ICAO was always different from the MEVA II Service Provider website, since the latter included all operational information needed for the management, operation and track of network failures. An overview of this webpage implementation was explained and that the ICAO web link is: https://portal.icao.int/MEVA/Pages/default.aspx:

6.4 With the implementation of the MEVA III Network as part of the services of the new network, a MEVA III website has been implemented under the MEVA III Service Provider´s website. The ICAO Secure portal MEVA III site has served its purpose for all MEVA Members to handle the confidential information and complete the tender process information and selection progress. The Meeting also commented the need to review the former MEVA II website hosted by SES.

6.5 In order to avoid the duplication of information and to ensure that the MEVA III Website contains all the necessary operational information and meeting references, the Meeting decided on the migration of all the ICAO secure page MEVA III and MEVA II information to the MEVA III website as

needed (restricted or not) and the deactivation of the ICAO MEVA III and MEVA II secure website. The following conclusion was agreed:

CONCLUSION
MEVA/TMG/30/23 DATA MIGRATION OF ICAO MEVA II SECURE PORTAL

That in order to maintain and keep a common source of MEVA III information in benefit of all MEVA Members, the MEVA III TF:

a) review existing MEVA III secure portal and the former MEVA II Website to determine the relevant data to be migrated; and

b) coordinate with Comsoft to update the MEVA III website with the information provided by the MEVA III TF by **30 August 2015**.

Visit to ANSA MEVA III Facilities and SNMP Presentation

6.6 A visit to the Air Navigation Services Aruba (ANSA) facility for the MEVA III node was kindly provided by Aruba. The Meeting appreciated this visit, which provided a better understanding of the onsite status and operation of the MEVA III node.

6.7 Similarly, Comsoft provided under P/01 a presentation on three free Simple Network Management Protocol (SNMP) applications that may be used as a local MEVA III monitoring tool. It was emphasized that the use of local monitor should be carefully managed to avoid IP address conflicts, unnecessary network bandwidth use for wrong polling of remote node SNMP Management Information Bases (MIBs), etc. Comsoft provided the SNMP usable IP addresses per node for avoiding wrongly use of IP addresses, this information is shown in **Appendix E** to this report. In this regard the following conclusion was adopted:

CONCLUSION
MEVA TMG/30/24 MEVA III LOCAL MONITORING WITH SNMP

That in order to maintain and keep a common source of MEVA III information in benefit of all MEVA Members:

a) MEVA Members evaluate, if required, their local monitoring needs for local MEVA III node monitoring;

b) MEVA Members agree to implement this MEVA III local monitoring to inform the MEVA TMG and ICAO of this requirement; and

c) Comsoft assist free of charge the MEVA Members in this monitoring implementation.

6.8 The Meeting was presented with an overview of an Aeronautical Message Handling System (AMHS) solution developed by Comsoft.

6.9 The Meeting recalled the MEVA rotational scheme for the MEVA TMG meetings. In this regard Jamaica confirmed its agreement for hosting the next MEVA TMG Meeting in 2016.

APPENDIX A

FOLLOW UP TO VALID CONCLUSIONS FROM THE MEVA TMG/29 MEETING

Conclusions	Description	Remarks	Status
TMG/29/01 – CONTINUATION OF ACTIVITIES FOR MEVA/REDDIG INTERCONNECTION AFTN DATA CIRCUIT WITH BRAZIL	That United States continue the coordination with Brazil to complete final testing of AFTN data circuit Atlanta-Manaus and have the data circuit implemented through the MEVA III Network by the first semester of 2015.	Based on Brazil statement for using the AFTN Data circuit, a new conclusion has been adopted.	Superseded
TMG/29/02 - MEVA II NETWORK AVAILABILITY AND CREDIT CONSIDERATIONS FOR LAST MEVA II SERVICE INVOICE	That considering several MEVA II sites resulted with less than 99 % link availability, SES: a) Inform the MEVA Members by 13 March 2015 about the MEVA II Network availability and corresponding credits for the period May 2014 to March 2015; and b) Apply the applicable credits to the last invoice of the MEVA II Service.	MEVA Members have taken action on this conclusion	Completed
TMG/29/03 – MEVA II BUC FINAL POWER VALUES	That, considering the importance of keeping the most efficient power values for an efficient and safe MEVA II- MEVA III Transition, SES: a) Provide the BUC power value of the Panama MEVA Node by 19 December 2014; b) Inform of the BUC power of the San Juan MEVA Node once its corresponding peak and poll antenna adjustment is made; and c) Report no later than 16 January 2015 of any changes of the MEVA II BUC power values.	Information was provided prior to transition.	Completed
TMG/29/04– REPLACEMENT OF ANTENNA FEED IN NASSAU AND FREEPORT MEVA II NODES	That, in order to improve the BUC power level in the Bahamas MEVA II Nodes with the replacement of the antenna feed polarizer rings: a) Bahamas search for the necessary antenna feed rings as soon as possible; and b) SES will assist Bahamas as possible, for finding and replacing these rings as soon as possible prior to the installation of MEVA III.	The replacement of the Antenna feeder was completed in Nassau Node. The Freeport Antenna is OK just needing to improve its alignment.	Completed

