INTERNATIONAL CIVIL AVIATION ORGANIZATION

Second Meeting of the Eastern Caribbean Network Technical Group

E/CAR/NTG/2

FINAL REPORT

(Port of Spain, Trinidad and Tobago, 14 – 16 June 2011)

The designations employed and the presentation of material in this publication do not imply the expression of any opinion whatsoever on the part of ICAO concerning the legal status of any country, territory, city or area of its authorities, or concerning the delimitation of its frontiers or boundaries.

INDEX

i - Index i-1

ii - History of the Meeting ii-1
Place and duration of the Meeting ii-1
Opening ii-1
Working languages ii-1
Participants and organization ii-1
Agenda ii-1
Schedule and Work Mode ii-3
Decisions and Conclusions ii-3
List of Working and Information Papers ii-4

iii - List of Participants iii-1

Report on Agenda Item 1: Review of valid conclusions from E/CAR/WG, NACC/WG and E/CAR/DCA Meetings concerning the work of the NTG 1-1

Report on Agenda Item 2: E/CAR AFS Network Status: Operation and Performance 2-1

Report on Agenda Item 3: E/CAR AFS Network Replacement Activities 3-1

Report on Agenda Item 4: Revision of E/CAR NTG Terms of Reference, work programme and membership 4-1

Report on Agenda Item 5: Other Business 5-1

HISTORY OF THE MEETING

1. PLACE AND DURATION OF THE MEETING

The Second Meeting of the Eastern Caribbean Network Technical Group was carried out in the Blue Rotors Room at the Bristow Caribbean Limited, Training and Conference Facility, in Port of Spain, Republic of Trinidad and Tobago, from 14 to 16 June, 2011.

2. OPENING

Mr. Julio Cesar Siu, Regional Officer, Communications, Navigation and Surveillance of the ICAO NACC Regional Office, in representation of the ICAO NACC Regional Director, Mrs. Loretta Martin, welcomed the participants, thank the Trinidad and Tobago Civil Aviation Authority (TTCAA) for hosting and inviting ICAO to this important meeting, emphasizing the ECAR NTG active participation and functions as advisory body to the E/CAR/DCAs. Trevor Dowrich, Executive Manager Air Navigation Services of Trinidad and Tobago Civil Aviation Authority (TTCAA), in behalf of Mr. Ramesh Lutchmedial Director General of the TTCAA, welcomed the participants, briefing on the relevant agenda items, noting the importance of the issues to be addressed during the meeting and opened the meeting.

3. WORKING LANGUAGES

The working language of the Meeting was English. The Documentation was provided electronically to the participants and was available in the ICAO NACC Regional Office Website under the section “meetings”.

4. PARTICIPANTS AND ORGANIZATION

The meeting counted with the assistance of 4 E/CAR States/Territories (Barbados, France, Trinidad & Tobago, United States), ECCAA in representation of the OECS States, ICAO and the E/CAR AFS Network Service Provider (TSTT); making a total of 17 participants. The list of participants is being presented in pages iii-1 to iii-4.

The Meeting was chaired by Ms. Veronica Ramdath, Rapporteur of the Eastern Caribbean Network Technical Group, and acted as Secretary to the Meeting. She was assisted by Mr. Julio Siu, Regional Officer Communications, Navigation and Surveillance.

5. AGENDA

The Meeting adopted the following agenda:

Agenda Item 1: Review of valid conclusions from E/CAR/WG, NACC/WG and E/CAR/DCA Meetings concerning the work of the NTG

1.1 Follow-up to previous E/CAR/NTG Conclusions and actions

1.2 Revision and actions concerning E/CAR/WG and the NACC/WG conclusions and the support of the E/CAR NTG to these WGs

1.3 Follow-up to conclusions from E/CAR/DCA meetings and agreements from PIARCO FIR Policy Meeting related to the E/CAR AFS Network

Agenda Item 2: E/CAR AFS Network Status: Operation and Performance

2.1 Network Performance analysis and general aspects

a) Analysis of annual performance of the network,
b) analysis of failures and recommendations
c) maintenance and reporting procedures,
d) logistics activities and their improvements

2.2 Review of Multi-Protocol Label (MPLS) configuration, operational requirements, capacities and final implementation issues

a) Identification of pending installations activities
b) Results of site testing
c) Initial network performance evaluation
d) Documentation, training, spare parts, etc.
e) Monitoring the network,
f) Evaluation of new requirements such as connectivity with other regional and domestic digital communications networks of the CAR and SAM Regions or new services as AMHS, radar sharing, etc.

Agenda Item 3: E/CAR AFS Network Replacement Activities

a) Revision of Request for Information Document (RFI)
b) Action Plan for E/CAR AFS Network Replacement Process
c) Draft of "Request for proposal" (RFP) document for the replacement of the Network

Agenda Item 4: Revision of E/CAR NTG Terms of Reference, work programme and membership

Agenda Item 5: Other Business

a) Actions for NACC/DCA/4 Meeting
b) E/CAR AFS Network Website by TTCAA
c) Next meeting/ Future activities

6. SCHEDULE AND WORK MODE

The Meeting agreed to hold its daily sessions from 09:00 to 16:00 hours, with two breaks.

7. RECOMMENDATIONS AND CONCLUSIONS

The Eastern Caribbean Network Technical Group recorded its activities as Decisions and Draft Conclusions as follows:

No.	Title	Page
DRAFT Conclusion E/CAR/NTG/2/01	MPLS Maintenance Procedure and Service Level of Agreement	2-3
DRAFT Conclusion E/CAR/NTG/2/02	Use of IP phones in MPLS Network	2-5
DRAFT Conclusion E/CAR/NTG/2/03	Removal of old unused E/CAR Network equipment	2-6
DRAFT Conclusion E/CAR/NTG/2/04	Revision of Basic operating conditions for E/CAR AFS Network Equipment at OECS States	2-6
DRAFT Conclusion E/CAR/NTG/2/05	Urgent Immediate Solution to Power Supply Irregularity at Melville Hall Premises	2-7
Decision E/CAR/NTG/2/06	Submission MPLS Test Protocols	2-7
Decision E/CAR/NTG/2/07	E/CAR AFS Network members' access to MPLS Website Portal	2-8
Decision E/CAR/NTG/2/08	Analysis of telecommunication requirements for future operation needs	2-9
DRAFT Conclusion E/CAR/NTG/2/09	IPv4 Addresses implementation in the E/CAR AFS Network	2-10
Decision E/CAR/NTG/2/10	Planning for the implementation of a Common Request for Information (RFI) document for the CAR Region telecommunication networks.	3-1
Decision E/CAR/NTG/2/11	E/CAR Replacement Activities Revision.	3-2
DRAFT Conclusion E/CAR/NTG/2/12	Update to E/CAR/NTG Terms of Reference, work programme and membership.	4-1
Decision E/CAR/NTG/2/13	planning for E/CAR AFS Network Website implementation.	5-2

8. **List of Working and Information Papers**

Working and Information Papers are available on the ICAO website at the following link: http://mexico.icao.int/restricted/Meetings/ECARNTG02Documentation.zip

Number	Agenda Item	Title	Presented by
WP/01		Draft Agenda and Schedule of The E/CAR/NTG/2 Meeting	Rapporteur
WP/02	1.1	Follow-up to previous E/CAR/ NTG Conclusions and actions	Rapporteur
WP/03	1.2	Revision and actions concerning E/CAR/WG and the NACC/WG conclusions and the support of the E/CAR NTG to these WGs	ICAO
WP/04	1.3	Follow-up to conclusions from E/CAR/DCA meetings and agreements from PIARCO FIR Policy Meeting related to the E/CAR AFS Network	Rapporteur
WP/05	2.1	Covered under WP/08	Trinidad and Tobago (TSTT)
WP/06	2.1/2.2	E/CAR AFS Network status: Operation and Performance	France
WP/07	2.2	Problems experienced prior to and after the installation of the New AFS Network	ECCAA
WP/16	2.1	International Standard Operations Procedures (SOP)	United States
WP/08	2.2	Review of Multi-Protocol Label (MPLS) configuration, operational requirements, capacities and final implementation issues	Trinidad and Tobago (TSTT)
WP/18		Cancelled	
WP/09	2.2 (f)	Regional Network Integration: MEVA II / REDDIG Interconnection/ Integration Case	ICAO
WP/10	2.2 (f)	New Communication Requirements for the ECAR AFS Network	ICAO
WP/11	2.2 (f)	Work carried out by the GREPECAS D2 Project	United States
WP/19	3	CNS technology roadmaps – to consider to aid investment decisions	ICAO
WP/12	3 (a)	Revision of Request For Information Document (RFI)	Rapporteur
WP/13	3 (b)(c)	Action Plan for E/CAR AFS Network Replacement Process/ RFP document for the replacement of the Network	ICAO
WP/14	4	Revision of E/CAR NTG Terms of Reference, Work Programme and membership (PoCs Update)	Rapporteur
WP/15	5 b)	E/CAR AFS Network Website	Trinidad and Tobago
WP/17	5	Support to NACC/WG bodies and GREPECAS reorganization issues	ICAO

Number	Agenda Item	Title	Presented by
IP/01	-	General Information	-

BARBADOS
Richard Odle

FRANCE
Jean-Jacques Deschamps

TRINIDAD AND TOBAGO
Trevor Dowrich
Veronica Ramdath
Dayanand Rajnath
Randy Gomez
Pamela Williams
Richard Brumant
Anton Romany
Vanessa Lee
Alton Marshall
Nichole Greaves
Dexter Atkins

UNITED STATES
Dulce Maria Roses
Tayloe Lewis

ECCAA
Rudyard Ashe

ICAO
Julio Siu

NAME POSITION	ADDRESS TEL. / FAX / E-MAIL
Barbados	
Richard Odle Electronic Engineer / Manager	Grantley Adams International Airport, Christ Church, Barbados. Engineering Building, Grantley Adams International Airport, Christ Church, Barbados. Tel: (246) 467 1301 / 2 Fax: (246) 428 0925 Rodle@gaiainc.BB
France	
Jean-Jacques Deschamps Head of Technical Division SNA	DGAC Aeroport Martinique SNA – AG 97232 Le Lamentin, Martinique Antilles-Guyane Tel +596 596 42 25 07 Fax +596 596 42 27 22 E-mail jean-jacques.deschamps@aviation-civile.gouv.fr
Trinidad and Tobago	
Veronica Ramdath Manager Telecommunications & Electronics	Trinidad and Tobago Civil Aviation Authority P.O. Box 2163, National Mail Centre Golden Grove Road Piarco, Republic of Trinidad and Tobago, W.I. Tel. + 1868 669 4706 Fax + 1868 669 5239 E-mail: vramdath@caa.gov.tt
Richard Brumant Telecommunications and Electronics Engineer (Ag)	Trinidad and Tobago Civil Aviation Authority P.O. Box 2163, National Mail Centre Golden Grove Road Piarco, Republic of Trinidad and Tobago, W.I. Tel. + 1868 669 4706 Fax + 1868 669 5239 E-mail: rbrumant@caa.gov.tt
Pamela Williams ATC IV – Planning and Evaluation	Trinidad and Tobago Civil Aviation Authority P.O. Box 2163, National Mail Centre Golden Grove Road Piarco, Republic of Trinidad and Tobago, W.I. Tel. + 1868 669 4806 Fax + 1868 669 0635 E-mail: atcivp_e@caa.gov.tt
Dayanand Rajnath (Ag.) Manager Air Traffic Services	Trinidad and Tobago Civil Aviation Authority P.O. Box 2163, National Mail Centre Golden Grove Road Piarco, Republic of Trinidad and Tobago, W.I. Tel. + 1868 669 4806 Fax + 1868 669 0635 E-mail: drajnath@caa.gov.tt

NAME POSITION	ADDRESS TEL. / FAX / E-MAIL
Randy Gomez Chief Technical Officer/AIS	Trinidad and Tobago Civil Aviation Authority P.O. Box 2163, National Mail Centre Golden Grove Road Piarco, Republic of Trinidad and Tobago, W.I. Tel. + 1868 669 4128 Fax + 1868 669 1716 E-mail: rgomez@caa.gov.tt
Trevor Dowrich Executive Manager Air Navigation Services	Trinidad and Tobago Civil Aviation Authority P.O. Box 2163, National Mail Centre Golden Grove Road Piarco, Republic of Trinidad and Tobago, W.I. Tel. + 1868 669 4302 Fax + 1868 669 4302 E-mail: tdowrich@caa.gov.tt
Anton Romany Head Of Department (HOD) Enterprise Operations	Telecommunications Services of Trinidad and Tobago (TSTT) 52 Jerningham Ave Belmont Port of Spain Tel: 1 868 623 9032(Office) 1 868 681 8383 (Mobile) Fax: 1 868 623 9795 Email: asromany@tstt.co.tt Web page: www.tstt.co.tt
Vanessa Lee Manager Installation & Service- East	Telecommunications Services of Trinidad and Tobago (TSTT) Enterprise Services 52 Jerningham Ave Belmont Port of Spain Tel: 1-868-683-7419 Fax: 1 868 627 6975 Email: Vlee@tstt.co.tt
Alton Marshall Account Manager	Telecommunications Services of Trinidad and Tobago (TSTT) 52 Jerningham Ave Belmont Port of Spain Tel: 868 688 6681 Fax: 868 621 2800 Email: AMarsha@tstt.co.tt
Nichole Greaves Project Manager	Telecommunications Services of Trinidad and Tobago (TSTT) Enterprise Services 52 Jerningham Ave Belmont Port of Spain Tel: 1-868-735-5895 Email: ngreave@tstt.co.tt

