International Civil Aviation Organization
North American, Central American and Caribbean Office
Eighth Meeting of Directors of Civil Aviation of the Central Caribbean (C/CAR/DCA/8)
Curaçao, Netherlands Antilles, 15 to 18 May 2006

Agenda Item 2: Air navigation issues
2.1 Review of the Summary of Discussions of the Sixth C/CAR Working Group Meeting

EXECUTIVE SUMMARY OF THE SIXTH MEETING OF THE C/CAR WORKING GROUP

(Presented by the Chairman of the C/CAR Working Group and by the Secretariat)

SUMMARY

This working paper presents a summary on the discussions held and the Draft Conclusions formulated by the Sixth Meeting of the C/CAR WG.

References:

- Report of the Sixth Meeting of Directors of Civil Aviation of the Central Caribbean (C/CAR DCA/7) (San Juan, Puerto Rico, 30 June to 01 July 2004)
- Report of the Sixth Central Caribbean Working Group Meeting (C/CAR WG/6) (Havana, Cuba, 20 to 24 February 2006).

1. Introduction

1.1 The Sixth Central Caribbean Working Group Meeting (C/CAR WG/6) was held in Havana, Cuba, from 20 to 24 February 2006, with the participation of delegates of 7 States/Territories of the CAR Region and two International Organizations. As a result of the C/CAR WG/6 Meeting, the group adopted the Summary of Discussions containing the most relevant matters dealt, as well as the Draft Conclusions presented in the **Appendix** to this Working Paper, for approval and/or consideration by the Civil Aviation Authorities of the C/CAR States/Territories. The priority level of the Draft Conclusions is also included, in accordance with Conclusion 7/1 contained in Appendix A to WP/02. For information purposes, the adopted Decisions of the C/CAR WG/6 are also included in the Appendix.

2. General Air Navigation matters

Review of the outstanding conclusions/decisions of the Group

2.1 El C/CAR WG reviewed the status of the conclusions of previous meetings, which had been reviewed and approved by the Seventh Meeting of Directors of Civil Aviation of the Central Caribbean.

2.2. When the Group updated the status of implementation of the conclusions, it noted the initiative that States present a report informing on the progress achieved when implementing the conclusions of previous meetings. Cuba and Haiti presented the corresponding Working Papers.

Air navigation Deficiencies in the Central Caribbean

2.3 The Group reviewed the current version of the ICAO database of the reporting forms of air navigation deficiencies in the Central Caribbean area, and noted the importance of reviewing and updating the list of deficiencies, as well as of developing an Action plan for their solution, informing the results to the ICAO NACC Regional Office, as specified in the conclusions of the GREPECAS/13 Meeting, (Santiago, Chile, November 2005) and the NACC/DCA/2 Meeting (Tegucigalpa, Honduras, October 2005).

2.4 Note was taken on Cuba's Action Plans for the solution of air navigation deficiencies in the AGA, MET and AIS fields. The Meeting recognised that the potential of the GREPECAS Air Navigation Deficiencies Database (GANDD) has not been fully taken advantage of, which is available on-line in the ICAO NACC Office website, and that the States and Territories of the C/CAR should carry out all the possible efforts in order to eliminate the urgent deficiencies within the next two years, in view that later, the GREPECAS/15 Meeting will review the status of their solution with a view to considering the application of the last resource action (Conclusion 13/92), after exhausting all the alternatives, where applicable.

3. Air navigation activities and specific developments

3.1 *AIS/MAP*

3.1.1 In accordance with the instructions of Civil Aviation Authorities in their last Meeting, the C/CAR AIS/MAP Task Force was reactivated. This Task Force worked as an Ad hoc Group during the deliberations of the Working Group, which examined seven tasks assigned by the Meeting, which developed a form that will serve to foster the future work programme of the AIS/MAP Task Force. The tasks reviewed were the total implementation of WGS-84 in the bordering points of the adjacent FIRs, the human factors, requirements and implementation of an AIS/MAP quality assurance system, and the implementation of an AIS automation plan.

AIS Automation Project

3.1.2 In accordance with Conclusion 2/2 of the Second NACC/DCA Meeting, the Group recognised the efforts carried out by the ICAO NACC Office to present to the ICAO Council a proposal for a regional technical co-operation project to assist solving the deficiencies related with the implementation of the AIS-related electronic elements, as a step towards the total AIS automation.

Finalization of the harmonization process of the WGS-84 coordinates

3.1.3 The Working Group reviewed the discrepancies of the WGS-84 coordinates in the bordering points of the adjacent FIRs and recognised that progress has been achieved, nevertheless, the States/Territories should make more efforts for the total implementation and harmonization of the WGS-84 coordinates, and in that regard, it formulated **Draft Conclusion 6/1.**

3.2 ***Air traffic management***

ATS routes

3.2.1 The Group reviewed the status of the different routes that have been approved by GREPECAS for Phase II-b and agreed the implementation of those routes in June 2006 with the quality requirements defined in Annex 11. It was decided that some proposed new routes be further analysed before taking a decision thereupon.

Implementation of Performance-based navigation

3.2.2 In accordance with the NACC/DCA/2 Conclusion 2/14 and the guidelines of GREPECAS, the Group recognised the need for adjusting its work programme to include the implementation of GNSS Routes according to scheduled dates for the publication of the new ICAO guidance material for RNAV and RNP.

Safety management

3.2.3 The group recognised that ATS Quality assurance Programmes have been of great help to reduce ATS incidents, nevertheless, due to the increase of traffic, it was also recognised that more efforts should be made so that these programmes evolve towards an ATM safety management system. Taking into consideration the implementation of RVSM in the CAR/SAM Regions in Juanuary 2005, the Group noted that most of the reported LHDs are due to human factor errors and therefore the States and Territories of the C/CAR should take urgent actions to mitigate the error in ATC loops. For these reasons the Group formulated **Draft Conclusion 6/2**.

ATM Contingency plans

3.2.4 The Group recognised that little progress had been achieved on the finalization of the ATM Contingency plans and identified that this non compliance implied a deficiency to the requirement stated in Annex 11. In this regard, it recommended that the States and Territories of the C/CAR that had not finalized their respective contingency plans take the necessary actions to comply with GREPECAS Conclusion 13/68 concerning the finalization of the Contingency plans by 30 June 2006, and other regional contingency measures including humanitarian support for the continuity of operations of the international civil aviation disrupted by human factors events or natural disasters.

Implementation of Air Traffic Flow Management (ATFM) in the C/CAR

3.2.5 The Group recalled that traffic growth has been constant and it is foreseen that the problem will keep on growing among traffic flows in the NAM Region to/from the Caribbean and of the Caribbean to/from Europe. It was recalled that in accordance with the conclusions of the NACC/DCA/2 and GREPECAS/13 meetings, the CAR Region is characterized as an homogeneous ATM area with similar operational features and needs, and therefore it is necessary to take measures for a better efficiency in air operations management. In this regard, the Working Group agreed **Draft Conclusions 6/3, 6/4 and 6/5.**

3.3 Communications, Navigation and Surveillance (CNS)

3.3.1 The Meeting examined the protection of the radiofrequencies spectrum and reiterated the importance that the States, Territories and International Organizations should coordinate the assignments of aeronautical frequencies through the ICAO NACC Regional Office.

