



**FINAL
VERSION**

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

**THIRTIETH EASTERN CARIBBEAN
WORKING GROUP MEETING**

30TH E/CAR WG

SUMMARY OF DISCUSSIONS

CASTRIES, SAINT LUCIA, 7 TO 11 AUGUST 2006

Prepared by the Secretariat
August 2006

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 or of its authorities, or concerning the delimitation of its frontiers or boundaries.

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HISTORICAL

ii.1 ESTABLISHMENT OF THE GROUP

The Eastern Caribbean Working Group (E/CAR WG) was established for the purpose of examining problems affecting airspace organization and utilization in the Eastern Caribbean region. Its terms of reference were expanded to include the examination on a continual basis of problems affecting all fields of Air Navigation in the Eastern Caribbean Region.

ii.2 SITE AND DURATION OF THE MEETING

The Thirtieth Eastern Caribbean Working Group Meeting (30th E/CAR WG), was held in Castries, Saint Lucia at the Bay Gardens Hotel. The Meeting started on 7 August 2006 and, after having dealt with all the Agenda Items provided for, it ended on 11 August 2006.

ii.3 OPENING CEREMONY

Mr. Michael Lee Acting Director of Airports of the Saint Lucia Air and Seaports Authority, gave an invocation to wish the participants success in their deliberations and also acted as Master of Ceremonies during the Opening Inauguration.

Mr. Vincent Hippolyte, General Manager, of Saint Lucia Air and Seaports Authority addressed the participants.

Mrs. Allison Jean, Deputy Permanent Secretary, Ministry of Communication, Works Transport and Public Utilities welcomed them to Saint Lucia.

Mr. Víctor Hernández from the ICAO NACC Regional Office addressed the Meeting on behalf of the Acting Regional Director, Mr. José A. Díaz de la Serna, thanking Saint Lucia for hosting the 30th Eastern Caribbean Working Group Meeting and wished the Meeting the best success in their deliberations.

Mr. Eustace Cherry, Civil Aviation Officer, gave the address on behalf of the Minister of Civil Aviation and officially declared the 30th E/CAR Working Group Meeting (30th E/CAR WG) open.

ii.4 OFFICERS OF THE MEETING

Mr. Simon Lewis from Grenada continued as Chairperson. Mr. Eustace Cherry of Saint Lucia was elected as Vice Chairperson for the term of this Meeting. Mr. Víctor Hernández, Regional Officer, Air Traffic Management/Search and Rescue acted as Secretary of the Meeting and he was assisted in the Secretariat duties by Ms. Leslie Cary, Regional Officer, Air Traffic Management/Search and Rescue, both from the ICAO North American, Central American and Caribbean Regional Office.

ii.5 WORKING ARRANGEMENTS

It was agreed that the working hours for the sessions of the meeting would be from 09:00 to 15:30 hours daily with adequate breaks. Ad-hoc Groups were created during the Meeting to do further work on specific items of the Agenda.

ii.6 AGENDA

- Agenda Item 1 **Approval of the Meeting Agenda and Schedule**
- Agenda Item 2 **General Air Navigation Matters**
- 2.1 Valid Conclusions/Decisions of previous E/CAR/WG and E/CAR/DCA Meetings
- 2.2 Deficiencies
- 2.3 CNS/ATM Systems
- Agenda Item 3 **Second amendment to the Global Plan for CNS/ATM systems (Doc 9750) and ICAO new related initiatives**
- Agenda Item 4 **Specific Air Navigation Activities and Developments**
- 4.1 Aeronautical Information Services (AIS)
- 4.2 Search and Rescue (SAR)
- 4.3 Aeronautical Meteorology (MET)
- 4.4 Air Traffic Management (ATM)
- 4.5 Communications, Navigation and Surveillance (CNS)
- Agenda Item 5 **Aviation Security Activities and Developments**
- Agenda Item 6 **Review of the Terms of Reference and Work Programme**
- Agenda Item 7 **Other business**
- 7.1 Next Meeting Site

ii.7 LIST OF WORKING PAPERS

WORKING PAPERS				
Number	Agenda Item	Title	Date	Prepared and Presented by
WP/01	1	Approval of the Meeting Agenda and Schedule	11/07/06	Secretariat
WP/02	2.1	Status of E/CAR WG Conclusions and Decisions of Previous E/CAR WG Meetings	10/07/06	Secretariat
WP/03 Rev.	2.2	Specific Air Navigation Planning and Implementation Deficiencies in the Eastern Caribbean	24/07/06	Secretariat
WP/04	2.3	Review of Strategy for Operational Integration of the ATM Automated Systems	24/07/06	Secretariat
WP/05	3	ATM performance objectives for the NAM and CAR Regions related to ICAO Global Plan Initiatives (GPI)	24/07/06	Secretariat

WORKING PAPERS				
Number	Agenda Item	Title	Date	Prepared and Presented by
WP/06	4.1	Status of implementation of the E/CAR States/Territories on the status of implementation of the AIS/MAP systems.	04/07/06	Secretariat
WP/07	4.2	Status of SAR agreements in the ECAR	24/07/06	Secretariat
WP/08	4.3	Current Status of CNS/ATM Systems Meteorological Components	15/06/06	Secretariat
WP/09	4.4	ATM Developments	25/07/06	Secretariat
WP/10	4.5	Follow-up on the Developments of the E/CAR CNS Systems	18/07/06	Secretariat
WP/11 Rev.	5	Review of the Global and Regional AVSEC Developments and Activities	03/08/06	Secretariat
WP/12	6	Terms of Reference and Work Programme of the Eastern Caribbean Working Group	28/07/06	Secretariat
WP/13	7	Next Meeting Site	01/08/06	Secretariat
WP/14	4.1	Status of the E/CAR AIS Committee	21/07/06	Rapporteur
WP/15	4.1	Current status of Automation in the E/CAR Region	21/07/06	Rapporteur
WP/16	4.4	Missing Flight Plans	25/07/05	France
WP/17	4.4	Improper Use of 121,5 MHz Emergency Frequency	10/07/06	France
WP/18	4.4	Provision of ATFM in the E/CAR	12/07/06	France
WP/19	4.5	E/CAR Network Status	25/07/05	France
WP/20	4.4	Traffic Management During the Next Cricket World Cup	10/07/06	France
WP/21	4.4	Future of CNS/ATM in the E/CAR Region	27/07/06	Barbados
WP/22	4.4.	Revisions to the West Atlantic Route System (WATRS)	28/07/06	United States
WP/23	4.1	Report on Aeronautical Information Services Technical Visits	31/07/06	Trinidad and Tobago
WP/24	4.4	Demand and Capacity Balancing in the E/CAR	02/08/06	Secretariat
WP/25	4.4	Programmes related with the Implementation of an Air Traffic Management (ATM) and Safety Management System (SMS)	03/08/06	Secretariat

ii.8 LIST OF INFORMATION PAPERS

INFORMATION PAPERS				
Number	Agenda Item	Title	Date	Prepared and Presented by
IP/01	--	General Information	05/07/06	Secretariat
IP/02 Rev.	--	List of Working and Information Papers	07/08/06	Secretariat
IP/03	4.5	New NDB, DVOR/DME for Trinidad	04/05/06	Trinidad and Tobago
IP/04	4.5	NDB, Localizer/DME Tobago, Crown Point Aerodrome	02/05/06	Trinidad and Tobago
IP/05	4.5	CNS-HF Communications (PIARCO FIR)	02/05/06	Trinidad and Tobago
IP/06	4.5	CNS-Aeronautical Fixed Telecommunications Network (AFTN)	02/05/06	Trinidad and Tobago
IP/07	4.5	CNS-Eastern Caribbean Digital Network (AFS)	02/05/06	Trinidad and Tobago
IP/08	4.5	Current status of the Federal Aviation Administration Telecommunications programs	21/07/06	United States
IP/09	4.5	Radar Developments in the E/CAR	25/07/06	France
IP/10	4.1	Status of Implementation of the AIS/MAP Systems in Anguilla, British Virgin Islands and Montserrat	25/07/06	United Kingdom
IP/11	4.4	ATM Modernization Plan	31/07/06	Trinidad and Tobago
IP/12	4.1	Improper Addressing of Flight Plans in the Eastern Caribbean Area	31/07/06	Trinidad and Tobago
IP/13	7	Licensing of Air Traffic Controllers in the OECS	31/07/06	ECCAA
IP/14	4.5	Status and Position of V.C. Bird Radar System	07/08/06	Antigua and Barbuda
IP/15	4.1	Discontinuance of "P" series of NOTAMs	07/08/06	Trinidad and Tobago

ii.9 LIST OF DISCUSSION PAPERS

DISCUSSION PAPERS				
Number	Agenda Item	Title	Date	Prepared and Presented by
DP/01	4.1	Report of the AIS Ad hoc Meeting	09/08/06	Rapporteur
DP/02	4.4	Report of the ATM Ad-hoc Meeting	09/08/06	Rapporteur
DP/03	4.5	Report of the CNS Ad-hoc Meeting	09/08/06	Rapporteur

ii.10 LIST OF DRAFT CONCLUSIONS

No.	TITLE	PAGE
30/01	IMPLEMENTATION OF WORK PROGRAMMES IN SUPPORT OF STRATEGIC PERFORMANCE OBJECTIVES	3-1
30/02	ACTION PLAN TO IMPROVE AIS IN THE E/CAR	4-1
30/03	AIS TECHNICAL VISITS	4-1
30/04	MEETING OF THE AIS COMMITTEE	4-2
30/05	STATUS OF IMPLEMENTATION OF THE E/CAR AIS/MAP SYSTEMS	4-2
30/06	HARMONIZATION OF THE WGS-84 BOUNDARY COORDINATES OF THE MAIQUETIA AND PIARCO FIRs	4-2
30/07	NATIONAL AND INTERNATIONAL SAR COOPERATION AGREEMENTS IN THE E/CAR	4-4
30/08	PARTICIPATION OF MET PERSONNEL IN ICAO MEETINGS	4-5
30/09	PARTICIPATION IN THE NAT/CAR ATS ROUTES WORKING GROUP MEETINGS	4-7
30/10	ACTION PLAN TO ESTABLISH DEMAND AND CAPACITY BALANCING MEASURES IN THE E/CAR	4-8
30/11	PARTICIPATION IN THE IMPLEMENTATION OF DEMAND AND CAPACITY BALANCING MEASURES IN THE E/CAR FOR THE CRICKET WORLD CUP 2007.	4-8
30/12	ATFM OPERATIONAL LETTERS OF AGREEMENT	4-9
30/13	BEGIN TRIALS ON THE USE OF ICAO ELECTRONIC GLOBAL AIR NAVIGATION PLANNING TOOLS	4-10
30/14	REGIONAL ATM SAFETY MANAGEMENT SYSTEM	4-11
30/15	ACTION PLAN TO IMPROVE CNS IN THE E/CAR	4-12
30/16	RECRUITMENT OF AVSEC PROFESSIONALS	5-1
30/17	AVIATION SECURITY POINT OF CONTACT (POC) NETWORK	5-3
30/18	REORGANIZATION OF THE ATM TERMS OF REFERENCE AND WORK PROGRAMME OF THE E/CAR/WG	6-1
30/19	PARTICIPATION OF ST. MAARTEN AND SAN JUAN PERSONNEL IN E/CAR MEETINGS	7-1

ii.11 *Speech delivered by Mr. Eustace Cherry on behalf of the Honourable Minister for Civil Aviation at the Opening Ceremony of the 30th Eastern Caribbean Working Group Meeting of the International Civil Aviation Organization on 7 August 2006.*

Before I get down to business with the task at hand, I would like to take this opportunity to mention, that the Hon Minister for Civil Aviation could not be with us this morning because of prior commitment of a pressing nature.

In the absence of the Minister the Permanent Secretary would have been confronted with the task, but unfortunately he too can't be with us due to imperative engagements abroad.

I am therefore clothed with the important trust of making brief welcoming remarks on behalf of the Ministry through words of the Minister.

I will now synchronize his words.

On behalf of the government and the warm-hearted people of St Lucia, I embrace this opportunity to make brief welcoming remarks, framed with my gratitude for your presence and principle in our beloved island.

I am indeed very pleased to note that based on the content of the various foregoing addresses, I do not have to make any forays into civil aviation issues which are a matter for appropriately trained and experienced technocrats.

However, as the Minister for Civil Aviation I wish to place on record that I do have a lively interest in the matter. In fact, I have a fundamental role to play in the management of this country. My role as it relates to civil aviation is two-fold.

First, our government like many others in the region has always recognized safety security and efficiency as top priorities of the civil aviation industry. We have also recognized that the industry plays a pivotal, or rather, critical role to our economic development. With this recognition, I have to insure strong aviation synchronization.

Second, sustainability although it may sound rather simply is yet a demanding task. I have to ensure that the contributions of civil aviation are maintained and that it can grow with exponential rhythm for our future generations. This present venture is in part, a behind-the-scene gesture in enhancing that sustainability.

Many of you and I hope all of you entered St. Lucia by air. I would find it rather fanciful to believe that any of you on this business trip would have traveled as if it were a leisure trip. By that, I mean to have entered by ship. If you were to categorize travelers, it may be plausible to concur that those who utilized that method of travel would travel with a significant other or the whole family in a leisure atmosphere.

In any event, if you entered by air, you may have observed the subtleness in the travel process. This subtleness is because of people like you. This group as you know was established for examining problems

affecting all fields of Air Navigation, along with airspace organization and utilization in the region. This process helps contribute significantly to the efficiency of air travel.

I believe it is appropriate to remind you that the last meeting (18th meeting) held in St. Lucia was in October 1994. This present rotation comes in at an opportune time as we gear ourselves to host Cricket World Cup 2007. During that period, we will need safe and efficient skies and I remain optimistic that this deliberation will lend a hand to that effect.

Now, as you may be aware, our country depends heavily on tourism for economic growth. For it to be sustainable, we need to strengthen all facets as it relate to that industry in an effort to create synergy. Civil aviation is one of those facets and your presence here is a momentous example of the plausible effort.

Whilst agriculture had for centuries been the dominant sector of our regional economy, I wish to echo that today tourism is the region's leading sector, which depends on air transportation for its survival. Hence, the value of visitors, freight exports and imports via air transport is of major economic significance to the region. In addition, the availability of the region's airports has created entirely new industries, such as the export of fresh fruits from the region to Europe, as it provides a faster mechanism for distributing those time sensitive goods.

Air transport is also the most reliable means of inter-island transportation within the region. It serves as a vital transportation service for local businesspersons, traders as well as the local traveling public. Safe reliable air transport is vital in this community of small island nations.

To see the true essence of air transport it would be appropriate for you to, for a brief moment, imagine our region without the services of air transport. Having done that you would agree that this industry has become an integral and vital part of the region, which provides significant public benefits. It has created jobs, brought prosperity, increased trade and has brought new travel and tourism opportunities to the islands of the Caribbean.

Besides providing high levels of employment, this industry provides both investment opportunities and public service vital to an increasing global economy. Hence, the sustained development of our region, especially in this global economy, is critically dependent on a comprehensive air transportation system, which is responsive to the tourism and trade needs of the region.

Accordingly, the benefits of being linked to the rest of the world by an efficient network of air navigation system are increasingly significant. A simple representation can be realized with the reality that efficiency leads to lower cost to the airlines, which in turns passes on the low cost to our people in the form of lower airfares. This domino effect thus makes air travel increasingly affordable.

However, while all those activities impact positively on our respective economies I realize that it presents an unparalleled challenge for you who are charged with the mammoth responsibility for behind-the-scene of maintaining and guaranteeing the safety and efficiency of our airways especially with the increased traffic levels at our airports that accompany those economic developments.

Further, newer and larger aircraft, which transport a greater number of passengers at lower unit cost to the airline over longer distances, are now in operation. With the introduction of such aircraft, our capability of airfield and air navigation system becomes critical. It is thus superfluous to add that you are expected to, among other things, address these issues during your deliberations.

We have been fortunate, yet not justified, to have the airlines blamed for our shortcomings. By this I mean when there are delays for example, when it may be as a result of our procedures in place, the passengers tend to blame the airline they are using at the time. We cannot escape the fact that decisions we make and system we have in place can very well be creating inefficiencies which could be contributing factors for delays in the air travel industry.

In view of the foregoing, the gathering here today is definitely not a product of spontaneous combustion but rather a team conceived out of the pressing need for technocrats to organize themselves into an integrated whole. In that way, you shall effect the conditions necessary for identifying and curbing deficiencies that exist in our air navigation system. Please feel good about this, feel good about what you do. Play your part in making air travel safer and more efficient. This as you know depends on deliberations like the one at hand.

To end, 30th Eastern Caribbean Working Group Meeting, you are on final approach, you are cleared to land, winds are favorable and the atmospheric conditions allow for unlimited visibility.

With this, I take great delight in welcoming this regional meeting and delegates to our beloved island of St Lucia. I hope you will find St Lucia simply beautiful, with warm-hearted people.

Against this background, and as I remain optimistic that this venture will serve its purpose, it is my distinct pleasure to officially declare the meeting open and wish you all ample success once again in your deliberations in the conducive environment of St Lucia.

Thank You.

LIST OF PARTICIPANTS

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30TH EASTERN CARIBBEAN WORKING GROUP MEETING
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30TH EASTERN CARIBBEAN WORKING GROUP MEETING
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List of Participants – General Information

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Agenda Item 1 Approval of the Meeting Agenda and Schedule

1.1 The Secretariat presented WP/01 with the Draft Meeting Agenda and a revised Schedule. The Meeting approved the Agenda and decided to deal with all Agenda Items in plenary. As was agreed in the previous E/CAR WG Meetings, the invitation letter informed that Ad-hoc Groups would be formed to deal with specific matters as established. It was agreed that the ad hoc groups' work methodology was related on this occasion to Agenda Items 4.1 AIS; 4.4, ATFM; and 4.5, G/G Telecommunications.

Agenda Item 2 General Air Navigation Matters

2.1 Valid Conclusions/Decisions of previous E/CAR/WG and E/CAR/DCA, Meetings

2.1.1 The Meeting reviewed the status of Conclusions supported electronically by the 20th Directors General Meeting of the Eastern Caribbean and valid E/CAR/WG Decisions. As a result of this review, the Meeting agreed that the Conclusions and Decisions shown in the **Appendix** to this part of the Report are still valid.

2.1.2 Also the Meeting agreed that the following conclusions were completed or superseded by new ones.

CONCLUSION 29/1	DEVELOP THE NATIONAL AND INTERNATIONAL SAR COOPERATION AGREEMENTS IN THE E/CAR
CONCLUSION 29/3	SIGNATURE OF LOAs
CONCLUSION 29/5	NOTIFICATION OF NETWORK FAILURES AND FEEDBACK PROCEDURES BETWEEN THE FRENCH ANTILLES AND TRINIDAD AND TOBAGO
CONCLUSION 29/8	E/CAR WG TERMS OF REFERENCE AND WORK PROGRAMME
CONCLUSION 28/2	ESTABLISHMENT OF AN AIS/MAP AUTOMATED REGIONAL DATABASE SYSTEM
CONCLUSION 28/5	PARTICIPATION OF AIS STAFF IN TECHNICAL VISITS PROGRAMME
CONCLUSION 28/7	RNAV AND RNP IMPLEMENTATION IN THE EASTERN CARIBBEAN
CONCLUSION 28/8	IMPLEMENTATION OF ATS SAFETY MANAGEMENT PROGRAMMES AND MINIMUM SAFETY LEVELS

2.2 Deficiencies

2.2.1 Based on WP/02 presented by the Secretariat, the Meeting was informed on the status of the outstanding deficiencies of States and Territories of the E/CAR, as well as those deficiencies where action plans for their correction have been submitted and those deficiencies which have been corrected or eliminated. The GREPECAS Air Navigation Deficiencies Database (GANDD) is based on the uniform methodology for identification, assessment and reporting of air navigation deficiencies in the different fields of air navigation which is now available at the NACC Office electronic address: www.mexico.icao.int/bases accessed with a username and password assigned to the nominated person in each Administration.

2.2.2 In accordance with the information referred in the above paragraph, the Meeting noted that not all States/Territories have informed the ICAO NACC Regional Office on their respective action plans to correct the deficiencies in the air navigation fields. In accordance with Article 28 of the Chicago Convention for providing safe, regular and efficient air navigation services, the Meeting recalled that the solution to Air Navigation deficiencies is the responsibility of Civil Aviation Authorities (CAAs) as well as the requirement to update accordingly the related information on their list of deficiencies in the database.

2.2.3 The Meeting took note of the GREPECAS Decision 12/124, which urges States to eliminate urgent deficiencies by **31 December 2007**, and subsequently the GREPECAS/15 meeting will review the deficiencies solution status with a view to considering the application of last resort action, after exhausting all the alternatives, wherever applicable. The Secretariat offered support in the preparation and implementation of action plans to resolve deficiencies to those States/Territories who have not yet updated them.