NAME POSITION	ADDRESS TEL. / FAX / E-MAIL
Dexter Atkins Engineer	Telecommunications Services of Trinidad and Tobago (TSTT) 52 Jerningham Ave Belmont Port of Spain Tel: 868 682 0088 Fax: 868 621 2800 Email: datkins@tstt.co.tt
United States	
Dulce Maria Roses Program Manager, CAR/SAM Region	Air Traffic Organization – Technical Support Center 7500 NW 58th St. Miami, FL 33166 United States Tel.: + 305 716 1830 E-mail: dulce.roses@faa.gov
Tayloe Newton Lewis Sr. Telecommunications Analyst Contract support to Program Manager, CAR/SAM Region	Science Applications International Corporation (SAIC) Tel. +202-651-2420 E-mail: tayloe.ctr.lewis@faa.gov
Eastern Caribbean Civil Aviation Authority (ECCAA)	
Rudyard Ashe	Eastern Caribbean Civil Aviation Authority P.O. Box 1130 St. Johns Cnr Factory Road & Nugent Ave Antigua and Barbuda Tel: (268)-462-0000/0907/0030 Fax: (268)-462-0082 E-mail: rashe@eccaa.aero
International Civil Aviation Organisation (ICAO)	
Julio Siu Regional Officer, CNS	International Civil Aviation Organisation (ICAO) North America, Central America and Caribbean Office Tel: +5255 5250 3211 Email: jsiu@mexico.icao.int icao_nacc@mexico.icao.int Web: www.mexico.icao.int

Agenda Item 1: Review of valid conclusions from E/CAR/WG, NACC/WG and E/CAR/DCA Meetings concerning the work of the NTG

1.1 Follow-up to previous E/CAR/NTG Conclusions and actions

1.1.1 Under WP/02, the Meeting reviewed and followed up the conclusions from the E/CAR/NTG/1 meeting, concluding that these conclusions were completed or superseded as detailed in **Appendix A** to this part of the report.

1.2 Revision and actions concerning E/CAR/WG and the NACC/WG conclusions and the support of the E/CAR NTG to these WGs

1.2.1 Under WP/03, the Meeting followed up the valid conclusions formulated by the E/CAR/WG and NACC/WG related to the E/CAR AFS Network, proposing the several actions to be considered by these WGs as detailed in **Appendix B** to this part of the report.

1.3 Follow-up to conclusions from E/CAR/DCA meetings and agreements from PIARCO FIR Policy Meeting related to the E/CAR AFS Network

1.3.1 Similarly under WP/04, a follow-up and actions by the E/CAR/NTG were proposed for the valid conclusions formulated by the E/CAR/DCA and PIARCO/FIR/PG related to the E/CAR AFS Network, agreeing in the actions as detailed in **Appendix C** to this part of the report.

APPENDIX A

Conclusion Description	Follow-up	Status
E/CAR/NTG/1/01- E/CAR NTG Contributions to the development of E/CAR/WG work programme	A work programme proposal was developed detailing the items that the E/CAR/NTG would contribute to the development of the E/CAR Region, which was presented at the E/CAR/WG/32 Meeting. The E/CAR/WG incorporated this contribution into their action plans.	Completed
E/CAR/NTG/1/02- Reclassification of GANDD Deficiencies for E/CAR AFS Network from "U" to "A"	Superseded with conclusion E/CAR/WG/32/5.	Superseded
E/CAR/NTG/1/03 - A Request for Information document for the E/CAR VSAT Network be compiled and issued to industry.	A draft Request for Information document was circulated to NTG members for comments on 20th December 2010. A Decision was agreed for a common RFI document coordinated by the MEVA TMG and the E/CAR/NTG.	Superseded

APPENDIX B

Conclusion Description	Proposed Follow-up to be informed (16 June 2011)	Status
CONCLUSION E/CAR/WG/31/6 E/CAR AFS NETWORK IMMEDIATE RECOVERY ACTIONS	b) Each E/CAR Network member State evaluated the transportation of spare parts of the system, to avoid delays due to VAT payments or customs formalities, implementing improvements. c) The near term solution, MPLS Network, is almost completely implemented with adequate spare parts shall be available on sites, d) The support by local technicians for visual checks and preliminary revision previous to trouble ticket was agreed.	To be considered completed
CONCLUSION E/CAR/WG/31/7 REPLACEMENT OF THE E/CAR AFS NETWORK	E/CAR/NTG studied, analyzed and followed-up on the planning, documentation and implementation of the replacement of the E/CAR AFS Network; in coordination with TTCAA and the ICAO NACC Regional Office; resulting in new planning dates and actions. A new conclusion on the replacement process planning was formulated by the E/CAR/NTG/2 meeting.	To be superseded
CONCLUSION E/CAR/WG/32/5 E/CAR AFS NETWORK DEFICIENCIES	a) ICAO changed the priority of the existing related E/CAR AFS network Air Navigation deficiencies to priority "A;" and b) E/CAR/NTG evaluated further improvements with the implementation of the MPLS Network during the E/CAR/NTG/2 Meeting but its evaluation after 6 months in operation of the MPLS network is still to be carried out. MPLS Network tentatively to be completed by middle of July 2011.	a) Completed b) Valid
CONCLUSION E/CAR/WG 32/6 E/CAR AFS NETWORK FAULT REPORTING SYSTEM BY E-MAIL	An email reporting system was introduced in October 2010 and continues to date. A new failure reporting system is being proposed by the E/CAR/NTG based on TSTT website application. New conclusion proposed by the E/CAR/NTG/2 Meeting	To be superseded
CONCLUSION NACC/WG/3/2 PRELIMINARY OFF-LINE TESTING OF THE NEW FPL FORMAT	No action for E/CAR/NTG since no E/CAR State will be capable to participate in these offline testing by the end of 2011.	-
CONCLUSION NACC/WG/3/3 ACTIONS TO AVOID ERRORS, MISSING AND DUPLICATION OF FLIGHT PLANS	Several new telecom requirements are to be analyzed by the E/CAR/NTG due to the initial proposal for a Centralized FDP Data System. Actions included in the E/CAR/NTG work programme.	-
CONCLUSION NACC/WG/3/6 ADS-B TRIALS AND ANALYSIS IN THE CAR	Several new telecom requirements are to be analyzed by the ABS-B trials and data exchanged. Actions included in the E/CAR/NTG work programme.	-

REGION		

APPENDIX C

Conclusion Description	Proposed Follow-up to be informed (16 June 2011)
E/CAR/DCA/23/6 IMPLEMENTATION OF SOLUTIONS FOR MISSING/DUPLICATION OF FLIGHT PLAN DATA IN THE E/CAR	A similar conclusion was adopted by the NACC/WG/03 Meeting. Several new telecom requirements are to be analyzed by the E/CAR/NTG due to the initial proposal for a Centralized FDP Data System. Actions included in the E/CAR/NTG work programme.
E/CAR/DCA/23/7 MPLS IMPLEMENTATION MILESTONES	Delays in the implementation of MPLS Network were identified and a follow up of their completion was made. MPLS Network to be completed by end of July 2011.
E/CAR/DCA/23/8 E/CAR AFS NETWORK FAILURE REPORTING IMPROVEMENTS	A new failure reporting system is being proposed by the E/CAR/NTG based on TTCAA website application. New conclusion proposed by the E/CAR/NTG/2 Meeting
PIARCO/FIR/PG/1/2 E/CAR RADAR DATA SERVER	New requirements to be analyzed once TTCAA informed on the initial planning of this system, by 31th August 2011. Actions included in the E/CAR/NTG work programme.
PIARCO/FIR/PG/1/3 PIARCO AIS CONTINGENCY PLAN	New requirements to be analyzed once the E/CAR AIM Committee defines the draft PIARCO AIS Contingency Plan, by 30th September2011. Actions included in the E/CAR/NTG work programme.

Agenda Item 2: E/CAR AFS Network Status: Operation and Performance

a) Network Performance analysis and general aspects

2.1 Under WP/08, TSTT Presentation, the ECAR/AFS Network Service Provider described the deployment process of the MPLS Network and the current status of the E/CAR AFS Network:

i) Stage 1 (Initial Stage): Voice and AFTN utilized the legacy (old) Promina/Option 11 E/CAR AFS Network.

ii) Stage 2 (Interim Stage-AFTN): The AFTN application was cutover to the IP MPLS WAN with the exceptions of Anguilla, Martinique, Guadeloupe and San Juan. In this stage the voice circuits were passed through the Cisco 2921 router but still utilized the PBX systems of the legacy infrastructure. Stage 2 which started from the AFTN cutover of the first site on January 19, 2011 continued until March 13, 2011 in order to evaluate the performance of the new network by examining the performance of the AFTN.

iii) Stage 3 (Interim Stage – Voice and AFTN): In this stage the voice circuits were available on both the old and new networks. Sites on the new network were able to call each other on the new network. If Site A was on the old network and Site B was on the new network, then the old network would have been the medium used for voice. This stage was completed over the period March 14th 2011 to April 1st 2011. The selection of the appropriate network is transparent to the user. Stage 3 will continue until the connectivity issue with the MPLS network and the French Territories of Martinique and Guadeloupe is resolved.

Present Network Status: Stage 3 with the sites that have voice connectivity with Martinique and Guadeloupe will communicate with them on the old network for voice. Trinidad and Tobago (Piarco) will continue to use the old network in order to send AFTN to the French Territories.

iv) Stage 4 (Cutover Stage): Migration of each site from the legacy network to the fully routed IP network infrastructure for both voice and AFTN communications. This stage is to be completed by the 31 July 2011.

2.2 The failure reporting tickets registered since January 2011 until May 2011, highlighted that:

i. Analysis of annual performance of the network

Less failures tickets were reported since the Stage III implementation

ii. Analysis of failures and recommendations

- The failures reported at this stage are related to the legacy equipment which is to be replaced with the MPLS equipment. Some reports were associated to the transition of circuits to the MPLS Network.

- Failure report description should be improved to have a more significant description of the failure and to fasten its resolution. Coding of failure causes or types may be useful to make this improvement.

iii. Maintenance and Reporting Procedures

2.3 The possibility for local support by local State maintenance technicians was studied by the E/CAR/NTG and due to the equipment operation/ characteristics; only visual checks on request by TSTT will be needed.

2.4 The Meeting agreed that when a failure occurs, local State technician should carry out their verification checks on end-user equipments and other related equipment operating with the E/CAR AFS Network and after this verification coordinate the failure report to the E/CAR AFS Network if applicable.

2.5 An email reporting system was introduced in October 2010 and continues to date. The current valid failure reporting procedure is presented under **Appendix A** to this part of the report. A new failure reporting system is being proposed by the E/CAR/NTG based on TTCAA website application. This application is detailed under Agenda Item 5 of this report.

2.6 TSTT outlined the SLA maintenance procedures for the MPLS network:

i. acknowledge a fault in 30 minutes
ii. report to site in 4 hours. It was noted that repair may not always be possible in 4 hours depending on the type of failure
iii. All maintenance (1st and second level maintenance) will be covered by TSTT and their local technicians. On-site support will be provided by LIME for the Eastern Caribbean States and by Nexar for San Juan. TSTT is evaluating proposals from two companies for the provision of on-site support in Martinique and Guadeloupe.
iv. Smart CISCO net support is available for CISCO equipment, i.e. delivery of failed routers on-site within 4 hours from in-country depot spares.
v. For on-site intervention, TSTT will provide their MOP (Method of Procedure) information on the activities to be made on the intervention. The MOP will be provided to the TTCAA at least two weeks in advance for service affecting maintenance.
vi. A preventive Maintenance plan of visits every 6 months is scheduled by TSTT, which is to start on January 2012. States will be given two weeks advance notice of these scheduled visits in order to make the appropriate access arrangements.

2.7 Under WP/16, the Meeting was informed that in order to facilitate and expedite the trouble reporting procedures between E/CAR Network Management Center (NMC), FAA Network Enterprise Management Center (NEMC) Facilities, and New York Systems Operations Center (SOC), it was acknowledge at previous meetings between the FAA and TTCAA that an International Standard Operations Procedures (SOP) should be developed by the E/CAR/NTG.

2.8 The meeting agreed that the SOP should provide information on the following:

a) Network Operation Centers
b) List of Participating States
c) Interface Locations
d) Service Configurations
e) Service Priorities
f) Network Topology
g) Trouble reporting and tracking

h) Failure notification
i) Escalation procedures
j) Outage assessment report
k) Scheduling maintenance release

2.9 A draft copy of the proposed International SOP was presented to the meeting for review and can be seen in full in Attachment A and B of WP/16.