Developments and interconnectivity of the regional/subregional digital networks

3.3.2 The C/CAR WG reviewed the status of implementation of the MEVA II network, and urged the States/Territories that had not done so to finalize the contracts as soon as possible to proceed to the implementation of this network. Additionally, note was taken that the ICAO NACC and SAM regional offices had convened a Coordination Meeting with the aim of achieving an agreement for the interconnectivity/interoperation of the MEVA II–REDDIG networks.

3.3.3 Taking into account the status of the transition process towards MEVA II and the activities oriented by GREPECAS for the interconnectivity/interoperability of the MEVA II – REDDIG networks, the Meeting formulated **Draft Conclusion 6/6.**

Implementation of the ground portion of the ATN

3.3.4 The Meeting developed a preliminary implementation plan of ATN ground-ground applications, as well as other related with the development of air-ground communications; considering also the implementation of AMHS connections. Based on the above, the C/CAR WG formulated **Draft Conclusion 6/8.**

Review of the status of implementation of the VHF and HF voice communications of the aeronautical mobile service

3.3.5 The Meeting examined the implementation plan of the VHF and HF voice communications of the aeronautical mobile service and, based on the work done, it thanked the VHF/AMS Coverage Task Force and then disbanded it.

Implementation of air-ground links

3.3.6 The Group recalled its Conclusion 5/12, urging the States, Territories and International Organizations to participate in this programme for the implementation of the VHF, HF and satellite data links in the CAR Region. It also recalled GREPECAS guidelines for the updating and implementation of the plan of air-ground data links and the updating to the corresponding parts of the contents in Table CNS 2A of the CAR/SAM ANP FASID. The Meeting reviewed the parts corresponding to the air-ground data link communications systems of Table CNS 2A of the FASID, and formulated **Draft Conclusion 6/10.**

Evolutionary implementation of the navigation systems

3.3.7 The Group recalled the studies carried out for a CAR/SAM regional SBAS solution. Additionally, the C/CAR WG noted that the implementation of GNSS will be carried out in an evolutionary manner in the mid-long term using the current and future satellite-based navigation systems with a certain kind of augmentation or combination of augmentations required for operation in a particular phase of flight. Taking into account the evolutionary status of development of the GNSS, the C/CAR WG formulated **Draft Conclusion 6/11.**

3.3.8 The C/CAR WG also examined the problems derived from the use of the same identifiers in VOR/DME stations in Dominican Republic and Venezuela and it formulated **Draft Conclusion 6/12.**

Radar data exchange

3.3.9 The C/CAR WG examined the tasks developed for the establishment of radar data exchange in the Central Caribbean and prepared an action plan for the establishment of bilateral agreements among units interested in exchanging radar data, including ADS-C or ADS-B, and therefore formulated **Draft Conclusions 6/13, 6/14 and 6/15.**

3.3.10 Considering the need for a seminar for the C/CAR experts, the Group recommended specific training actions for the technical and operational staff to support the implementation of radar services and/or surveillance data exchange. Based on this need, the C/CAR WG formulated **Draft Conclusion 6/16**.

3.4 *CNS/ATM*

Implementation of the CNS/ATM Systems in the Central Caribbean

3.4.11 The Group considered that for the implementation of the Mode S secondary surveillance radar (SSR), it is necessary to study the areas where this facility would be justified. It was recommended to continue the analysis on Mode S SSR operational and technical aspects with regard to the Central Caribbean, including evaluation the developments of the ADS-C and ADS-B systems.

Integration of the ATM automated systems

3.4.12 The Central Caribbean Working Group considered that nowadays there is already a high automation level in the control centres; therefore, the States, Territories and International Organizations should continue working in accordance with the Regional Strategy approved by GREPECAS, including other related activities, such as the integration of automated systems, use of an interphase control document (ICD), foster the planning and development of human resources, and establish the coordination between the States, Territories and International Organizations.

3.4.13 The Meeting noted that the GREPECAS ATM/CNS Subgroup ATM Automation Task Force will continue reviewing the ICD for its uniform application in the CAR/SAM Regions, with the aim of achieving the evolutionary integration and the harmonised interoperability of the ATM automated systems in the NAM, CAR and SAM Regions. The C/CAR WG agreed to continue the integration of ATM automated systems among ATS units of the Central Caribbean, as described in **Draft Conclusion 6/14**. In a subsequent phase, the integration works of Cuba, Haiti and Dominican Republic could continue, once Haiti has implemented its automated system.

3.5 *MET*

3.5.2 The Group recognised that the new technologies applicable to MET service will demand a better coordination between ATS and the meteorological authorities, and it was recalled that these technologies supporting CNS/ATM systems are closely linked to the world area forecast system (WAFS), the international airways volcano watch (IAVW) and the exchange of operational meteorological information (OPMET). It was noted that the meteorological procedures are experiencing important changes and that in view of the little participation at the ICAO meetings and the difficulties encountered for electronic coordination and MET information exchange among the States and Territories of the Central Caribbean, the Working Group agreed **Draft Conclusion 6/17**.

3.6 *SAR*

Emergency Locator Transmitters (ELTs) at 406 MHz

3.6.1 The C/CAR WG noted the great progress achieved in the SAR field in the Central Caribbean. It was recognized that the installation of emergency locator transmitters (ELT) at 406 MHz would help to considerably improve the SAR Service provided in the States and Territories of the Central Caribbean and to that end the Group agreed to recommend **Draft Conclusion 6/18.**

SAR national plans

3.6.3 The Group also recognised that the IAMSAR Manual (Doc 9731) is the suitable guidance to help the States and Territories of the Central Caribbean to develop and review their own SAR plans and national manuals, which would foster the harmonization of regional procedures for the provision of SAR services and at the same time finalize the task entrusted by the Directors General of civil aviation. Based on the above **Draft conclusion 6/19** was adopted**.**

SAR Agreements

3.6.4 In accordance with the requirements established in Annex 12, the Working Group favoured the establishment of SAR Agreements between the RCCs and between the latter with the military authorities, through the establishment of a SAR multilateral agreement considering the SAR agreement model of Doc 9731 as the adequate guideline for collaboration purposes pursued in the Central Caribbean. Taking into consideration that the agreements are an essential part of the SAR regional system, the C/CAR WG adopted **Draft Conclusion 6/20**.

4 Safety Activities

4.1 The Group examined the progress of the activities developed by ICAO related with the Universal Safety Oversight Audit Programme (USOAP). Recognising that the harmonization of aeronautical regulations means an important step for the compliance with ICAO guidelines concerning safety, the C/CAR WG adopted **Draft Conclusion 6/21.**

5 Human resources and training

5.1 Taking into account the guidelines of the NACC/DCA/2 Meeting, the Group examined the status of human resources and training planning regarding the new CNS/ATM systems, and concluded that the activities should continue. In this regard, the C/CAR WG adopted **Draft Conclusion 6/22**.