Conclusions	Description	Remarks	Status
TMG/29/05 ADDITIONAL CIRCUIT DOCUMENT	That, in order to have a single document containing the prices and conditions applicable for additional circuits and valid during the lifetime of the MEVA III Network, COMSOFT: a) provide the current figure of bandwidth available by the end of December; b) include in the monthly report the information on Erlang B blocking probability and bandwidth availability; and c) develop by February 12, 2015 a document detailing the conditions and prices for additional circuits and the procedure to follow for any additional circuit implementation; considering that the MEVA III Network Coordinator is the focal Point.	COMSOFT will provide a draft method for the Erlang B Block probability by the end of July 2015 and upon approval by the TF, will then be included in the report. COMSOFT provided information for c) on 27 April.	a, b) Superseded c) Completed
TMG/29/06 BANDWIDTH COST SHARING FOR ADDITIONAL MEVA III CIRCUITS	That, considering bandwidth increases may be required for new MEVA III circuits; the MEVA Members agreed that the cost ($500) of each bandwidth 100kHz increment be equally shared among all Members.	A proposal to share bandwidth cost for additional MEVA III circuits was approved	Completed
TMG/29/07 PROCEDURE FOR MEVA III MANAGEMENT FOR ADDITIONAL MEVA III CIRCUITS	That, in order to manage as a Group any additional circuit requirement, the MEVA III Task Force develop by February 20, 2015 a procedure to plan, manage, inform and approve new circuits requirements including bandwidth increase and communication requirements. This procedure must be based on the MEVA Members Group agreements detailed in paragraph 4.1.13 of TMG/29 final report.	A proposal to share bandwidth cost for additional MEVA III circuits was approved	Completed
TMG/29/8 - MEVA III DOCUMENTATION REVIEW AND APPROVAL	That, in order to continue and streamline the review and approval process of the SDD: a) COMSOFT to provide the updated SDD chapters (1, 2, 4, 6, 7, 9,10, 11, 12) with the changes highlighted and dates detailed in this agenda item; b) COMSOFT to deliver the SAT and NAT Procedures on 5 January at the latest; and c) Task Force to review the changes and recommend the documents to the TMG for approval.	Documentation was approved.	Completed
TMG/29/09 - MEVA III WEBSITE-REVIEW BY MEMBERS	That, in order to process on the review and approval of the MEVA III Website and its features, all MEVA Members to evaluate this website (http://noc.comsoft-sat.com:7543) and provide comments by 30 January 2015.	Comments were made and updates were included in the website.	Completed

Conclusions	Description	Remarks	Status
TMG/29/10 - MEVA III POCS FOR NOC TROUBLESHOOTING	That for the appropriate operation and coordinate of the NOC, MEVA III TF to compile the list of Point of Contact for inclusion in the directory of the Trouble Ticket System by **30 January 2015**.	PoC information has been provided	Completed
TMG/29/11 - MEVA III- REDDIG II INTERCONNECTION	In preparation for the upcoming MEVA III-REDDIG II interconnection/ integration discussions, a) That the MEVA III TF is to finalize the draft of the MEVA III – REDDIG II interconnection/integration documents and submit it to the MEVA Members for approval by 15 march 2015; and b) All MEVA Members to identify 2014 as needed by 6 April any future Interconnection requirements for discussion with the REDDIG Network.	A new agreement was adopted and new future circuits were agreed by the MEVA III-REDDIG II Interconnection Meeting	Completed
TMG/29/12 - MEVA III EQUIPMENT DELIVERY AND INSTALLATION	In preparation for the equipment delivery of MEVA III, COMSOFT a) to coordinate with each MEVA Member PoC the documentation for the delivery, providing all the shipping documentation in advanced for its customs clearance; and b) submit the installers 'information (Passport, etc.) and list of tools to be use in the node installation by **19 December 2014**	These actions were completed during transition	Completed
TMG/29/13 - MEVA III OPERATIONAL DOCUMENTS	That to review and approve the necessary MEVA III Operational documents: a) COMSOFT delivers by 23 January 2015, the following document: ✓ Maintenance Plan (Preventive and Corrective) ✓ NOC Operational Manual ✓ Trouble Ticket System Manual b) The Task Force to review the documentation provided, and recommend it for approval before the Network Acceptance Test (NAT) in March 2015.	Documents were provided and were accepted considering them live documents that can be continuously improved	Completed
TMG/29/14 - AMHS END-TO-END TESTING BETWEEN CUBA AND ATLANTA	That TMG and COMSOFT approves AMHS end-to-end testing between Cuba and Atlanta in the already established non-operational circuit to perform testing over MEVA III before the NAT	This was approved and testing done on non-operational circuit	Completed