2.3 *CNS/ATM Systems*

Review of regional strategy for integration of the ATM automated systems

2.3.1 Based on the regional strategy for integration of ATM automated systems approved by GREPECAS, the Meeting agreed to restructure and include certain tasks in the **performance objective 6, Improve ATM situational awareness**, contained in **Agenda Item 6, Appendix B** to this part of the report as an action plan for interfacing of ATM automated systems which is related to the new ICAO global plan initiatives (GPI).

2.3.2 The Meeting also considered that States and Territories should carry out analyses to provide appropriate ATS surveillance in accordance with the airspace classification, as well as other requirements to satisfy future operational applications of the ATM community. The full action plan should consider:

- a) that each State/Territory of the Eastern Caribbean appoint an expert as point of contact to carry out works for the evolutionary interfacing of ATM automated systems;
- b) follow guidance material specified in the regional Interface Control Document (ICD) for data interfacing and common procedures to exchange messages between ATM automated systems;
- c) establish bilateral or multilateral agreements as appropriate, among States/Territories of adjacent airspaces for trials and operational implementation/integration of ATM automated systems;
- d) establish necessary measures for human resources planning and training;
- e) identify other potential benefits for the ATM community that may be obtained in the long-term;
- f) conduct a cost-benefit analysis; and,
- g) document the action plan providing best experiences to other States/Territories

Future of CNS/ATM in the E/CAR

2.3.3 Barbados presented a Working Paper reviewing CNS/ATM programmes in which the E/CAR WG had made significant advancements and those which have been left dormant over the past two years. The Meeting was reminded that these programmes were adopted for implementation using a regional approach with full implementation anticipated by 2015. Some of these programmes were identified as:

- (a) The establishment of local CNS/ATM plans.
- (b) The establishment of a Regional CNS/ATM plan coordinated by a private entity.
- (c) Completion of Planimetric surveys and the change from conventional coordinates to the WGS-84 system.
- (d) The design of RNAV Non-Precision Approaches for all regional airports.
- (e) The establishment of a new Digital Network for voice and data point-to-point communications.

2.3.4 The Meeting agreed that States and Territories need to review their CNS/ATM plans and the region as a whole must revitalize the regional CNS/ATM plan.

STATUS OF CONCLUSIONS AND DECISIONS OF MEETINGS UP TO AND INCLUDING THE 29TH E/CAR WG MEETING

FIELD	CONCLUSIONS / DECISIONS	ACTION BY:	COMMENTS	STATUS
ATM	CONCLUSION 29/2 PROCEDURES FOR FILING FPLs That, a) ICAO request IATA to inform procedures for authorized airlines to directly file their flight plans on the AFTN; and b) the States in order to comply with the addressing rules, adopt a common method to assess the technical and operational causes of discrepancies related to FPLs.	ICAO, IATA, States	Doc 4444 contains the procedures for the transmission of FPL messages. ATM Committee is developing related procedures and expects to finish them by 01-03-07.	a) Completed b) Valid
CNS	CONCLUSION 29/4 IMPROVE CONNECTION BETWEEN E/CAR NETWORK AND FAA AFTN AND VOICE CIRCUITS That, a) the FAA CERAP coordinates with the Puerto Rican Telephone Company (PRTC) and MCI to move the Antigua circuit to a different T-1; and b) FAA and TSTT coordinate, if necessary, a stress test of the Antigua circuit once a separate T-1 has been implemented by PRTC.	USA, TSTT	FAA and TTCAA continue working to improve the connection. First phase involved a direct X.25 connection between T&T AFTN switch and FAA Atlanta and removing the PAD in Trinidad and Tobago Thales AFTN switch. Second phase will be to change from X.25 to TCP/IP protocol which should be completed in late 2006.	Valid
CNS	CONCLUSION 29/6 INCREASE THE RELIABILITY OF THE E/CAR DIGITAL NETWORK That the E/CAR States/Territories establish an urgent action plan to increase the reliability of the E/CAR Digital Network to attain a higher level of safety of the air navigation operations.	E/CAR States/Territories	TTCAA discussed an action plan for the improvement of the network, which will be circulated to States.	Valid
CNS	CONCLUSION 29/7 THE NEED OF A CONTRACT WITH THE PROVIDER TSTT That, a) in light of the serious concerns of the E/CAR States, the DGCA of TTCAA should be urged to take the necessary action so that an interim contract could be concluded with TSTT as soon as possible, until the matter of a more permanent service provider be resolved; b) the TTCAA request, as a matter of urgency from TSTT information on circuit documentation, spares, number of trained personnel and quarterly reports on the status of the AFS network inclusive of statistical failures; c) the TTCAA supports continued regular teleconferences with the users of the AFS network; and d) TTCAA provide clarification, as a matter of urgency, on the future development of the AFS network.	Trinidad and Tobago	a) a draft copy of a contract has been developed and will be circulated to the DCAs prior to signatures b) Completed c) On-going d) Completed.	Valid

FIELD	CONCLUSIONS / DECISIONS	ACTION BY:	COMMENTS	STATUS
AIS	CONCLUSION 28/4 AIS COORDINATION BETWEEN TRINIDAD AND TOBAGO AND VENEZUELA That the ICAO NACC Regional Office make the corresponding arrangements and provide the necessary support to carry out the coordination between Trinidad and Tobago and Venezuela CAAs in AIS matters.	ICAO	Trinidad and Tobago and Venezuela made progress; expect completion by May 2007.	Valid
ATM	DECISION 28/11 ACTION PLAN FOR THE IMPLEMENTATION OF THE D-ATIS AND PDC SERVICES IN INTERNATIONAL AERODROMES OF THE EASTERN CARIBBEAN. That Trinidad and Tobago: a) develops, in coordination with NACC Regional Office, an action plan to implement ATS data link technology with benefits for ATS providers and users in the Eastern Caribbean; and b) presents to the 29 th E/CAR WG the Action Plan to implement the D-ATIS and PDC services in the Eastern Caribbean international aerodromes.	Trinidad and Tobago	In progress	Valid
CNS	CONCLUSION 27/20 RADAR IMPLEMENTATION IN ANTIGUA That, Antigua and Barbuda expedite the commissioning of the new radar in Antigua.	Antigua and Barbuda	Antigua and Barbuda presented updated information (IP-14).	Valid
CNS	CONCLUSION 27/21 REVIEW OF THE VHF AIR-GROUND VOICE COMMUNICATIONS COVERAGE That, States/Territories/International Organizations send to the ICAO NACC Regional Office information on their respective VHF air-ground voice communications stations using the form shown in Appendix E, and calculated theoretical graphic coverage and/or in-flight inspection measures, where available, by 30 November 2003 .	States/ Territories	Montserrat indicated that they do not have a date by which time the information will be submitted; Trinidad and Tobago plans to implement new VHF frequencies.	Valid
CNS	CONCLUSION 27/22 GUIDANCE FOR THE WORK REGARDING THE VHF AIR-GROUND VOICE COMMUNICATIONS COVERAGE That, States/Territories with TMAs a) should calculate coverage for its terminal areas considering the minimum in-flight levels to be 4,000 ft and the maximum 12,000 ft and for control areas the minimum of 7,600 m (25,000 ft) and the maximum of 13,700 m (45,000 ft) flight level in accordance with the specifications of Annex 10, Volume III, Part II, Chapter II, on the required field intensity levels; b) propose corrective measures if range gaps are identified; and c) present this information at the 28th E/CAR IWG Meeting.	States/ Territories	To be finish by ECAR WG 31.	Valid
CNS	CONCLUSION 27/23 IMPROVEMENT TO AFTN CIRCUITS That, ICAO support Trinidad and Tobago by coordinating and facilitating the convening of bilateral meetings with the United States and Venezuela with the aim of agreeing to the details of implementation of the Caracas–Port of Spain AFTN circuit, utilizing 2400 bps or higher, and X.25.	ICAO	This project will be completed by September 2006 with the commissioning of a REDDIG VSAT Node in Trinidad.	Valid

Agenda Item 3: Second amendment to the Global Plan for CNS/ATM systems (Doc 9750) and new related ICAO initiatives

3.1 The Secretariat made a comprehensive presentation on the Second Amendment to the *Global Air Navigation Plan for CNS/ATM Systems* (Doc 9750), which will be renamed the Global Air Navigation Plan (Global Plan). It was noted that the Global Plan Initiatives (GPIs) contained in the revised Global Plan were developed by the Air Navigation Commission on the basis of a roadmap which was aimed at bringing near and medium term benefits to the ATM community, taking advantage of currently available aircraft capabilities and ATC infrastructure and technology.

3.2 The Meeting noted the necessity in the E/CAR to restructure ATM tasks based on performance objectives which are in accordance with the new ICAO global plan initiatives (GPI), and agreed that its future work should be justified and based on clearly established performance objectives in support of the ICAO Strategic Objectives. Initial review of ATM tasks is included in the Work Programme, Agenda Item 6, Appendix B.

3.3 In follow-up to the above discussions, the Meeting agreed to adopt a performance-based approach for ATM regional tasks and to take early steps to ensure that its work will fully support the business planning processes of ICAO, the directives of the ICAO Council, and the ALLPIRG Conclusions. To this end the Meeting agreed the following:

DRAFT

CONCLUSION 30/01

IMPLEMENTATION OF WORK PROGRAMMES IN SUPPORT OF STRATEGIC PERFORMANCE OBJECTIVES

That, in support of the evolution from a systems-based to a performance-based approach to planning and implementation of the air navigation infrastructure, States/Territories of the E/CAR develop and implement work programmes, as depicted in Agenda Item 6, Appendix B, to this report, in support of the following performance objectives:

- i) Optimization of the ATS route structure
- ii) Improve demand and capacity balancing
- iii) Enhance civil/military coordination and co-operation
- iv) Align upper airspace classification
- v) Implement RNP approaches

Agenda Item 4 Specific Air Navigation Activities and Developments

4.1 Aeronautical Information Services (AIS)

4.1.1 The Meeting was informed on the lack of activity of the AIS Committee since its inception at the 24th E/CAR WG in San Juan, Puerto Rico. With the growing importance of AIS in the global concepts for CNS/ATM systems, and its impact on aviation safety in terms of providing critical information, it is essential to regularize the activities of the AIS Committee. Further stressing the AIS resources of the E/CAR is the upcoming 2007 Cricket World Cup, being hosted by nine States/Territories in the Eastern Caribbean and neighbouring areas. AIS facilities will play a significant role in disseminating information leading up to and during this extensive event. The Meeting formulated the following two Draft Conclusions:

DRAFT

CONCLUSION 30/02

ACTION PLAN TO IMPROVE AIS IN THE E/CAR

That the AIS Committee develop and present to the DCAs an action plan specifying agreed solutions to improve AIS in the E/CAR in accordance with information contained in **Appendix A** to this part of the report and keeping in mind the ATM requirements relating to the 2007 Cricket World Cup.

DRAFT

CONCLUSION 30/03

AIS TECHNICAL VISITS

That in order to improve AIS technical expertise and harmonization in the E/CAR:

- a) the TTCAA, on behalf of PIARCO AIS, extend an invitation by the first half of September 2006 to the E/CAR States/Territories to send two of their AIS staff on AIS Technical Visits to Piarco AIS and that receiving States/Territories reply within two months of receipt of the invitation;
- b) the E/CAR Civil Aviation Authorities support a two day visit of their AIS staff to Piarco AIS in accordance with the adjusted tentative schedule and agenda contained in **Appendix B**; and
- c) the E/CAR States/Territories support the visit of the Piarco AIS Chief Technical Officer to their facilities for the purpose of identifying deficiencies in accordance with the list referred in **Appendix C**.

4.1.2 It was agreed that the AIS Committee must urgently work to define the Integrated Automated AIS and draft an action plan for its implementation in accordance with the AICM/AIXM concepts recommended by the 11th Air Navigation Conference; draft an action plan to resolve E/CAR AIS deficiencies; and draft an action plan for the full implementation of E/CAR AIS Quality Assurance Systems using ICAO guidelines. To this end, the following Draft Conclusion was formulated:

DRAFT

CONCLUSION 30/04

MEETING OF THE AIS COMMITTEE

That in order to advance the AIS activities of the E/CAR:

- a) the 2nd Meeting of the E/CAR AIS Committee be held in 2007 for the purpose of:
 - defining the Integrated Automated AIS in the E/CAR;
 - drafting the Implementation Plan of the Integrated Automated AIS in the E/CAR through Aeronautical Information Management using the AICM and AIXM models;
 - resolving other E/CAR AIS deficiencies; and
 - implementing the E/CAR AIS Quality Assurance Programme.
- b) that ICAO, in cooperation with France and the United States, support the Meeting with technical experts in AIS quality assurance programmes and Aeronautical Information Management implementation.

4.1.3 The Meeting discussed the necessity of correctly reflecting the status of AIS/MAP systems in the E/CAR in order to focus attention on finding solutions to problems and to take immediate actions to correct them. To this end, the Meeting agreed on the following:

DRAFT

CONCLUSION 30/05

STATUS OF IMPLEMENTATION OF THE E/CAR AIS/MAP SYSTEMS

That in order to reflect the fulfilment of the AIS/MAP systems in the E/CAR, States/Territories present information in the format contained in **Appendix D** to this part of the report, and submit advances to the NACC Regional Office in this respect by **15 November 2006** and thereafter on a quarterly basis until complete.

4.1.4 With regards to the implementation of WGS-84 within the E/CAR, the Meeting was informed that almost all coordinates are now correctly published in accordance with WGS-84 standards. Piarco AIS will make note of the few questionable coordinates and notify the respective Civil Aviation Authority. Additionally, the FIR boundary coordinates between Maiquetia and Piarco have not yet been resolved. To correct this, the Meeting agreed on the following Draft Conclusion:

DRAFT

CONCLUSION 30/06

HARMONIZATION OF THE WGS-84 BOUNDARY COORDINATES OF THE MAIQUETIA AND PIARCO FIRs

That Trinidad and Tobago and Venezuela:

- a) finalize the harmonization of bordering geographical coordinates of their respective FIRs by May 2007, and
- b) inform ICAO of the completion of this activity.

4.1.5 Several meeting participants informed the Secretariat that while the ICAO AIS Regional Officer had visited their States/Territories recently, reports of those visits had not yet been provided. The Secretariat provided copies of reports for those members which were completed. The remainder will be forwarded shortly.

4.1.6 The Discussion Paper of the AIS Ad-Hoc group is shown in **Appendix E** to this part of the Report.

4.2 Search and Rescue (SAR)

4.2.1 The Meeting recalled that SAR cooperation should be fostered by the States and Territories for an effective SAR regional system. This cooperation should consider civil and military authorities and aeronautical and maritime agencies all combining efforts through multi-lateral agreements. The purpose is to ensure the RCC can carry out coordination with all parties concerned regarding localization, assignment of equipment and personnel through a common communication network, allowing easy operational coordination between SAR units.

4.2.2 It was agreed that States and Territories of the E/CAR must continue working to achieve an effective regional SAR system through agreements with neighbouring States addressing, among other items, entry conditions of SAR brigades of one State into the territory of another State with a minimum of formalities to assist in the rescue of the accident survivors. The SAR agreements should include the following:

- general information on SAR organizations;
- level clearance so that an RCC may allow SAR units to enter territorial areas;
- establishment of common procedures;
- pooling of facilities, when appropriate;
- cooperation on international SAR projects of common interest;
- liaison visits; and
- joint training exercises.

More comprehensive SAR agreements should also include:

- identification of SAR areas;
- information on RCC and SAR communications;
- agreements to exchange SAR information;
- procedures for requesting and providing SAR assistance;
- directories of SAR facilities;
- lists of special SAR services available; and
- scope of SAR coordination, research, testing and technical assistance.

4.2.3 Considering this information, the Meeting agreed on the following Draft Conclusion:

DRAFT

CONCLUSION 30/07

**NATIONAL AND INTERNATIONAL SAR COOPERATION
AGREEMENTS IN THE E/CAR**

That States/Territories of the E/CAR Area that have not yet done so:

- a) present an up-to-date report of their bilateral and/or multilateral SAR cooperation agreements with other States/Territories/International Organizations which allow the use of mechanisms and resources to improve the SAR regional system; and
- b) submit to the ICAO NACC Regional Office by **30 August 2007** a report on the progress attained in this regard.

Contingency planning

4.2.4 The Meeting reviewed the ATM contingency plan for PIARCO FIR, and agreed to provide the name of the point of contact in each State and Territory of the E/CAR who will carry out coordination of contingency measures. Contingency planning in the E/CAR should also contain measures to prevent air navigation disruptions due to human or natural disasters so as to avoid emerging risks to civil aviation.

4.3 Aeronautical Meteorology (MET)

4.3.1 The Meeting took note that the new technologies applicable to MET service will demand better coordination between ATS and meteorological authorities, and recalled that the meteorological components 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).

4.3.2 It was recognized that meteorological procedures are undergoing important changes and difficulties are encountered with MET information exchange among the States and Territories of the Eastern Caribbean. Compounding this issue is the limited participation of E/CAR MET personnel at ICAO Meetings, particularly the AERMET Subgroup where MET advances are reviewed and agreed. The Secretariat informed that invitation letters were sent to MET authorities urging them to participate in E/CAR/WG Meetings and the AERMET SG, to no avail.

4.3.3 It was noted that aviation weather is given lower priority by MET authorities and concern was expressed regarding the potential ramifications of this attitude on civil aviation. The Meeting regretted the lack of participation of MET experts and approved following Draft Conclusion:

DRAFT

CONCLUSION 30/08

PARTICIPATION OF MET PERSONNEL IN ICAO MEETINGS

That, where applicable, Civil Aviation Administrations make the necessary coordinations with national meteorological services to:

- a) enable the participation of meteorology experts in ICAO meetings;
- b) assign a MET expert to be directly contacted by the AERMET Subgroup Secretariat and by the task forces' rapporteurs to carry out the required actions in their respective work programmes; and
- c) send the contact information of the MET expert assigned to the ICAO NACC Office as soon as possible and, in any event, not later than **15 March 2007**.

4.4 Air Traffic Management (ATM)

Airspace Organization and Management (AOM)

4.4.1 The Meeting recognized that States/Territories have achieved great progress in implementing ATM in the E/CAR; notwithstanding, in spite of the efforts attained there are still some inconsistencies to be resolved regarding the airspace organization and strategic management, such as:

- discontinuities and differences in classification and transition altitudes between adjacent airspaces;
- requirements to fly departure and arrival procedures;
- operation of aircraft at inefficient altitudes, speeds, and in unfavorable winds;
- less than optimum use of scarce resources such as airspace and aerodrome capacity;
- limited collaborative decision making between Civil Aviation Authorities, ATM providers, aerodrome authorities and aircraft operators;
- limited facilities for real-time information exchange between ATM providers, aerodromes and aircraft operators; and,
- insufficient flexibility to permit optimum management of weather-related disruptions to airline operations.

4.4.2 To achieve a regional ATM system, the totality of airspace should be considered as an available resource for users, establishing a dynamic and flexible management wherein any restriction may be considered only on a temporary basis. States should encourage the flexible use of the global airspace through the optimization and equitable balance of its use by civil and military operators. Also, to the extent possible, airspace should be structured free from operational discontinuities, inconsistencies and differing rules and procedures.

4.4.3 Proper alignment of airspace classifications can facilitate the implementation of ATFM service, introduction and better utilization of data link communications, an improved flight plan processing system, and advanced airspace management coordination tools and message exchange capabilities, leading to progressively more flexible and dynamic airspace management. Airspace classifications should be harmonized across adjacent FIRs as defined in Annex 11.

Implementation of RNAV Routes and Required Navigation Performance (RNP)

4.4.4 The future strategy for RNAV/RNP implementation between city pairs including performance-based navigation (PBN) for en-route, terminal and approach flight phases should take into account the new ICAO provisions for future RNAV and RNP implementation. Some airports which have implemented GNSS procedures in Caribbean are:

AUA: Aruba	SDQ: Santo Domingo
NAS: Nassau	BGI: Barbados
STT: St. Thomas	GCM: Grand Cayman
STX: St. Croix	KIN: Kingston
SJU: San Juan	MBJ: Montego Bay
POS: Port of Spain	PLS: Providenciales
GDT: Grand Turk	PUJ: Punta Cana (Higüey)
FPO: Freeport	POP: Puerto Plata
TAB: Tobago	

Revisions to the West Atlantic Route System (WATRS)

4.4.5 The United States presented its project to revise the West Atlantic Route System (WATRS) airspace which will provide increased capacity, additional fixed routes, and flexibility through implementation of a more efficient lateral separation standard and redesign of the ATS Route Structure. The project has been designated the “WATRS Plus Airspace Redesign and Separation Reduction Initiative” (WATRS Plus) and is depicted in the **Appendix F** to this part of this report.

4.4.6 The Meeting took note that the WATRS was redesigned in 1995 for more efficient operation. This revision was extremely successful, resulting in the elimination of many restrictive routing requirements, and prepared the airspace for the introduction of Reduced Vertical Separation Minimum. Improved aircraft navigation and ATC ground capabilities including the use of the Ocean21 automation system at New York Center, provide an opportunity to implement additional separation reductions and to reorganize the route system to increase capacity and efficiency in this area.