6. Review of the Terms of reference and Work programme of the Central Caribbean Working Group

6.1 The Meeting reviewed and made some amendments to the Terms of Reference and Work Programme of the C/CAR WG and modified the programmes of the existing Task Forces. The C/CAR WG elected as his new Chairperson Mr. Fidel Ara; and adopted **Decision 6/24**.

7 Support to the Tentative Schedule - 2006 ICAO NACC Office Meetings, Seminars, Courses and Workshops

7.1 The Group considered that given the importance of the tasks to be developed by the States/Territories of the C/CAR, the participation of their air navigation experts should be fostered in order to effectively comply with the tasks entrusted by the Directors of Civil Aviation, and therefore adopted **Draft Conclusion 6/25**.

5. Next Meeting site

5.1 In accordance with the Rotational Programme of future meeting sites, it was informed that Jamaica would host the next C/CAR WG/7 Meeting, in February 2007, tentatively.

6. Suggested actions

6.1 The C/CAR DCA/8 Meeting is invited to:

a) note the information contained in this Working Paper;

b) review and approve the conclusions the C/CAR Working Group included in the Appendix to this Working paper;

c) agree on suitable actions to provide the Action plans to solve the deficiencies; and

d) agree other actions as necessary.

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APPENDIX

DRAFT CONCLUSIONS FORMULATED BY THE SIXTH MEETING OF THE CENTRAL CARIBBEAN WORKING GROUP (C/CAR WG/6)

1. ***AGENDA ITEM 3***

DRAFT CONCLUSION 6/1 **FINALIZATION OF THE HARMONIZATION PROCESS OF THE WGS-84 COORDINATES AT THE FIR BOUNDARIES**

That the C/CAR States/Territories/International Organizations that have not yet done so:

A) finalize the harmonization of boundary geographical coordinates in their respective FIRs, in coordination with the ICAO NACC Regional Office; and

b) inform the ICAO NACC Regional Office:

1. on the officer appointed as the point of contact to carry out the task by **7 June 2006**; according with the ICAO data base information that for such purpose would be distributed by the ICAO NACC Regional Office, as applicable, and

2. on the agreements reached in this respect by **15 September 2006**.

PRIORITY A

DRAFT CONCLUSION 6/2 **ESTABLISHMENT OF ATS SAFETY MANAGEMENT MEASURES**

That the States and Territories of the Central Caribbean, in order to reduce ATC loop errors:

a) ensure that LHDs are promptly forwarded to CARSAMMA and copied to the ICAO Regional Office;

b) request to the ATS authorities to establish management measures to enhance monitoring of ATC operations through the application of ATS quality assurance mechanisms;

c) establish the maximum permitted levels as an objective of LHDs incidents and/or occurrence;

d) in compliance with Doc 9859, Safety Management System (SMS), establish for the identification of the main incident causes and for risk assessment;

e) foster coordination bilateral visits among their ATS quality assurance experts in order to exchange experiences and data on ATC Loop Errors and the actions taken to mitigate against recurrence;

f) as applicable, plan the early interconnectivity of their ATS automated system in accordance with GREPECAS regional guidelines; and

g) request the assistance of the ICAO NACC Regional Office where bilateral actions taken to address these errors prove insufficient.

PRIORITY A

DRAFT
CONCLUSION 6/3 ATFM PROCEDURES DEVELOPMENT

That, C/CAR States/Territories, based on their regional and subregional developments:

a) develop an ATFM Manual to serve as a basis for the provision of ATFM service in the different FIRs of the Central Caribbean; and

b) present the progress thereupon to the C/CAR WG/7.

PRIORITY A

DRAFT
CONCLUSION 6/4 ATFM OPERATIONAL AGREEMENTS

That C/CAR States/Territories encourage ATS providers to establish operational agreements among ATS units for ATFM service provision in the C/CAR.

PRIORITY B

DRAFT
CONCLUSION 6/5 PERSONNEL INVOLVED IN ATFM ACTIVITIES

That the C/CAR States/Territories/International Organizations support the development of experts involved in ATFM implementation and their participation in the different related events to be developed in coordination with the ICAO NACC Office.

PRIORITY A

DRAFT
CONCLUSION 6/6 **FINALIZATION OF THE IMPLEMENTATION PROCESS OF THE MEVA II NETWORK AND INTERCONNECTION/INTEROPERABILITY WITH REDDIG**

That MEVA Member States/Territories:

a) make every effort to finalize and conclude their respective actions in order to contribute to the transition towards the MEVA II VSAT Network, by mid 2006; and

b) follow-up and implement their respective agreed actions to achieve the interconnection/interoperability of MEVA II–REDDIG.

PRIORITY A

DRAFT
CONCLUSION 6/8 **C/CAR PRELIMINARY IMPLEMENTATION PLAN OF THE ATN AND GROUND-GROUND APPLICATIONS**

That the States/Territories of the Central Caribbean:

a) review and complete the preliminary implementation plan of the ATN ground-ground applications, presented in Appendix C to this part of the report ***(Attachment 1 to the Appendix to this Working Paper)***; and

b) that have not yet done so, establish their correspondent national implementation plan of routers and ATN system based on the Regional Plan, the results of the C/CAR WG and the guidelines of GREPECAS.

PRIORITY B

DRAFT
CONCLUSION 6/10 **AIR-GROUND DATA LINKS REGIONAL PLAN UPDATE AND ACTIONS FOR ITS IMPLEMENTATION**

That, with regard to the implementation of the air-ground data links, the C/CAR States/Territories adopt the part of the updated regional Plan presented in Appendix E to this part of the Report ***(Attachment 2 to the Appendix to this Working Paper)***.

PRIORITY B

DRAFT
CONCLUSION 6/11 SHORT-TERM IMPLEMENTATION OF THE AVAILABLE GNSS CAPABILITIES

That, considering GREPECAS Conclusion 13/84, the C/CAR States/Territories,

a) which have not done so, proceed with the application of the available GNSS capabilities in the short term; and

b) follow-up the work developed by GREPECAS and ICAO for the evolutionary implementation of GNSS in the mid-long term.

PRIORITY A

DRAFT
CONCLUSION 6/12 SOLUTION TO THE CONFLICTS PRODUCED BY THE SAME IDENTIFIERS USED IN VOR/DME STATIONS OF DOMINICAN REPUBLIC AND VENEZUELA

That, aimed at resolving the conflicts detected by the use of identical identifiers in the VOR/DME stations,

a) Dominican Republic should substitute identifier “CRO” of its Cabo Rojo VOR/DME station;

b) Venezuela should substitute identifier “PNA” of its Punta San Juan VOR/DME station; and

c) the States mentioned in the above items should coordinate with the ICAO NACC and SAM Regional Offices as applicable for the selection and assignment of new identifiers for the mentioned VOR/DME stations.

PRIORITY A

DRAFT
CONCLUSION 6/13 USE OF THE MEVA II NETWORK TO SUPPORT RADAR DATA EXCHANGE

That, for the establishment of communications for surveillance data sharing, the C/CAR States/Territories consider that,

a) the VSAT MEVA II Network has the capability to support this objective; and

b) the use of a synchronic channel of 9.6 kbps for the transmission of radar data is recommended.