Conclusions	Description	Remarks	Status
TMG/29/15 – MEVA MEMBER´s SUPPORT FOR ICAO WRC-2015 POSITION AND ITU VSAT NODE REGISTRATION	That in order to protect the use of the radiofrequency spectrum for aviation usage and the timely MEVA III VSAT Node registration in ITU Master International Frequency Register (MIFR), the MEVA Members: a) Coordinate with their National Spectrum Regulators, the support to be provided to the ICAO WRC-2015 Position for the upcoming CITEL Meetings in February 2015 (Medellin: (XXV PCC.II) and August 2015 (Ottawa: (XXVI PCC.II)); b) Using the ITU study carried out for the MEVA III Network (appendix B), coordinate with their National Spectrum Regulators the corresponding MEVA III Node registration into MIFR; and c) Report the progress of action a) and b) by MEVA TMG/30 Meeting	A new conclusion was agreed	Superseded
TMG/29/16 APPROVAL OF MEVA TMG TERMS OF REFERENCE	That in order to maintain the functions and responsibilities of the MEVA TMG up-to-date, the attached MEVA TMG Terms of Reference shown in the Appendix C was approved		Completed
TMG/29/17 MEVA TMG SUPPORT FOR ANIWG/02 MEETING	That in order to ensure active participation by MEVA Members at the ANIWG/02 Meeting and appropriate preparation of the MEVA III progress, the MEVA TMG Coordinator coordinate and develop the corresponding working paper for the ANIWG/02 Meeting describing the progress in MEVA III Implementation and the support of the MEVA Network to Air navigation in the regions	A WP was developed for the ANI/WG/02 Meeting	completed
TMG/29/18 ACCEPTANCE OF THE MEVA III GO-TEAM MISSIONS AND SME DESIGNATION	That, in order to comply with the MEVA III implementation dates, MEVA III Network Members who are part of the RLA/09/801 Project: a) hereby accept the Go-Team MEVA III Mission visits that will be carried out as detailed in the tentative schedule for MEVA III Go-Team Missions; and b) designate subject matter experts (SME) to support these Go-Team missions in accordance with the designation given in the tentative schedule for MEVA III Go-Team Missions	Note was taken	Completed
TMG/29/19 – MEVA TMG MEETING ROTATIONAL SCHEME	That in order to improve the planning and organize of the MEVA TMG Meetings taking in consideration the benefits of conducting the meetings in MEVA locations, the MEVA Members: a) Approve the MEVA TMG Meeting Rotational scheme as shown in Appendix F; and b) Confirm the hosting of the MEVA TMG Meeting by the next MEVA TMG/30 Meeting.	The next MEVA TMG Meeting was confirmed by Jamaica for 2016.	Completed

Status Overview for the week of 5/11/2015

The following items are applicable to all sites. Items for individual sites are presented on subsequent slides.

1. BUC replacement program: Proposed dates for installation of replacement BUCs are listed per country. There's a risk of dates changing if any customs clearance issues are encountered.
2. NAT: NAT will be performed after we have transitioned to the final carrier configuration. Final carrier configuration date proposed for 6/2/2015.
3. As-Built and other documentation: COMSOFT is in the process of updating the required documentation.
4. Status Definition:
   - Red – High priority
   - Orange – Medium Priority
   - Green – No action required

Site	Circuit Status (i.e.: FXS, E&M, FTN)	Site Acceptance Test	On-the-Job Training	BUC Replacement	MEVA II Status
Aruba Dual Chain Configuration	All circuits operational. **Status Green**	SAT document delivered. **Status Green**	OJT provided to customer - confirmed. **Status Green**	Dual Chain, both BUCs replace on 5/2/15 **Status Green** No X-POL issues **Status Green**	Equipment disconnected. **Status Green.**
Cuba Single Chain Configuration	AMHS non-operational, New pin-out provided as quick solution, new cable to be handed over at TMG for long term solution. **Status Red** All other circuits **Status Green**	SAT document delivered. **Status Green**	OJT provided to customer - confirmed. **Status Green**	Single Chain, BUC replacement pending. Need to contact customer regarding shipping. **Status Orange (ref. item #1)** No X-POL issues **Status Green**	Equipment disconnected. **Status Green.** LNB Voltage Injector installed. **Status Green.**
Atlanta Dual Chain Configuration	All circuits operational. **Status Green**	SAT document delivered. **Status Green**	OJT provided to customer - confirmed. **Status Green**	Dual Chain Terrasat BUC returned to normal configuration. One BUC needs replacement **Status Red** No X-POL issues **Status Green**	Equipment disconnected **Status Green.**