2.10 Considering the SLA maintenance procedures for the MPLS network explained by TSTT and the SOP presented by United States, the Meeting agreed on the need to define the applicable Maintenance Procedures for coordinating the on-site interventions by TSTT, the maintenance activities, response times, and other issues related to the maintenance of the MPLS Network. In this regard, the Meeting formulated the following draft conclusion:

DRAFT Conclusion
E/CAR/NTG/2/01 MPLS Maintenance Procedure and Service Level of Agreement

In order to establish and define the MPLS Maintenance procedures and inform on the service level of agreement to be applicable to the MPLS Network, that:

a) E/CAR AFS Network members provide the E/CAR/NTG Rapporteur the necessary information for the coordination of the maintenance (Point of Contact information, working hours available for technical intervention, any particular security procedure to follow, escalation, etc.) by the **30 June 2011**;
b) United States, Trinidad and Tobago and TSTT to review and draft a personalized version of the Standard Operations Procedure (SOP) by **31 July 2011**;
c) E/CAR/NTG Rapporteur to draft a MPLS Maintenance Procedure based on the personalized SOP and the MPLS SLA by **30 August 2011**;
d) Comments to MPLS Maintenance Procedure by E/CAR/NTG Members by **15 September 2011**; and
e) E/CAR AFS Network members to apply MPLS Maintenance Procedure final version by **1 October 2011**.

iv. logistics activities and their improvements

2.11 Each E/CAR Network member State evaluated the transportation of spare parts of the system, to avoid delays due to VAT payments or customs formalities, and improvements have been made by the States.

b) Review of Multi-Protocol Label (MPLS) configuration, operational requirements, capacities and final implementation issues

2.12 Also under WP/8, TSTT explained the current MPLS Network implementation with a network overview diagram, which is shown on **Appendix B** to this part of the report, highlighting:

i. IPLCs circuits between Piarco-Martinique, Martinique-Guadeloupe and Guadeloupe-Antigua. This design provides circuit redundancy to Martinique and Guadeloupe.

ii. Implementation of IPLCs is to be reviewed after 1 year time looking for have MPLS circuits
iii. TSTT Network Management System (NMS) at TTCAA premises
iv. Antigua Hub at Telecom premises and Antigua switch and rest of ECAR Network equipment at Civil Aviation premises
v. Management portal implemented
vi. Scalable architecture and available HW expansion
vii. Trunk circuit bandwidth use is under 30%, allowing a high network expansion capability
viii. 32 Serial AFTN lines into PIARCO AFTN System
ix. Dial up directory/extensions remained the same
x. The use of PSTN lines as backup to the E/CAR AFS Network (voice) will be available for 1 year after MPLS Network commissioning

2.13 IP phones have been supplied in all sites, but just in certain sites they have been implemented based on user request. The IP phones implemented are configured with the same phone number/extension of the analogue phones or VCCS assigned for ATC voice communications. These phones also have the line hunting feature and are connected directly to the CISCO router. No IP phone voice recording is implemented in the system. The IP phones installed are listed in the following table:

STATE	No. of IP PHONES IN TOWER/ ACC	No. of ANALOG PHONES IN TOWER	No. Of ANALOG PHONES IN AIS	No. of ANALOG PHONES FIRE STATION	No. of ANALOG PHONES ELSEWHERE	VCCS Connected	Extensions
Anguilla			1			N/A	N/A
Antigua VC Bird			1			Y	7000, 7001, 7002, 7003, 7011
Barbados	2		1			Y	6001, 6002, 6003, 6004
Dominica /Melville Hall	1		1	1		N	6501, 6502
Dominica/ Canefield		2	1		1 Chief ATC office, 1 ECCAA office	N	8201, 8202, 8203, 8290
Grenada		2	1			N	6101, 6102
Montserrat		1 (AIS in Tower) 1 multiline phone (ATC)	1 (AIS in Admin Bldg)	1		Y	7101, 7102, 7103
Nevis		1			1 Chief ATC office	N/A	8301, 8302, 8303
Piarco	2 in ACC					Y	5000, 5001, 5002, 5004,

							5005, 5011, 5012, 5090
St. Kitts			1	1		Y	7301, 7302,
St. Lucia/ George Charles		4	1		1 ECCAA office	N/A	8401, 8402, 8490, 8499
St. Lucia/ Hewanorra			1		1 ECCAA office	N	6301, 6302, 6340, 6390
St. Vincent			1	1		Y	6201, 6202
San Juan	0					Y	1841, 1842, 1843,1845, 1846, 1847, 1848
San Juan /AIFSS						Y	1861, 1862, 1863

2.14 Considering the existence of these IP phones and its use as a possible contingency media in case of a failure in the VCSS equipment, the Meeting agreed on the following draft conclusion:

DRAFT Conclusion
E/CAR/NTG/2/02 Use of IP phones in MPLS Network

In order to define the use of IP phones in the MPLS Network, and considering the existence of these equipment in all the sites, that E/CAR AFS Network members:

a) coordinate and agree with their local ATC users the use of IP phones as a contingency media in case of VCCS failure;
b) coordinate with TTCAA for implementation actions for those IP phones not installed but requested to be implemented by users; and
c) inform the use of IP phones and progress made in action b) to the E/CAR/NTG by **31 July 2011**.

i. Identification of Pending Installation Activities

2.15 A contract was signed with Southern Caribbean Fibre for IPLCs between Trinidad and Martinique, Martinique and Guadeloupe and Guadeloupe and Antigua. The circuits are expected to be delivered by June 27, 2011. After the circuits are successfully tested end-to-end, the installation of the routers will be carried out.

2.16 The San Juan installation experienced some delays due to the delivery of the IPLC from the service provider. The installation which started on May 17th 2011 was put on hold due to mis-matched interfaces on the end device (CISCO router) and the 512K circuit CPE installed. An additional 4 port E1/T1 card needs to be installed in order to provide the V.35 interface. Currently the slots on Routers are all occupied by 3* 4FXS cards and 1* HWIC4t cards. Therefore, these routers require expansion modules to accommodate the additional 4 port E1/T-1 card in order to facilitate turn up of the Piarco and Antigua circuits. The installation is tentatively scheduled to restart the week of June 27th.

2.17 In Saint Lucia/Hewanorra TSTT was unable to connect a couple of extensions to the new VCCS. This was attributed to configuration problems within the VCCS. This issue is being addressed by the ECCAA and the respective Airport Authorities. Meanwhile individual phones are implemented.

2.18 There was also an issue with the presence of old discarded equipment in the room where the E/CAR AFS Network equipment was installed. The Meeting recognized that space in several sites is a critical aspect, which is greatly affected if the old unused equipment is not removed from site. In this regard the Meeting agreed on the following draft Conclusion:

DRAFT Conclusion
E/CAR/NTG/2/03 Removal of old unused E/CAR Network equipment

To free the space occupied by the old E/CAR Network equipment and to complete the installation of the MPLS Network that TTCAA inform the E/CAR Network members no later than **30 July 2011** on the actions to be carried out for the removal of these old unused equipment.

ii. Results of Site Testing- Issues encountered during installation

2.19 Under WP/07, regarding several installation issues, the Meeting was informed that although site requirements were circulated to all the Airport Authorities within the OECS States, site preparations were incomplete at some sites. Some of the issues included:

i. The presence of old discarded equipment in the room where the AFS equipment would be installed.
ii. Dusty environment
iii. Unserviceable/inadequate air-conditioning unit.
iv. Cabling not in place
v. Montserrat: As per the voice connectivity agreed upon one extension remained outstanding to AIS Office in the Terminal Building due to the structural incompleteness of the building. ECCAA has since advised that this extension will no longer be required.
vi. Dominica/Melville Hall: There is a major issue regarding power regularity and conditioning around Melville Hall airport, with daily power fluctuations and on resumption of regular power, voltage spikes occurred. These continuous spikes can pose long term damage to UPS equipment and network hardware. Immediate solution to this power supply irregularity should be carried out. ECCAA advised that this problem has been brought to the attention of the relevant parties. As stated at the E/CAR/WG/32, the state will bear responsibility for the cost of replacing and installing the damaged equipment.

2.20 In this regard the meeting agreed to formulate the following draft conclusions:

DRAFT Conclusion
E/CAR/NTG/2/04 Revision of Basic operating conditions for E/CAR AFS Network Equipment at OECS States

Considering the criticality to provide and maintain the basic operating conditions (air conditioning, cleanness, cabling order, equipment ventilation, etc.) for the optimum operation of the E/CAR AFS Network equipment, the OECS States and ECCAA shall review with the assistance of TSTT these conditions to implement them no later than **31 July 2011** and informing the E/CAR/NTG members on this matter.

DRAFT Conclusion
E/CAR/NTG/2/05 Urgent Immediate Solution to Power Supply Irregularity at Melville Hall Premises

Since E/CAR AFS Network equipment implemented in Melville Hall premises is facing major power supply irregularities that will soon damage the operating equipment, that:

a) TTCAA Director General writes to ECCAA Directorate advising of the matter of irregularities in the electrical power and bringing to his attention the resulting action if the AFS equipment is damaged as a result of power problems. As stated at the E/CAR/WG/32, the state will bear responsibility for the cost of replacing and installing the damaged equipment; and
b) Dominica/Melville Hall Airport Authority to implement an urgent immediate solution for the power supply irregularity no later than **30 June 2011.**

Decision
E/CAR/NTG/2/06 Submission MPLS Test Protocols

For the corresponding follow-up and internal testing procedures, TSTT will send United Sates and French Antilles the test protocols to be carried out with the implementation of the MPLS no later than **30 July 2011.**

iii. Initial Network Performance Evaluation

2.21 Since the implementation of the MPLS Network in March 2011, the failure reporting tickets registered for April and May 2011 have been decreasing; nevertheless a full network evaluation is to be carried out after the first 6 months of full implementation of the MPLS Network as agreed on E/CAR/WG/32 Conclusion.

iv. Documentation, Training, Spare parts, etc.

2.22 TSTT informed that 'As-Built' documentation that is one of the deliverables of the contract with TTCAA, will be delivered when the network is completed and commissioned (30 July 2011). No other technical documentation is foreseen for the sites.

2.23 Regarding training, TSTT pointed out that only Cisco certified personnel can work on the Cisco routers. As such no training will be provided to States on the Cisco routers. Also since just some visual checks on request may be made by States, no need to have any training to the States.

2.24 The spare Cisco router is installed in the cabinet rack. The spare is a 'cold standby'. The Maintenance Procedure will provided the necessary guidance in order to switch to the standby router in the event of failure of the main router, to physically remove the cables from the failed router and connect to identical positions on the standby router. The two routers are configured identically. The standby router is automatically updated whenever the main router is re-configured. This procedure for switch to the standby router will be carried out by the local TSTT technicians and the switching will be made every 6 months during the preventive maintenance visits. TSTT informed that three (3) spare routers are available at the TSTT premises in Trinidad.

v. Monitoring the Network

2.25 The monitoring provided by TSTT on the MPLS network supporting the E/CAR deployment would consist of two entities monitoring the network. Firstly AVIAT would provide monitoring and reports on the performance of the network and also ensure that Service Level Agreement timelines with all subcontractors are achieved. AVIAT is an entity resident in the United States that is a best in class in NOC services and presently provides monitoring for the FAA. TSTT has also implemented monitoring of the network via its management platform which would be centrally monitored from TSTT ESOC. An internet portal which can be used to monitor the performance of the network would be provided to the TTCAA for monitoring purposes. This access is read only and can be used to provide reports. TTCAA would be able to log onto the portal using a username and password via any internet connection. The MPLS portal would provide statistics such as utilization, availability and router performance. TSTT has committed to provide portal access by the end July 2011. In this regard, the Meeting agreed in the following decision:

Decision
E/CAR/NTG/2/07 E/CAR AFS Network members' access to MPLS Website Portal

In order to facilitate the E/CAR AFS Network members information on the network performance (utilization, availability and router performance), as well as the provision of reports, that TTCAA/ TSTT, to provide portal access by **31 July 2011** to all E/CAR AFS Network members and ICAO.

vi. Evaluation of new requirements such as connectivity with other regional and domestic digital communications networks of the CAR and SAM Regions or new services as AMHS, radar sharing, etc.

2.26 Under WP/06, France informed the Meeting on the French plans to update their ATM Automated Systems. The ATM systems are used both by ATCO and AIS officers (for flight information). Flight displays including general information (SIGMA) and surveillance displays (IRMA and CACAO) are connected on a dual local Ethernet network. The radar systems are fed by DACOTA RDPS and an alert server (APW, MSAW, STCA). The Flight displays are connected to SIGMA servers and strip printers which are fed by AFTN information, time, meteorological and other information.

2.27 The AFTN Switch (Concentrateur Aiguilleur de messaGes pour l'OUtre-mer [CAGOU]) is not AMHS compliant. A contract is set to replace this switch with AMHS capability in 2012. The SIGMA System which comprises of Flight Data Processing System, General information (notam, meteo, platform, etc) and AFTN interface (FPL preparation) is used both for Towers (SOCA, TFFR, TFFF), for Approaches (SOCA, TFFR, TFFF), and for en-route (SOOO). SIGMA will be upgraded in May 2012 to be compliant with FPL2012. In Cayenne Sigma should be replaced by two (2) systems: one system dedicated to FDPS (e.g. Thales Eurocat, Adacel Aurora, ATECH, etc.), and one system dedicated to

General information and AIS (e.g. ATALYS from Egis AVIA). Other ATM systems should be replaced in 2016 (DACOTA RDPS, FDPS, radar displays).

2.28 Under WP/09, the meeting agreed that the E/CAR AFS Network is the main Air Navigation telecommunication network for the E/CAR Region and recalled that with the implementation of the MPLS Network, a requirements matrix was formulated in order to design and develop the necessary equipment and bandwidth for the operation of the network. Also the Meeting recognized that the MPLS Network will cover all the existing voice and data requirements defined in the CNS Tables in the CAR/SAM ANP FASID but also noted that the current exchange of information between the regional telecommunication networks aimed to the integration of regional networks may require several future requirements for the Network Administrations to analyse and agree on its implementation.