4.4.7 The current structure of WATRS airspace with its lateral separation requirement of 90 nautical miles between routes does not lend itself to adding additional fixed routes as they would conflict with existing heavily travelled north/south routes. This would cause undue restrictions on all aircraft in the airspace and would result in unfavorable altitude assignments and other restrictions that may impact operator costs (time and fuel).

4.4.8 Preliminary studies indicate that a lateral separation reduction from 90 to 50 nautical miles in WATRS Plus airspace is attainable using Required Navigation Performance (RNP) 10 as the minimum navigation performance standard. Preliminary analyses of aircraft navigation performance indicates that the ICAO endorsed Target Level of Safety (TLS) can be met in the WATRS Plus airspace. Additionally, the project will include harmonizing the WATRS Plus airspace redesign with adjoining ATS route structures in accordance with Global Plan Initiative 1, Optimize the ATS route structure in both terminal and en-route airspace.

4.4.9 It is estimated that WATRS Plus separation reduction and airspace redesign could be implemented in approximately two years. This revision will include lateral separation reduction, a new route structure, and the increased ability to file and fly random routes. Because FAA will be in a position

to re-evaluate border crossing points along the southern Miami and San Juan Flight Information Regions, an opportunity exists to analyze routes originating further south in the Caribbean and South America feeding traffic to/from WATRS.

4.4.10 As initial international coordination, the ICAO NACC office has already forwarded meeting invitations to the appropriate North Atlantic and Caribbean States, Territories and International Organizations requesting that they provide technical and operational expert representation in the NAT/CAR ATS Routes Working Group. The first meeting has been scheduled for 19-21 September, 2006 in Miami, Florida.

4.4.11 The FAA has scheduled a meeting on 22 August in Washington DC with IATA Miami and Montreal representatives and a small group of airline representatives. The objectives of this meeting are to review the preliminary airspace redesign plan, discuss related operational issues and obtain operator input to aid in planning for the September meeting. Meetings will also be scheduled during the course of the next two years to address the operator and airworthiness aspects of RNP 10, if that becomes the facilitating standard.

4.4.12 Considering the WATRS Plus project will provide benefits to all operators and improvements to ATS providers, the Meeting recognized the importance of participation of E/CAR States and Territories, as well as that of Curacao, Jamaica, Trinidad and Tobago, and Venezuela and agreed the following:

DRAFT

CONCLUSION 30/9

PARTICIPATION IN THE NAT/CAR ATS ROUTES WORKING GROUP MEETINGS

That ICAO urge Cuba, Curacao, Dominican Republic, Haiti, Jamaica, Trinidad and Tobago, and Venezuela to participate in the NAT/CAR ATS Routes Working Group meetings for the implementation of the WATRS Plus project in CAR and NAT Regions.

Demand and Capacity Balancing

4.4.13 The Meeting noted that in several NAM/CAR Flight Information Regions air operations saturation periods have occurred, and that in some airports annual traffic increases have reached 13%. It is foreseen that this problem will continue to grow in the traffic flows of the NAM Region to/from the Eastern Caribbean and of the Caribbean to/from Europe.

4.4.14 It was recognized that Air Traffic Flow Management (ATFM) is a service addressed to ensure a balance is maintained between air traffic and the declared capacities of ATC and aerodromes. ATFM helps ATC use, to the maximum extent possible, its capacity to serve the demand. In order to attain its objectives, the ATFM unit (FMU) monitors air traffic and, if applicable, issues management initiatives to keep a safe, orderly and efficient movement of the air traffic flow. For ATFM implementation, performance objective 2, in line with GPI 6 of the new ICAO Global Air Navigation Plan, should be taken into account, as indicated in Agenda Item 6, Appendix B to this report.

4.4.15 The Meeting held extensive ATFM discussions relating to the Cricket World Cup which will begin in March 2007, in the Eastern Caribbean and last for a two month period. It is foreseen that during this event the demand will exceed the current ATC capacity. Due to the importance of the event for the region, efficient procedures must be developed in order to manage all ATM aspects appropriately.

4.4.16 The E/CAR/WG considered that the ATM Committee is the appropriate Group to develop an urgent action plan, in accordance with information contained in **Appendix G, H and I** to this part of the report, to collect traffic forecasts, compare them with the declared system capacity, and establish a plan of regulations to ensure an optimum traffic flow towards or through affected areas. Other data to be gathered are demand and capacity balancing procedures, airport capacity, ATS capacity and air traffic demand. Coordination with adjacent ACCs will be critical for dealing with regional traffic congestion. Keeping in mind the necessity to develop a coordinated action plan for the 2007 Cricket World Cup, the Meeting approved the following two Draft Conclusions:

DRAFT

CONCLUSION 30/10

**ACTION PLAN TO ESTABLISH DEMAND AND CAPACITY
BALANCING MEASURES IN THE E/CAR**

That the ATM Committee develop and present to the DCAs an action plan specifying agreed solutions to establish demand and capacity balancing in the E/CAR in accordance with information contained in Appendices G, H and I to this part of the report and keeping in mind the requirements relating to the 2007 Cricket World Cup.

DRAFT

CONCLUSION 30/11

**PARTICIPATION IN THE IMPLEMENTATION OF DEMAND
AND CAPACITY BALANCING MEASURES IN THE E/CAR FOR
THE CRICKET WORLD CUP 2007.**

That,

- a) States and Territories of the Eastern Caribbean provide the name and related information of the point of contact who will participate in the implementation of demand and capacity balancing measures in the E/CAR; and,
- b) ICAO take action to send invitation letters to Curacao, Dominican Republic, Guyana, Haiti, Jamaica, Suriname, Trinidad and Tobago, United States and Venezuela for their participation in the implementation of demand and capacity balancing measures for the Cricket World Cup to be held during March and April, 2007.

4.4.17 The Meeting also considered appropriate that States and Territories take into account the information included in **Appendices J, K, L, M and N** to this part of the report, containing guidance material on demand and capacity balancing, collaborative decision making, a regional operations plan and a preliminary ATFM strategy. This information can be used as guidelines to determine as guidelines to determine the airport and ATS capacity as well as human resources and training planning for the development of their national plans and an E/CAR ATFM procedural manual.

4.4.18 Additionally, it was considered that the States and Territories should review, through a CDM process, the airspace and airport organization and management allowing flexibility and optimization of resources for the benefit of ATS users and providers as well as other tasks to develop in the short term such as:

- enhance civil/military coordination and co-operation aiming to achieve dynamic and flexible use of airspace;
- the development of an ATFM procedural manual for its common application, including specifications to determine airport and ATS capacity;

- publication of available service and airport capacity information according to ICAO guidelines;
- publication of national procedures in the AIP;
- establish improvements regarding surveillance and automated systems for flight data processing as well as the development and co-ordination of ATFM messages;
- improve human resources planning and required training aspects;
- improve the ATS route network; and
- encourage operational agreements between ATS users and providers for ATFM implementation, especially in those areas where flow problems are already present.

4.4.19 ATFM implementation will facilitate the path towards a seamless, globally harmonized and inter-operable air traffic management (ATM) system, merging efforts, data, knowledge, ideas, and concepts, and it will provide great financial benefits, enhanced safety, increased ATM system capacity, and effectiveness of air operations. In order to improve the efficiency for current air operations in the short term, the Meeting agreed that LOAs must be up-dated to include ATFM measures and to that end, agreed on the following:

DRAFT

CONCLUSION 30/12

ATFM OPERATIONAL LETTERS OF AGREEMENT

That E/CAR States/Territories that have not done so, encourage the ATS providers to include demand and capacity balancing measures in their operational Letters of Agreement by **30 November 2006**.

4.4.20 Discussions of the ATM Ad-hoc Group – Cricket World Cup 2007 ATFM pertaining to the above issues are contained in **Appendix O** to this part of the report.

ICAO Global Air Navigation Plan (ANP) on-line database

4.4.21 The Secretariat presented information on the Global Air Navigation Plan (GANP) database which is available on-line through the ICAO Geographic Information Service/GIS portal with the performance-based approach to measuring success with implementation and the planning process to carry out regional integration and transition to a global ATM system. GIS characteristics include:

- Various formats: software applications, planning documentation, web-based reporting forms, project management tools;
- Common programme templates as the basis for establishing performance objectives and implementation time lines;
- Comprehensive schedule and programme planning activities; and
- Links to relevant guidance material and documentation in order to assist the planner throughout the planning process.

4.4.22 Also, GIS provides for interactive database links in a dynamic chart where the user selects what is to be displayed and functions, such as:

- Zoom in or out;
- Input coordinate lat long;
- Decide the area to be charted;
- Search, query the map for data;
- Perform spatial analysis; and

- Many output options (Extract function, Save as: pdf, text, tab, ai, svg, jpg, and special print functions).

4.4.23 In accordance with recommendations of the Fifth Meeting of All Planning and Implementation Regional Groups (ALLPIRG/5), which supported the use of online global air navigation plan database tools for an interactive and dynamic planning the Meeting agreed the following:

DRAFT

CONCLUSION 30/13

**BEGIN TRIALS ON THE USE OF ICAO ELECTRONIC
GLOBAL AIR NAVIGATION PLANNING TOOLS**

That States/Territories of the E/CAR,

- a) utilize the on-line electronic planning tools provided on the ICAO web page as the common planning and implementation mechanism, ensuring proper coordination of regional and global integration;
- b) review on a regular basis the progress achieved and challenges identified in the implementation process; and
- c) provide feedback to the Secretariat on their possible improvements.

ATM safety management

4.4.24 The Meeting recognized that ATS Quality Assurance Programmes have proven to be an efficient tool which fosters enhancements on ATM safety management through the establishment of several complementary programmes for the assessment of ATS performance such as incidents notification and investigation; incidents prevention; verification and training for ATC proficiency; proficiency in the use of aeronautical language and of English language; and verification of the use of aeronautical phraseology.

4.4.25 Despite the fact that these implementations have been successful in reducing incidents, there are still a large number of human factors errors. Therefore, the Meeting considered necessary the systemic implementation of other aspects regarding performance assessment in order to attain an evolution to an effective regional ATM safety management system in the NAM and CAR Regions.

4.4.26 The implementation of an ATM safety management programme will require defining related performance objectives, and a suitable regional mechanism proving that these objectives are being met, which implies undertaking new tasks to measure the performance of the ATM system. Among these aspects are: sharing information on incidents and accidents on the web, the classification of risk and the suitable measures for its solution, as well as the regional collaboration for the harmonization and exchange of experiences.

4.4.27 The Meeting noted the characteristics of a positive safety culture as well as the elements of a formal safety programme, primarily compliance with ICAO requirements, noting that the implementation of a Safety Management System was an indispensable pro-active tool for creating and reinforcing a safety culture, which requires a commitment at top level of CAAs overriding priority in the management of basic and traditional business processes such as allocating human resources, financing, budgeting, and provide enough funding.

4.4.28 Also it was considered that the ECCAIRS (European Co-ordination Centre for Aviation Incident Reporting Systems) adopted by ICAO are an effective means to implementing and harmonizing taxonomies to facilitate the exchange of occurrence data between States/Territories and between States/Territories and ICAO. The Meeting took note that ECCAIRS software is available on the ICAO web page for States/Territories at no cost. Taking into consideration the information aforementioned, the Meeting approved the following:

DRAFT

CONCLUSION 30/14

REGIONAL ATM SAFETY MANAGEMENT SYSTEM

That the States/Territories of the E/CAR,

- a) take the necessary actions for the implementation of an ATM safety system which ensures air navigation service providers the implementation of a Safety Management System in accordance with the new ICAO Annex 11 guidelines;
- b) establish the acceptable levels and objectives with regard to safety, within the airspace and aerodromes of their jurisdiction;
- c) consider the use of ECCAIRS (European Coordination Centre for Aviation Incident Reporting Systems) as a means for classification of incident and accident taxonomies;
- d) take appropriate actions so as to provide funds for the promotion and enhancement of the ATM safety culture in their respective organizations in accordance with ICAO Doc 9859 guidelines;
- e) foster analysis and co-operation meetings among their related SMS/QAP specialists in order to share experiences for the effective implementation of ATM safety management programmes; and,
- f) participate in the activities carried out by ICAO in order to facilitate the implementation of a regional ATM safety management system.

ATM Modernization Plan in Trinidad and Tobago

4.4.29 The Meeting was informed on efforts carried out by the Trinidad and Tobago Civil Aviation Authority (TTCAA) to significantly upgrade its ATM/CNS systems and facilities. Trinidad and Tobago, in its commitment to enhance air navigation safety, has embarked on the establishment of modern state-of-the art ATM/CNS systems and facilities in order to meet the needs of airspace users within the Piarco FIR and its domestic airspace. The overall ATM/CNS plan, included in the **Appendix P** to this part of the report, requires the fullest cooperation of all stakeholders to ensure maximum benefits for all users.

4.4.30 The Meeting welcomed the information and noted that Trinidad and Tobago, as custodian of the Piarco FIR, remains fully committed to the modernization and development of air traffic services and will continue to pursue the provision of safe, efficient and reliable services in the sub-region.

4.5 *Communications, Navigation and Surveillance (CNS)*

4.5.1 The Meeting took note of the Conclusions and Decisions of previous Meetings pertaining to CNS developments in the Eastern Caribbean and new information provided by the States/Territories.

4.5.2 It was recognized that difficulties continue to be encountered with AFTN coordination between facilities and that measures must be taken to improve this situation. Analyses indicate that the primary cause of failures resides with the end user equipment, and in this regard Trinidad and Tobago presented the action plan being pursued by TTCAA which includes replacement of the AFTN workstations with the Thales Intelligent AFTN Terminals (PC, printer and UPS). States/Territories will need to provide backup generators for extended power outages. Concern was raised by the Meeting that the templates contained in the new software may not be sufficient to meet the needs of the end users as a format/logic check is not included for the operator entering the data, however downstream systems will reject messages based on those errors.

4.5.3 TTCAA and the U.S. FAA informed the Meeting on the AFTN upgrades being pursued by their administrations. Complete transition to TCP/IP is tentatively set for the last quarter of 2006.

4.5.4 Likewise, the problems associated with the voice and data AFS circuits on the Eastern Caribbean Digital Network were analysed and TTCAA provided three options for upgrading/replacing the system. The options will be reviewed by the E/CAR CNS Committee, during a meeting tentatively scheduled for 18-20 October, once the user requirements from each State/Territory have been received. The recommendations and outcomes will be presented to the DCAs for their approval.

4.5.5 The Meeting noted that discrete lines are being installed by France between Trinidad and Guadeloupe and between Trinidad and Martinique to permit remoting of radar-data to Piarco ACC. This should be completed by the end of August, 2006. Action is underway for sharing radar-data between Barbados and Trinidad and Tobago.

4.5.6 Antigua and Barbuda informed the Meeting on the status of the Antigua Radar Project aimed at repairing and commissioning the radar and providing training for both technicians and controllers. The procurement of funds continues to be the inhibiting factor in the completion of the Project. Despite this setback, Antigua and Barbuda remains fully committed to fulfilling its obligation toward radar harmonization within the E/CAR.

4.5.7 Trinidad and Tobago presented information on new NAVAIDs being installed (NDBs, DVOR/DME and Localizer/DME). Concern was raised that Trinidad and Tobago was not following the time table for the E/CAR CNS/ATM Plan in respect of decommissioning NDBs.

4.5.8 Discussions of the CNS Ad-Hoc Group pertaining to the above issues are contained in **Appendix Q** to this part of the report.

DRAFT

CONCLUSION 30/15

ACTION PLAN TO IMPROVE CNS IN THE E/CAR

That the CNS Committee develop and present to the DCAs an action plan specifying agreed solutions to improve CNS in the E/CAR in accordance with information contained in **Appendix R** to this part of the report and keeping in mind the requirements of ATM and AIS fields relating to the 2007 Cricket World Cup.

APPENDIX A
ACTION PLAN TASK LIST FOR E/CAR STATES' AIS

Task No	TASK	DEADLINE	RESPONSIBILITY	REMARKS
1	Invitation to E/CAR States to send their AIS Staff on a 2 day visit to Piarco AIS	15-Sep-06	Trinidad and Tobago Civil Aviation Authority AIS (TTCAA AIS)	Invitations to be sent via email and fax and estimated costing (hotel, etc) also to be done and issued later (about end of September)
2 CWC	Issue of general AIC relating to World Cricket Cup 2007	15-Sep-06	Barbados, Martinique and Piarco AIS Units	Each responsible state will issue an AIC requiring the following: That all ACFT operators intending to operate into the Piarco FIR and the TMAs and CTRs within it during March and April should send particular information to AIS Units of Piarco, Martinique and Barbados This information may include Airline name, Aircraft type, Date of flight, Departure AD/ Time, Destination AD/Time, Estimated parking time at destination
3 CWC	Collection of information as stated in AIC and issue to Trinidad and Tobago POC	15-Nov-06	Piarco AIS Unit	
4	Reply to invitation	30-Nov-06	All E/CAR States CAA's	Reply needed so that Piarco AIS staff can be in readiness to receive visits
5	Submit to ICAO completed form re: status of implementation of E/CAR AIS MAP Systems	30-Nov-06	All E/CAR States CAA's	To be sent thereafter on a quarterly basis. (Form is found as Appendix to Working Paper 06 - (30th ECWG Meeting).
6	Visit of Barbados AIS Staff to Piarco AIS	31-Dec-06	Barbados CAA	Visit expected by Piarco at end of September
7	Production of WAC for E/CAR	31-Dec-06	All E/CAR States CAA's	This maybe accomplished through use of the former survey contractor who has indicated possession of all needed info to complete this task
8	Correction of existing AIP Coordinates which are not clearly WGS 84 compliant	31-Dec-06	Venezuela CAA AIS TTCAA AIS	Piarco will request confirmation of all dubious points from E/CAR states

ACTION PLAN TASK LIST FOR E/CAR STATES' AIS

Task No	TASK	DEADLINE	RESPONSIBILITY	REMARKS
9 CWC	Familiarization of AIS Staff	1-Jan-07	All E/CAR States	Each state will ensure that their AIS staff are familiar with the basic ATFM strategies developed for use during the world cup
10 CWC	Refresher training of AIS Staff	31-Jan-07	All E/CAR States	Each State's AIS Administrator will ensure that their AIS staff are refreshed on basic flight planning, NOTAM and other ATS message issue
11 CWC	Issue of NOTAM or AIP SUP relating to activity including any ATS flight status status restrictions-IFR/VFR and advanced FPL notification via AFTN email, website posting, fax etc.	31-Jan-07	Barbados, Martinique and Piarco AIS Units	Coordination required between the AIS units of Piarco, Barbados and French Antilles with their respective ATS units
12 CWC	Equipment Availability and Accessibility	28-Feb-07	All E/CAR States	Each State's AIS Administrator will ensure that AFTN Terminals, Telephones, Telefaxes, Internet/email are accessible to AIS Staff and are in good working order
13 CWC	Contingency Planning			Each State's AIS Administrator will work on contingency arrangements with neighbouring AIS Units. Example in the event that AFTN at State A malfunctions then State B will transmit ATS Messages on their behalf etc.
14 CWC	Human resource availability			Each State's AIS administrator will ensure that AIS staffing is adequate including possible extra staff for the Mar-Apr period
15 CWC	Issue of Trigger NOTAM (if AIRAC SUP was issued as at 11 above) to herald start of ATFM from Mar 3rd to May 5th	1-Mar-07	Barbados, Martinique and Piarco AIS Units	

ACTION PLAN TASK LIST FOR E/CAR STATES' AIS

Task No	TASK	DEADLINE	RESPONSIBILITY	REMARKS
16	Harmonization of ENR boundary Coordinates between Piarco and Maiquetia	31-May-07	TTCAA AIS and Venezuela AIS	Venezuela has indicated that their WGS 84 Survey will be complete by Dec 06. At that time they have requested a bilateral meeting to discuss the points in question
17	Visit of TTCAA AIS Chief to E/CAR AIS Units to identify deficiencies	30-Jun-07	TTCAA and E/CAR States AIS	The list of areas to be examined are attached to the report of the 30th ECWG Meeting
18	Visit of E/CAR States AIS Staff to Piarco AIS Unit	30-Jul-07	E/CAR States CAA AIS. TTCAA AIS	Visits are in accordance with the schedule as well as the topics for consideration attached to the Report of the 30th ECWG Meeting .
19	2nd Meeting of the E/CAR AIS Committee	31-Dec-07	E/CAR AIS Committee Members	Meeting to be held for the purpose of discussing the issues included in draft conclusion 30/05 in the report of the 30 ECWG Meeting.
20	Meeting with Technical Experts in Quality Assurance and AIM	31-Dec-07	France CAA, US FAA, ICAO, E/CAR AIS Committee	Preferably to be held during the E/CAR AIS Committee Meeting
21	Implementation of E/CAR AIS Quality Assurance	31-Dec-08	All E/CAR States CAA's	Some States have started this implementation
22	Establishment of a Strategy for E/CAR AIS MAP Automation	31-Dec-08	E/CAR AIS Committee	The meeting with Technical experts in AIM is expected to yield ideas for this strategy

APPENDIX B

1) SCHEDULE (TENTATIVE) OF E/CAR AIS VISITS TO TRINIDAD AND TOBAGO 2007

MONTHS	JAN	X	X								
	FEB			X		X					
	MAR										
	APR										
	MAY						X				X
	JUN				X			X			
	JUL								X	X	
	AUG										
	SEP										
	OCT										
	NOV										
	DEC										
		TA	TQ	TG	TR	TK	TL	TV	TD	TB	TF

Each visit would last two days and be set for the second half of the month indicated.
Please note that the schedule can be adjusted to the needs of each member state.