Site	Circuit Status (i.e..: FXS, E&M, FTN)	Site Acceptance Test	On-the-Job Training	BUC Replacement	MEVA II Status
Miami Dual Chain Configuration	All circuits operational. **Status Green**	SAT document delivered. **Status Green**	OJT provided to customer - confirmed. **Status Green**	Dual Chain, both BUCs replace on 4/28/15 **Status Green** No X-POL issues **Status Green**	Equipment disconnected. **Status Green.**
Dominican Republic Dual Chain Configuration	. All circuits operational. **Status Green**	SAT document delivered. **Status Green**	OJT provided to customer - confirmed. **Status Green**	Dual Chain, both BUCs replace on 5/5/15 **Status Green** No X-POL issues **Status Green**	Equipment disconnected. **Status Green.**
Haiti Dual Chain Configuration	All circuits operational. **Status Green**	SAT document delivered. **Status Green**	OJT provided to customer - confirmed. **Status Green**	Dual Chain, both BUCs replace on 5/7/15 **Status Green** No X-POL issues **Status Green** Exchange of 1 old LNB against new one. **Status Orange**	Equipment disconnected. **Status Green.**

Site	Circuit Status (i.e..: FXS, E&M, FTN)	Site Acceptance Test	On-the-Job Training	BUC Replacement And X-POL	MEVA II Status
Jamaica Single Chain Configuration	All circuits operational. **Status Green**	SAT document delivered. **Status Green**	OJT provided to customer - confirmed. **Status Green**	Single Chain, BUC replaced on 4/22 **Status Green** No X-POL issues **Status Green**	Equipment disconnected. **Status Green.**
Grand Cayman Single Chain Configuration	All circuits operational. **Status Green**	SAT document delivered. **Status Green**	OJT provided to customer - confirmed. **Status Green**	Single Chain, BUC replaced on 5/8/15 **Status Green** Antenna requires alignment current isolation 25 dBm **Status Orange**	Equipment disconnected. **Status Green.**
COCESNA (Honduras) Single Chain Configuration	All circuits operational. **Status Green**	SAT document delivered. **Status Green**	OJT provided to customer - confirmed. **Status Green**	Single chain BUC pending replacement installation date **Status Orange**	Equipment disconnected. **Status Green.**

Site	Circuit Status (i.e.: FXS, E&M, FTN)	Site Acceptance Test	On-the-Job Training	BUC Replacement	MEVA II Status
Bahamas-Freeport Single Chain Configuration	All circuits operational. **Status Green**	SAT document delivered. **Status Green**	OJT provided to customer - confirmed. **Status Green**	Single chain BUC installation 5/14/15 **Status Green.** Antenna requires some alignment **Status Orange**	Equipment disconnected. **Status Green.** LNB Voltage Injector installed. **Status Green.**
Bahamas-Nassau Single Chain Configuration	All circuits non operational due to antenna feed issue. Customer using commercial lines. Customer working on solution with SES but not ETR at this time. Once feed issue resolved site must be re-commissioned. **Status Red**	SAT not performed, needs to be performed after commissioning. **Status Red**	OJT provided to customer - confirmed. **Status Green**	Single chain BUC proposed installation 5/15/15 **Status Green** Antenna requires alignment after feed is reinstalled. **Status Red**	Equipment disconnected. **Status Green.** Feed arrived and installed but no alignment done. Equipment disconnected. **Status Green.** LNB Voltage Injector installed. **Status Green.**

Site	Circuit Status (i.e.: FXS, E&M, FTN)	Site Acceptance Test	On-the-Job Training	BUC Replacement	MEVA II Status
Curacao Single Chain Configuration	All circuits operational. **Status Green**	SAT document delivered. **Status Green**	OJT provided to customer - confirmed. **Status Green**	Single chain BUC replaced **Status Green** No X-POL issues **Status Green**	Equipment disconnected. **Status Green.** LNB Voltage Injector installed. **Status Green.**
Panama Single Chain Configuration	All circuits operational. **Status Green**	SAT document delivered. **Status Green**	OJT has not been provided. Needs to be scheduled. **Status Orange**	Single chain BUC proposed installation 5/20/15 **Status Orange** No X-POL issues **Status Green**	Equipment disconnected. **Status Green.** LNB Voltage Injector installed. **Status Green.**
Puerto Rico Dual Chain Configuration	All circuits operational. **Status Green**	SAT document delivered. **Status Green**	OJT has not been provided. Needs to be scheduled. No answer from customer. **Status Orange**	Dual Chain, 1 BUC replaced, 2nd BUC proposed installation 5/18/15 **Status Orange** No X-POL issues **Status Green**	Equipment disconnected. **Status Green.**