PRIORITY A

DRAFT

CONCLUSION 6/14 ACTION PLAN FOR THE ESTABLISHMENT OF BILATERAL AGREEMENTS FOR RADAR DATA SHARING

That, for the establishment of bilateral agreements for radar data sharing the C/CAR States/Territories consider the Action Plan presented in Appendix F to this part of the report ***(Attachment 3 to the Appendix to this Working Paper)***.

PRIORITY A

DRAFT
CONCLUSION 6/15 FIRST PHASE OF BILATERAL RADAR DATA SHARING

That, taking into account the technical feasibility studies and operational benefits carried out for the first phase of radar data sharing; Cuba, Cayman Islands and Jamaica, in coordination with COCESNA, consider initiating work and bilateral agreements in accordance with the guidelines of Appendix F ***(Attachment 4 to the Appendix to this Working Paper)*** for radar data exchange between the following centres: Kingston ACC/Cenamer ACC/Grand Cayman APP, Havana ACC/Kingston ACC and Cenamer ACC/Havana ACC.

PRIORITY A

DRAFT
CONCLUSION 6/16 SEMINAR ON RADAR DATA SHARING

That the C/CAR States/Territories/International Organizations and ICAO take into account the proposed subjects presented in Appendix H to this part of the report ***(Attachment 5 to the Appendix to this Working Paper)*** for the development of seminars on radar data sharing.

PRIORITY A

DRAFT
CONCLUSION 6/17 APPOINTMENT OF MET EXPERTS IN THE C/CAR STATES/TERRITORIES

That, as applicable, the C/CAR Civil Aviation Administrations, in coordination with the aeronautical meteorological services, take the corresponding actions in order to:

a) designate a MET officer to participate as a point of contact in behalf of the aeronautical meteorological service;

b) send to the ICAO NACC Office by **1 June 2006** the name and electronic address of the appointed MET focal point; and

c) provide to the MET point of contact the support of the required electronic means so that he/she may be contacted by the Rapporteur of the C/CAR MET Task Force and the Secretariat of the GREPECAS AERMET Subgroup, in order to carry out the necessary coordination concerning the respective work programmes.

PRIORITY A

DRAFT
CONCLUSION 6/18 ADOPTION OF EMERGENCY LOCATOR TRANSMITTERS (ELTs) AT 406 MHZ

That the C/CAR States/Territories/International Organizations, in the terms and periods defined by ICAO:

a) establish that all international transport aircraft including passengers and cargo that perform operations in the C/CAR area be equipped with emergency locator transmitters (ELT) at 406 MHz in accordance with Annex 6 parts I, II and III;

b) take the necessary measures so that operators, including the ones in general aviation, use ELTs at 406 MHz or equivalent; and

c) ensure that necessary arrangements and the requirements be established for the register of all the ELTs at 406 MHz, and stipulate that these register data be available 24 hours a day for any RCC that might need them.

PRIORITY B

DRAFT
CONCLUSION 6/19 ADOPTION OF THE IAMSAR MANUAL FOR THE DEVELOPMENT OF NATIONAL SAR MANUALS OF THE CENTRAL CARIBBEAN STATES/TERRITORIES

That the States/Territories who have not yet done so, henceforth use as a reference the IAMSAR Manual (Doc 9731) for the development of their National SAR rules.

PRIORITY B

DRAFT
CONCLUSION 6/20 ESTABLISHMENT OF SEARCH AND RESCUE (SAR) AGREEMENTS BETWEEN THE CENTRAL CARIBBEAN RCCs

That, based on the draft agreement included in Appendix I to this part of the report ***(Attachment 6 to the Appendix to this Working Paper)***:

a) the States and Territories of the Central Caribbean have their SAR Coordinators review/develop the SAR Letters of Agreement between the corresponding RCCs;

b) Civil Aviation Authorities of Cuba, Dominican Republic, Haiti and Jamaica establish a multilateral SAR agreement in the short term; and

c) Civil Aviation Authorities of the States and Territories of the Central Caribbean endorse the SAR agreements achieved and present the progress status to the Eighth Meeting of Directors of Civil Aviation of the Central Caribbean (CCAR/DCA/8).

PRIORITY A

2. ***AGENDA ITEM 4***

DRAFT
CONCLUSION 6/21 **HARMONIZATION OF THE AERONAUTICAL REGULATIONS IN THE CENTRAL CARIBBEAN**

That, aimed at maintaining the harmonization of the aeronautical regulations required by the States and Territories, the Central Caribbean Civil Aviation Administrations promote adequate coordination and collaboration among its designated experts for the development and publication of aeronautical regulations.

PRIORITY A

3. ***AGENDA ITEM 5***

DRAFT
CONCLUSION 6/22 **REQUEST OF INFORMATION ON HUMAN RESOURCES AND TRAINING**

That, as part of the main elements for the CNS/ATM systems implementation, the C/CAR Civil Aviation Administrations:

a) notify the ICAO NACC Office the name and email address of their respective Point of Contact;

b) complete the forms contained in Appendices A, B, C and D to this part of the Report ***(Attachments 7, 8, 9 and 10 to the Appendix to this Working Paper)***; and

c) send the information detailed in items a) and b) above to the ICAO NACC Regional Office by **7 July 2006**.

PRIORITY A

4. ***AGENDA ITEM 7***

DRAFT
CONCLUSION 6/25 **PARTICIPATION IN THE ICAO MEETINGS, SEMINARS AND OTHER EVENTS OF EXPERTS OF DIFFERENT AIR NAVIGATION FIELDS**

That, the Central Caribbean States and Territories support the participation of their experts assigned to the different air navigation fields in the meetings, seminars and other events convened by the ICAO NACC Office for 2006, described in Appendix B to this part of the report ***(Attachment 11 to the Appendix to this Working Paper)***.

PRIORITY A

DECISIONS

DECISION 6/7 **STUDY ON THE INITIAL C/CAR ATN IMPLEMENTATION PLAN**

That an ATN Task Force be activated to conduct preliminary studies of ATN architecture in the Central Caribbean, composed by members of Cayman Islands, Cuba, Haiti, Jamaica and United States (Rapporteur) so as to present the results of its study at the next C/CAR WG meeting.

DECISION 6/9 **DISBANDING OF THE C/CAR VHF/AMS COVERAGE TASK FORCE**

That, considering the VHF/AMS improvement and the existing actions plans for on-going enhancements, that the C/CAR VHF/AMS Coverage Task Force be disbanded, appreciating the work carried out by the Rapporteur and the Members.

DECISION 6/23 **PROVISION OF INFORMATION TO THE HUMAN RESOURCES AND TRAINING TASK FORCE BY THE C/CAR WG MEMBERS**

That, with the purpose of carrying out tasks, the C/CAR Working Group Members directly provide information to the Human Resources and Training Task Force regarding the needs and policies of each aeronautical field/speciality.