2.29 Initial proposals on the E/CAR Regional telecommunications requirements for the near term implementation and future requirements/services regarding interconnection with other regional network include:

a. AMHS implementation plan
b. Radar data exchange: Radar Data Server provided by TTCAA
c. ADS B Data sharing
d. ATFM messages
e. CPLs Barbados/ Piarco, etc.
f. Contingency or alternate means
g. Backup to data services

2.30 The E/CAR AIM Committee representative provided a brief description of the proposal for a Centralized FDP/NOTAM/MET Data Server in which several workstations are planned to be implemented in each E/CAR State. The Meeting agreed that like this example of future operational needs that will demand telecommunication implementation, other are also foreseen considering the different regional conclusions. As part of the role of the E/CAR/NTG, the meeting agreed that the E/CAR/NTG inquire and coordinate with the E/CAR/WG the necessary information to identify the future telecommunication requirements so as to consider them in the replacement/improvement process of the E/CAR AFS Network. In this regard the following decision was formulated:

Decision
E/CAR/NTG/2/08 Analysis of telecommunication requirements for future operation needs

In order to identify the future telecommunication requirements for future operational needs in the E/CAR Region, that the E/CAR/NTG Rapporteur:

a) coordinates and requests the E/CAR/WG ATM, AIM and CNS Committees their future operational needs that require the use of the E/CAR AFS Network (Centralized FDP System, Radar Data Server, Contingency plan, FPL mitigation, ADS-B Trial, etc.); and
b) inform the E/CAR/NTG members by **30th September 2011** on the progress of this enquiry so as to include these tasks in the NTG work programmes.

2.31 TTCAA indicated that a new site in Tobago was to be included in the MPLS as well as consideration for voice circuits requested by Anguilla with San Juan and Antigua.

2.32 Under WP/10, the Meeting was informed on the progress of the interconnection process carried out by the MEVA II and REDDIG Networks (Appendix to WP/09, presents a detailed summary of the status of implementation of all circuits related with the MEVA REDDIG Interconnection) and that the MEVA TMG, during its MEVA TMG/23 Meeting, designated the MEVA TMG Coordinator, United States and St. Maarten to support the initiative of the interconnection/integration of the MEVA Network and the E/CAR AFS Network by exchanging the necessary information.

2.33 Also the Meeting took note that during the MR/8 Meeting, the MEVA and REDDIG Network administrations made several agreements to precede with the Networks integration aspects:

a) An initial technical-administrative study for the network integration
b) An action plan for the integration aspects
c) Network integration will take place after a 5 year period after the interconnection is implemented
d) Each network administration shall continue their integration analysis and exchange information with the other network

2.34 Considering that several of the regional networks in the CAR region are in the process of updating and modernization and a closer exchange of these plans for a regional harmonized integration of networks shall be considered and coordinated, the Meeting agreed to support and exchange information with the other regional networks for evaluating interconnection/integration issues. In this regard the Meeting agreed that the E/CAR/NTG Rapporteur be the point of contact with the MEVA TMG Group for exchanging information on regional network interoperation A collaborative work between the MEVA TMG and the E/CAR/NTG Groups was agreed for the elaboration of a Common Request for Information (RFI) document.

2.35 The Meeting recalled the implementation of several future requirements with the AFTN terminals in Antigua and Barbados for the MET Offices and the radar data feed from Barbados to Trinidad and Tobago. In this regard the following considerations and agreements were made:

i) For the new AFTN terminals, hardware (PC) and associated cabling from the AFS equipment to the MET user are to be provided by the user and TTCAA will coordinate the circuit and AFTN Switch configuration as well as the software for the AFTN Terminal
ii) Barbados informed that the radar data feed will be implemented with Trinidad and Tobago by the 16 September 2011.

2.36 Under WP/11, the meeting was informed of the latest updates to the D2 ATN G-G and A-G Project, focusing on ATN Routers Regional Plan and ATN G-G applications, highlighting the regional NAM/CAR/SAM agreement for the IPv4 addressing plan. In this regard, the Meeting agreed in the following draft conclusion:

DRAFT Conclusion
E/CAR/NTG/2/09 IPv4 Addresses implementation in the E/CAR AFS Network

In compliance with the regional agreement for implementing ATN IPS Networks, under the IPv4 addressing scheme, TTCAA carry out the necessary activities for the application of the IPv4 addressing scheme in the MPLS Network and inform the progress of this action to the E/CAR/NTG Members by the next E/CAR/NTG Meeting (E/CAR/NTG/03)**.**

Appendix A to Agenda Item 2

CURRENT E/CAR AFS NETWORK FAILURE REPORTING PROCEDURE

1. Users can fax the fault report form to:
    - 868-669-1716
    - 868-669-5239

2. Users may email the fault report form (electronic format provided at the E/CAR/WG/32 Meeting) to:
    - ais@caa.gov.tt

(accessed 24/7 by the Piarco AIS Supervisor who will contact the TTCAA Technician/Engineer.)

and

- telecoms.ttcaa@gmail.com

(accessed by the Telecommunications and Electronics Technicians/Engineers during regular working hours – Mon thru Fri 8:00am to 4:15 pm, excluding weekends and public holidays.)

FAULT REPORT – AFS/AMS NETWORKS

EASTERN CARIBBEAN AND FRENCH ANTILLES

INITIATOR

STATE: **FAULT NUMBER: (designator/mm/###):**

SERVICE: **SPEECH** **DATA**

FAULT DISCOVERY (yy/mm/dd - UTC)

NAME OF FAULT INITIATOR:

FAULT: (Give details below of fault symptoms and service affected)

TTCAA NOTIFICATION (yy/mm/dd - UTC)

TTCAA

ACKNOWKLEDGEMENT OF REPORT (yy/mm/dd - UTC)

NAME/SIGNATURE:

RESOLUTION ACTION: (Give details of resolution below)

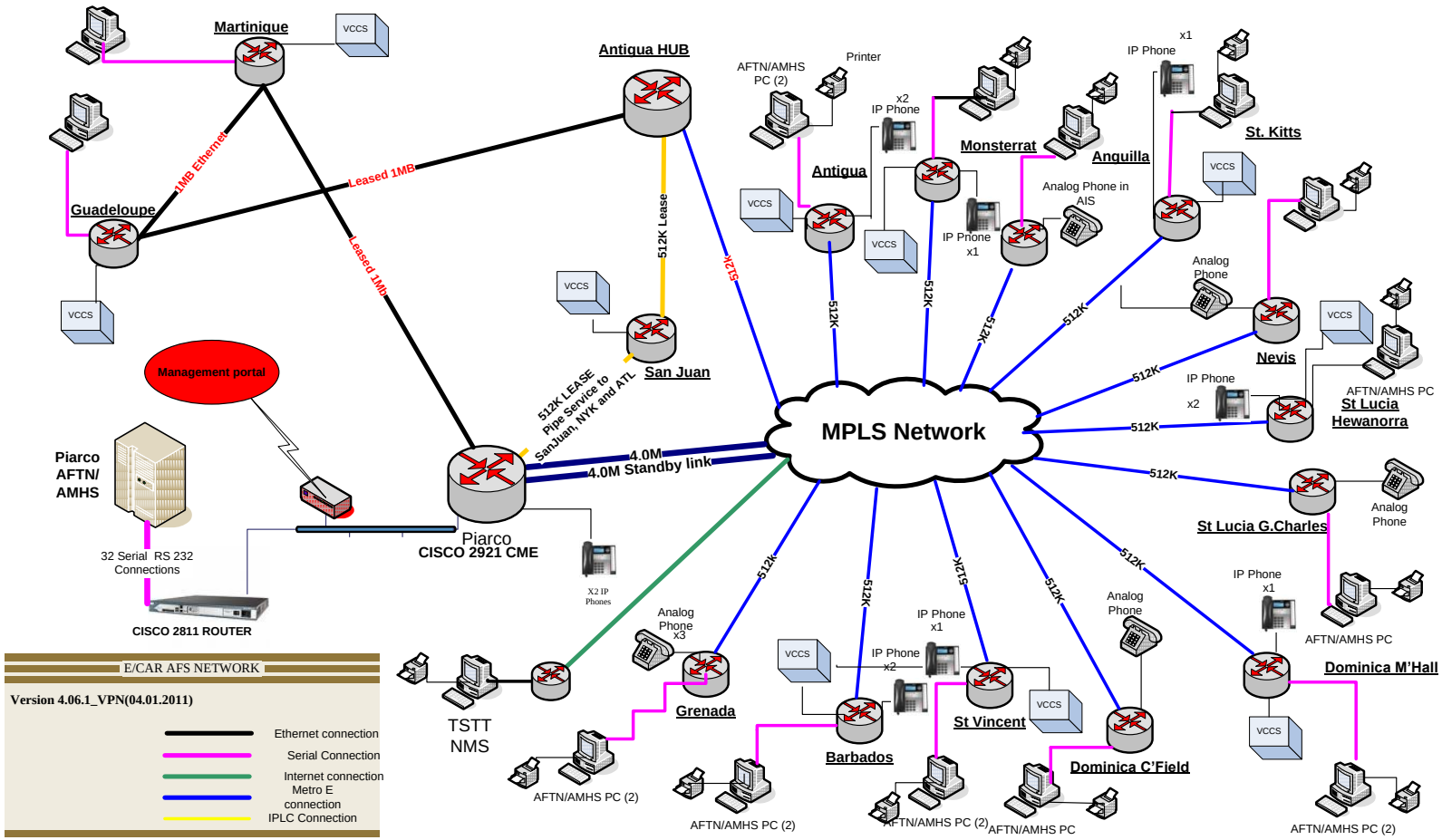
CIRCUIT RE-ESTABLISHED: (yy/mm/dd - UTC):

INITIATOR'S ACKNOWKLEDGEMENT OF CLOSED REPORT

NAME:

DATE/TIME: (yy/mm/dd – UTC):

E/CAR AFS ECAR NETWORK



Agenda Item 3: E/CAR AFS Network Replacement Activities

3.1 Under WP/19, ICAO informed the meeting on the reasons and initiative to develop a global CNS technology roadmap that will assist States and other stakeholders with their implementation decisions. This global roadmap applicable to international aviation as a whole, will inform all States of the prospective capabilities of aircraft and also the implementation programmes of progressive ATS providers and its benefits would include:

a) predictable implementation with early achievement of operational benefits and returns on investment and;
b) widespread deployment, which will ease transition issues.

3.2 An interactive means of presenting information that is applicable to all stakeholders, States or regions will be implemented with this CNS technology roadmap to have an online, interactive, graphics-based, information tool. The development of a CNS roadmap will require the cooperation of all stakeholders (including industry groups, airframe and avionics manufacturers).

3.3 With this roadmap, the different CAR/SAM implementation strategies (http://www.mexico.icao.int/CNS.html) will be reviewed and updated in accordance with the defined roadmaps. To do this, the meeting noted that the Global Air Navigation Industry Symposium (GANIS) is being convened by ICAO from 20 to 23 September 2011 in Montréal, alongside will be an industry exhibition/workshop of current and emerging technologies. Details on this event are given in ICAO State letter Ref.: AN 7/59-11/15 dated 25 March 2011

3.4 In this regard, the Meeting agreed to take this roadmap into consideration for the future network requirements in the improvements implementation of the E/CAR AFS Network.

a) Revision of Request for Information Document (RFI)

3.5 The meeting took note on the draft document for Request for Information (RFI) provided under WP/12, and following the agreement of a common RFI Common document to be issued and used by the E/CAR/NTG and MEVA TMG, the Meeting agreed to formulate the following decision:

Decision
E/CAR/NTG/2/10 Planning for the implementation of a Common Request for Information (RFI) document for the CAR Region telecommunication networks.

Considering the current modernization and improvement activities by the MEVA II Network and future improvement of the E/CAR AFS Network, the need to collect information on the current available technologies and the convenience/ optimization of resources for the implementation of a Common Request for Information (RFI) document for the CAR Region telecommunication networks as to achieve a common single region CAR Network, that the E/CAR/NTG Rapporteur

a) in coordination with the MEVA TMG Coordinator and the assistance of ICAO, drafts the planning and administrative structure needed to carry out the process of the RFI by the **30 of September 2011**;

b) send this draft to the E/CAR/NTG members for comments and observations, to receive these by **28 October 2011**; and
c) inform and coordinate with the E/CAR/NTG members the activities agreed for this RFI.

b) Action Plan for E/CAR AFS Network Replacement Process

3.6 The meeting discussed WP/13 and noted the following:

i) The 'immediate recovery' action as concluded in the E/CAR/DCA/22 referred to the Promina AFS network was completed;

ii) That the 'near term' solution refers to the MPLS network which is a new network. In fact, the Promina E/CAR AFS network has been replaced with the MPLS network at considerable cost. The MPLS network was not only designed for current user requirements but to meet future requirements by its scalability design;

iii) That the 'replacement' of the network needs to be revisited. The meeting agreed that the MPLS network be evaluated after its completion over a period of time. The meeting recommended the pursuance of the RFI not be limited to VSAT but should meet user requirements. In this regard the following draft conclusion was formulated:

DRAFT Conclusion
E/CAR/NTG/2/11 Revision of E/CAR Replacement Activities.