Site	Circuit Status (i.e.: FXS, E&M, FTN)	Site Acceptance Test	On-the-Job Training	BUC Replacement	MEVA II Status
Venezuela Indoor Unit only	FXS operational. **Status Green** AFTN circuits operational **Status Green**	SAT document delivered. **Status Green**	OJT provided to customer - confirmed. **Status Green**	N/A	NA
Colombia Indoor Unit only	Installation completed on 5/7/15. Waiting on customer to test voice lines.. AFTN circuits require router solution. PAD pending shipment. Installation without PAD to start on 5/4/15. **Status Red**	SAT document delivered. **Status Green**	OJT provided to customer - confirmed. **Status Green**	N/A	N/A
St. Maarten Single Chain Configuration	All circuits operational. **Status Green**	SAT document delivered. **Status Green**	OJT provided to customer - confirmed. **Status Green**	Single chain BUC replaced **Status Green.**	Equipment disconnected. **Status Green.**

APPENDIX C
PROCEDURE FOR ADDITIONAL MEVA III CIRCUITS

This document refers to the MEVA III Coordinator as defined in the MEVA III Memorandum of Agreement.

The procedure is as follows:

1. Once a new data or voice circuit requirement is identified, the MEVA Member is to inform the MEVA III Coordinator of this new requirement, providing as a minimum:

    a) voice/data circuit
    b) interface required
    c) bandwidth/speed required
    d) voice signaling/ data protocol
    e) expected date of implementation

2. The MEVA III Coordinator, with the support from the TMG, will consolidate the requirements coordinating with the MEVA III Service Provider:

    a) monthly (starting the date of the last MEVA III monthly report) or
    b) when a new 100kHz of bandwidth is received as needed

3. The MEVA III Coordinator will notify the Service Provider on the new requirement.

4. The Service Provider will assess whether enough bandwidth is available to accommodate the requirement(s):
    a) If enough bandwidth is available in the existing MEVA III operating bandwidth then:
        i. The Service Provider will confirm that the requirement can be implemented without addition bandwidth.
        ii. The MEVA III Coordinator will inform the requesting MEVA Member(s) to coordinate the implementation with the Service Provider
    b) If enough bandwidth is not available:
        i. The MEVA III Coordinator will request, from the Service Provider, the cost of bandwidth increase
        ii. The MEVA III Coordinator will inform (by email) all MEVA Members of the increase, in which billing cycle the increase is to occur, and request their approval.
        iii. Once agreed by all the TMG Members, the MEVA III Coordinator will notify the Service Provider to increase the bandwidth at the agreed date.

5. An evaluation by the Service Provider will be done if enough interfaces (hardware) are available at the MEVA nodes involved in the new requirements:
    i. If enough interfaces are available no impact in existing leasing costs will be done.
    ii. If additional interfaces (hardware) are needed, the Service Provider will inform of its costs to the related MEVA Members

6. The MEVA III Coordinator will report at each MEVA TMG Meeting or as soon as possible for any activity if and when it occurs.

APPENDIX D
MEMORANDUM OF UNDERSTANDING BETWEEN STATES/TERRITORIES/INTERNATIONAL ORGANISATIONS MEMBERS OF MEVA III AND REDDIG II PROJECT ORGANISATION

1. SECTION 1. INTRODUCTION AND PURPOSE OF THIS DOCUMENT

1.1 INTRODUCTION

1.1.1 With the aim of effectively and efficiently fulfilling aeronautical telecommunications requirements in these regions, the members of the MEVA II and REDDIG VSAT networks decided to interconnect the two networks. For this purpose, the Members agreed to establish this Memorandum of Understanding (MoU). This Agreement is being established jointly under coordination of the ICAO North American, Central American, and Caribbean (NACC) Office in Mexico City, Mexico and the ICAO South American (SAM) Office, in Lima, Peru.

1.1.2 The Third MEVA II / REDDIG Coordination Meeting (MR/3) concluded that the interconnection implementation will operate for a five-year period, as an initial basis, after finalising the implementation.

1.1.3 The First MEVA III / REDDIG II Coordination Meeting concluded that the interconnection implementation will be renewed for five initial year period, after finalizing the implementation.

1.1.4 The main body of this document consists of four (4) sections and 2 Appendices. The content of the sections and appendices is summarised below: In accordance with the interconnection development, when considered necessary, and if the interested Parties of both networks agree to do so, other Appendices could be added as necessary.

a) Section 1.0: Presents a brief overview and statement of purpose.

b) Section 2.0: Provides an explanation of the Technical Cooperative Agreement process.

c) Section 3.0: Describes the technical terms of reference.

d) Section 4.0: Describes the financial responsibilities of the parties to this agreement.

e) Appendix A: A list of reference documents used in support of this Agreement.

f) Appendix B: Technical-operational coordination agreement for the establishment of VSAT MEVA III and REDDIG II networks interconnection

1.1.5 This document is based on the former MEVA II - REDDIG Memorandum of Understanding (MoU).

1.2 **SECTION 1 – PURPOSE**

1.2.1 The goal of this MoU is to foster a coordinated plan for in the development of MEVA III and REDDIG II networks and its interconnection implementation.