DECISION 6/24 **C/CAR WG TASK FORCES TERMS OF REFERENCE AND WORK PROGRAMME**

The C/CAR WG adopts the revised Terms of Reference and Work Programme of its Task Forces as presented in the Appendix to this part of the report.

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APPENDIX C

TABLE CNS 1BB – ATN GROUND-GROUND APPLICATIONS PLAN / TABLA CNS1 BB – PLAN DE APLICACIONES TIERRA-TIERRA ATN

ATN GROUND-GROUND APPLICATIONS PLAN / PLAN DE APLICACIONES TIERRA-TIERRA					
Administration and Location/ Administración y localidad	**Application Type/ Tipo de Aplicación**	**Conneted with Administration & Location of/ Conectada con Administración y Localidad de**	**Used Standard / Norma usada**	**Implementation Date/ Fecha de Implementación**	**Remarks/ Observaciones**
1	2	3	4	5	6
Aruba	AMHS	TBD/Por determinar	ATN	TBD/Por determinar	
Estados Unidos, Atlanta United Status, Atlanta	AMHS	TBD/Por determinar	ATN	03 2007	Availability to connect to the CAR/SAM Regions/Disponibilidad de conectar con las Regiones CAR/SAM
Nassau, Bahamas	AMHS	FAA-Atlanta	ATN	TBD/Por determinar	
Cayman Islands / IslasCaimanes	AMHS	FAA-Atlanta	ATN	TBD/Por determinar	
Dominican Republic, Santo Domingo/ República Dominicana, Santo Domingo	AMHS	FAA-Atlanta	ATN	TBD/Por determinar	
Haiti, Port-au-Prince/ Haití, Puerto Príncipe,	AMHS	FAA-Atlanta	ATN	TBD/Por determinar	
Cuba, Havana Cuba, La Habana	AMHS	FAA-Atlanta	ATN	2009	
Jamaica, Kingston	AMHS	FAA-Atlanta	ATN	2008	
Venezuela, Maiquetia	AMHS	FAA-Atlanta	ATN	2009	
Netherlands Antilles (Curacao) / Antillas Neerlandesas (Curazao)	AMHS	FAA-Atlanta	ATN	TBD/Por determinar	
Panama, Panama City/ Panamá, Ciudad de Panamá	AMHS	FAA-Atlanta	ATN	TBD/Por determinar	
COCESNA	AMHS	FAA-Atlanta	ATN	TBD/Por determinar	

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APPENDIX/APÉNDICE E

CAR/SAM FASID TABLE CNS 2A – TABLA CNS 2A
(Part of the CAR Region/Parte de la Región CAR)

Country and location Pays et emplacement País y localidad	Service or function Service ou fonction Servicio o función	VHF voice Voix VHF Voz VHF	VHF data Données VHF Datos VHF	HF voice Voix HF Voz HF	HF data Données HF Datos HF	Satellite voice Voix satellite Voz por satélite	Satellite data Données satellite Datos por satélite	Mode S Modo S	Remarks Remarques Observaciones
1	2	3	4	5	6	7	8	9	10
CUBA									
MUCM CAMAGUEY/ Ignacio Agramonte	APP-SR-L TWR	1 1 (1)							
MUCL CAYO LARGO DEL SUR/Vilo Acuña	APP-L TWR	1 (1) 1 (1)							
MUCA CIEGO DE AVILA/ Máximo Gómez	APP-L TWR	1 1 (1)							
MUHA HABANA	ACC-SR-U ACC-SR-I GP-U	5 (4)-ER 3 (1)-ER 2 (1)	2 (06/0~~6~~*10*)	CAR-A (6)	~~X (OG/06)~~				
MUHA HABANA/José Martí	APP-SR-L APP-SR-I TWR SMC ATIS	1 1 (1) 1 (1) 1 (1) 1 (1)							*D-ATIS 2008*
MUHG HOLGUIN/Frank País	APP-SR-L TWR	1 1(1)							
MUCU SANTIAGO DE CUBA/ Antonio Maceo	APP-SR-I TWR SMC	1 (1) 1 (1) 1							
MUVR VARADERO/Juan Gualberto Gomez	APP-SR-L TWR SMC *ATIS*	1 1 (1) 1 *1*							*D-ATIS 2008*
DOMINICAN REPUBLIC									
MDBH BARAHONA/ Maria Montes Intl.	TWR	1 (1)							
MDHE HERRERA/ Herrera Intl.	TWR	1 (1)							
MDLR LA ROMANA/ La Romana Intl.	APP-L TWR	1 (1) 1 (1)							
MDPP PUERTO PLATA/ Gregorio Luperon	APP-SR-I TWR SMC	1 (1) 1 (1) 1 (1)							
MDPC PUNTA CANA/Punta	APP-L	1							

Country and location Pays et emplacement País y localidad	Service or function Service ou fonction Servicio o función	VHF voice Voix VHF Voz VHF	VHF data Données VHF Datos VHF	HF voice Voix HF Voz HF	HF data Données HF Datos HF	Satellite voice Voix satellite Voz por satélite	Satellite data Données satellite Datos por satélite	Mode S Modo S	Remarks Remarques Observaciones
1	2	3	4	5	6	7	8	9	10
Cana Intl.	TWR	1 (1)							
MDST SANTIAGO/Cibao	APP-L	1							
Santiago Intl.	TWR	1 (1)							
MDCS SANTO DOMINGO	ACC-U	4	1 (06/08)						
	ACC-SR-U	1 (1)							
	GP	1							
MDSD SANTO DOMINGO/	APP-SR-I	2 (1)							
De las Américas Intl.	TWR	1 (1)							
	SMC	1 (1)							
	ATIS	1 (1)							
	CLRD	1							
HAITI									
MTCH CAP HAITIEN/Intl.	APP-L	1							
	TWR	1 (1)							
MTEG PORT-AU-PRINCE	ACC-SR-U	1 (1)	1 (06/08)						
	GP	1							
MTPP PORT-AU-PRINCE/Intl.	APP-SR-I	1							
	APP-I	1 (1)							
	TWR	1 (1)							
	SMC	1							
HONDURAS									
MHTG TEGUCIGALPA	ACC-SR-U	7 (4)	3 (06/08)	CAR-A (6)	X (06/08)	X (06/08)	X (06/08)		
(CENAMER)				SAM-1 (2)					
	GP	1							
JAMAICA									
MKJK KINGSTON	ACC-SR-U	1	2 (06/06)		X (06/06)	X (06/06)	X (06/06)		
	ACC-U	5 (2)							
	GP	1							
MKJP KINGSTON/Norman	APP-SR-1	1							
Manley Intl.	APP-I	1 (1)							
	TWR	1							
	SMC	1 (1)							
	ATIS	*1*							
MKJS MONTEGO BAY/	APP-SR-I	1							
Sangster Intl.	APP-I	1							
	TWR	1 (1)							
	SMC	1 (1)							
	ATIS	*1*							