Considering the current performance and operation of the new ECAR AFS Network and the improvements achieved, the need to evaluate the MPLS network when fully implemented and the information from the RFI Process, that the E/CAR/NTG

a) continues the evaluation of the MPLS Network Performance and operation;
b) defines the need and activities for a network replacement based on the MPLS Network performance and the RFI Process information; and
c) inform by the next E/CAR/DCA/24 Meeting the progress and results on actions a) and b)

c) Draft of "Request for proposal" (RFP) document for the replacement of the Network

3.7 Based on the Draft Conclusion E/CAR/NTG/2/11, the Meeting agreed that the development of "Request for proposal" (RFP) document for the replacement of the Network was to be defined after the evaluation of the MPLS Network Performance and the RFI Process results.

Agenda Item 4: Revision of E/CAR NTG Terms of Reference, work programme and membership

4.1 Under WP/14, the meeting reviewed its current terms of reference, work programme and membership as follows:

a) update the work programme activities including the discussions, conclusions and agreements accomplished in the E/CAR/NTG 02 Meeting
b) Modify reporting scheme to include E/CAR/WG coordination

Regarding the membership, the Meeting agreed that ICAO requests Sint Maarten and UK on the updates to their E/CAR/NTG membership.

4.2 **Appendix** to this part of the report has the proposed update to the E/CAR/NTG terms of reference, work programme and membership. In this regard the Meeting formulated the following draft conclusion:

DRAFT Conclusion
E/CAR/NTG/2/12 Update to E/CAR/NTG Terms of Reference, work programme and membership.

In order to show the current valid works and activities of the E/CAR/NTG, the terms of reference, work programme and membership were reviewed and updated as shown in **Appendix** A to this report and so are submitted for the E/CAR Directors approval

EASTERN CARIBBEAN NETWORK TECHNICAL GROUP (E/CAR/NTG)
TERMS OF REFERENCE

1. Background

The Eastern Caribbean Network Technical Group (E/CAR/NTG) was established as a standing group in accordance with E/CAR/WG/31 Meeting, Conclusion 31/7, approved by the E/CAR/DCA/22 Meeting (Port of Spain, Trinidad and Tobago, 8-11 December 2009). The terms of reference of the E/CAR/NTG were approved by the E/CAR/DCA/22 Meeting, Decision 22/6, to accomplish the following main objectives:

a) analysis and monitoring of the status of the current E/CAR AFS Network;
b) recommend measures to improve reliability of the E/CAR AFS Network for the immediate/near term; and
c) study, analyze and follow-up on the planning, documentation and implementation of the replacement of the existing E/CAR AFS Network.

2. Terms of Reference

For the activities related to the analysis and monitoring of the status of the current E/CAR AFS Network, the E/CAR/NTG is required to make recommendations on measures to improve the reliability of the E/CAR AFS Network for the immediate/ near term. These activities include:

a) follow-up on the immediate agreed activities for the recovery of the existing E/CAR AFS Network as well as the near term solution activities for its timely implementation;
b) review the current status of the Network (maintenance and reporting procedures, technical personnel involved, spare parts, tools for monitoring the Network status, identify common network points of failure, etc.) and submit recommendations;
c) ensure compliance of the Network services with ICAO SARPs and user expectations;
d) assist the TTCAA and the E/CAR States with technical coordination and solutions of problems that occurred with the implementation and operation of the AFS including the E/CAR AFS Network and to consider and make recommendations on measures to improve implementation and operation; and
e) study and propose to the E/CAR/DCA intra and inter-regional coordination for the E/CAR AFS Network connectivity with other regional and domestic digital communications networks of the CAR and SAM Regions.

For the activities related to the replacement of the existing E/CAR AFS Network:

a) study and assist the E/CAR States with technical measures to facilitate the transition of the current E/CAR AFS terrestrial network towards the ATN infrastructure and its air-ground and ground-ground sub-networks of air navigation services according to GREPECAS Conclusions and Recommendations and ICAO SARPs and technical guidance;
b) assist the TTCAA in the preparation of ~~the RFP and related~~ technical documentation for the replacement/improvement process of the E/CAR AFS Network including considerations for contingency planning;
c) provide technical assistance and follow-up to the replacement/improvement process of the E/CAR AFS Network during its preparation, implementation and operation; and
d) provide advice on schedule activities for the network replacement/improvements process.

3. Work Programme

See attached project file.

4. Working Methods

a) E/CAR/NTG work programme should present their activities in terms of objectives, responsibilities, deliverables and timelines;
b) E/CAR/NTG will avoid duplication of work within the E/CAR/WG and maintain close coordination among the existing entities to optimize the use of available resources and experience;
c) E/CAR/NTG may designate, as necessary, ad-hoc groups to work on specific topics and activities; all tasks and activities should be clearly defined by time and deliverables;
d) E/CAR/NTG should co-ordinate and advance its works as follows to maximize efficiency and reduce costs:
   - conduct work via electronic written correspondence
   - conduct work via phone and teleconference calls
   - hold meetings when necessary
e) E/CAR/NTG will report and coordinate the progress of assigned tasks to the E/CAR/WG~~DCA~~ and provide a ~~quarterly~~ progress report to E/CAR Directors.

5. Membership

~~Barbados - to be determined~~
~~Jean-Jacques Deschamps, France~~
~~Netherlands Antilles - to be determined~~
~~Veronica Ramdath, Trinidad and Tobago~~
~~James Prideaux and Steven Riley, United Kingdom~~
~~Dulce Roses, United States~~
~~Rudyard Ashe, OECS States.~~
See attached Membership List

6. Rapporteur

Ms. Veronica Ramdath (Trinidad and Tobago)

STATE/TERRITORY MEMBERS OF THE E/CAR NETWORK TECHNICAL GROUP (E/CAR/NTG)

BARBADOS

Richard Odle, Electronics Manager, Engineering Department
Grantley Adams International Airport Inc.
E-mail: rodle@gaiainc.bb
Tel: + 1 246 428 0917
Fax: + 1 246 428 0925
Cell: + 1 246 233 5107

FRANCE

Jean-Jacques Deschamps, Head of Technical Division
DGAC
Aeroport Martinique SNA – AG
97232 Le Lamentin, Martinique
Antilles-Guyane
Tel +596 596 42 25 07
Fax +596 596 42 27 22
E-mail jean-jacques.deschamps@aviation-civile.gouv.fr

SINT MAARTEN

Jan Brown, Director ATS
Princess Juliana International Airport
Sint Maarten
E-mail: jbrown@pjiae.com
Tel: +1 599 546 7530
Fax: +1 599 546 7550
Mobile: +1 599 520 7139

TRINIDAD AND TOBAGO

Veronica Ramdath, Manager Telecommunications and Electronic Department TTCAA
E-mail: vramdath@caa.gov.tt

UNITED KINGDOM

James Prideaux, Assistant Manager Caribbean Air Safety Support International
E-mail: james.prideaux@caribairsafety.aero

Steven Riley, Senior Air Traffic Controller ag
John A Osborne Airport
Montserrat
E-mail: ryans@gov.ms

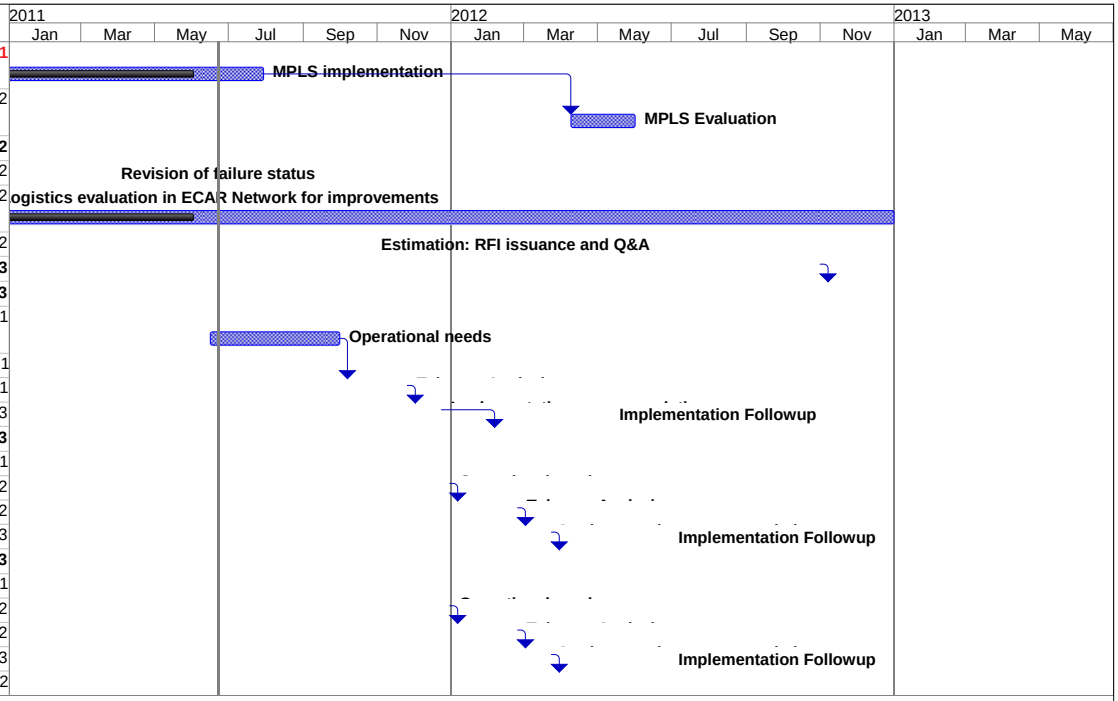
UNITED STATES

Dulce Maria Roses, Program Manager, International Telecommunications Caribbean and South America
E-mail: dulce.roses@faa.gov

ECCAA

Rudyard Ashe, Manager CNS Unit
E-mail: rashe@eccaa.aero

ID	Task Name	Start	Finish
1	Coordination and assistance to implement near term solution (MPLS)	Mon 01/02/10	Fri 29/07/11
2	MPLS Network Evaluation on its performance and operation	Mon 09/04/12	Thu 31/05/12
3	**Revision of Current Status of Network**	**Mon 14/12/09**	**Mon 31/12/12**
4	Revision of Failure Status	Mon 14/12/09	Fri 28/12/12
5	Spare parts, 1st level Maintenance personnel, documentation, skills and other logistics	Mon 14/12/09	Mon 31/12/12
6	RFI Process	Thu 16/06/11	Wed 31/10/12
7	**Replacement of Network (TBD)**	**Thu 01/11/12**	**Wed 09/10/13**
17	**Centralized FDP Data System**	**Thu 16/06/11**	**Fri 08/02/13**
18	Centralized FDP Data System operational definition	Thu 16/06/11	Fri 30/09/11
19	analisis of telecom requirements	Mon 03/10/11	Fri 25/11/11
20	Implementation recommendations	Mon 28/11/11	Fri 23/12/11
21	Follow up to Implementation status	Mon 06/02/12	Fri 08/02/13
22	**ADS-B TRIALS Activities**	**Thu 16/06/11**	**Fri 29/03/13**
23	ADS-B TRIALS definition	Thu 16/06/11	Fri 30/12/11
24	analisis of telecom requirements	Mon 02/01/12	Fri 24/02/12
25	Implementation recommendations	Mon 27/02/12	Fri 23/03/12
26	Follow up to Implementation status	Mon 26/03/12	Fri 29/03/13
27	**Radar Data Server implementation**	**Thu 16/06/11**	**Fri 29/03/13**
28	Revision of Radar needs and circuits	Thu 16/06/11	Fri 30/12/11
29	analisis of telecom requirements	Mon 02/01/12	Fri 24/02/12
30	Implementation recommendations	Mon 27/02/12	Fri 23/03/12
31	Follow up to Implementation status	Mon 26/03/12	Fri 29/03/13
32	AIS Contingency Plan implementation	Thu 16/06/11	Fri 23/11/12



Project: E CAR NTG Work Programme
Date: Thu 23/06/11

Task	External Tasks	Inactive Summary	Start-only		
Split	External Milestone	Manual Task	Finish-only		
Milestone	Inactive Task	Duration-only	Progress		
Summary	Inactive Task	Manual Summary Rollup	Deadline		
Project Summary	Inactive Milestone	Manual Summary			

Agenda Item 5: Other Business

a) Actions for NACC/DCA/4 Meeting

5.1 Under WP/17, the Meeting was recalled its contribution to the work programme of the E/CAR/WG related to the E/CAR AFS Network issues. The E/CAR/NTG contribution is presented in Appendix A to WP/17 of this meeting and was included in the action plans of the E/CAR/WG CNS Committee (http://www.mexico.icao.int/ECARWG.html#ActionPlan). The Meeting revised this contribution due to the updated version of the NAM/CAR Regional Performance-based Air Navigation implemention Plan (Version 2.00) resulted from the NACC/WG/03 Meeting. **Appendix A** to this report presents this update.

5.2 Likewise, the Meeting was informed that during GREPECAS/16 Meeting several improvements in the GREPECAS mechanism, applying project management concepts to existing tasks and works in each subsidiary body of GREPECAS and the creation of project to handle the activities of GREPECAS. It was clarified that these projects are referred to its generic definition and that they are not limited to the ICAO Technical Cooperation projects. In this regard, GREPECAS has requested States/Territories and international organizations to support the work of the projects assigning experts to work and achieve the expected deliverables from each Project.

b) E/CAR AFS Network Website

5.1 Under WP/15, the Meeting was informed that Trinidad and Tobago is in the process of implementing a web-based fault reporting and resolution application which would allow users of the Eastern Caribbean AFS network to log E/CAR faults and receive timely resolution information.