1.2.2 This MoU is a living document through which members of the MEVA III and REDDIG II networks shall convene, as necessary and at locations agreed upon, to review or amend the details of the Agreement. Revised versions of this Agreement, or paragraph changes, shall be coordinated and distributed by the ICAO NACC and SAM Regional Offices to the signatory parties of the Agreement as appropriate.

1.2.3 This MoU document establishes the following coordination and cooperation process:

a) The holding of coordination meetings, if required, to analyse and identify the new service requirements for the MEVA III and REDDIG II VSAT networks interconnection.

b) The exchange of technical reports and documentation, program plans and schedules, as may become necessary, to assure the successful and timely completion of these efforts.

c) Operational-technical coordination between the Parties involved in MEVA III and REDDIG II networks, as necessary.

d) Planning, technical coordination, and development participating member States/Territories/International Organisations of the MEVA III and REDDIG II Networks.

2. **SECTION 2 – THE TECHNICAL COOPERATIVE AGREEMENT PROCESS**

2.1 To reach the goal of this MoU, the MEVA III and REDDIG II members have developed an interconnection solution to operate during a five-year phase after the implementation of the interconnection of the MEVA III and REDDIG II Networks.

2.2 **RELATIONSHIPS AND RESPONSIBILITIES OF THE PARTIES**

2.2.1 In order to achieve the interconnection of the networks in a timely and mutually beneficial way, the parties to this Agreement recognise the need to coordinate their actions and exchange updated operational-technical information.

2.2.2 The Parties also recognise the need to develop common technical solutions for interconnecting and/or integrating these networks, in a manner that shall not negatively impact the planned operation, performance, or management of the either network.

2.2.3 ICAO NACC and SAM Regional Offices shall convene coordination meetings, as needed.

2.2.4 The Parties of this MoU agree to exchange reports, technical documents, plans and programming that may be necessary in order to guarantee the interconnection and the implementation of the new services.

2.2.5 The Parties of this MoU agree to implement during a 5 year phase the MEVA III / REDDIG II interconnection solution as presented in Appendix B.

3. SECTION 3 – TECHNICAL TERMS OF REFERENCE

3.1 The interconnection solution's objectives and their technical operational principles are described under the Appendix B of this document.

4. SECTION 4 – FINANCIAL RESPONSIBILITIES OF THE NETWORK PARTIES

4.1 MEVA III / REDDIG II Members shall, as individual administrations, be responsible for their own financial obligations, in accordance with the Agreement contained in Appendix B.

4.2 The Parties to this Agreement understand that they shall not commit to any action that may result in a financial obligation to other Parties, without first obtaining an Agreement, in writing, from all other parties to this Agreement.

NOTES:

MEVA III - The term "MEVA III", as used in this document, refers to the VSAT network currently providing voice and data aeronautical telecommunications services to States/Territories/International Organisations in the Caribbean Region. The network is managed by Caribbean States/Territories/International Organisations members, through the Technical MEVA Group (TMG), and is coordinated by the ICAO NACC Regional Office.

REDDIG II - The term "REDDIG II", as used in this document, refers to the VSAT network presently implemented in the South American region under the technical cooperation project RLA/03/901 coordinated by the ICAO Lima Office.

APPENDIX A

A LIST OF REFERENCE DOCUMENTS USED IN SUPPORT OF THIS AGREEMENT

- Contract N| 2250128 between the International Civil Aviation Organization and COMSOFT GmbH for the provision of the Interconnection of the MEVA III and REDDIG II Satellite Telecommunications Network for MEVAIII and REDDIG II Member States/Territory/International Organization
- Acuerdo de gestión de servicios entre la Cooperación Centroamericana de Servicios de Navegación Aérea (COCESNA) y la OACI Proyecto RLA/09/901 Interconexión del Nodo MEVAII de COCESNA a la REDDIG
- Contract No. 22501200 between the International Civil Aviation Organization and the consortium consisting of INEO Engineering and Systems and LEVEL 3 PERÚ S.A. for the Provision of a New Regional Aeronautical Telecommunication Network (REDDIG II)and associated equipment and services
- Manual de operación de la REDDIG II
- MEVA III Document of Agreement
- MEVA III Service Level Agreement

APPENDIX B

TECHNICAL-OPERATIONAL COORDINATION AGREEMENT FOR THE ESTABLISHMENT OF VSAT MEVA III AND REDDIG II NETWORKS INTERCONNECTION

1. SECTION 1 – PURPOSE OF THIS AGREEMENT

1.1 PURPOSE

1.1.1 To establish technical, operational and administrative aspects necessary for the digital VSAT MEVA III and REDDIG II networks interconnection, to meet aeronautical telecommunications requirements between the CAR/SAM Regions.