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APPENDIX F

ACTION PLAN FOR THE ACHIEVEMENT OF BILATERAL AGREEMENTS IN SUPPORT OF RADAR DATA SHARING BETWEEN INTERESTED ATS UNITS

1. Develop and coordinate a draft letter of agreement between the interested parties in supporting the radar data sharing, defining the sharing scope and the responsibilities in the radar data sharing, in the party providing the radar data as the one utilizing it for its ATS service. Likewise, each party's responsibility should be expressed on the correspondent cost payment of this radar data sharing, mainly with regard to the communication services payment.
2. Each part identification of the required staff to carry out the work and also the training needs of these staff, in the technical and operational aspects.
3. Train the maintenance staff in both units so that they count with the minimum necessary knowledge allowing the correct implementation of radar data exchange and that the procedures related to the new exigencies concerning surveillance may be established.
4. Train ATC operational staff bearing in mind the new planned enhancements to be obtained in view of the radar data exchange.
5. To conduct a detailed survey for the necessary equipment's implementation for the radar data sharing, including the communication needs for this implementation. This includes the exchange of technical and operational information concluding that the radar data sharing will allow to efficiently obtain the operational requirements pursued, in relation to the costs.
6. A joint evaluation of the integration of a new radar to the SDPS system concerned. This evaluation should consider quality assurance of the radar piece of information to be obtained (availability, integrity, accuracy and service continuity) as well as the procedures to be established concerning deviations to the standards in the radar signal used in the exchange of data. This evaluation should also include the evaluation of monoradar and multiradar track evaluation, as well as the simultaneous recording of radar data from the previously existent sources with the radar source integrated and the evaluation of the adaptations to the SDPS software consider necessary in order to integrate the new signal. These tests are necessary, whether if the radar signal sharing will be used with redundancy purposes or if it has the intention to use the radar signal sharing as the only radar source for the ATS services provision.
7. Temporary implementation of a radar signal sharing in a pre-operational environment, which allows the execution of the technical tests considered appropriate and convenient.
8. Survey on the operational aspects which have achieved improvement with the introduction of radar sharing between the units and evaluation of these improvements in relation to the real costs derived from the implementation, in financial and human resources.
9. Final adjustments, validation and certification of the radar data sharing use by the relevant aeronautical authorities.
10. Development and establishment of the letter of agreement between the Parties, taking into account the compliance with the objectives and the technical and operational capabilities achieved during the project.
11. Operational execution of the ATS services considering the radar data sharing.

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APPENDIX H

PROPOSAL OF ACTIONS TO BE TAKEN INTO ACCOUNT FOR A SEMINAL ON RADAR DATA EXCHANGE

1 General considerations to be covered:

a) make an inventory of radar installed in C/CAR including their specifications;
b) identify training needs for radar technicians and air traffic controllers;
c) identify technical requirements for the implementation of radar data sharing within the C/CAR environment;
d) share the technical and operational experience on radar data sharing from other regions, particularly useful information in respect to errors and or omissions and discuss measures to be taken to avoid or mitigate such occurrences;
e) address means to achieve cost-effectiveness, reliability and integrity of data products offered by the system;
f) discuss methods to ensure that timely, accurate and quality assured radar data information is exchanged;
g) obtain a high level view of system components, common systems and common user interfaces;
h) discuss the type of data to be exchanged and the established of priorities for their implementation taking due consideration of ATC operational requirements;
i) discuss methods to ensure that the system integrates the functionality of all current regional radar automation systems;
j) discuss resource and priority issues for system implementation;
k) provide the air navigation service providers with special reports on developments in the area of radar data and ADS-B data sharing;
l) the protection of information obtained from shared radar data (see Assembly resolution A 35-17);
m) discuss and plan of system policies;
n) achieve agreement on a common specification for radar sensor hardware and software;
o) establish common standards for data acquisition methods;
p) define, test and implement adequate communication methods and protocols as well as dissemination procedures; and
q) discuss the testing of data communication and protocol telecommunication of the network, as well as monitoring and management of the system.

2 Technical considerations to be covered

a) discuss message transmission formats, in particular the All Purpose Structured European Surveillance Information Exchange and its benefits.(Asterix);
b) define the data formats and interfaces to realise an optimal data exchange;
c) evaluate and recommend suitable data communication links;
d) discuss the availability and performance of equipment for radar message conversion and message distribution system;
e) present technical studies of radar data sharing to participants;
f) discuss specifications for the network node, its location and legal implications;

g) discuss specification design, acceptance testing and evaluation of the system;
h) discuss the similar regional problems for implementing radar data sharing, if any, and methods of resolution;
i) discuss the implementation of (radar) data against constraints experienced and issues which rose during implementation projects in other areas;
j) provide expert advice to telecommunication engineering; identifying the cost/benefit advantages for implementing radar data sharing specifically to facilitate the flow of traffic within the C-CAR;
k) discuss methods and procedures for maintenance as well as possibilities for system enhancements and upgrades;
l) develop and standardize appropriate quality procedures;
m) make States/Territories better acquainted with new communication tools such as ADS-B, which may support radar surveillance;
n) the provision of assistance to States/Territories in their decision making process for the selection of the necessary equipment, software development or installation, system support or installation, and the further enhancement of the system with mode S;
o) discuss the availability of compatible replacement to avoid system failures and outages;
p) discuss the development describing the risk analysis and the mitigation actions by the system supplier, maintenance service suppliers and air navigation service suppliers;
q) discuss radar data sharing agreement with the assistance of persons in the legal field and ICAO legal Bureau.

3 Operational considerations to be covered.

a) discuss procedures to make the system user friendly in order to facilitate the controller to access easily only relevant data, so as to prevent the system to overflow the controller with information, which might adversely affect the controller's decision-making process;
b) trigger discussions on operational requirements within the region in order to increase safety;
c) discuss the perceived deficiencies within the system in other regions and identify the most appropriate action that should be taken in order to avoid or minimise the same deficiencies within the C/CAR;
d) discuss operational evaluations in areas making use of radar data sharing such as its influence on the capabilities of ATC units and the target level of safety, including the response of controllers with regard to the system;
e) discuss operating problems, which might have been experienced by ATS of other regions participating in radar data sharing exchange so that these can be taken into account when developing plans for its implementation;
f) discuss contemporary functional requirements and solutions for congestion on the network.

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APPENDIX I

AGREEMENT ON AERONAUTICAL AND/OR MARITIME SEARCH AND RESCUE BETWEEN:

_____,_____, _____,

_____.

1 INTRODUCTION

Knowing the importance of co-operation in search and rescue (SAR), and of the provision of expeditious and effective SAR services;

Desiring to support the provisions of the International Convention on Maritime Search and Rescue of the International Maritime Organization (IMO) and/or the Convention on International Civil Aviation of the International Civil Aviation Organization (ICAO); and

Seeking to provide an overall plan for SAR co-ordination, use of available resources, mutual assistance, and efforts to improve SAR services;

The Parties have agreed as follows:

2 EXTENT OF ASSISTANCE

The Parties agree to co-operate in the following areas:

(a) Support each other by pooling SAR facilities as appropriate for operations within their respective search and rescue regions (SRRs);

(b) Make, and respond to, requests for operational assistance between the designated rescue co-ordination centres (RCCs) or rescue sub-centres (RSCs) of the Parties as capabilities allow;

(c) Develop procedures and communications appropriate for co-ordination among facilities of both Parties responding to the same distress incident, in co-ordination between the RCCs or RSCs of the Parties;

(d) Normally apply the guidance of the International Aeronautical and Maritime SAR manuals regarding SAR operational procedures and communications;

(e) Work to establish agreed procedures, with balanced concern for sovereignty and for saving lives, regarding entry of various types of SAR facilities into the territory of the other Party, solely for a search or a rescue operation; and

(f) Enter into other collaborative SAR efforts which many include:

- Mutual visits by SAR personnel of the parties;
- Joint training or exercises
- Co-operation in development of SAR procedures, techniques, equipment, or facilities;
- Exchange of pertinent SAR or communication information; and
- Establishment of one or more SAR committees to provide a means for ongoing co-operation in improving SAR effectiveness.