5.2 Users will be assigned a password which will allow access to enter a fault and view subsequent feedback information on resolution for their State/Territory. Passwords will be assigned to the following departments per State: ATC, AIS, Engineering/NOC and Administration. All users will have the ability to log into the database to view statistics and reports for all States/Territories. Reports and Statistics may be generated per State, per period, per type of failure, etc.

5.3 A user will log into the TTCAA website, access the “Fault Reporting and Resolution” tab. The main page will show the fault report form. The application will be set to email the maintenance department thus alerting that a fault has been logged. If a fault is called in via telephone or faxed to the Piarco AIS, the AIS will log the information like any other user of the application.

5.4 The assigned maintenance personnel will acknowledge receiving the report on the fault report form and then contact TSTT (either phone or email) and report the fault and obtain the TSTT Incident Number. TSTT NOC then broadcasts an email (to a list supplied by TTCAA) acknowledging the fault report. The application can be set up to email users the information on acknowledgement and resolution action planned. When TSTT advises of resolution, Maintenance personnel will contact the user by telephone to verify the operability of the service that was affected. When operability is confirmed maintenance personnel will post another update on the application and close the fault report.

5.5 Statistics and reports will be automatically generated by the application and is accessible to the users.

5.6 Trinidad and Tobago advised that the installation and configuration/customization of the software which started the week of 9th May 2011 is expected to be completed by June 24th, 2011. Training on the use of the application will be carried out over the telephone: TTCAA will talk through the process of logging in and using the website with each user State/International Organisation. That individual will then pass the information along to other individuals who may use the application. Documentation on the procedure will also be provided in advance to each State.

5.7 A demonstration of this application was given to the Meeting by the TTCAA Provider. **Appendix B** shows the presentation and information on this application.

5.8 The Meeting congratulated TTCAA for the application and discuss on the trial planning and date to be available to users. In this regard the Meeting agreed to formulate the following decision:

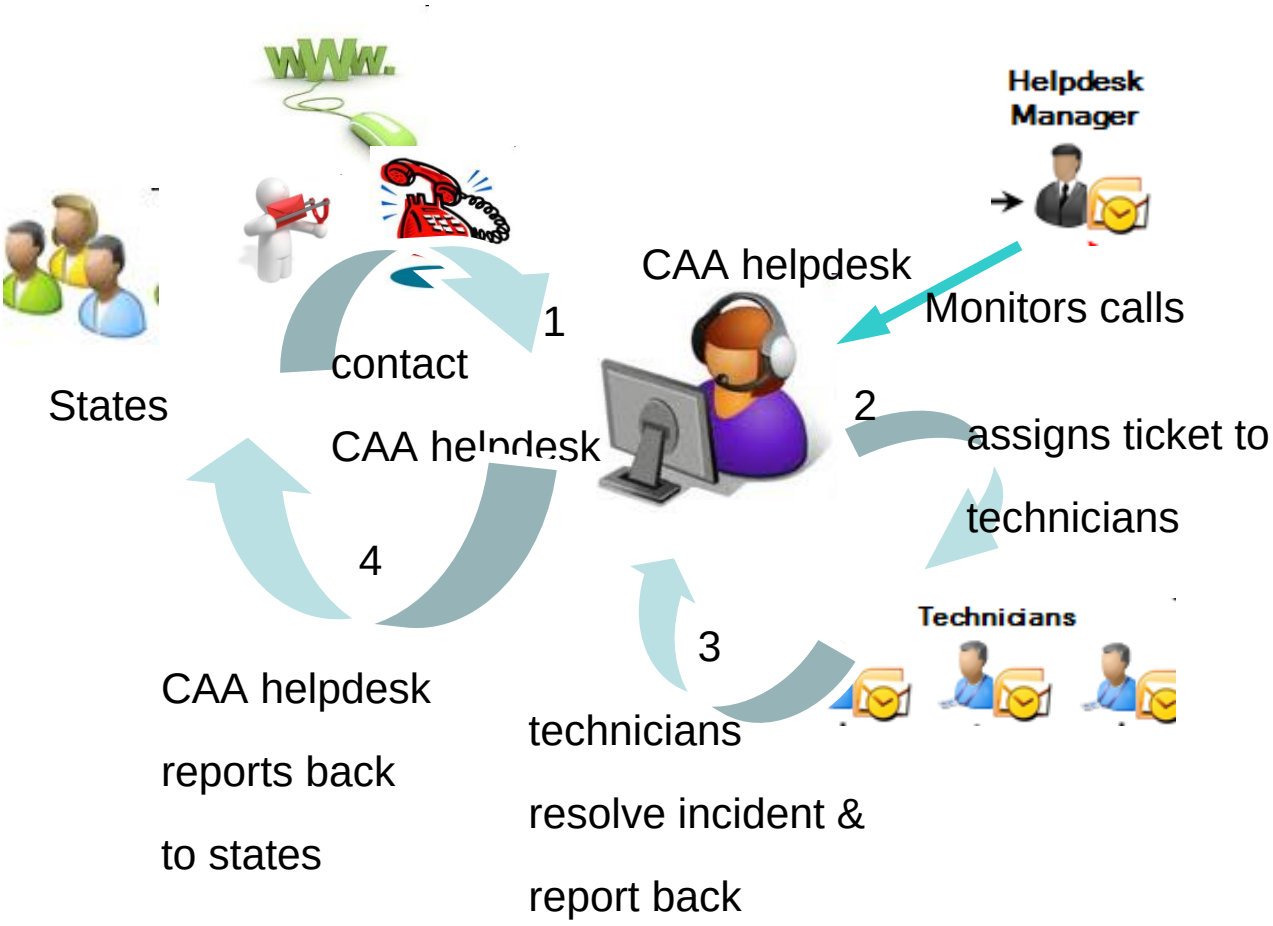
Decision
E/CAR/NTG/2/13 planning for E/CAR AFS Network Website implementation.

In order to coordinate and support the customization of the new E/CAR AFS Network Website, that TCCAA informs on the planning of its implementation to States by **30 August 2011**.

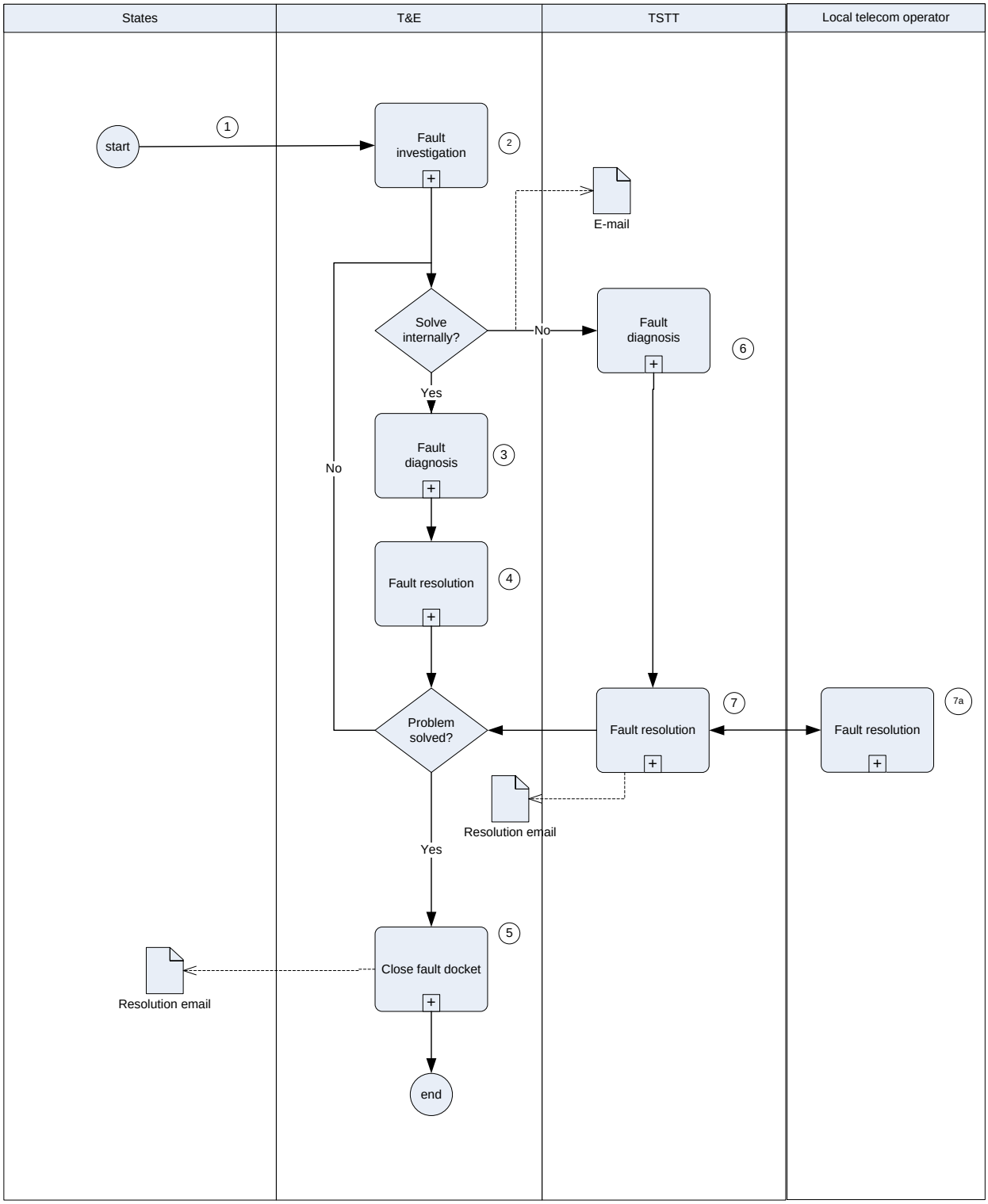
FOLLOW-UP AND IMPLEMENTATION ACTION PLAN
AIR-GROUND AND GROUND-GROUND COMMUNICATIONS
PERIOD: 2009-2014

No.	Performance Objective Task	Action Description	Responsible	Begin date	End date	Deliverables	Observations	REMARKs	Status
1	2	3	4	5	6	7	8	9	10
1	9 a), 9 b)	Improve AFTN communications and ATS direct communications and mitigate deficiencies	States/ Territories coordinated by WG	Oct 2009	Dec 2011	• Deficiencies Identification and • Corresponding corrective action plan	References to CNS tables 1A and 1C	AFTN Communication Antigua and Barbados	Valid
2	9 a), 9 b)	Replace E/CAR Telecommunication network by ECAR VSAT network	E/CAR NTG	Oct 2009	TBD	E/CAR VSAT Telecommunication Network		Postponed until RFI Process results and MPLS evaluation	Valid
3	9 c)	Update the ATN Routers Regional Plan	GREPECAS D2 Project	June2009.	June 2012	CNS Table 1Ba Updated proposal	References to CNS table 1Ba	E/CAR/NTG will analyze communication capabilities and technical aspects on ATN architecture proposal	Valid
4	9 d)	i. Perform AMHS operation trials	USA, Trinidad & Tobago,	Oct 2009	1st quarter 2012	Trial results		E/CAR Network to support AMHS application	Valid
5	9 e), 4c)	ii. Evaluation of regional networks to support ATN Applications	States/ Territories coordinated by WG	Oct 2009	4th quarter 2012	Trial results		E/CAR Network to support ATN applications	Valid

CAA Helpdesk process flow (1)