TQ	ANGUILLA	TG	GRENADA
TA	ANTIGUA AND BARBUDA	TR	MONTserrat
TU	BRITISH VIRGIN ISLANDS	TK	ST KITTs /NEVIS
TB	BARBADOS	TL	SAINT LUCIA
TD	DOMINICA	TV	ST VINCENT & GRENADINES
TF	FRENCH ANTILLES	TT	TRINIDAD & TOBAGO

2) TOPICS FOR CONSIDERATION

- NOTAM and Pre-flight Information Bulletin (PIB) query procedures and automated replied and their interpretation
- Piarco internal NOTAM processing procedures: Eastern Caribbean and International.
- Flight planning difficulties
- Aeronautical Fixed Telecommunication Network
- Specific problems encountered between visiting states AIS units and Piarco AIS
- Restructuring of Letters of Agreement
- Proper indication of WGS-84 Coordinates for publishing
- World Aeronautical Chart Production

APPENDIX C

LIST OF AREAS OF EXAMINATION BY CHIEF TECHNICAL OFFICER PIARCO AIS

- 1) Level of training and number of AIS Staff
- 2) Organization and efficiency of AIS office
- 3) Level of documentation available in the AIS office
- 4) Degree of computerization
- 5) Availability or access to the internet
- 6) Status of implementation of a quality assurance program
- 7) Organizational structure of the AIS

APPENDIX D

STATUS OF IMPLEMENTATION OF THE E/CAR AIS/ MAP SYSTEMS

STATE/TERRITORY:

No	Tasks	Start date	In process	Finalized	Difficulties encountered during the execution of the tasks
	1	2	3	4	5
1	Harmonization with the WGS 84 bordering points coordinates.				
2	Total Implementation of WGS 84.				
3	Implementation of a quality management system.				
4	Implementation of the AIS Automation plan.				
5	Updating of the deficiencies tables.				

APPENDIX E



International Civil Aviation Organization
North American, Central American and Caribbean Office
Thirtieth Eastern Caribbean Working Group Meeting (30 E/CAR WG)
Castries, Saint Lucia, 7-11 August 2006

30 E/CAR WG –DP/01
09/08/06

Agenda Item 4: Specific Air Navigation Activities and Developments
4.1 AERONAUTICAL INFORMATION SERVICES

REPORT OF THE AIS AD-HOC MEETING

(Presented by Rapporteur of the E/CAR AIS Committee)

SUMMARY

The purpose of this paper is to discuss the AIS issues identified in the AIS working papers presented at this Meeting.

• References:

- WP/06 Status of Implementation of E/CAR AIS/MAP Systems.
- WP/23 Report on AIS Technical Visits.
- WP/14 Status of the AIS E/CAR Committee.
- WP/20 Traffic Management During the Next Cricket World Cup.

1. Introduction

Purpose

1.1 The AIS AD-HOC Group was formed for the purpose of examining the following working papers and formulating actions:

- WP/06 Status of Implementation of E/CAR AIS/MAP Systems.
- WP/23 Report on AIS Technical Visits.
- WP/14 Status of the AIS E/CAR Committee.
- WP/20 Traffic Management during the Next Cricket World Cup.

1.2 The States participating were: Barbados, Trinidad and Tobago, Antigua and Barbuda, ECCAA, British Virgin Islands.

Secretary of the group: Francisca Moses from Trinidad and Tobago.

2. Discussion

WP/06 Status of Implementation of E/CAR AIS/MAP Systems.

2.1 The members of this group understood that each state is responsible for supplying to ICAO the information requested in the Appendix to WP/06 and agreed that items 1) and 2) can be considered as finalized for most member States.

2.2 Those States that still have some outstanding coordinates to finalize should attempt to have this done by the end of this year. Piarco AIS will compile a list of coordinates which are published in the AIP, the WGS84 status of which is uncertain. The list will be sent to the States concerned by the end of October and a reply would be expected by the end of December.

2.3 This information must be sourced from the surveyor of the doubtful points either directly or indirectly from the agency which supplied the coordinates for publishing.

2.4 Group members also agreed that with regard to the start date for implementation of the automation plan, the year 1989 can be used as the start date for implementation. That was the year that Piarco installed its, first Automatic Message Switch and NOTAM Processing Package. All connected States could then receive automatic answers to NOTAM database interrogation as well as benefit from automatic switching of messages to and from their stations.

2.5 The automation plan in its newest sense, which would embrace the AICM (Aeronautical Information Conceptual Model)/AIXM (Aeronautical Information Exchange Model) for database information exchange, still has to be formulated by the AIS Committee.

3. Conclusion

The group members then agreed to adopt the Draft Conclusion 30/x contained in WP/06.

WP/23 Report on AIS Technical Visits

3.1 The members of the group agreed that there exists a real need for AIS technical visits, especially to Piarco in view of the new AMHS and AIS system installed and the need for rapid development in the regional AIS.

3.2 The schedule was examined and there were no objections, however it was noted that Piarco is willing to entertain changes if it is given at least one month advance notice.

3.3 It was however noted that the months of March and April may be unsuitable for these visits considering the expected manpower challenge that will exist at that time due to the cricket world cup. It was therefore thought prudent to move Montserrat's and St Vincent's visits to June and to move Barbados' and Dominica's visits to July.

3.4 Some members suggested that an estimated cost may help in States' budgeting for this event. It was decided that the option of receiving a costing would be offered along with the invitation to be extended by Trinidad and Tobago.

The following conclusion was then formulated:

- a) that the TTCAA on behalf of Piarco AIS extend an invitation by the first half of September 2006 to E/CAR member States to send two of their AIS staff on AIS Technical Visits to Piarco AIS and that receiving States reply within two months of receipt of the invitation; and
- b) that E/CAR member States Civil Aviation Authorities support a two day visit of this AIS staff to Piarco AIS in accordance with the adjusted tentative schedule and to deal with AIS matters in accordance with the Agenda contained in Attachment A (refer to **Appendix A** to the 30 E/CAR WG Report).

WP/14 Status of the AIS E/CAR Committee

3.5 The AIS AD-HOC group agreed that, in view of the growing importance of AIS as the means through which the global concept for CNS/ATM is to be achieved, that the E/CAR AIS Committee must urgently work at AIS issues affecting the E/CAR.

3.6 The foremost of these have been identified as:

-  Defining the Integrated Automated AIS and drafting an Action Plan for its implementation Aeronautical Information Management in accordance with the AICM/AIXM concepts which were recommended by the 11th Air Navigation Conference.
-  Drafting an action plan for resolving E/CAR AIS deficiencies.
-  Drafting of an action plan for the full implementation of E/CAR AIS Quality Assurance Systems using the ICAO guides.

3.7 Member States of the E/CAR AIS Committee re-affirmed their commitment to the group by each supplying to the Meeting contact information for one state representative and an alternate. They also agreed that there was a need for more regular meetings of the AIS committee via face to face meetings, telephone, email etc if the tasks assigned to this committee are to be accomplished. The group members agreed that there was an urgent need for a face to face meeting in the 2nd half of 2007. The Meeting noted that Trinidad and Tobago is considering hosting this meeting

3.8 Regarding the first issue, it was noted that AIS Committee members France and the United States have already implemented AIM in accordance with ICAO's thrust. It was also noted that ICAO can provide technical assistance in the implementation of this type of system. As a result group members agreed that ICAO France and USA be requested to lend their expertise to the formulating of an action plan. It was also agreed that vendors of systems that are in accord with AICM/AIXM could be invited exhibit their products at the meeting

3.9 Regarding the second issue all agreed that the Chief Technical Officer (CTO) at Piarco is in the best position to audit and gather information on deficiencies of the individual States AIS in view of the fact that he is responsible for publishing aeronautical information for them.

3.10 It was noted here that an ICAO representative visited many of the AIS Units in E/CAR member States for the purpose of identifying deficiencies.

3.11 In the absence of this report, the group members agreed that the CTO at Piarco should conduct a data gathering tour of member States' AIS gathering information in accordance with the list in WP/14 par 2.1 along with information about the organizational structure of the AIS. This information can then be used at the next AIS Committee meeting in formulating an action plan for resolving AIS deficiencies. It was agreed that the CTO's visit should take place during the first half of 2007, and that a report should be delivered to the AIS Committee at the next meeting.

3.12 The third issue was not discussed in much detail, however it was acknowledged that ICAO has already published guidance to enable administrations to implement quality assurance systems and that most of them had at least started the process. It was felt that through sharing of experiences and some technical assistance from ICAO, this process could be accelerated. This would be examined in more detail at the Meeting.

The following conclusion was then formulated:

- a) that EC/WG member States support the 2nd meeting of the E/CAR AIS committee in 2007 for the purpose of the following:
 - to define the Integrated Automated AIS in the E/CAR;
 - to draft the Implementation plan of the Integrated Automated AIS in the E/CAR through Aeronautical Information Management using the AICM and AIXM models;
 - to resolve other E/CAR AIS deficiencies; and
 - to implement the E/CAR AIS Quality Assurance Program
- b) that ICAO, France and the United States be urged to supply experts in quality assurance system and AIM (Aeronautical Information Management) implementation at that meeting;
- c) that EC/WG member States support the visit of the Piarco AIS Chief Technical Officer for the purpose of identifying deficiencies in accordance with the list contained in Attachment B to this report (refer to **Appendix B** to the E/CAR WG Report); and

WP/20 Traffic Management during the Next Cricket World Cup

3.13 The group acknowledged that during the time of the scheduled world cup matches from March to April 2007, ATS systems in the TMAs within Piarco FIR will be under severe strain. The importance of a smoothly functioning AIS system before, after and especially during world cup matches was stressed. It was agreed that there will be less problems encountered if there is ample communication.

3.14 During the ATFM AD-HOC group, three phases were mentioned: Strategic, Pre-tactical and Tactical. The group agreed that AIS has an important role in each phase as follows:

Strategic phase

- a) (Present to mid-November 2006)

This is the data collection and analysis phase at the start of which time a NOTAM/AIC is to be issued by each States' AIS Unit requesting all aircraft operators who intend to operate into Piarco FIR the TMAs, CTRs and ADs within it during March and April 2007 to send the following details for each and every flight to a data collection point of contact to be decided:

Name of Airline/Aircraft Operator, Aircraft Type, Date of Flight, Departure AD/Time, Destination AD/Time, Estimated Parking Time at Destination

- b) (Mid-November 2006 to 1st January 2007)

This is the ATFM strategy development and finalization stage. It may be prudent to issue an AIC at this point with the basic (undetailed) ATFM information in view of the short period of time (approx one month) before it takes effect. This way the operators concerned would be better prepared for the actual finalized ATFM operations since only a fine tuning may be needed.

Pre-tactical phase

- c) (2nd January 2007 to 28th February 2007)

Promulgation of finalized ATFM strategies via NOTAM and or AIP/Supplement and or AIC.

AIS administrators must ensure that their staff are fully aware of this information since it impacts on flight planning.

Tactical phase

- d) (1st March 2007 to End of World Cup)

AIS administrators would need to ensure that their units work in harmony with the ATFM strategies by:

-  Ensuring that trained staff is available during the hours of aerodrome operation. (Some aerodromes may extend their hours of operation during the world cup matches since aircraft operators have been requested to transport most of their passengers at night). Also catering for extra staff in the event that a need arises.
-  Ensuring that communication equipment in AIS units are accessible to AIS Officers and are in good working order. This includes AFTN terminals, Telephone/Fax facilities, Internet/email facilities, hotlines etc.
-  Ensuring that AIS Officers are well aware of all new procedures promulgated or otherwise that affect flight planning during this period. (eg: restrictions on changes from IFR to VFR or restrictions on use of RPLs).



Establishing with neighbouring AIS/ATS Units, contingency plans in the event of loss of communications.

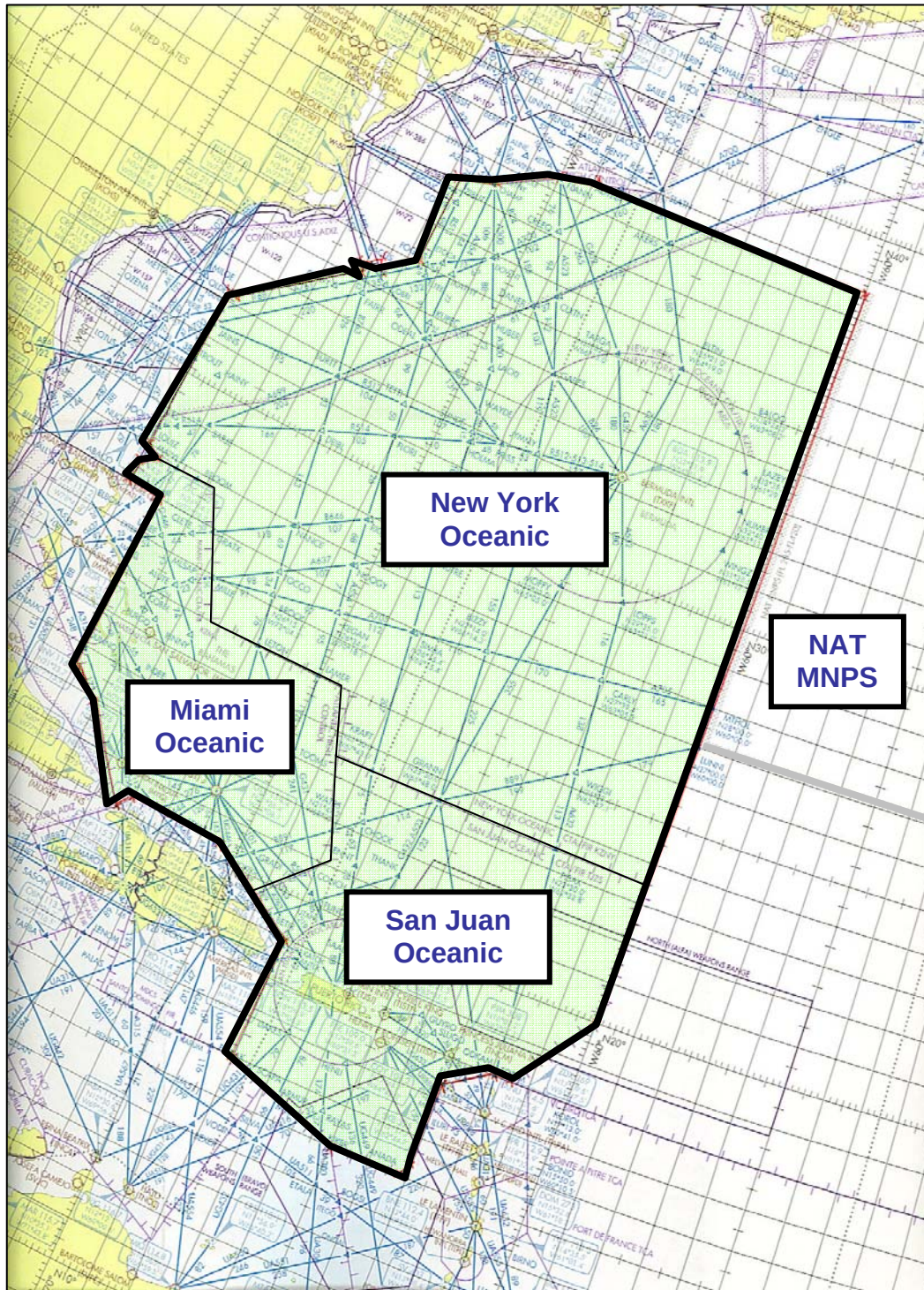
4. Conclusion

4.1 The Meeting is invited to adopt the conclusions formulated in this report and give careful consideration to the AIS needs specified for Cricket World Cup.

APPENDIX F

DIAGRAM: WATRS PLUS AIRSPACE

- WATRS Plus airspace being considered for oceanic lateral separation reduction.
- Chart only intended to show general location of WATRS Plus airspace.
- Full WATRS coordinates posted at www.faa.gov/ats/ato/watrs.htm





APPENDIX G

ICC CWC WI 2007 Match Schedule

Based on the following groups (world ranking as of April 2005 in brackets):

	Group A	Group B	Group C	Group D
	St Kitts & Nevis	Trinidad & Tobago	Saint Lucia	Jamaica
1	Australia (1)	Sri Lanka (2)	New Zealand (3)	Pakistan (4)
2	South Africa (5)	India (8)	England (7)	West Indies (6)
3	Scotland (12)	Bangladesh (11)	Kenya (10)	Zimbabwe (9)
4	The Netherlands (16)	Bermuda (15)	Canada (14)	Ireland (13)

Warm-up matches

Event Day	Date	Group WA	Group WB	Group WC	Group WD
		Jamaica Trelawny	St. Vincent	Trinidad Brian Lara	Barbados, 3Ws
4	Mon 05 Mar	WI v KEN	ENG v BER	SA v CAN	SL v SCO
5	Tue 06 Mar	IND v NETHER	AUS v ZIM	PAK v IRL	NZ v BAN
7	Thu 08 Mar	KEN v NETHER	ZIM v BER	IRE v CAN	SCO v BAN
8	Fri 09 Mar	IND v WI	AUS v ENG	PAK v SA	NZ v SL

Opening Ceremony

Date	Activity
Sun 11 Mar	Opening Ceremony

EVENT AUTHORITY



Group Stage

Date	Group A St. Kitts & Nevis	Group B Trinidad & Tobago	Group C Saint Lucia	Group D Jamaica
Tue 13 Mar				WI v PAK
Wed 14 Mar	AUS v SCO		KEN v CAN	R
Thu 15 Mar	R	SL v BER	R	ZIM v IRE
Fri 16 Mar	SA v NETHER	R	ENG v NZ	R
Sat 17 Mar	R	IND v BAN	R	PAK v IRE
Sun 18 Mar	AUS v NETHER	R	ENG v CAN	R
Mon 19 Mar	R	IND v BER	R	WI v ZIM
Tue 20 Mar	SA v SCO	R	NZ v KEN	R
Wed 21 Mar	R	SL v BAN	R	ZIM v PAK
Thu 22 Mar	SCO v NETHER	R	NZ v CAN	R
Fri 23 Mar	R	IND v SL	R	WI v IRE
Sat 24 Mar	AUS v SA	R	ENG v KEN	R
Sun 25 Mar	R	BER v BAN	R	
Mon 26 Mar		R		

Second Stage – Super Eight Series

Date	Antigua & Barbuda	Grenada	Guyana	Barbados
Tue 27 Mar	D2 v A1			
Wed 28 Mar	R		A2 v B1	
Thu 29 Mar	D2 v C1		R	
Fri 30 Mar	R		D1 v C2	
Sat 31 Mar	A1 v B2		R	
Sun 01 Apr	R		D2 v B1	
Mon 02 Apr	B2 v C1		R	
Tue 03 Apr	R		D1 v A2	
Wed 04 Apr	C2 v B1		R	
Thu 05 Apr	R			
Fri 06 Apr				
Sat 07 Apr			B2 v A2	
Sun 08 Apr	A1 v C2		R	
Mon 09 Apr	R		D1 v C1	
Tue 10 Apr		D2 v A2	R	
Wed 11 Apr		R		C2 v B2
Thu 12 Apr		B1 v C1		R
Fri 13 Apr		R		A1 v D1
Sat 14 Apr		A2 v C1		R
Sun 15 Apr		R		B2 v D1
Mon 16 Apr		A1 v B1		R
Tue 17 Apr		R		A2 v C2
Wed 18 Apr		D1 v B1		R
Thu 19 Apr		R		D2 v B2
Fri 20 Apr		A1 v C1		R
Sat 21 Apr		R		D2 v C2
Sun 22 Apr				R

Semi –Finals Round

Date	Semi Final 1 Jamaica	Semi Final 2 Saint Lucia
Mon 23 Apr		
Tue 24 Apr	SEMI-FINAL 1: 2nd v 3rd	
Wed 25 Apr	R	SEMI-FINAL 2: 1st v 4th
Thu 26 April		R

Final

Date	Barbados
Fri 27 April	
Sat 28 April	FINAL
Sun 29 April	R

E/CAR ATFM TRAFFIC MOVEMENTS DATA

[illegible]