2. SECTION 2 – CO-OPERATIONAL TECHNICAL PROCESS OF THE AGREEMENT

2.1 RELATIONSHIP AND RESPONSIBILITIES OF THE PARTIES

2.1.1 During this stage, the management of MEVA III and REDDIG II shall continue with their respective service providers, i.e, REDDIG II shall continue with its REDDIG Administration, and MEVA III, with the MEVA III Service Provider.

2.1.2 States/Territories/International Organisations members of MEVA III and REDDIG II networks shall be responsible for the normal operation of each of their nodes, having to establish mechanisms necessary to ensure the degree of availability required for each of the services under consideration.

3. SECTION 3 – TECHNICAL TERMS OF REFERENCE

3.1 TECHNICAL TERMS OF REFERENCE

3.1.1 Members of MEVA III and REDDIG II networks have mutual interest in establishing the interconnection of their respective communications networks in a manner that they provide the capacity for current and future voice and data aeronautical telecommunications services between the designated nodes within these networks, so as to support aeronautical telecommunications in the CAR/SAM Regions.

3.1.2 The interconnection technical solution shall be carried out under premise that the REDDIG II and MEVA III VSAT network is developed under a full mesh network topology, using TDMA satellite access, as well as a IS-14 satellite transponder with a beam directed over United states / Latin America, C-band operation frequencies and co-linear vertical polarisation.

3.1.3 For the interconnection of the additional equipments to be initially installed at each node involved, MODEM, as well as any other necessary equipment required.

3.1.4 The interconnection implies the following implementations:

a) Additional equipment at Bogota (Colombia) and Caracas (Venezuela), REDDIG II nodes; and

b) Additional equipment at Tegucigalpa, Honduras, COCESNA MEVA III node.

3.2 **MANAGEMENT TERMS OF REFERENCE**

3.2.1 Implementation of the interconnection option shall not involve modifications to the technical, operational and control management of MEVA III and REDDIG II networks, with exception of the necessary maintenance coordination procedures detailed in paragraph 3.2.5 of this Attachment.

3.2.2 The configuration, synchronisation, supervision and control of additional MODEMs participating in the interconnection and installed at REDDIG II nodes, shall be carried out by the MEVA III Network Control Centre (NCC). Also, the configuration, synchronisation, supervision and control of additional MODEMs participating in the interconnection and installed at MEVA III nodes, shall be carried out by the REDDIG NCC.

3.2.3 The bandwidth, number and type of circuits installed in the MEVA III node for communications with REDDIG II, shall be managed by REDDIG II.

3.2.4 The bandwidth, number and type of circuits installed in the REDDIG II node for communications with MEVA III, shall be managed by MEVA III.

3.2.5 **Maintenance coordination procedures between the NCCs**

3.2.5.1 When there is any problem in a REDDIG II node, with the MODEM or other equipments involved in the interconnection with MEVA III, the following shall be applied:

a) MEVA III Service Provider shall call the REDDIG II Administration informing of the happening;

b) The REDDIG II Administration shall phone the respective node and shall establish an audio teleconference between MEVA III Service Provider and Caracas or Bogota local technicians, as necessary;

c) REDDIG II NCC, under control of the REDDIG II Administration, shall supervise communications between MEVA III Service Provider and REDDIG II nodes technicians.

d) The MEVA III Service Provider is the only one that may call the REDDIG II Administration to start or close the respective trouble ticket.

3.2.5.2 When there is any problem in a MEVA III node, with the MODEM or other equipment affect the interconnection with REDDIG, the following shall be applied:

a) The REDDIG II Administration shall call the MEVA III Service Provider informing of the happening;

b) The MEVA III Service Provider shall call the respective node and shall establish an audio conference between REDDIG II Administration and local technicians, as necessary;

c) MEVA III NCC, under control of the Service Provider, shall supervise communications between REDDIG II Administration and MEVA III nodes technicians.

d) The REDDIG II Administration is the only one that may call the MEVA III Service Provider to start or close the respective trouble ticket.

3.2.6 **Security requirements**

3.2.6.1 The minimum security arrangements required by REDDIG II, and that should be followed by the MEVA III, are:

a) MEVA III network have no direct communications with public networks.

b) The equipment is not shared with services different to MEVA III.

c) Access restriction to equipment belonging to the network, through the use of a password.

d) The network must exclusively support services to which it was originally constituted for.