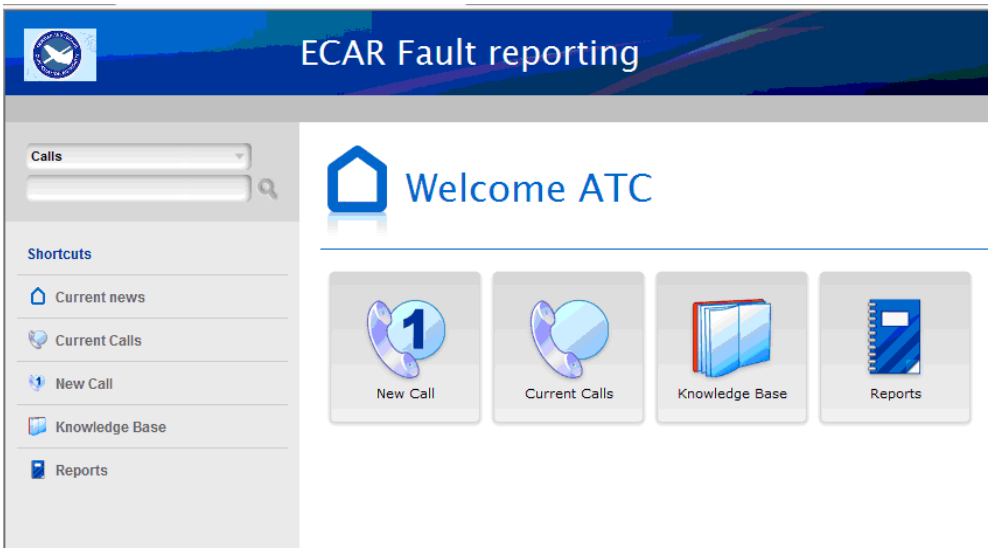


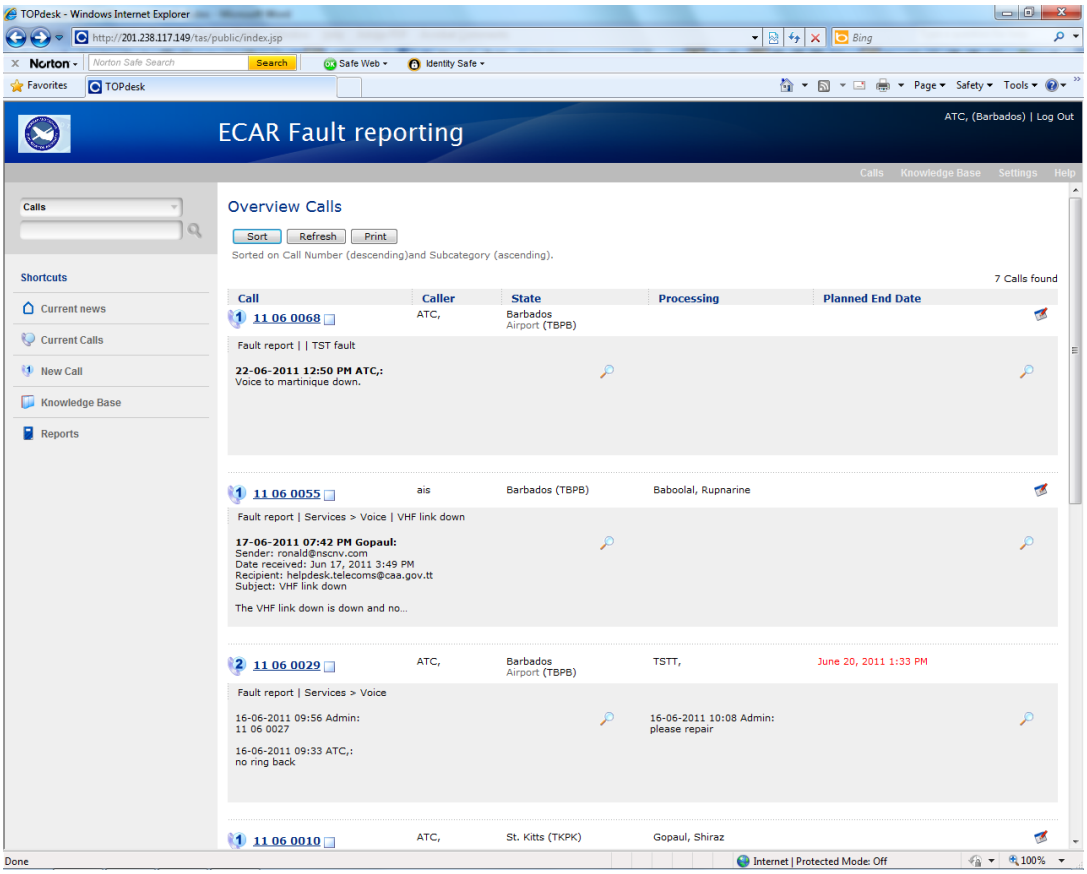
ECAR fault report and resolution process activities



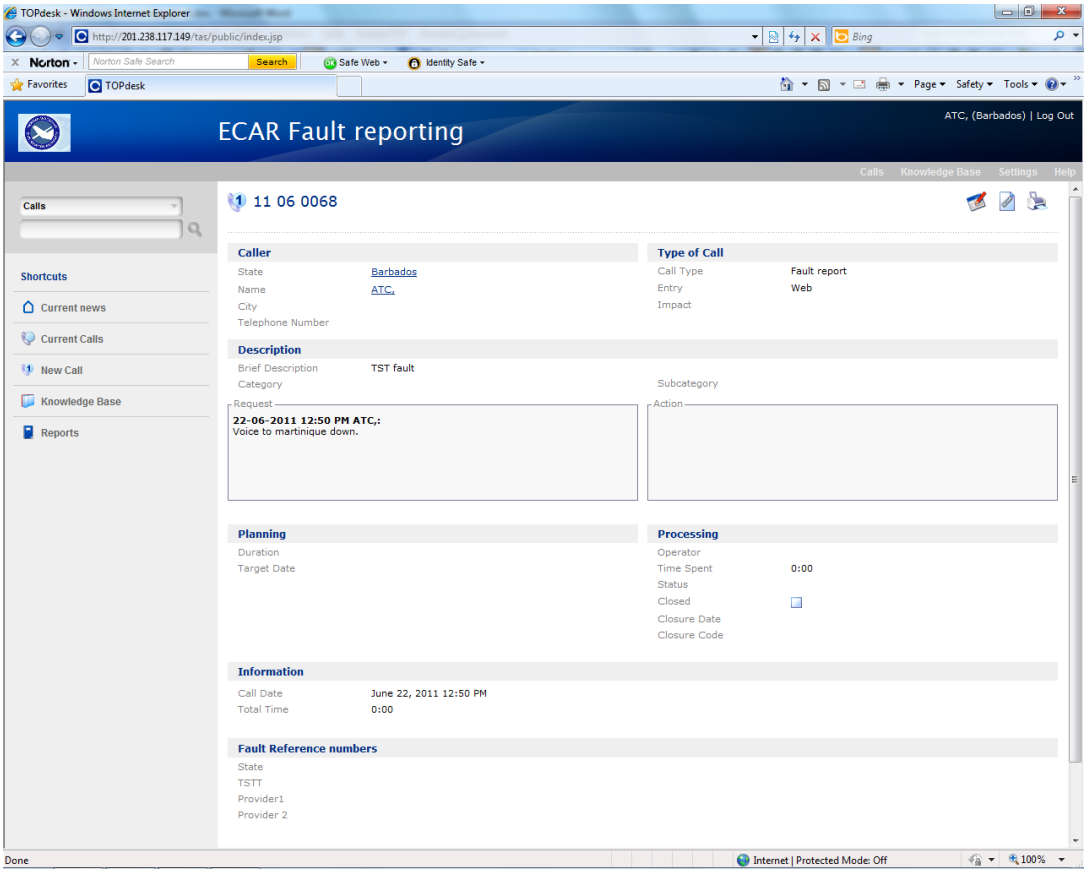
Process name: Faultreporting Process owner: TTCAA T&E Version: 2