APPENDIX I CRICKET WORLD CUP 2007 ATFM TASKS

NO	TASK	DEADLINE DATE	PERSON RESPONSIBLE	REMARKS
1.	Provide Point of Contact (POC) to Trinidad and Tobago POC.	By 2006 August 18	All E/CAR States and Territories	Invitation will be sent through ICAO NACC Office to Dominican Republic, Guyana, Haiti, Jamaica, Netherlands Antilles, Suriname, United States, Venezuela, IATA, IFALPA and IFATCA for their participation in ATFM activity during the Cricket World Cup 2007.
2.	Issue general AIC relating to Cricket World Cup 2007.	2006 September 15	Piarco AIS Barbados AIS Martinique AIS	Coordination required between Trinidad and Tobago, Barbados and France.
3.	Coordinate with U.S. FAA Command Center, regarding telephone conferencing communications facility.	On-going	Trinidad and Tobago POC	US FAA Command Center has offered the use of their telephone communication in this activity
4.	Copy all information relating to Cricket World Cup 2007 to ATS Points of Contact in Dominican Republic, Guyana, Haiti, Jamaica, Netherlands Antilles (Curacao & Sint Maarten), Suriname, USA (Miami Center & San Juan CERAP) and Venezuela.	On-going	Trinidad and Tobago POC	Action to be carried out by Trinidad and Tobago POC.
5.	Obtain projected spectator attendance at all E/CAR cricket venues.	2006 September 30	All E/CAR States and Territories	To be sent to Trinidad and Tobago POC.
6.	Obtain, for purposes of traffic analysis:			
6.a.	Air traffic statistics for 2004, 2005, 2006 (Jan-Apr).	2006 September 30	All E/CAR States and Territories	To be sent to Trinidad and Tobago POC.
6.b.	Assess TMA en-route capacity (all TMAs).	2006 September 30	All E/CAR States and territories	To be sent to Trinidad and Tobago POC.
6.c.	Assess Airport capacity (including apron capacity).	2006 September 30	All E/CAR States and Territories	To be sent to Trinidad and Tobago POC.
7.	Forecast Estimates on weather conditions (historical weather patterns).	2006 September 30	All E/CAR States and Territories	To be sent to Trinidad and Tobago POC.
8.	Obtain projected air traffic movements (scheduled and non-scheduled traffic, including charter flights, extra sections, general aviation (corporate and business operations), overflights and helicopter operations).	2006 September 30	All E/CAR States and Territories	To be sent to Trinidad and Tobago POC.
9.	Obtain information relating to aerodrome and ATS hours of operation and any conditionalities attached.	2006 September 30	All E/CAR States and Territories	To be sent to Trinidad and Tobago POC.
10.	E/CAR ATM Committee Meeting.	2006 October	All Parties concerned	Location – Trinidad and Tobago
11.	Issue NOTAM relating to the activity regarding required advance FPL notification.	2006 October 18	Piarco NOF	Coordination required between Piarco NOF and Trinidad and Tobago POC.
12.	Disseminate between POCs corresponding information via web postings, e-mail, facsimile to coordinate demand and capacity balancing procedures among FMPs and FMU.	2006 October 25	Trinidad and Tobago POC	All concerned parties.

30TH EASTERN CARIBBEAN WORKING GROUP MEETING
Appendix I to the Report on Agenda Item 4

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13.	Plan and execute first E/CAR TELECON.	By end of 1 st week of 2006 November	Trinidad and Tobago POC	TELECON between all parties concerned.
14.	WP to the E/CAR DCAs Meeting (St. Kitts/Nevis – 2006 December).	2006 November 22	Trinidad and Tobago POC	Completion of WP for submission to ICAO NACC Office. Mr. Samuel Lampkin, Rapporteur of E/CAR ATM Committee will make appropriate presentation.
15.	Conclude and sign revised ATS Operational Letters of Agreement.	2006 December 01	All E/CAR States and Territories	
16.	Correct all AIS flight planning deficiencies.	2007 January 31	All E/CAR States and Territories	
17.	Establish a Flow Management Unit (FMU).	By 2007 January 31	Trinidad and Tobago	Located at Piarco ACC.
18.	Establish Flow Management Positions (FMPs).	By 2007 January 31	All E/CAR States and Territories	
19.	Ensure standardization and harmonization of operating procedures among FMPs and the FMU.	By 2007 January 31	Trinidad and Tobago POC	
20.	Complete demand and capacity balancing procedures among FMPs and the FMU.	End of November	Trinidad and Tobago POC	Between all parties concerned.
21.	Trigger NOTAM regarding requirements of FPL notification, and demand and capacity balancing procedures (IFR/VFR).	2007 February	Piarco NOF	Coordination between Piarco NOF and Trinidad and Tobago POC.
22.	Ensure availability of adequate human resources (ATC and AIS).	2007 March 01	All E/CAR States and Territories	Requires CAA's measures to ensure appropriate staffing in the medium term as required.
23.	Implementation of ATFM Measures/Operations within the Piarco FIR.	2007 March 01	All E/CAR States and Territories	All Parties concerned.

APPENDIX J

Demand and Capacity Balancing (DCB) Management

Capacity is the maximum number of flights which can be handled gate-to-gate and can be measured daily, monthly and/or annually in order to monitor system performance in an effective manner for:

- Airport – arrival acceptance rate
- Terminal and en route – maximum number of flights in sector/FIR

The purpose of DCB management is to establish sufficient capacity to provide service for both normal and peak traffic levels. By analyzing demand and capacity, measures can be identified to increase capacity where needed. The responsible ATS authority shall ensure that agreed safety levels are not jeopardized during introduction of any changes to the system.

When all the agreed requirements are adequately covered, the service capacity is 100%. The latter reduces when said requirements are restricted in their operation. As more restrictions are placed on resources, a corresponding reduction in service capacity occurs.

A record of all aspects concerning the declared capacity should be carried out in order to be able to determine when it is reduced or needs to be increased. The responsible ATS authority shall ensure that agreed safety levels are not jeopardized.

Among the most important DCB management aspects are the following:

ATS capacity - In order to attain maximum efficiency, the following aspects should be analyzed:

- Airspace and route structure - the operation of all types of aircraft foreseen with the user's preferred profiles, the final objective of which is to attain a dynamic and flexible use of airspace.
- High and low sectors, TMAs, restrictions, etc.
- Available infrastructure and navigation accuracy of the aircraft using the airspace and routes with regard to agreed regional air navigation requirements
- ATC workload
- Weather factors

Airport capacity - The development and establishment of a master plan aimed at optimizing the available airport capacity should be fostered. The future service requirements should also be studied with regard to the following aspects:

- Runway and taxiway
- Airport efficiency (timing use of runways, taxiways, and ramps) delays, restrictions, SLOTS, etc.
- Airport acceptance rate: considering additional services such as ramp, immigration, custom, and others related to:
 - VFR operations
 - IFR operations

APPENDIX K

Demand/Capacity Study



1. Identification of Remarks in the Management of Demand.

1.1 From the analysis performed on data described in the Reference, we may conclude that factors more frequently included in this type of analysis and which directly affect airspace capacity and contribute to delays are as follows:

- Planning and awareness of demand and capacity;
- Type of aerodrome (hub, terminal, seasonal);
- Air traffic control (airspace organization and management);
- Type and level of technologies supporting air traffic control;
- Human Factors;
- Length, heading, and number of runways and procedures for different types of operations;
- Topographical characteristics of the surroundings (limitations on simultaneous departures and arrivals, obstructions, etc);
- Layout, number and characteristics of taxiways and holding bays;
- Type, characteristics and mixture of aircraft;
- Meteorological conditions, especially wind, rain and fog;
- Condition of runway surfaces;
- Category of operation of runways and associated navigation aids and downgrading criteria in case of failures;
- Number, layout and associated management of parking sites;
- Environmental restrictions (noise and emissions);
- Special situations such as: unlawful interference, aircraft emergencies, labour demands of aeronautical personnel and airline crews;
- Participation, discussion, analysis and coordination mechanisms for planning schedule v/s airport operational availability.

1.2 With regard to the aircraft operator the following factors may be mentioned:

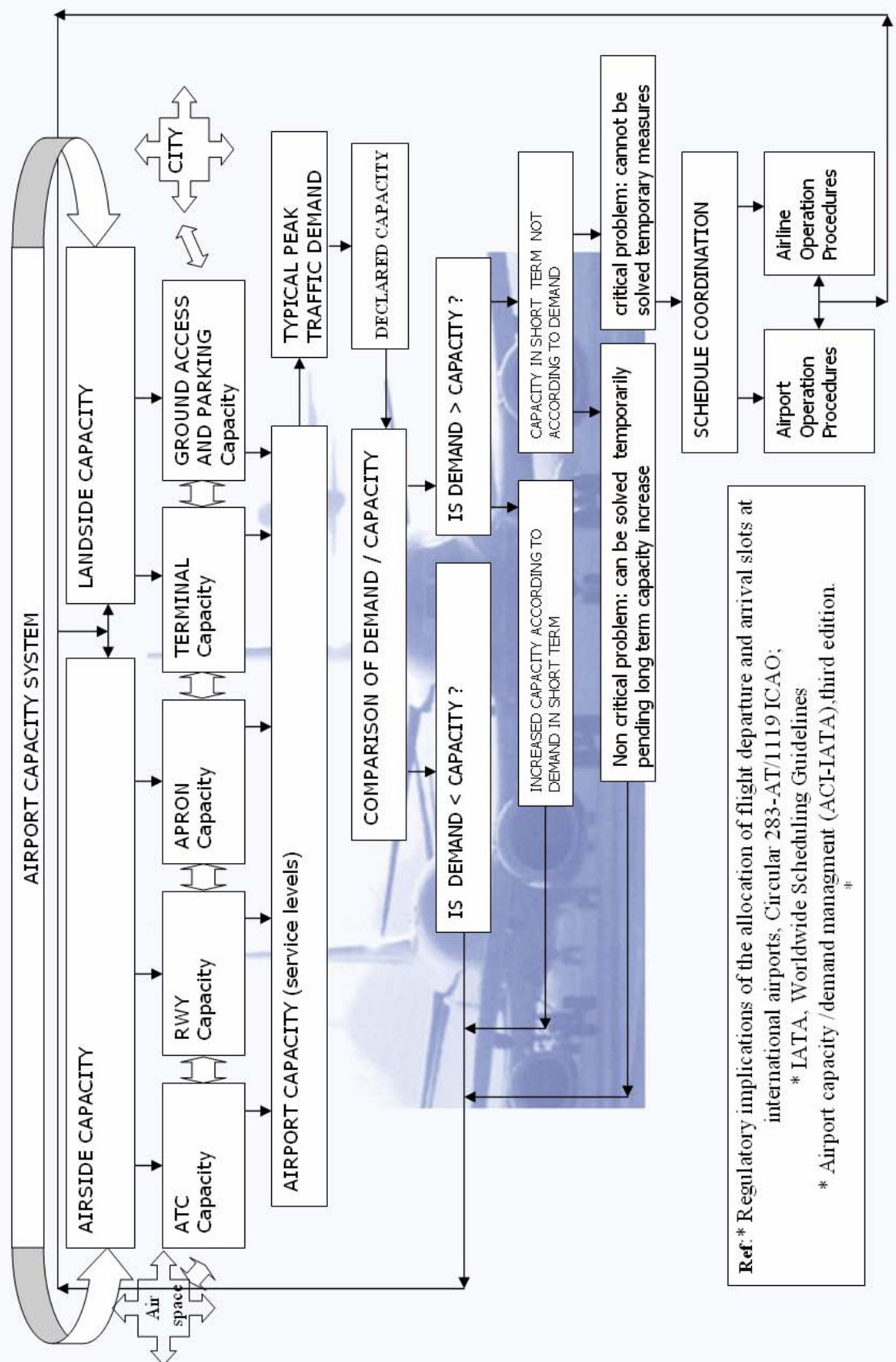
- Schedule Planning;
- Type of flight (short, medium or long haul)
- Ground handling management.

1.3 From the analysis of above factors, we may conclude in this first phase of the Task that the most frequent problems contributing to delays are:

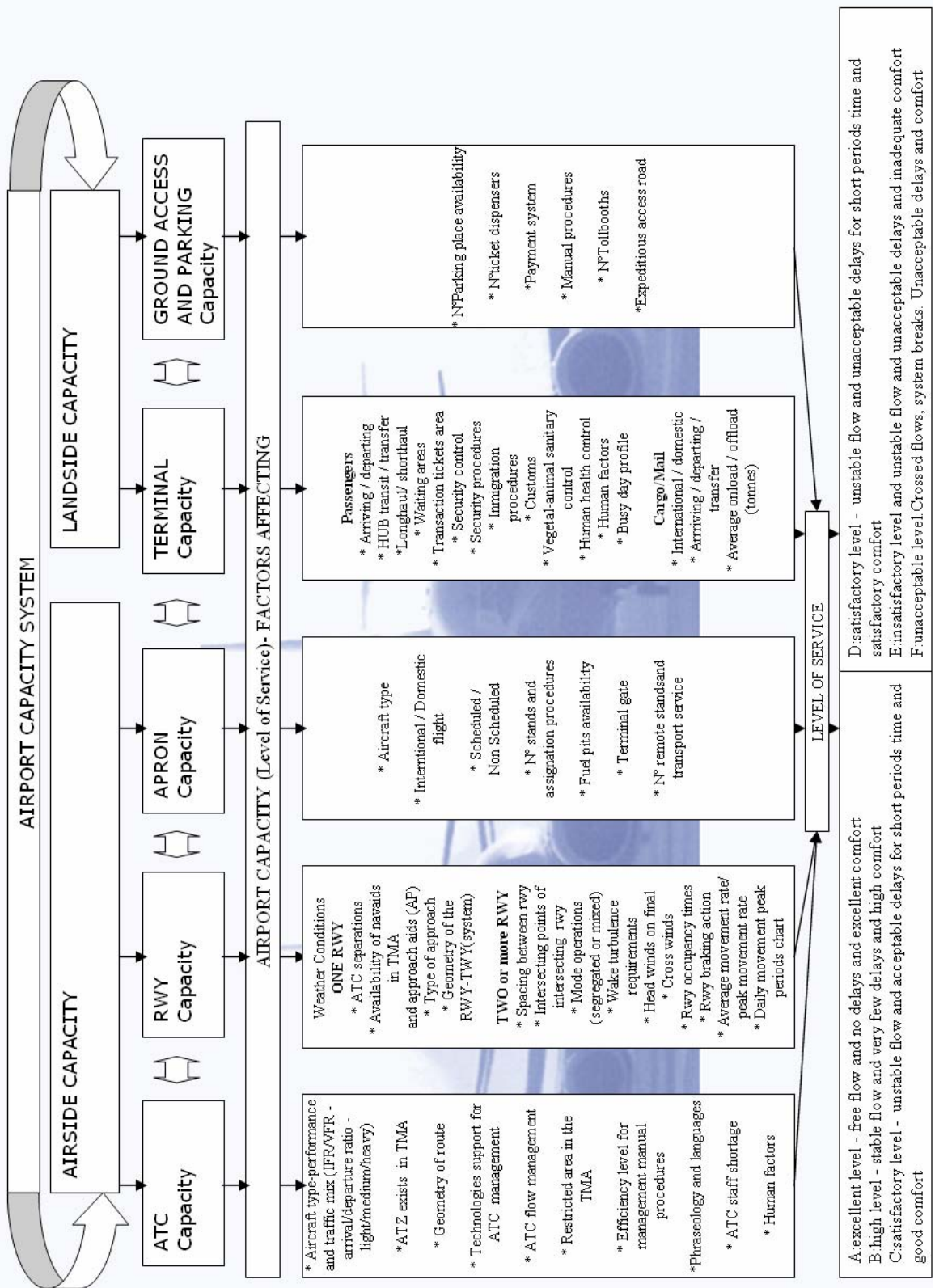
-
- Lack of historical data concerning number of aircraft operations, passengers/freight and its relation to the behaviour of local, regional and global macro economic variables;
 - Too many external players in decision making process for the definition and mode of development of horizontal and vertical infrastructure capabilities;
 - Delays in discussion and timely updating of Aerodrome Master Plans;
 - Lack of practical effectiveness of agreements of Airport Operational Committees concerning actions for reducing delays;
 - Lack of mechanisms for coordination and development of mutual benefits between the Aeronautical Systems of neighbouring States for reducing delays;
 - Differences in planning and schedules of implementation of concepts and new technologies (CNS/ATM, GNSS, Free Flight and Gate-to-Gate Operations);
 - At the local level (State/Territory), a lack of policies and coordination for the analysis and approval of air carrier schedules;
 - Lack of standards and performance indicators for determining maximum delay times which will not be considered a reportable delay;
 - Lack of information at the regional level detailing how airports manage delays;
 - Lack of public dissemination of information on compliance or non-compliance with arrival and departure times;
 - Pending implementation of benchmarking concepts in the management of punctuality of aircraft departures/arrivals;
 - Pending management of schedules that include measures to address system constraints based on demand and capacity balancing (ICAO, Circular 283-AT/119);
 - The airside capacity studies do not consider sufficiently the risk factors (safety, economy and politics) and associated uncertainties in the establishment of base lines and possible scenarios of demand behaviour.

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Flow Chart for Operational Study of Airport Capacity / Demand(1)



Factors to analyze in each segment of the Airport and Level of resulting services (2)



APPENDIX L

COLLABORATIVE DECISION MAKING (CDM) PROCESS

The purpose of collaborative decision-making is to satisfy the declared levels of capacity and efficient use of resources, and allows all members of the ATM community, especially airspace users, to participate in ATM decision-making that affects them. The level of participation reflects the level to which the decision will affect them.

Collaborative decision-making applies to all layers of decisions, from longer-term planning activities through real-time operations. It applies across all concept components of the ATM system and is an essential element to achieving an acceptable solution, taking into account the needs of those involved. The rules for determining priorities for access to an ATM resource will have been collaboratively agreed in advance, applied both actively and, through agreed procedures, passively.

Effective information management and sharing will enable members of the ATM community to each be aware, in a timely manner, of the needs, constraints and priorities of other members in relation to a decision-making issue. Collaborative decision making can occur between airspace users directly, without any involvement of an ATM service provider. Any member of the ATM community can propose a solution.

Where a service provider is involved in collaborative decision making because of a requirement of the ATM system, it is often the ATM service provider who will propose a solution for consideration by the airspace user, as the service provider is aware of the requirements of other users and service providers and the collaboratively agreed rules for resolving competing requests for an ATM resource. However, because it is an information rich environment where the airspace user may have access to the same information as the service provider, the airspace user may understand why the particular solution is proposed.

A user can propose an alternative solution that addresses a user's preference that is not known to the service provider. In the same way the service provider can reject the user's proposed solution because of an ATM requirement that the user is not aware of.

Information Management

Information management aims at integrating the ATM network in the information sense, not just in the system sense. It forms the basis for the migration from the past one-to-one message exchange concept to the future many-to-many information distribution and to geographically dispersed sources which collaboratively update the information, with dissemination to many geographically dispersed destinations.

Managing the quality, integrity and accessibility of this complex, growing web of distributed information will ensure that the information needs of ATM stakeholders, both within as well as outside the ATM network, will be satisfied in a much more flexible and cost-effective manner than previously.

Decision-making is a normal operational process, but decisions will be of a better quality and engender greater confidence because accurate and validated information in the right form, in the right place and at the right time is shared. An open systems environment and better information management will allow information sharing on a much wider basis than hitherto, and will support a permanent dialogue between the various partners, throughout all phases of flight.

Automated systems are a big support for CDM and ATM en-route services. The aim of these systems is conformance and safety monitoring.

Phases of flight

Through CDM in the departure and landing phase of flight, ATM service delivery management might ensure that flights can arrive at the runway in time for their take-off slot and at the same time to integrate them with all the other departing and arriving flights in order to ensure safety and to optimize the use of the parking locations, ramps, taxiways and runways. The ATM service delivery management will ensure that service providers are given access to real-time data on projected arrivals and departures, runway loading, airport congestion, parking locations and environmental considerations, in order to reduce the inefficiencies in aircraft and vehicle movements. Within the en-route phase of flight, ATM service delivery management will be involved in matching ATM service capabilities with demand — e.g. traffic flow characteristics — by a range of means, including, inter alia, dynamic re-sectorization in ATM service centres, changes to route structures or airspace organization, or changes to conflict management modes.

The phases of a flight, from its inception at a scheduling or planning stage, through its actual operation, to its completion at an arrival parking location, are as follows:

- a) planning — integration into the ATM environment to achieve a close match between user preferred trajectory and system delivered trajectory;
- b) ramp — moving of the aircraft in and out of the parking locations;
- c) surface-departures — moving aircraft from ramp to departure queue;
- d) departure — the departure queue and the runway are managed to launch aircraft from the queue into the airspace;
- e) dispersion — where aircraft get up and out of the terminal area into the en-route structure;
- f) cruise — in which the aircraft is at altitude and moving towards its destination, but not yet subject to actions related to its arrival phase;
- g) collection — the state in which aircraft are sequenced and spaced to bring them into the terminal area for arrival;
- h) approach — in which aircraft are assigned to runways and onto the surface;
- i) surface-arrival — moving aircraft off runways and to the ramp; and, once again
- j) ramp — working the aircraft into the parking location.