3. SEARCH AND RESCUE REGIONS

Establishment of SRRs is intended only to effect an understanding concerning where each Party accepts primary responsibility for co-ordinating or providing SAR services. SRRs of the Parties shall be separated by lines connecting points as follows: [appropriate co-ordinate points describing applicable lines.]

4. TERMS OF AGREEMENT

Each Party will:

(a) Keep the other fully and promptly informed of all SAR operations of mutual interest, or which may involve use of facilities of the other Party;

(b) Keep information readily available on the availability of any SAR facilities or other resources which may be needed for implementing these agreements;

(c) Authorize its RCC(s) to request assistance from the RCC(s) of the other Party, and to provide all pertinent information on the distress situation and scope of assistance needed;

(d) Authorize its RCC(s) to promptly respond to any request for assistance from an RCC of the other Party;

(e) Authorize its RCC(s) to promptly arrange, or arrange in advance, with other national authorities for territorial entry of SAR of the other Party (including overflight or landing of SAR aircraft, in similar accommodation of surface (land or water) SAR units) as circumstances dictate for fueling, medical or other appropriate and available operational support, or in response to a request to the RCC of the other Party for assistance of those facilities which will involve territorial entry;

(f) Normally fund its own activities in relation to this agreement unless otherwise arranged by the Parties in advance, and, in any event, will not allow a matter of reimbursement of costs to delay response to persons in distress.

5. GENERAL PROVISIONS

This Agreement:

Shall enter into force… [provisions as appropriate];
May be amended … [provisions as appropriate]; and
May be terminated or superseded …[provisions as appropriate].

- - - - - - - - -

APPENDIX A

TRAINING NEEDS-CAR REGION STATES (PERIOD 2005-2009)
State/Territory/International Organisation
(Please indicate in each column the estimated total number of personnel to be trained each year locally or abroad and by specialty)

FIELD	CATEGORY/SPECIALTY	LOCAL INSTRUCTION					EXTERNAL INSTRUCTION					Total HR required		Order of Priority		
		2005	2006	2007	2008	2009	2005	2006	2007	2008	2009	Local	Ext.	1	2	3
AIG	Officer - Accident Investigation and Prevention															
AIR	Inspector - Shop Specialist															
	Inspector - Fixed wing															
	Inspector - Helicopter															
	Specialist - Avionics															
	Inspector - Airworthiness certification															
	Specialist - RVSM															
AIS	Directorate/Supervisor AIS															
	AIS Officer															
	Aeronautical Cartography (MAP)															
	Specialist Data Base/Automation and Quality Assurance AIS															
AGA	Supervision/Certification/ Aerodrome Regulations															
	Aerodromes Inspector/Auditor															
	Officer – Airport Operations															
	Officer Airport Security															
	Trainer – Aerodrome Emergencies															
	Fire fighter - Rescue															
	Control – Natural resources															
	Maintenance - Pavements and drainage -Civil Engineer															

FIELD	CATEGORY/SPECIALTY	LOCAL INSTRUCTION					EXTERNAL INSTRUCTION					Total HR required		Order of Priority		
		2005	2006	2007	2008	2009	2005	2006	2007	2008	2009	Local	Ext.	1	2	3
	Electric maintenance (lighting, markings, power generators) – Electric engineer															
	Inspector –Obstacle control															
	Inspector-environment control															
ATM	Air Traffic Controller - TWR															
	Air Traffic Controller - APP															
	Air Traffic Controller -Area															
	Air Traffic Controller-Radar/Area															
	Air Traffic Controller - Radar/APP															
	Supervisor – Air Traffic Control															
	ATC/OJT Instructor															
	ATS Airspace Planner															
	ATS Regulations Officer															
	Specialist – ATS Quality Assurance															
	Safety Officer															
	ATM Internal Audit Officer															
	Specialist – Search and Rescue SAR for RCC or RSC															
AVSEC	AVSEC Administrator															
	AVSEC Control Officer															
CNS	Specialist - Communications															
	Specialist - Navigation															
	Specialist –ADS and Radar Systems															
	Digital communication system specialization course															
MET	Meteorologist Senior level															
	Meteorologist Mid level															
	Meteorologist Entry level															

FIELD	CATEGORY/SPECIALTY	LOCAL INSTRUCTION					EXTERNAL INSTRUCTION					Total HR required		Order of Priority		
		2005	2006	2007	2008	2009	2005	2006	2007	2008	2009	Local	Ext.	1	2	3
	Meteorological Technician Senior level															
	Meteorological Technician Mid level															
	Meteorological Technician Entry level															
OPS	Inspector – Flight checks - Large airplanes															
	Inspector – flight checks – General aviation															
	Inspector – flight checks - Helicopter															
	Specialist – Regulatory compliance															
	Inspector OPS Certification															
	Inspector – Cabin safety															
	Inspector- Dangerous goods															
	Inspector – Ramp safety															
PEL	Specialist - Licensing															
	Examiner/Inspector – Flight schools															
GENERAL	Introduction to CNS/ATM Systems															
	CNS/ATM - Implementation systems global															
MAN-AGE-MENT	Management – Civil Aviation															
	Management – Aeronautical Operations															
	Management – AIS Services															
	Management – ATM Services															
PLNG	Human Resources Planning															

FIELD	CATEGORY/SPECIALTY	LOCAL INSTRUCTION					EXTERNAL INSTRUCTION					Total HR required		Order of Priority		
		2005	2006	2007	2008	2009	2005	2006	2007	2008	2009	Local	Ext.	1	2	3
Q.A.	Specialist – Quality Assurance															
TRNG	Instructors training -TRAINAIR															

NOTE: 1) The information required in the blank columns will be provided by the Administrations
2) Useful information for the Administration's training programmes planning
3) Information considered by the CATCs, GREPECAS and ICAO's for the programming of courses, seminars, etc.
4) Order of priorities of the Training Needs

- - - - - - - - -

APPENDIX B

STATUS OF THE SPECIALIZED MANPOWER IN THE CENTRAL CARIBBEAN

TABLE 2. EXPERTS BY TYPE AND AGE GROUPS

State/Territory/International Organization:	