Webportal view

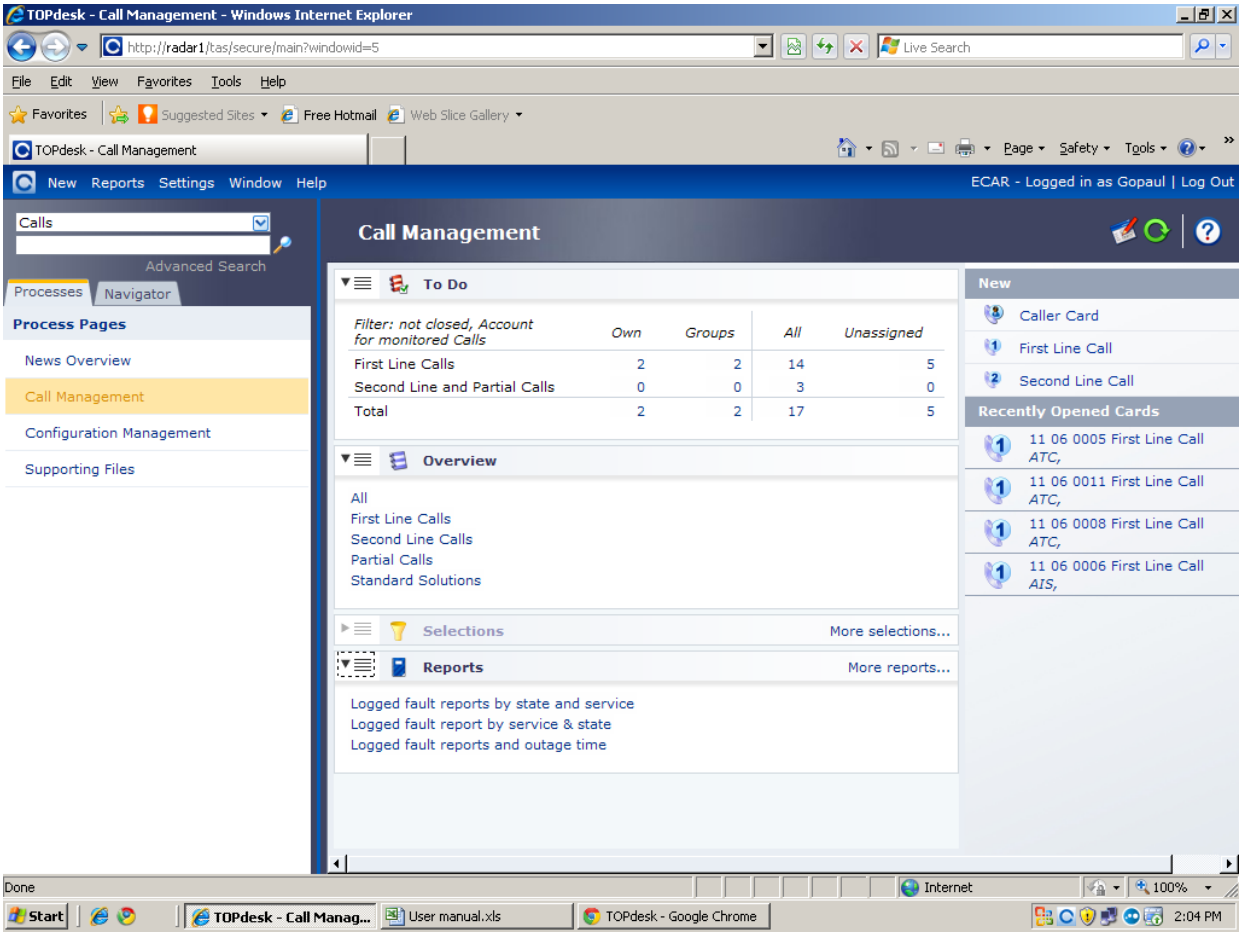


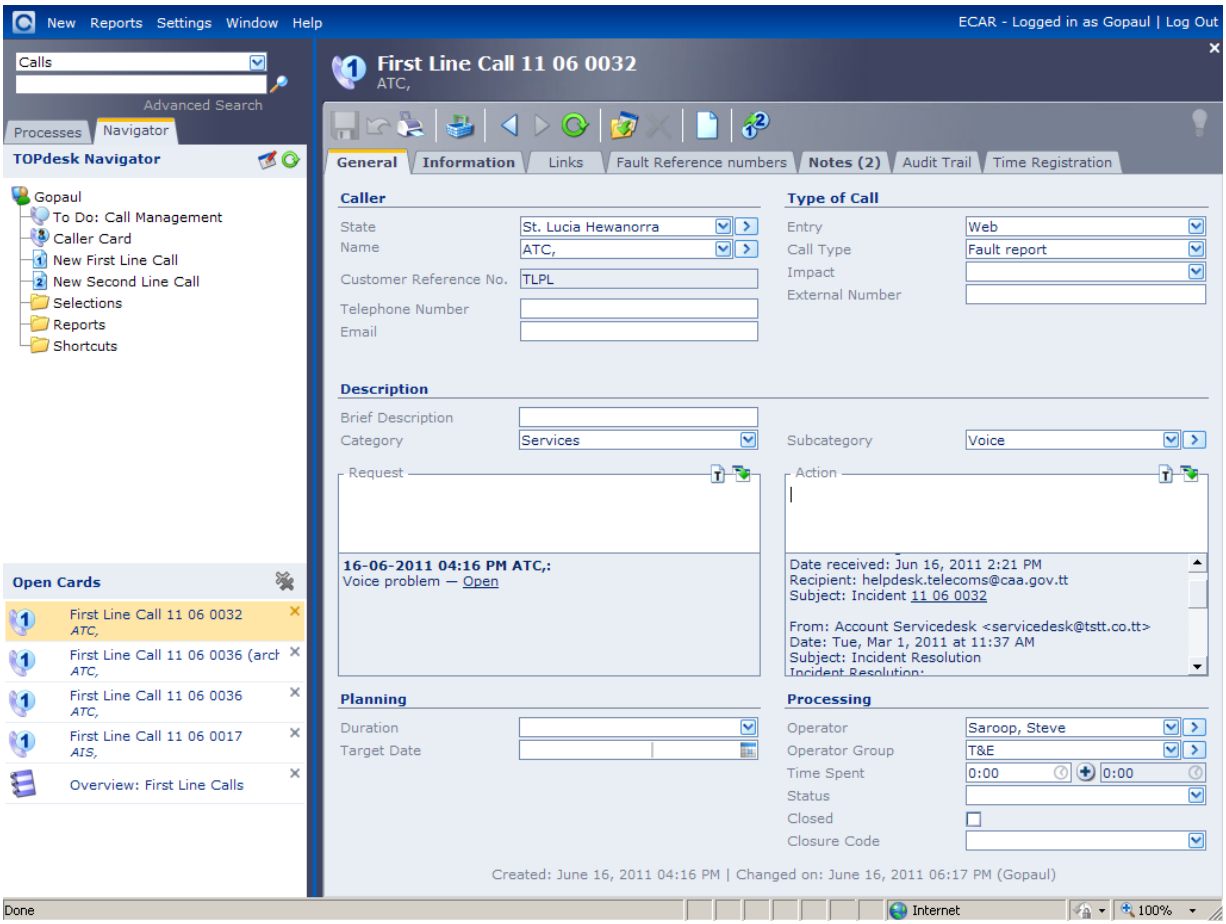


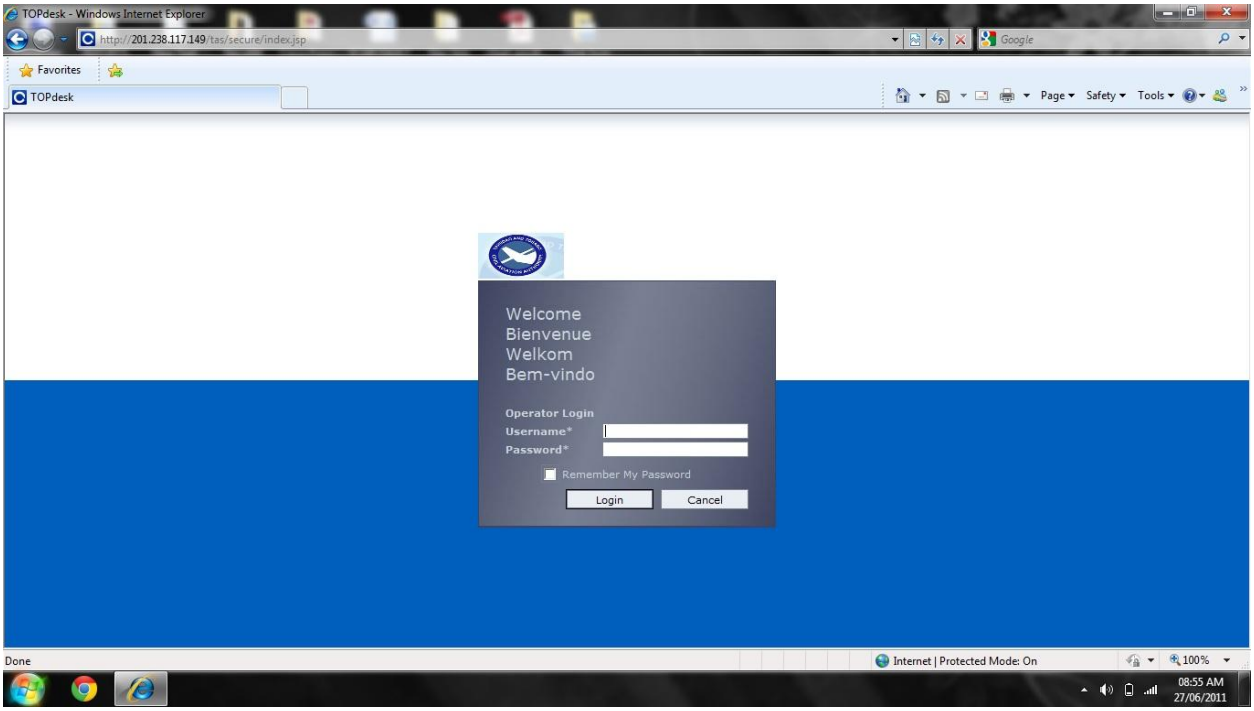
In the Action and Status fields, you can find information about what has happened with your report.

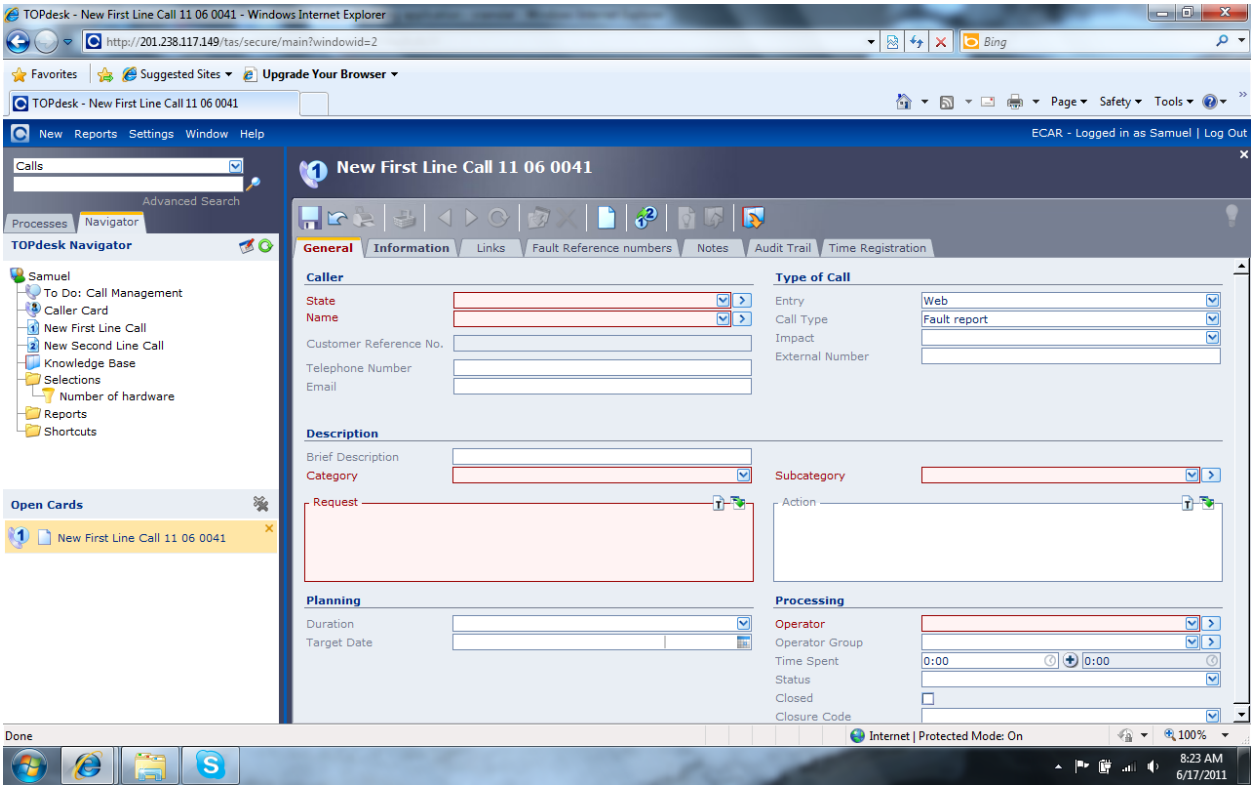


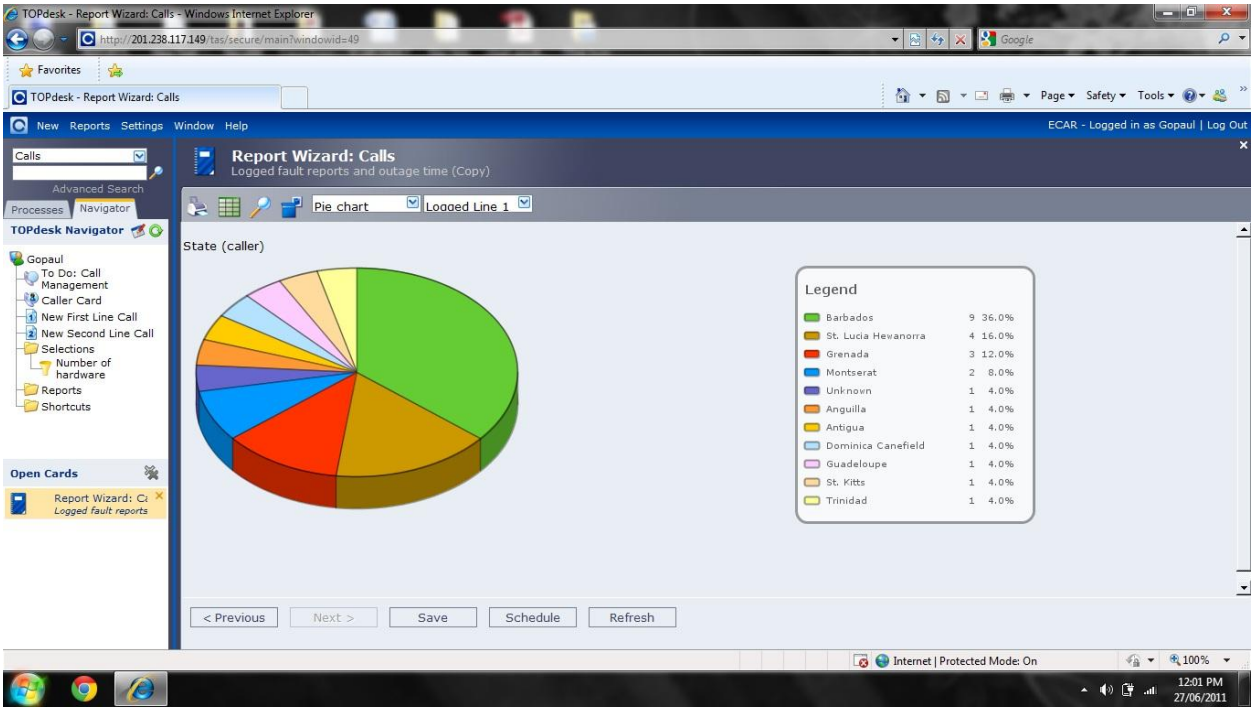
Operators view




New Reports Settings Window Help
ECAR - Logged in as Gopaul | Log Out
Calls
Advanced Search
Processes Navigator
TOPdesk Navigator
Gopaul
To Do: Call Management
Caller Card
New First Line Call
New Second Line Call
Selections
Reports
Shortcuts
Open Cards
First Line Call 11 06 0032
ATC,
First Line Call 11 06 0036 (arch
ATC,
First Line Call 11 06 0036
ATC,
First Line Call 11 06 0017
AIS,
Overview: First Line Calls
First Line Call 11 06 0032
ATC,
General Information Links Fault Reference numbers Notes (2) Audit Trail Time Registration
Caller
State St. Lucia Hewanorra
Name ATC,
Customer Reference No. TLPL
Telephone Number
Email
Type of Call
Entry Web
Call Type Fault report
Impact
External Number
Description
Brief Description
Category Services
Subcategory Voice
Request
16-06-2011 04:16 PM ATC,:
Voice problem — Open
Action
Date received: Jun 16, 2011 2:21 PM
Recipient: helpdesk.telecoms@caa.gov.tt
Subject: Incident 11 06 0032
From: Account Servicedesk <servicedesk@tstt.co.tt>
Date: Tue, Mar 1, 2011 at 11:37 AM
Subject: Incident Resolution
Planning
Duration
Target Date
Processing
Operator Saroop, Steve
Operator Group T&E
Time Spent 0:00 0:00
Status
Closed
Closure Code
Created: June 16, 2011 04:16 PM | Changed on: June 16, 2011 06:17 PM (Gopaul)
Done
Internet
100%


TOPdesk - Windows Internet Explorer
http://201.238.117.149/tas/secure/index.jsp
Google
Favorites
TOPdesk
Page
Safety
Tools
Welcome
Bienvenue
Welkom
Bem-vindo
Operator Login
Username*
Password*
Remember My Password
Login
Cancel
Done
Internet | Protected Mode: On
100%
08:55 AM
27/06/2011


TOPdesk - New First Line Call 11 06 0041 - Windows Internet Explorer
http://201.238.117.149/tas/secure/main?windowid=2
Favorites
Suggested Sites
Upgrade Your Browser
TOPdesk - New First Line Call 11 06 0041
New Reports Settings Window Help
ECAR - Logged in as Samuel | Log Out
Calls
Advanced Search
Processes
Navigator
TOPdesk Navigator
Samuel
To Do: Call Management
Caller Card
New First Line Call
New Second Line Call
Knowledge Base
Selections
Number of hardware
Reports
Shortcuts
Open Cards
New First Line Call 11 06 0041
New First Line Call 11 06 0041
General
Information
Links
Fault Reference numbers
Notes
Audit Trail
Time Registration
Caller
State
Name
Customer Reference No.
Telephone Number
Email
Type of Call
Entry
Web
Call Type
Fault report
Impact
External Number
Description
Brief Description
Category
Subcategory
Request
Action
Planning
Duration
Target Date
Processing
Operator
Operator Group
Time Spent
0:00
0:00
Status
Closed
Closure Code
Done
Internet | Protected Mode: On
100%
8:23 AM
6/17/2011


TOPdesk - Report Wizard: Calls - Windows Internet Explorer
http://201.238.117.149/tas/secure/main?windowid=49
Favorites
TOPdesk - Report Wizard: Calls
New Reports Settings Window Help
ECAR - Logged in as Gopaul | Log Out
Calls
Advanced Search
Processes Navigator
TOPdesk Navigator
Gopaul
To Do: Call Management
Caller Card
New First Line Call
New Second Line Call
Selections
Number of hardware
Reports
Shortcuts
Open Cards
Report Wizard: Ca
Logged fault reports
Report Wizard: Calls
Logged fault reports and outage time (Copy)
Pie chart
Logged Line 1
State (caller)
Legend
Barbados 9 36.0%
St. Lucia Hewanorra 4 16.0%
Grenada 3 12.0%
Montserat 2 8.0%
Unknown 1 4.0%
Anguilla 1 4.0%
Antigua 1 4.0%
Dominica Canefield 1 4.0%
Guadeloupe 1 4.0%
St. Kitts 1 4.0%
Trinidad 1 4.0%
< Previous
Next >
Save
Schedule
Refresh
Internet | Protected Mode: On
100%
12:01 PM
27/06/2011