ELECTRONIC DATABASES REQUIRED FOR THE ATFM SYSTEM

1. Information management ensures that the information needs of ATFM stakeholders are satisfied in a much more flexible and efficient manner than previously. It is achieved by integrating all information to continuously maintain the best possible scenario of the past, present and future traffic situation. This becomes a common basis for decision making by all ATM stakeholders during their strategic, pre-tactical and tactical planning processes, including real-time operations and post-flight activities. The electronic databases required in evolutionary phases for the ATFM system are:

- a) Data processing and display for traffic flow management
 - Flight planning and processing data (FPL, RPL, etc);
 - Airspace and airport structure;
 - Situational air traffic display;
 - Automatic messages in CDM support (access to SLOTS, delay reporting alternative routes, etc.)
 - Monitoring status of air navigation infrastructure;
 - Airport acceptance rate capacity (AAR);
 - ATC capacity;
 - Traffic demand;
 - Airspace structure and ATS routes network;
 - Air navigation aids, radar, etc;
 - Aircraft performance;
- b) Surveillance data (SSR, ADS, etc.)
- c) AIS (mapping, ATFM warnings, AIRAC updating, etc)
- d) MET
- e) Historical and statistical analysis of air operations, meteorology, etc.
- f) Communication system to support CDM with:
 - Other ATFMC;
 - Other FMUs and/or FMPs and/or ATS units;
 - Users and operators (airlines, general aviation, State, etc.);
 - Airport authorities;
 - MET authorities;
 - AIS authorities

Evolutive phases of data bases for ATFM automated systems

Strategic

1. Refers to long-term information required for a coordinated, strategic plan of demand and capacity up to a year or more in advance of a particular airspace activity. While full schedule information might

not be known until some months or weeks before a particular flight, normally certain data is available many years/months in advance, and aids in pre-planning. Strategic programming includes:

- historic demand from scheduled and non-scheduled flights,
- airspace availability or constraints,
- available capacity of ATM resources and the impact of operational changes (new procedures, new standards, etc);
- ATM and airport facilities availability,
- estimates on weather conditions; and
- estimates of other non-forecast airspace users' demands.

2. This data can be used to aid the airspace organization and management processes to obtain strategic demand and capacity balancing by adjusting capacity in advance. The main benefit through using electronic data in a strategic phase is improved processes, developing from a tactical or reactive system to a strategic or proactive one, in which predictability is improved and allowing the maximum flexibility and economy of operations for users in normal conditions.

3 The strategic ATFM database includes establishing procedures and route structures to maintain or improve safety levels, capacity and efficiency in the use of airspace and runways, and to best suit the traffic flows and to assist traffic separation in line with the different demands on airspace at different times of the day and night.

Pre-tactical

4. Implies adjustments to the coordinated strategic plan. During the pre-tactical phase, data received from all users and service providers -- such as confirmations, modifications, cancellations and additions -- must be analyzed and incorporated. The data should:

- be progressively refined and expanded, taking into account user preferences for flexibility, punctuality or service quality requirements;
- provide a framework that gives a good forecast of the traffic demand and the users' capabilities and resolves conflicts of interest between those parties and user groups that plan their activities up to years in advance;
- estimate the reserve capacity and airspace needed for those airspace users who, due to the tactical nature of their operations, cannot plan far in advance;
- set the rules and parameters, which broadly outline everyone's access to airspace, routes and airports; and
- provide estimates on the reserve capacity that may be needed for each day's traffic situations.

5. The pre-tactical data refers to statements of proposed flight plan, airspace regimes and reservations, route configuration and service provider limitations, capabilities and capacities. Normally this data is promulgated on a regional basis, hour-by-hour, at an agreed time before operation.

Tactical

6. Involves final tactical modifications. Prior to the flight, users determine the preferred flight trajectory that best addresses their operations and submit the requested trajectory to the demand and capacity balancing service provider for assessment and agreement.

7. This phase examines a flight request to determine if it is acceptable or if there are any potential resource, capacity or congestion problems of which the user is unaware. If there are problems, demand and capacity balancing identifies user-preferred solutions, giving the freedom to choose the most optimum flight within the system constraints. In this phase, real-time information exchange is required, such as:

- weather forecasts;
- current traffic demand and airspace reservations;
- predictability on a continuous basis of airport and airspace capacity and traffic densities for the entire day;
- updated information, hour-by-hour, on forecast capacity constraints throughout areas and/or routes; and,
- assessment of the impact on the complete flight trajectory, i.e. gate-to-gate.

8. Other interested parties who might need electronic information to improve the service that they supply or receive will benefit from more accurate arrival, departure and current flight trajectory information include: customs and immigration authorities, meteorology departments, baggage handling, airport authorities and aircraft operators (refueling times, parking bays, etc.).

APPENDIX M

REGIONAL OPERATIONS PLAN (ROP)

The need for air traffic flow management drives demand at major aerodromes as well as demand in the en route environment.

Meteorological conditions affect both aerodrome and en route operations, placing strains on the system which are most effectively dealt with through ATFM initiatives.

The ANS providers must work together to manage traffic demand in airspace. These partnerships should also provide customers with more efficient routings and altitudes by taking into account forecast weather, minimum time tracks, and demand.

The regional implementation of ATFM service includes development of a Regional Operations Plan (ROP) with the purpose to establish a process, structure, and identify responsibilities that will be coordinated through daily teleconferences and advisories to manage demand and capacity balancing.

The Regional Operations Plan (ROP).

The ROP will be a collaboratively developed plan derived from discussion between ANS points of contact (POCs), weather forecasters and customer representatives. Other participants may be included in the process as necessary, including military representatives, aerodrome representatives, and technical representatives.

- a) The ROP will normally be developed:
 - For one day at a time; and
 - For the twelve (12) hour period following a morning Planning Telephone Conference (Planning TELCON), utilizing agreed upon weather products.
- b) The ROP will specify:
 - 1. Aerodrome constraints - Facilities where delays are expected to reach 15 minutes or greater.
 - 2. En route constraints - Facilities where expanded miles-in-trail, expanded minutes-in-trail, en route deviations, or tactical reroutes may be required.
- c) ANS POCs will:
 - 1. Participate via a daily Planning TELCON in the formulation and development of the ROP.
 - 2. Provide input on:
 - i. Aerodrome constraints - for example, include aerodrome acceptance rate (AAR) information when arrival delays are anticipated at a particular aerodrome.
 - ii. En route constraints - for example, include the impact of thunderstorm and hurricane activity and route closures.
 - iii. Equipment outages - for example, include radar and sector frequency outages that have an operational impact.

- iv. Other issues that may have an impact on operations - examples include: staffing, special events, volcanic activity.
 - v. Anticipated traffic management initiatives that will be used to manage regional traffic.
 - 3. Coordinate with and provide direction to their air traffic facilities on implementation of the ROP.
- d) Hosting Air Traffic Flow Management Unit
 - 1. Maintain a Planning TELCON bridge.
 - 2. Maintain a web page for publishing the ROP to aviation system customers.
 - 3. Lead the Planning TELCON and facilitate the development of the ROP.
 - 4. Record the list of participants on the Planning TELCON.
 - 5. Post the ROP on the designated web page.
 - 6. Coordinate the transmission of the ROP as a numbered advisory.
 - 7. Coordinate with and provide direction to appropriate air traffic facilities on implementation of the ROP.
- e) Planning TELCON preparation checklist
 - 1. Review the weather products
 - 2. Obtain input from ACCs
 - i. Constraints
 - ii. Anticipated traffic volume
 - iii. Anticipated traffic management initiatives
 - iv. Staffing
 - v. Equipment outages
 - vi. Other
 - 3. Obtain input from Aerodromes
 - i. Aerodrome configuration and acceptance rate
 - ii. Constraints
 - iii. Anticipated traffic volume
 - iv. Anticipated traffic management initiatives
 - v. Staffing
 - vi. Equipment outages
 - vii. Other
 - 4. Miscellaneous
 - i. Special events
 - ii. Military activities
 - iii. Volcanic activity

APPENDIX N

ATFM Strategy for Cricket World Cup

- Identify key stakeholders (ATC service providers and users, military authorities, airport authorities, aircraft operators and relevant international organisations) for purposes of coordination and cooperation, using a CDM process;
 - ATC service providers
 - ACC/ARTCC
 - Towers
 - Airport authorities
 - Customers
 - Air carrier, IATA, and IFALPA
 - Air taxi
 - Air Cargo
 - General aviation and IBAC
 - Military
 - Other

Target completion date: October 2006

- Identify and analyse traffic flow problems and develop methods for improving efficiencies on gradual basis, as needed, through enhancements in current:
 - airspace organization and management (AOM) and airway structure (unidirectional routes),
 - communications and surveillance systems,
 - aerodrome capacity,
 - ATS capacity, and
 - ATS letters of agreement;
 - Coordinate with the POCs to identify specific traffic flows between the NAM and CAR regions that require the application of ATFM procedures

Target completion date: October 2006

- Coordinate with ATC service providers and airport authorities to establish airport acceptance rates (AAR) at key airports in the NAM/CAR regions where this metric has not been defined

Target completion date: March 2007

- Coordinate with the POCs to improve the airway structure in the NAM/CAR regions
- Coordinate with all parties concerned to improve radio and navigational communications and radar surveillance in the NAM/CAR regions

Target completion date: Sep 2008

- Identify on-going regional traffic flow problems and develop methods for improving efficiency on an as needed, graduated basis
 - Coordinate with the POCs to identify the key traffic flows in the NAM and CAR regions that can benefit from ATFM procedures

Target completion date: October 2006

- Define common elements of situational awareness between FMUs;
 - common traffic displays,
 - common weather displays (Internet),
 - communications (teleconferences, web), and
 - daily teleconference/messages advisories
 - Coordinate with the FAA/ATCSCC and DGAC concerned to complete the installation of ETMS or similar system, as required

Target completion date: December 2006

- Coordinate with the FAA/ATCSCC and NAM/CAR regional ATC service providers to explore the concept of establishing a regional weather data display

Target completion date: March 2007

- Coordinate with the FAA/ATCSCC, and POCs to establish a once-a-day telephone conference to be used for regional ATFM planning measures

Target completion date: November 2006

- Develop methods to establish demand and capacity forecasting
 - Coordinate between parties concerned to develop a method for determining:
 - Airport acceptance rate
 - Sector capacity
 - Sector monitor alert parameters

Target completion date: March 2007

- Develop a regional strategy and work programme for implementation of ATFM in the ECAR
 - Coordinate with the FAA/ATCSCC and ACCs to prepare Draft NAM/CAR Regional ATFM Concept of Operations

Target completion date: November 2006

- ATFM Procedural Manual

Target completion date: March 2007

- Training programme

Target completion date: March 2007

- Monitor implementation progress

Target completion date: December 2006 and March 2007

APPENDIX O



International Civil Aviation Organization
North American, Central American and Caribbean Office
Thirtieth Eastern Caribbean Working Group Meeting (30 E/CAR WG)
Castries, Saint Lucia, 7-11 August 2006

30 E/CAR WG –DP/02
09/08/06

Agenda Item 4: Specific Air Navigation Activities and Developments
4.4 Air Traffic Management (ATM)

REPORT OF THE ATM AD-HOC MEETING

(Presented by Rapporteur Ad-hoc Group - Cricket World Cup 2007 ATFM)

SUMMARY
The purpose of this Paper is to discuss ATFM Strategies pursuant to Cricket World Cup 2007 in the E/CAR.
References: • WP/09 - ATM Developments • WP/18 - Provision of ATFM in the E/CAR • WP/20 - Traffic Management during the next Cricket World Cup • WP/24 - Demand and Capacity Balancing in the E/CAR

1. Introduction

1.1 The ad-hoc group agreed that Mr. Samuel M. Lampkin of Trinidad and Tobago carry out the function of Rapporteur.

1.2 Leslie Payne of Trinidad and Tobago acted as Secretary.

1.3 The Ad-hoc Group met over the period 2006 August 8 - 9.

In attendance were:

Antigua and Barbuda
France

Barbados
Grenada

British Virgin Islands
Montserrat

St. Kitts/Nevis
United Kingdom
ICAO

Saint Lucia
United States of America

Trinidad and Tobago
ECCAA

2. Discussion

2.1 The ad-hoc group reviewed the ICC Cricket World Cup 2007 Match Schedule, attached as Attachment A (refer to **Appendix G** to this E/CAR WG Report).

2.2 The Opening Ceremony is scheduled for 2007 March 05 in Jamaica with the Final taking place on 2007 April 27 (with April 28 and 29 being reserved days) in Barbados.

2.3 It was acknowledged that there would be significant increase in air traffic movements in the sub-region over the period, as cricket matches are being played by sixteen (16) teams in nine (9) States over a two-month period with projected spectator attendance to the group's knowledge being:

-	Barbados	53,000
-	Antigua	52,000
-	Grenada	30,000
-	Saint Lucia	15,000

2.4 Additional to the extensive inter-island air travel, specifics of which are yet to be determined, traffic movements will be further augmented with Regional and International Charter Flights, General Aviation and Corporate Operations including Helicopters.

2.5. The Ad-hoc Group as per its terms of reference reviewed 30th E/CAR WG Working Papers - WP/09, WP/18, WP/20 and WP/24. From the review of the Working Papers, the ad-hoc group determined that the planning for this major event should take place in the following three (3) phases, the work being conducted in relation to the methodologies and guidance contained in Appendices A, B, C, D, E and F of WP/24:

-	Strategic Phase	- Present to mid-November 2006 - Data collection and analysis - Mid-November 2006 to 01 January 2007 – ATFM Strategy development and finalization;
-	Pre-tactical Phase	- 2007 January 02 to February 28 – ATFM Strategies finalized and promulgated;
-	Tactical Phase	- 2007 March 01 to end of Cricket World Cup 2007, actual ATFM Operations

2.6 The ad-hoc group noted that most of the airports in the E/CAR do not presently operate H24, and that a requirement exists for extended hours of operation at these airports. Where such extensions are determined it is recommended that the information is disseminated via NOTAM and forwarded additionally to the Point of Contact (POC) in Trinidad and Tobago.

2.7 It was agreed that in order to conduct a proper analysis of projected air traffic, statistics would be required in respect of:

- historic demand of scheduled and non-scheduled flights – i.e. air traffic statistics for 2004, 2005 and 2006 for the months of January to April, attached as Attachment B to this discussion paper (refer to **Appendix H** to the E/CAR WG Report);
- airspace availability or constraints – i.e. en-route capacity (including that of France TMAs) and approach capacity;
- available capacity of ATM resources and the impact of operational changes – i.e. new procedures, new standards, etc;
- ATM and airport facilities availability – i.e. airport capacity, including apron capacity;
- estimates on weather conditions – i.e. historical weather patterns over the period concerned; and
- estimates of other non-forecast airspace users' demand – i.e. extra (World Cup) commercial air traffic demand, corporate/business jet (General Aviation) air traffic demand.

2.8 A Table depicting tasks, deadline date, person or agency responsible and remarks will be utilized in order to keep track of the above activities.

2.9 It was agreed that all E/CAR States and Territories disseminate no later than 2006 September 30, information concerning Cricket World Cup 2007 and the likely capacity constraints at airports and in the Air Traffic Services.

The ad-hoc group agreed that all E/CAR States and Territories send to the Piarco International NOTAM Office (NOF) the data required for the promulgation of information in respect of any and all Ground and Air restrictions applicable to the respective Terminal airspaces and Airports as follows:

- General advance information for dissemination in the form of an AIC as per AIP-Eastern Caribbean. (For ATFM coordination Barbados and France are to copy their information to the POC - Trinidad and Tobago); and
- Specific information requiring dissemination by NOTAM (Piarco NOF for all E/CAR States and Territories).

Note: Electronic dissemination of information, including web postings would also be used to augment the normal aeronautical communication channels.

2.10 It was agreed that existing flight planning deficiencies in the E/CAR must be corrected well in advance of Cricket World Cup 2007. Further, ATC may require the filing of flight plans in a time period greater than that stipulated in PANS ATM Doc 4444. Likewise, ATC may restrict the cancellation of IFR flight to VFR flight during the period of Cricket World Cup 2007.

2.11 The ad-hoc group acknowledged the need for all E/CAR States and Territories to ensure adequate manpower to handle the projected increase in air traffic over the period of Cricket World Cup 2007.

2.12 The ad-hoc group urged E/CAR States and Territories, to conclude and sign revised ATS Operational Letters of Agreement by 2006 December 01, as the new provisions create a more effective method for the coordination of air traffic in the E/CAR.

Note: France and Trinidad and Tobago indicated that their respective joint LOAs will be signed before the end of 2006 August and become effective 2006 September 01.

2.13 The United States offered to the E/CAR, use of the FAA Command Centre telephone conference communication facility to assist with the day-to-day planning operations prior to and during Cricket World Cup 2007.

- The ad-hoc group accepted the offer of the United States.
- It was agreed that the first Telecon would take place during the first week of 2006 November.
- The United States Primary POC is Joe Hof, FAA, Herndon, Virginia, USA, Telephone: + 703-925-3113, E-mail: joe.hof@faa.gov. Justo Casablanca, United States delegate to the E/CAR/WG/30 is the alternate POC.

2.14 It was agreed that all E/CAR States and Territories provide a POC to include name, telephone number, facsimile number and e-mail address to the Trinidad and Tobago POC. Additionally, it was agreed that an alternate POC (Head of ATS) should be identified.

2.15 Trinidad and Tobago indicated that their POC will be Samuel M. Lampkin, Telephone: + 868-669-4806/8789/0636, Facsimile: + 868-669-0635, E-mail: samlampk@tstt.net.tt

2.16 It was agreed that Piarco ACC establish a Flow Management Unit (FMU) for the purpose of managing air traffic during Cricket World Cup 2007. This FMU shall be called the Piarco ATFMU. Additionally, all other ATC Units (TMA Units in particular) within the Piarco FIR will be required to establish Flow Management Positions (FMPs) in their respective Units.

2.17 The ad-hoc group identified that there is a requirement for standardization and harmonization of Operating Procedures among FMPs and the FMU.

In reviewing WP/18, **Provision of ATFM in the E/CAR** it was determined that there is the need for procedures to be implemented by each ATC Unit, and recommended that effective immediately all ATFM measures initiated by direct phone contact between Supervisors of ATC are followed-up by an AFTN confirmation message. The duration of the restrictions shall be defined. Further, the cancellation of the restrictions shall be communicated by direct phone contact and followed-up by an AFTN confirmation message.

2.18 The ad-hoc group agreed that the Trinidad and Tobago POC will solicit from IATA, the Cricket World Cup Organizing Committee and other aviation organizations, intended flight operations into and out of the E/CAR for the period.

2.19 It was agreed that in addition to E/CAR States and Territories, the following States and Territories shall be copied all information relating to Cricket World Cup 2007:

- Guyana;
- Suriname;
- Venezuela;
- United States (San Juan CERAP)

- Netherlands Antilles (Curacao ACC and Juliana Approach); and
- Jamaica.

2.20 The ad-hoc group recommended that the Trinidad and Tobago POC present an action plan Working Paper on Cricket World Cup 2007 ATFM matters to the E/CAR DCAs Meeting to be held in St. Kitts/Nevis in 2006 December, shown in the Attachment C to this discussion paper (refer to **Appendix I** to the E/CAR WG Report).

APPENDIX P



International Civil Aviation Organization
NORTH AMERICAN, CENTRAL AMERICAN AND CARIBBEAN OFFICE
Thirtieth Eastern Caribbean Working Group Meeting (30 E/CAR WG)
Castries, Saint Lucia, 7-11 August 2006

30 E/CAR WG – IP/11
31/07/06

Agenda Item 4: Specific Air Navigation Activities and Developments
4.4 Air Traffic Management (ATM)

ATM Modernization Plan

(Presented by Trinidad and Tobago)

SUMMARY

This Information Paper provides an update on the efforts of the Trinidad and Tobago Civil Aviation Authority (TTCAA) to significantly upgrade its ATM/CNS systems and facilities.

1. Introduction

1.1 Trinidad and Tobago in its commitment to enhance air navigation safety has embarked on the establishment of modern state-of-the art ATM/CNS systems and facilities in order to meet the needs of airspace users within the Piarco FIR and its domestic airspace.

2. Discussion

2.1 On 2006 March 06, the Trinidad and Tobago Civil Aviation Authority issued an invitation to tender for the supply, installation and commissioning of a CNS/ATM System for its Area Control Centre and Control Tower at Piarco, Trinidad and its Control Tower at Crown Point, Tobago. The CNS/ATM System includes Primary and Secondary Surveillance Radars and associated Voice and Data Link and Display Site equipment.