Field	Specialty	Quantity of experts	Age Groups								Post requirements		
			20-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	Tech	Univ	Spec
AIR	Inspector - Shop Specialist												
	Inspector - Fixed wing												
	Inspector - Helicopter												
	Specialist - Avionics												
	Inspector - Airworthiness certification												
	Specialist - RVSM												
AIS	Directorate/Supervisor AIS												
	AIS Officer												
	Aeronautical Cartography (MAP)												
	Specialist Data Base/Automation and Quality Assurance AIS												
ATM	Air Traffic Controller - APP												
	Air Traffic Controller -Area												
	Air Traffic Controller-Radar/Area												
	Air Traffic Controller - Radar/APP												
	Supervisor – Air Traffic Control												
	ATS Airspace Planner												

Field	Specialty	Quantity of experts	Age Groups								Post requirements		
			20-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	Tech	Univ	Spec
	Specialist – ATS Quality Assurance												
	Specialist CNS / ATM												
	Specialist – Search and Rescue SAR for RCC or RSC												
CNS	Specialist - Communications												
	Specialist - Navigation												
	Specialist –ADS and Radar Systems												
	Digital communication system specialization course												
MET	Meteorologist Senior level												
	Meteorologist Mid level												
	Meteorologist Entry level												
	Meteorological Technician Senior level												
	Meteorological Technician Mid level												
	Meteorological Technician Entry level												

Note:

1. In the column titled **Specialty**, different specialties recognized by the ICAO training system are listed.
2. In the column titled **Quantity of Experts,** the number of available experts in the system os detailed.
3. In the following columns experts are detailed by age groups.
4. In the following 3 columns the post requirements are listed according to the degree required by the CAA.

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APPENDIX C

SUMMARY TABLE

SURVEY OF TRAINING METHODS
FOR TRAINING OF PERSONNEL IN THE C/CAR AREA

State/Territory/International Organization/CATC: _____

COURSES GIVEN				METHOD/MODE					
TRAINING	RATING	REGRADING	REFRESHMENT	OFF-SITE	ON-SITE	ON/OFF SITE	CONFERENCE	SEMINAR	WORKSHOP

SUMMARY TABLE

SURVEY OF CATCs/CLASSROOMS OR PREMISES
FOR TRAINING OF PERSONNEL IN THE C/CAR AREA

State/Territory/International Organization: _____

INSTITUTE/CATC NAME	REGION/STATE/ PROVINCE FOR LOCATION PURPOSES	NUMBER OF AVAILABLE PREMISES			FOR COMMUNICATIONS			
		CLASS-ROOMS	LABS.	PREMISES	E-MAIL	INTERNET	TEL.	FAX

- - - - - - - -

APPENDIX D

MODEL 1. PROFILE OF THE CATCs INSTRUCTORS TRAINING NEEDS

State/CATC/International Organization_____

_____

Complete Name:_____ Age:_____

Specialty:_____

Degree: _____

Educational level: _____

Courses/assignments:_____

Training needs:_____

Specialist training
Strategy: _____

Comments: _____

Note: This form should be completed by the specialist of any aviation field, both from the State, CATCs or International Organization.

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APPENDIX B

TENTATIVE SCHEDULE – 2006
ICAO NACC OFFICE – MEETINGS, SEMINARS, COURSES AND WORKSHOPS

1ST. QUARTER

MEETING/SEMINAR/COURSE/WORKSHOP	DATES	VENUE	PARTICIPANTS
North America Aviation Trilateral Safety/Security Meeting	23-27 January	Ixtapa, Mexico	NAM/CAR/SAM
COCESNA Meeting	24 February	Tegucigalpa, Honduras	Central America
C/CAR/WG/6 Meeting	20-24 February	Havana, Cuba	C/CAR
RASOS/12 Meeting	February	Caribbean	Members
ACG/6 Meeting	2-3 March	Lima, Peru	Members
ICAO/ASPA/SMS Seminar	14-16 March	Mexico City, Mexico	NAM/CAR/SAM
PAAST/10 Meeting	17 March	Mexico City, Mexico	Members
MEVAII/REDDIG Meeting	20-22 March	Lima, Peru	NAM/CAR/SAM
NAM/CAR ATFM Seminar	27-31 March	Tegucigalpa, Honduras	NAM/CAR
MEVA TMG/16 Meeting	March	Santo Domingo, Dominican Republic	Members

2ND QUARTER

MEETING/SEMINAR/COURSE/WORKSHOP	DATES	VENUE	PARTICIPANTS
AVSEC Airport Security Programme Workshop	3-7 April	Trinidad and Tobago	NAM/CAR/SAM
ICAO/PAIGH Meeting	18-21 April	Cartagena, Colombia	CAR/SAM
NAM/CAR Civil/Military Coordination Seminar	17-18 April	Santo Domingo, Dominican Republic	NAM/CAR
Regional NAM/CAR ATM Meeting	19-21 April	Santo Domingo, Dominican Republic	NAM/CAR
Central America AVSEC Experts	April	TBD	Central America
LACAC AVSEC Experts Meeting	8-10 May	Buenos Aires, Argentina	NAM/CAR/SAM
AVSEC COMM/5 Meeting	11-13 May	Buenos Aires, Argentina	NAM/CAR/SAM
COCESNA Meeting	26 May	Central America	Central America
C/CAR/DCA/8 Meeting	May	Curacao	C/CAR
E/CAR/WG/30 Meeting	5-9 June	St. Lucia	E/CAR
AP/ATM/12 Meeting	26-30 June	Lima, Peru	CAR/SAM

3RD QUARTER

MEETING/SEMINAR/COURSE/WORKSHOP	DATES	VENUE	PARTICIPANTS
Regional NAM/CAR/SAM SAR Workshop/Meeting	17-21 July	Merida, Mexico	NAM/CAR/SAM
ATM/CNS/SG/5 Meeting	14-18 August	Rio de Janeiro, Brazil	CAR/SAM
COCESNA Meeting	25 August	Central America	Central America
CA/ANE/5 Meeting	28-31 August	Tegucigalpa, Honduras	Central America
AGA/AOP/SG/5 Meeting	August	Montevideo, Uruguay	CAR/SAM
ICAO Annex4/15 AIM Seminar	25-29 September	Colombia	CAR/SAM

4TH QUARTER

MEETING/SEMINAR/COURSE/WORKSHOP	DATES	VENUE	PARTICIPANTS
ICAO AVSEC Human Factors Seminar	16-20 October	CAR Region	NAM/CAR/SAM
Performance Based Navigation Seminar	23-27 October	Santo Domingo, Dominican Republic	CAR/SAM
CAP/DCA/92 Meeting	October	ICAO NACC Office	Central America and Panama
RASOS/13 Meeting	October	Caribbean	Members
ASB/7/GREPECAS/14 Meetings	12-17 November	Costa Rica	CAR/SAM
AIS ANP Deficiencies Seminar	20-24 November	Mexico City, Mexico	CAR/SAM
COCESNA Meeting	November	Central America	Central America
E/CAR/DCA/20 Meeting	December	United States	E/CAR
ICAO ATN Seminar	Open	Mexico City, Mexico	CAR/SAM

12/01/06

- END -