3.2.6.2 The minimum security arrangements required by MEVA III, and that shall be followed by REDDIG II, are:

a) REDDIG II network have no direct communications with public networks.

b) The equipment is not shared with services different to REDDIG II.

c) Access restriction to equipment belonging to the network, through the use of a password.

d) The network must exclusively support services to which it was originally constituted for.

SECTION 4 – FINANCIAL RESPONSIBILITIES OF THE PARTIES

4.1 EQUIPMENT PURCHASING

4.1.1 Additional equipment to be installed at REDDIG II nodes, with MEVA III MODEMs requirements, can be included in the leased contract established between ICAO, in behalf of the REDDIG II members, and the MEVA III Service Provider in accordance with the requirements established for the interconnection.

4.1.2 Additional equipment to be installed at MEVA III nodes, with REDDIG II MODEMs requirements, can be purchased by MEVA III members (States, Territories, Organisations) in accordance with the requirements established for the interconnection.

4.2 SPARE PARTS LOT PURCHASING

4.2.1 The spare parts for the additional equipment to be installed at the REDDIG II nodes, with MEVA III MODEM and other device requirements, can be included in the leasing contract established between ICAO, on behalf of the REDDIG II States, and the MEVA III Service Provider.

4.2.2 The spare parts for the additional equipment to be installed at the MEVA III nodes, with REDDIG II MODEM and other device requirements, shall be purchased by MEVA III Members.

4.3 MAINTENANCE

4.3.1 The additional equipment that would be installed in the REDDIG II nodes and that would route communications requirements with MEVA III nodes, shall be maintained by the MEVA III Service Provider, under the coordination of the REDDIG II Administration.

4.3.2 The additional equipment that would be installed in the MEVA III node, with communications requirements with REDDIG II nodes, shall be maintained by MEVA III Member, in coordination with the REDDIG II and the MEVA III Service Provider.

4.4 SPACE SEGMENT

4.4.1 The carriers, as well as the band width requirement for communications between REDDIG II nodes shall be the same as those currently rented with INTELSAT. The payment of the space segment to INTELSAT shall continue being carried out through the REDDIG II Administration, who shall be in charge of collecting contributions from each SAM State member of REDDIG II.

4.4.2 The carriers, as well as the band width requirement for communications between MEVA III nodes shall be done through the MEVA III Service Provider. MEVA III members shall pay the bandwidth consumption to the MEVA III Service Provider.

4.4.3 The circuits necessary for communications between a REDDIG II node having MODEMs participating in the interconnection with MEVA III shall be administrated by the MEVA III Service Provider. The amount charged for circuits used by the REDDIG II Member of the aforementioned node mentioned shall be provided by the MEVA III Service Provider, and the respective consumption payment to the provider shall be made through REDDIG II Administration.

4.4.4 The circuits necessary for communications between a MEVA III node having MODEMs participating in the interconnection with REDDIG II shall be administrated by REDDIG II. The amount charged for circuits used by the mentioned node shall be provided by the REDDIG Administration, and the respective consumption payment shall be made by the MEVA II member of the aforementioned node to the REDDIG II Administration.

Country/Site	SNMP usable IP Address	Mask	Comment
Aruba	192.168.102.30	255.255.255.192	Cisco Switch (AUA1L3SWI) - Port 1-8
Cuba	192.168.103.30	255.255.255.192	HP Switch any Port
Atlanta	192.168.104.30	255.255.255.192	Cisco Switch (ATL1L3SWI) - Port 1-8
Miami	192.168.105.30	255.255.255.192	Cisco Switch (MIA1L3SWI) - Port 1-8
Dom.-Rep.	192.168.106.30	255.255.255.192	Cisco Switch (DOM1L3SWI) - Port 1-8
Haiti	192.168.107.30	255.255.255.192	Cisco Switch (HAI1L3SWI) - Port 1-8
COCESNA	192.168.108.30	255.255.255.192	HP Switch any Port
Mexico	192.168.109.30	255.255.255.192	HP Switch any Port
St. Maarten	192.168.110.30	255.255.255.192	HP Switch any Port
Jamaica	192.168.111.30	255.255.255.192	HP Switch any Port
Cayman	192.168.112.30	255.255.255.192	HP Switch any Port
Nassau	192.168.113.30	255.255.255.192	HP Switch any Port
Freeport	192.168.114.30	255.255.255.192	HP Switch any Port
Curacao	192.168.115.30	255.255.255.192	HP Switch any Port
Panama	192.168.116.30	255.255.255.192	HP Switch any Port
Colombia	192.168.117.30	255.255.255.192	HP Switch any Port
Caracas	192.168.118.30	255.255.255.192	HP Switch any Port
Puerto Rico	192.168.119.30	255.255.255.192	Cisco Switch (PUR1L3SWI) - Port 1-8