2.2 On 2006 April 20, a tender technical meeting was held in Trinidad, at which seventeen (17) international companies were in attendance.

2.3 That month, civil works commenced at the building site for the Civil Aviation Complex.

2.4 Tenders for the ATM/CNS equipment will be publicly opened in the last quarter of 2006.

2.5 The new Piarco ACC facility is expected to be completed in the first quarter of 2008, and will incorporate:

- provision for nine (9) sectors, providing a combined Area and Approach traffic environment each with dual state-of-the-art situation displays;
- an operational annex with three (3) sector positions in another room in the ACC;
- supervisor work position/workstation;
- touch-screen displays at all positions;
- new Flight Data Processing System (FDPS);
- electronic flight strips;
- a new voice communication and control system (VCCS);
- additional en-route VHF;
- provision for CPDLC;
- provision for AIDC;
- ADS capability.

2.6 Final designs for the ACC Operational Room and the entire Technical Complex (to include AIS and Engineering) are near completion.

3. Conclusion

3.1 The overall ATM/CNS plan requires the fullest cooperation of all stakeholders to ensure maximum benefits for all users.

3.2 Trinidad and Tobago, as custodian of the Piarco Flight Information Region, remains fully committed to the modernization and development of air traffic services and will continue to pursue the provision of safe, efficient and reliable services in the sub-region.

4. Action Suggested

4.1 The Meeting is invited to take note of the contents of this Information Paper.

APPENDIX Q

30th E/CAR WG –DP/03
09/08/06



International Civil Aviation Organization
North American, Central American and Caribbean Office
Thirtieth Eastern Caribbean Working Group Meeting (30 E/CAR WG)
Castries, Saint Lucia, 7-11 August 2006

Agenda Item 4: **Specific Air Navigation Activities and Developments** **4.5 Communications, Navigation and Surveillances (CNS)**

(Presented by Rapporteur of CNS Ad-Hoc group)

SUMMARY

The CNS ad-hoc group was asked to examine the following items:

- a. Proposed solutions to resolve the AFTN problems
- b. Immediate and near term proposed solutions to problems on the AFS network.
- c. FAA's Message Switch Network (MSN), Automatic Message Handling System (AMHS) programs and interconnection activities with the E/CAR AFS digital network.
- d. Fault reporting and resolution procedures, link failures and proposed solutions.
- e. Follow-up on the developments of the E/CAR CNS systems, namely the Conclusion on CNS matters arising out of the 29th ECWG, RADAR data sharing/remoting and studies on the regional implementation of ADS-C and ADS-B systems.
- f. Status of existing E/CAR digital network contract.

References:

- Summary of Discussions and Conclusion 29th Eastern Caribbean Working Group Meeting, Saint Vincent, 2005.
- 30th Eastern Caribbean Working Group Meeting IP/06, IP/07, IP/08, WP/10 and WP/19.

1. **Introduction**

- 1.1 The following Information and Working Papers were presented to the Meeting:
Trinidad & Tobago:
IP/06 – Aeronautical Fixed Telecommunications Network (AFTN)
IP/07 – Eastern Caribbean Digital Network (AFS)

United States

IP/08 - Current status of the Federal Aviation Administration Telecommunications Programs.

ICAO Secretariat

WP/10 – Follow-up on the Developments of the E/CAR CNS Systems

France:

WP/19 – E/CAR Network Status.

1.2. A CNS ad-hoc group comprising Barbados, ECCAA, France, Trinidad & Tobago (Rapporteur), and the USA was formed to discuss and arrive at a consensus on the issues raised in the working papers listed above.

1.3 **Attendees**

Anguilla

Lindon Garfield Hodge

Antigua

Eugene Thomas

Barbados

Mitchinson Beckles

France

Roger-Gabriel Prudent

Montserrat

Norman Cassel

Saint Lucia

Errol Cherubin
Michael Lee

Saint Kitts and Nevis

Elsworth L. Warner

Trinidad and Tobago

Veronica Ramdath
Andrew Ramkissoon
Manwar Ali

United States of America

Dulce Roses

Grenada

Simon Lewis

1.4 **Method of work**

1.5 The method of work agreed upon was to discuss IP/06, IP/07, IP/08, WP/19 and WP/10 in that order since WP/10 culminated most of the previous discussions.

2. Discussion

2.1 The delegate from the USA gave a presentation on the MEVA II network and the progress made thus far on the interconnectivity and operation of the MEVA II and REDDIG networks as per discussions held at the Third MEVA II/REDDIG Coordination Meeting (MR3) in Mexico July 26-28, 2006.

2.2 The delegate from Trinidad and Tobago gave background information on the formation and need for South American REDDIG network and the reasons for Trinidad and Tobago becoming a member of this network and the benefits of this for the E/CAR region and also the benefits of the interconnectivity of the MEVA II/REDDIG networks.

2.3 ICAO Montreal gave a presentation at the MR3 showing ICAO's vision for VSAT networks. This vision discouraged the proliferation of VSAT networks and encouraged States that are now studying the implementation of new VSAT services to utilize existing VSAT networks that service the area of coverage desired. This may impact the outcome of one of the E/CAR options to upgrade the

E/CAR digital network to a VSAT network. Relevant papers presented at the MR3 will be emailed to States for their information.

2.4 Information Paper 06 on the proposed solution for the AFTN problems with the end user equipment was discussed. TTCAA proposes to replace the AFTN workstations currently operating on the DSA software with the Thales Intelligent AFTN Terminals (IAT). The replacement would entail replacement of the PC, Printer and UPS. It does not at this stage include the replacement of the interconnection equipment between the user equipment and the E/CAR AFS network. The proposal already received from Thales is before the TTCAA Board. It was noted that the Board has already committed to this upgrade.

2.5 In discussion with the AIS committee and following up on the WP/19 presented by France, the TTCAA needs to verify the problems being experienced with the IAT test workstation in Dominica as far as the flight planning format is concerned. While it is agreed that ICAO procedures for filing flight plans and other AIS functions are very clearly defined, the group acknowledged that templates assist the AIS officers in carrying out this function. The TTCAA needs to examine closely the templates available on the existing AIS IAT software proposed for the upgrade. If these templates prove to be insufficient then TTCAA can re-examine and revise the software replacement solution proposed.

2.6 Saint Lucia's George Charles AFTN workstation is unserviceable. The TTCAA has committed to load the existing DSA software into a computer that will be provided by the TTCAA and send this to Saint Lucia within the coming week. Completion of this exercise will be notified to States. It was explained that due to software license limitations with Thales, France the TTCAA is unable at this time to install an IAT terminal in Saint Lucia. Limited permission was granted for the test workstation in Dominica based on the intent to replace the Caribbean AFTN workstations with the IAT terminals.

2.7 Information Paper 07 advised of problems on the E/CAR digital network regarding voice and data AFS circuits. The quarterly reports compiled and distributed by the TTCAA detail the faults and resolution and also provides statistics of the failures. The Group agreed that the E/CAR Region needs an end-to-end solution from a single provider/point of contact. This ties responsibility for resolution of failures to a single point of contact, increasing efficiency, reliability and availability of the network. Three options were proposed:

- a) To replace the existing E/CAR Digital network with a full VSAT solution. To this end the TTCAA has sent out an RFP to conduct:
 - A VSAT survey of the existing VHF high sites with reference to the VHF frequencies coverage areas.
 - A study of alternative and/or additional sites to provide the most optimum coverage for the existing and new VHF frequencies.
 - Provide a digital coverage map of each frequency at the recommended high site.
 - Propose the most economical and effective means of transporting the VHF information from the high site to the VSAT antenna at the operator site.
 - A survey of the existing Control Towers and AIS operator sites on the Eastern Caribbean islands and French Territories to determine the best location for the VSAT antenna to serve VHF, point-to-point voice, AFTN circuits and Radar data. While the VHF component only affects Piarco, it is listed here for completeness of the project since it would be economical to have a single network for both AFS (voice, AFTN and RADAR) and AMS (VHF). Signing of this contract is expected within the month.

- b) To have a combination VSAT and ground lines network.
- c) To have a full ground line network similar to what currently exists but with pertinent changes. This solution proposes retaining the TSTT backbone and tributary links from Cable & Wireless (C&W) but replaces all the end user and interface equipment. In this arrangement each State would be responsible for their first line maintenance with follow up support provided by the TTCAA. Each State would receive the appropriate training and compliment of spares required to support first line maintenance for both software and hardware as it relates to the AFTN. There would be no TSTT sub-contractor as currently exists with Sigma. In this regard TTCAA would perform the network management aspect.

2.8 Each State was previously requested to provide to the TTCAA via email with their user requirements to formulate a Request For Proposal (RFP) for the options presented above. The Group noted that the notification of requirements by States should be treated as a matter of urgency. After all the responses are received the TTCAA proposes to host a meeting of the E/CAR CNS Committee tentatively set for October 18-20, 2006 to review the requirements as a team and justify each request and then to discuss the options proposed. The subsequent RFP would be circulated and another meeting held to discuss same before a RFP is issued. To carry out an intelligent comparison on the options the RFP must be clearly written and solicit solutions for the three options.

2.9 The FAA recently went through this process with the MEVA II network and offered their experience to assist the E/CAR in this project.

2.10 The timeline for completion of this RFP is tentatively set for February 2007. It was agreed that a letter would be sent by the TTCAA to the relevant DCAs detailing the intent of the solutions for the network, agenda of the meeting in Trinidad and tentative timelines for each activity towards the completion of the goal.

2.11 The received proposals would be reviewed and then a recommendation on the selected option solution from the options presented in 2.7 would be forwarded to the DCAs for their approval.

2.12 The discrete lines requested by France between Trinidad/Guadeloupe and Trinidad/Martinique are being installed with completion expected by the end of August 2006.

2.13 The TTCAA will follow up on ECCAA's request for two 64 K circuits between Saint Lucia and Martinique. Tentative completion date is set for November 2006.

2.14 France reported that the RADAR task force has made no progress as it relates to RADAR sharing and the DACOTA project for a seamless image. DACOTA is currently in use in Martinique but not in Guadeloupe. Although it is available in Guadeloupe, the data is undergoing integrity and validation checks.

2.15 For the remoting of RADAR data from Barbados to Trinidad, Trinidad reported that a visit was made to Barbados to obtain information. The easiest option to implement remoting was for Trinidad to purchase the identical hardware and software display equipment used by Barbados and to transport the RADAR information to Piarco using the E/CAR AFS network. Barbados advised that they needed to confirm plans for the replacement of their RADAR Display Site Equipment. This would affect the decision that Trinidad takes.

2.16 Barbados advised that the LOA for RADAR remoting between Trinidad/Barbados is being addressed by the Solicitor General and it is expected to be signed shortly. France advised that the Letters of Agreement (LOA) between Trinidad/France is with their legal department and should be completed shortly.

2.17 Trinidad advised that to date no contract has been signed between TSTT/TTCAA. Mutual agreement was reached on a settlement figure for the outstanding balance of bills owed for the network. TSTT stated that when the payment is made, the network would no longer be on a leased basis and they would no longer be responsible for the maintenance and upkeep of the network. This delayed payment until an agreement was reached whereby TSTT would continue to provide support for the network.

2.18 Before a contract can be signed, TTCAA needs confirmation on the elements of the network to draft an intelligent and comprehensive contract. To this end the TTCAA and TSTT jointly conducted visits to States in 2005 to verify the status of the equipment and spares. After several meetings between TSTT/TTCAA to analyze and fine-tune the raw data, the full schematic of the network was recently completed. The TTCAA will use this information to draft a maintenance service contract agreement for the links and end equipment as applicable for the AFS and AMS (VHF). The first draft of this contract is expected in December 2006.

2.19 The network information compiled by the TTCAA will be circulated to the States prior to the Meeting in October.

2.20 Trinidad confirmed that the payment and retention of the back up telephone AFS lines will remain as currently exists.

2.21 The Trinidad and Tobago Civil Aviation Authority and United States Federal Aviation Administration have begun a project to reconfigure the Aeronautical Fixed Telecommunications Network (AFTN) between the two countries. The first phase of the process will remove the X.25 protocol Packet Assembler Disassembler (PAD) that is currently in front of the Trinidad Thales AFTN Switch. Once this PAD is removed the switch in Trinidad will communicate with the FAA NADIN Network through the legacy telecommunications connectivity.

2.22 The second phase of the process will begin in late 2006 and will consist of a change from X.25 protocol to Transmission Control Protocol / Internet Protocol (TCP/IP) and will terminate at the new US FAA NADIN MSN which is also multi-protocol capable. This phase is in the engineering and planning stage, and the telecommunications path has not been determined at this time. The AMHS implementation will impact the E/CAR in that the AFTN in Trinidad can be connected via AMHS instead of X.25 protocol. The planned removal of the TSTT AMHS pad in Piarco will remove a single point of failure and the AFTN will connect directly to the FAA via X.25 port on the AFTN switch in the immediate future. This is tentatively set for last quarter of 2006.

2.23 AMHS will also provide an alternate routing via the REDDIG node for Piarco's AFTN to Argentina, which has a full AMHS AFTN. This is a thought for future consideration.

2.24 The TTCAA explained the role of Caribbean Air Navigation Advisory Services (CANAS) and the FIR Policy group since there was obscurity as to the mandate of these entities. It was explained that CANAS was formed in keeping with ICAO guidelines for the collection of user charges for this purpose. In the past the DCAs of the region had mandated that IACL collect the user charges. By way of letter to States, CANAS advised that effective February 1, 2005 it would be taking over the responsibility previously held by IACL. Since the handover by IACL, several key bits of information on

projects that were handled by IACL are now being brought to the attention of the TTCAA. The TTCAA will request the DCAs and the ECWG to confirm the projects previously handled by IACL.

2.25 It was explained that the FIR Policy Group was formed to examine common concerns within the region for example user charges and CNS/ATM matters as far as administrative issues are concerned. The Group is comprised of the DCAs of the Region: ECCAA, TTCAA, France, Barbados.

2.26 Discussion on ADS-C and ADS-B for the region resulted in the following:

- a) Before the region can take a decision to implement ADS-B a study needs to be done on the number of aircraft that operate in the region that are ADS-B equipped and other factors affecting ADS-B. The Group agreed that information should be solicited from FAA, IATA and other airlines that operate in the region, so cost/benefit analysis should be done and recommendation made on this matter. The FAA has already implemented ADS-B in some areas and offered to provide information.
- b) Trinidad is committed to ADS-C to service the oceanic area of its FIR. No date has been determined as yet for this implementation.

3. Suggested action

3.1 The meeting is invited to consider and endorse the solutions and timelines proposed in this report and attached Attachment A (refer to **Appendix R** to the E/CAR WG Report).

- END -

APPENDIX R

TASK	DEADLINES	RESPONSIBLE REMARKS
Improve AFTN circuits reliability	Nov. 2006	Three days Meeting scheduled in Trinidad between 18-20 October 2006 to identify requirements and discuss possible solutions - TTCAA
Conclusion 29/4 Improve connections between E/CAR Network and FAA AFTN and voice circuits	1 st Quarter in 2007	FAA and TTCAA continue working to improve the connection. First phase was to remove PAD in Trinidad Thales AFTN Switch and it is completed. Second phase will be to change from X.25 protocol to TCP/IP and should be completed in late 2006
Conclusion 29/5 Notification of network failures and feedback procedures between the French Antilles and Trinidad and Tobago		Completed
Conclusion 29/6 Increase the reliability of the E/CAR digital network	On-going	TTCAA discussed an action plan for the improvement of the network, which will be circulated to States.
Conclusion 29/7 The need of a contract with the provider TSTT	Second quarter of 2007	a) a draft copy of a contract is been compiled and it will be circulated to the DCA's prior to signatures b) Completed c) On-going d) Completed

CNS ACTION PLAN

TASK	DETAIL	RESPONSIBILITY	ACTION	DEADLINES
Improving AFTN within the E/CAR	Replacement of AFTN terminals: PC, Printer, UPS	1. Trinidad and Tobago 2. TTCAA 3. TTCAA 4. States 5. States 6. TTCAA 7. TTCAA	1. Verify the needs requirements for templates available on the IAT software (FPL, RPL, NOTAM, etc) 2. Amend the proposed software requirement as necessary. 3. Sign a contract for the delivery of the AFTN hardware and IAT software. 4. States have to provide the requested ac power. 5. Sates have to notify TTCAA number of operators and technical persons to be trained on AFTN equipment. 6. Develop a schedule of implement the installation in conjunction with States. 7. New AFTN end equipment installed, tested and commissioned	1. October 31, 2006 2. To be determined tied to item 1. 3. December 2006 4. October 2006 5. October 2006 6. February 2007 7. May 2007
Conclusion 29/4 Improve connections between E/CAR Network and FAA AFTN	FAA and TTCAA continue working to improve the connection. First phase was to remove PAD in Trinidad Thales AFTN Switch and it is completed. Second phase will be to change from X.25 protocol	TTCAA and FAA	1. Set up with Thales a X.25 circuit in the AFTN switch. 2. Teleconference between TTCAA and FAA to finalize the X.25 parameters and submit the required FAA interconnectivity application form 3. Set up and test a parallel AFTN circuit between Piarco and San Juan to Atlanta to	1. October 2006 2. August 23, 2006 3. October 2006

TASK	DETAIL	RESPONSIBILITY	ACTION	DEADLINES
and voice circuits	to TCP/IP and should be completed in late 2006		verify circuit quality. 4. Connect Piarco switch to Atlanta's switch. 5. Test message switching on this circuit. 6. Cutover and commission this X.25 circuit 7. Decommission the Piarco AMHS PAD.	4. November 2006 5. November 2006 6. December 2006 7. December 2007
Conclusion 29/5 Notification of network failures and feedback procedures between the French Antilles and Trinidad and Tobago				Completed
Conclusion 29/6 Increase the reliability of the E/CAR digital network	TTCAA discussed an action plan for the improvement of the network, which will be circulated to States.	1. States 2. TTCAA 3. States 4. TTCAA 5. DG/TTCAA 6. TTCAA 7. TTCAA	1. Provide user requirements. 2. Set up meeting in Trinidad. 3. Develop draft RFP 4. Set up a teleconference to ratify the draft RFP 5. Send RFP to DG/TTCAA 6. Approved RFP distributed open tender 7. Proposals received, reviewed and evaluated 8. Selected option proposal sent to TTCAA	1. 2. 18-20, October 2006 3. October 2006-February 2007 4. February 2007 5. April 2007 6. TBD 7. TBD 8. TBD 9. TBD

30TH EASTERN CARIBBEAN WORKING GROUP MEETING
Appendix R to the Report on Agenda Item 4

4R- 4

TASK	DETAIL	RESPONSIBILITY	ACTION	DEADLINES
		8. TTCAA 9. TTCAA 10. TTCAA	9. Contract award after TTCAA approval 10. Implementation of contract	10. TBD
Conclusion 29/7 The need of a contract with the provider TSTT	Implement a short term contract between the service provider and TTCAA until a permanent solution is reached.	1. TTCAA 2. TTCAA/TSTT	1. Compile a draft contract 2. TTCAA/TSTT to review 3. Sign contract	Second quarter of 2007

Agenda Item 5 Aviation Security Activities and Developments

Annex 17 and the Security Manual

5.1 The Meeting took note that on 30 November 2005, the ICAO Council adopted Amendment 11 to Annex 17 which became effective 1 July 2006. Amendment 11 covers the reinforcement of national civil aviation security control programme provisions; In-Flight Security Officers (IFSOs); general aviation and aerial work; one-stop security concept for passengers and baggage; risk assessment concept; security for all-cargo operations; and definitions.

Restructuring of the Security and Facilitation Branch

5.2 The Meeting took note that the Security and Facilitation Branch has been restructured into two branches, Specification and Guidance Material (SGM) and Coordinated Assistance and Development Section (CAD).

Recruitment of AVSEC Professionals

5.3 The Meeting took note that a new ICAO strategy for aviation security assistance and development, the Coordinated Assistance and Development Section (CAD) in the Aviation Security and Facilitation Branch (S&F), and Technical Cooperation Bureau, are in the process of compiling a new roster of aviation security professionals. The purpose of this initiative is to recruit short term experts to carry out ICAO aviation security; the prerequisites are included in **Appendix A** to this part of the Report are required for all potential candidates. In view of the above, the Meeting agreed with the following Draft Conclusion:

DRAFT

CONCLUSION 30/16

RECRUITMENT OF AVSEC PROFESSIONALS

That the States/Territories:

- a) review the ICAO prerequisites and forward this information to AVSEC qualified individuals in their administrations; and
- b) encourage qualified individuals to apply with ICAO to assist States with the enhancement of their AVSEC Programmes

Aviation Security Training Programme

5.4 The Meeting received information on the ICAO 2006 AVSEC Training courses at the three Aviation Security Training Centres at Port of Spain (Trinidad and Tobago), Quito (Ecuador) and Buenos Aires (Argentina). CAD, which is responsible for the development of all Aviation Security Training Packages (ASTP), plans to develop new aviation security training packages, to include airport and aircraft security design, new and emerging threats in civil aviation, screener certification and national quality control.

Annex 9 and Machine Readable Travel Documents

5.5 The Meeting was also informed that through its Aviation Security and Facilitation Branch (S&F), ICAO pursues the objective to facilitate and strengthen border clearance and security measures in airports and to reduce landside congestion, with a three-part strategy: standardization of passports, visas and other travel documents; improvement of inspection processes with the use of modern technology; and tackling of related security problems.

ICAO Universal Security Audit Programme (USAP)

5.6 The Meeting took note of the schedule relating to ICAO USAP AVSEC Audits and Follow-up visits. The list of audits conducted and the follow-up visits for 2006 and 2007 are attached in **Appendix B** to this part of the Report.

Organization of American States (OAS) Counter Inter-American Committee Against Terrorism (CICTE)

5.7 The Meeting received information on the Organization of American States (OAS) Counter Inter-American Committee Against Terrorism (CICTE) that offered thirty (30) fellowships for National Aviation Security Officials in the region wishing to attend the Hold Baggage Screening Seminar/Meeting on 28 November 2005, at Monterrey, Mexico, and were advised of plans for future collaboration between OAS CICTE and ICAO in support of additional AVSEC training events.

ICAO/Canada Aviation Security Awareness Training Programme Phase II

5.8 The Meeting was informed that Transport Canada and ICAO are currently working to complete a proposal called “Counter Terrorism Capacity Building Programme” which entails aviation security workshops, courses and seminars in the CAR/SAM Regions from 2006-2009, targeted for the Civil Aviation Aeronautical Authorities and may include airports, air operators and airport policing authorities. The AVSEC topics for these events will include but are not limited to Airport Security Programme, National Civil Aviation Security Programme, National Quality Control Programme, Passenger Screening, Cargo Security Programme and Human Factors.

Aviation Security Point of Contact (POC)

5.9 The Meeting took note that due to the views expressed by the G8 Roma-Lyon Crime and Terrorism Group against criminality and terrorism, an ICAO-wide Aviation Security Point of Contact (POC) Network was established for the communication of imminent threats to civil air transport operations.

5.10 Due to the sensitivity of the information to be contained in the Network, strict control should be exercised as failure to do so may compromise efforts and future security implementation endeavours. Responsibilities that participating States should take into account in order to maintain control over this information were outlined. States who wish to participate should complete the application form included in **Appendix C** to this part of the Report and send it directly to the Chief, Aviation Security and Facilitation Branch, ICAO, fax; + 1 (514) 954-6408, e-mail: avsec@icao.int. The Meeting agreed the following Draft Conclusion:

DRAFT

CONCLUSION 30/17

AVIATION SECURITY POINT OF CONTACT (POC) NETWORK

That the States/Territories:

- a) review the criteria information and designate the appropriate authority to receive imminent threats to civil air transport operations through this Network; and
- b) as soon as practical sign up with ICAO using the appropriate form for the Aviation Security Point of Contact (POC) Network.

Aviation Security Committee (AVSEC/COMM)

5.11 The Meeting noted that the Fifth Meeting of the Aviation Security Committee (AVSEC/COMM) was held at Buenos Aires, Argentina in conjunction with the 10th Annual LACAC Group of AVSEC Experts on 8-13 May 2006. The AVSEC/COMM Meeting approved the establishment of a Passenger/Cabin Baggage Screening Seminar/Meeting to assist States with current screening procedures and technologies. Jamaica volunteered to host the event on 13-17 November 2006, in Montego Bay, Jamaica. This event is particularly pertinent in light of the upcoming Cricket World Cup being held in the Caribbean in 2007.

5.12 Trinidad and Tobago reported to the Meeting on AVSEC activities undertaken by the TTCAA which have been instrumental in fostering AVSEC programmes in T&T and the Caribbean. The TTCAA has hosted AVSEC Courses and Workshops at the Civil Aviation Training Centre and continues to work with the Airports Authority of Trinidad and Tobago to provide training programmes and courses some of which are held at the ICAO Aviation Security Centre. TTCAA encouraged the participation of other CAR States/Territories in these courses. Courses held to date include:

AVSEC STP123
AVSEC Instructor* T9
Hostage Negotiation (ISDS)
Crisis Management (ICAO)
Mail and Cargo Security Workshop* (IATA)
Passenger Screening
Baggage Screening*
Passenger Profiling*
Supervising AVSEC (ICAO)
AVSEC Awareness for all Airport Workers*
MCASP Implementation (TSA)

*These courses are repeated regularly.

5.13 The delegate from ECCAA informed the Meeting that in view of the findings during the ICAO USAP AVSEC Audit of the five of the six OECS States, ECCAA is in the process of developing the following programmes:

- 1) National Training programme;
- 2) Quality Control Programme; and
- 3) Aviation Security Awareness Programme.

APPENDIX A

REQUIREMENTS FOR THE RECRUITMENT OF AVSEC PROFESSIONALS

With the launch of a new ICAO strategy for aviation security assistance and development, and considering the continuously evolving and increasingly challenging nature of the aviation security field, the coordinated Assistance and Development section (CAD) in the Aviation security and Facilitation Branch, and Technical cooperation Bureau, are in the process of compiling a new roster of aviation security professionals. These professionals, if successfully recruited as short term experts will carry out ICAO aviation security missions to help ICAO contracting States; a) develop a sound aviation security infrastructure; b) correct aviation security deficiencies as revealed by the universal ICAO Aviation security programme, c) deal with new and emerging threats; d) teach ICAO aviation security training courses. The new list will be compiled based on merit and professional experience in aviation and aviation security. The following prerequisites are required for all potential candidates:

Required Experience:

1. A comprehensive and working knowledge of ICAO's Annex 17 to the convention on International Civil Aviation (Chicago convention).
2. A comprehensive and working knowledge of ICAO Security Manual for the safeguarding of civil Aviation from Acts of unlawful Interference. (Doc.8973).
3. Working knowledge and familiarity with ICAO Annexes 6, (Aircraft Operations) 9, (Facilitation) 14, (Aerodromes) and 18, (Dangerous Goods).
4. 10 years of domestic and international working experience in aviation security policy, planning, organizational and operational experience.
5. Strong command of one of the 6 ICAO working languages, Arabic, Chinese, English, French, Russian and Spanish, and one of any of the others.
6. Managerial skills in project management.
7. Working knowledge in aviation security training and familiar with the ICAO Aviation security Training programme.
8. Appreciation of, and ability to work with, people from different cultures.
9. Ability to travel anywhere around the world, including remote and high risk destinations.

Desirable experience:

1. Working experience in aviation management, airport operations (air and landside) operations, air carrier operations, aviation-related law enforcement operations.
2. Completion of ICAO aviation security training courses.
3. Certification as an ICAO aviation security auditing (USAP certification).
4. Risk and threat assessment (risk models and, geopolitical applications).
5. Airport security design and planning.
6. Cabin and flight deck experience.

Anyone who meets these requirements and may be interested in carrying out aviation security missions on behalf of ICAO is encouraged to submit his/her resume to me at Jhaidar@icao.int, and copy Mrs. Wendy Kiley-Valiquet, wkiley-valiquet@icao.int

Also, it would be greatly appreciated if you may forward this message to anyone qualified individuals in your administration.

Finally, we look forward to hearing from you with the Curriculum vitae of appropriate candidates.

Mr. Jalal Haidar
A/Chief Coordinated Assistance and Development (CAD) Section
Aviation Security and Facilitation Branch
International Civil Aviation Organization
Montreal, Quebec, Canada H3C 5H7
Tel: 514 954 5837 Fax: 514 954 6408

APPENDIX B

**ICAO UNIVERSAL SECURITY AUDIT PROGRAMME (USAP)
AUDIT ACTIVITY REPORT**

PROGRAMME IMPLEMENTATION AS OF 31 March 2006

	STATE	AIRPORTS AUDITED	DATE OF AUDIT	FOLLOW-UP VISIT DATES
1.	Antigua and Barbuda	Antigua V.C. Bird International Airport (ANU)	November 2005	2007
2.	Canada	Toronto Pearson International Airport (YYZ)	May 2005	2007
3.	Costa Rica	San Jose Juan Santamaria International Airport (SJO)	February 2005	2007
4.	Cuba	Havana Jose Marti International Airport (HAV)	March 2004	March 2006
5.	El Salvador	San Salvador El Salvador International Airport (SAL)	August 2004	2006
6.	Guatemala	Guatemala City La Aurora International Airport (GUA)	January/February 2005	2007
7.	Honduras	Tegucigalpa Toncontin International Airport (TGU)	March 2004	2006
8.	Jamaica	Kingston Norman Manley International Airport (KIN)	September 2003	October 2005
9.	Mexico	Mexico City International (MEX) and Guadalajara Miguel Hidalgo (GDL) Airports	January 2004	May/June 2006
10.	Nicaragua	Managua Internacional Augusto C. Sandino Airport (MGA)	August/September 2004	September 2006
11.	Saint Kitts and Nevis	St. Kitts Robert L Bradshaw Airport (SKB)	November/December 2005	2007
12.	Trinidad and Tobago	Port of Spain Piarco International Airport (POS)	June/July 2003	October 2005
13.	United States	New York John F. Kennedy International Airport (JFK)	April 2005	2007

**ICAO UNIVERSAL SECURITY AUDIT PROGRAMME (USAP)
AUDIT SCHEDULE**

JANUARY TO DECEMBER 2006

First Quarter 2006 (January to March)	Second Quarter 2006 (April to June)
Dominican Republic	Grenada Saint Lucia Saint Vincent and the Grenadines
Third Quarter 2006 (July to September)	Fourth Quarter 2006 (October to December)
NONE	Barbados

**ICAO UNIVERSAL SECURITY AUDIT PROGRAMME (USAP)
AUDIT SCHEDULE**

JANUARY TO DECEMBER 2007

First Quarter 2007 (January to March)	Second Quarter 2007 (April to June)
NONE	NONE
Third Quarter 2007 (July to September)	Fourth Quarter 2007 (October to December)
NONE	Bahamas Belize Haiti

ATTACHMENT to State letter SP 48/1-06/19

AVIATION SECURITY POINT OF CONTACT (PoC) NETWORK

Sign-up Form

Please complete the following form and ensure that the contact-point is not only knowledgeable but that he or she is available on a 24-hour basis.

1. CONTACT, TELEPHONE NUMBER, FAX and E-MAIL (*Example: "Country: Command Centre, Aviation Security Department, City, Country, Telephone: 1 - 555 - 555- 1212, Fax: 1 -555 - 555-1212, E-mail "*)

Contact Person (s) (up to 3 persons)

Name: _____

Position/Department: _____

Address: _____

Tel.: _____ Fax: _____

E-mail: _____

2. DESCRIPTION OF POINT OF CONTACT (*Example: "Country: Aviation Security Department is a telecommunications centre that is open 24 hours a day. Its personnel can immediately connect the caller to an appropriate investigator or expert. The Command Centre itself does not have electronic evidence investigators or experts."*)

3. LANGUAGE CAPABILITIES OF CONTACT (*Example: "Country: Command Centre personnel speak English only."*)

4. PLEASE PROVIDE E-MAIL CONTACT FOR DISTRIBUTION OF UPDATES TO CONTACT POINT LIST (*Example: "COUNTRY: Johndoe@xxx.gov and Marydoe@xxx.gov "*)

— END —

Agenda Item 6 Review of the Terms of Reference and Work Programme

6.1 The Meeting reviewed and updated the current E/CAR Working Group Terms of Reference and Work Programme; the results are presented in the **Appendix A** to this part of the Report.

6.2 The Meeting recognized that the terms of reference and work programme of the E/CAR Working Group should be reviewed taking into consideration the new Global Plan Initiatives (GPIs) and related ICAO on-line planning tools associated with planning and implementation work. This includes revising the methods of reporting work completed to ensure that progress will be measured against timelines and that performance objectives are being met which, in turn, ensures that resources are more appropriately directed and that all work supports the ICAO business plan.

6.3 These planning and implementation works should be reorganized keeping in mind the priority interests of the CAR Region aimed at optimizing human resources, financial savings and communication methods between States such as the Internet, video conference, teleconferencing, e-mail, telephone and facsimile, all of which should be encouraged during the intervening period.

6.4 The Meeting agreed that ICAO take appropriate actions to reorganize the E/CAR/WG work programme of future meetings, considering the ATM strategies shown in **Appendix B** to this part of the Report, improving the collaborative decision-making (CDM) processes, and avoiding any unnecessary and duplicated work, and adopted the following:

DRAFT
CONCLUSION 30/18 REORGANIZATION OF THE ATM TERMS OF REFERENCE
AND WORK PROGRAMME OF THE E/CAR/WG

That ICAO:

- a) review and integrate the ATM tasks of the E/CAR Working Group considering the performance objectives, as indicated in the Appendix B to this part of this Report, taking into account the new Global Plan Initiatives (GPI); and
- b) reorganize in an homogeneous manner the future activities of the E/CAR Working Group in accordance with the future annual work programme of the ICAO NACC Regional Office.

6.5 The Meeting unanimously elected Mr. Norman Cassell as the new Chairman and he thanked the Meeting for its support, offering his commitment in order to achieve new improvements and challenges in the E/CAR ANS. The Meeting also thanked Mr. Simon Lewis for his excellent work as Chairman of the E/CAR WG for two terms. It was highlighted that his performance and leadership during the E/CAR WG Meetings provided significant improvements for the benefit of the E/CAR.

APPENDIX A

EASTERN CARIBBEAN WORKING GROUP (E/CAR WG) TERMS OF REFERENCE AND WORK PROGRAMME

1. Terms of reference

- a) The E/CAR Working Group was established for the purpose of examining problems affecting airspace organization and utilization in the Eastern Caribbean area for States and Territories in the PIARCO and San Juan FIRs.
- b) Its terms of reference were expanded at the 18th E/CAR WG Meeting (Saint Lucia, October 1994) to include the examination on a continual basis of problems affecting all fields of Air Navigation in the Eastern Caribbean area.
- c) Identify, study and recommend action plans to solve air navigation deficiencies in the E/CAR.
- d) Maintain up-to-date the CNS/ATM Implementation Plan for the E/CAR.

2. Work Programme

TASK NUMBER	FIELD	TASK DESCRIPTION	Priority	Date	
				Start	End
1	AIS	Coordinate and implement common WGS-84 points information with neighbouring States for the full implementation of WGS-84 in the E/CAR area. (1)	A		ECAR/WG/31
2	AIS	Establish strategy for the AIS/MAP Automation System for the E/CAR area. (1)	A	2007	TBD
3	AIS	Establish procedures to access on line AIS information in accordance with ICAO guidelines	B	2007	2008
4	AIS	Analyse the requirements for world aeronautical charts and, if applicable, prepare a proposal of their production for the E/CAR Region.	B	2004	Dec. 2006
5	ATM	Improve airspace and route network structure through the implementation of RNAV routes and RNP procedures in the E/CAR area. (2)	A		2012
6	ATM	Develop and implement a Human Resources Training Plan considering the requirements for the next five years and the Guidance Manual for the Training of Human Resources on CNS/ATM Systems. (2)	B		31/ECAR/WG
7	ATM	Prepare a proposal to establish a common transition altitude in the TMAs of the Piarco FIR.	A	2004	Dec. 2008
8	CNS	Follow up to the improvement and development of the E/CAR AFS Digital Network. (4)	A		On going
9	ATM CNS	Establishment of a common seamless ATS surveillance system in the E/CAR area through radar data sharing and integration of ATM automated systems. (3)	A		2010

TASK NUMBER	FIELD	TASK DESCRIPTION	Priority	Date	
				Start	End
10	MET	Establish quality control mechanisms for OPMET exchange messages.	B	2004	On-going

Notes:

- (1) denotes tasks assigned to the AIS Committee
(Rapporteur: Barbados – Shirley Ford)
- (2) denotes tasks assigned to the ATM Committee
(Rapporteur: Trinidad and Tobago - Samuel Lampkin)
- (3) denotes tasks assigned to the Radar Data Sharing Task Force
(Rapporteur: France - Roger Prudent)
- (4) denotes tasks assigned to TTCAA
- (5) denotes tasks assigned to the CNS Committee
(Coordinator: TTCAA).

Priority

- A** High priority tasks, on which work should be speeded up.
- B** Medium priority tasks, on which work should commence as soon as possible, but without detriment to priority **A** tasks.
- C** Tasks of lesser priority, on which work should commence as time and resources allow, but without detriment to Priority **A** and **B** tasks.

3. Composition

Anguilla, Antigua and Barbuda, Aruba, Barbados, British Virgin Islands, Dominica, France, Grenada, Guyana, Montserrat, Netherlands Antilles, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago, United Kingdom, United States, Venezuela, ACI, IATA, IFALPA, IFATCA, and ECCAA.

4. Working Methods

- a) the E/CAR WG will appoint a standing Chairperson for its meetings with a term of 3 years on a rotational basis to lead the E/CAR WG meetings providing continuity to its work and establishing a communication link between the ICAO NACC Regional Office and the members of the E/CAR WG between meetings;
- b) the host State or Territory of the E/CAR WG Meetings will serve as Vice-Chairperson of the Meeting;
- c) nomination for the position of Rapporteur of Committees and/or Task Forces may be presented by any State or Territory which is a member of the E/CAR WG;
- d) the Committees and Task Forces should co-ordinate and advance their works between meetings as follows;
 - conduct work via written correspondence, i.e. e-mail, fax, etc.
 - conduct work via phone and teleconference calls;

- hold meetings when necessary;
- e) when required, the Secretariat, in consultation with the Chairperson, should establish the first day of the E/CAR WG Meeting as a Committee/Task Force meeting day for these groups to advance their work; and
- f) classification/definitions to record recommendations in the meeting reports:

DECISIONS

DRAFT CONCLUSIONS

Internal actions of the E/CAR WG

Actions requiring communications to States and Territories and/or endorsement by the E/CAR DCAs Meeting.

5. Meeting Sites

- a) the following meeting host rotation programme has been adopted for the E/CAR Working Group Meetings;
- b) any other States and International Organizations normally invited to participate in the E/CAR Working Group meetings may at any time offer to host a meeting;
- c) should a State or Group of Territories be unable to host a particular Working Group meeting as per the programme, it may exchange positions with another State or Group of Territories through bilateral discussions and the ICAO Regional Office should be informed of the change at the latest six months before the convening of the meeting;
- d) should a State or Group of Territories be unable to host a particular Working Group meeting as per the programme and not have exchanged positions in the programme with another State or Territory, the ICAO Regional Office should be advised at least six months before the convening of the meeting, where upon the next State on the list should take on the responsibility of hosting the meeting; and
- e) Meeting Host Rotation Programme:

YEAR	STATES OR GROUP OF TERRITORIES
2007	Trinidad and Tobago
2008	Antigua and Barbuda
2009	Netherlands Antilles
2010	Barbados
2011	French Antilles
2012	United States
2013	Saint Kitts and Nevis

APPENDIX B

Improve ATM situational awareness

Benefits

The benefits of this performance objective are:

- enhanced traffic surveillance;
- enhanced collaboration between flight crew and the ATM system;
- improved collaborative decision-making through sharing of electronic aeronautical data information;
- improved available electronic terrain and obstacle data in the cockpit;
- reduction of workload for both pilots and controllers;
- improved operational efficiency;
- enhanced airspace capacity;
- improved implementation on a cost-effective basis;
- reduction of the number of controlled flights into terrain; and
- improved safety management.

Near term (2006 - 2010) Strategy for ATC

- identify the automation level required according to the ATM service provided in airspace and international aerodromes, assessing
 - architecture design,
 - characteristics and attributes for interoperability,
 - data bases and software, and
 - technical requirements;
- implement improved flight plan data processing systems and electronic transmission tools
- implement radar data sharing programs where benefits can be obtained
- develop a situational awareness training programme for pilots and controllers
- implement ATM surveillance systems for situational traffic information and associated procedures
- implement ATS automated message exchanges, as required
 - FPL, CPL, CNL, DLA, etc.
- implement automated radar handovers, where able;
- implement ground and air electronic warnings, as needed
 - Conflict prediction
 - Terrain proximity
 - MSAW
 - DAIW
 - Surveillance system for surface movement
- implement data link surveillance technologies and applications: ADS, CPDLC, AIDC, as required

Strategy for ATFM

- implement ATS automated message exchanges as required (FPL, CPL, CNL, DLA)
- implement additional automation support tools to increase sharing of aeronautical information
 - ETMS or similar
 - MET information
 - AIS/NOTAM dissemination
 - Aerodrome/sector/facility constraints
- implement teleconferences with ATM stakeholders
- monitor implementation progress

GPIs

The above is supported by GPI/1: flexible use of airspace; GPI/6: air traffic flow management; and GPI/7: dynamic and flexible ATS route management; GPI/9: situational awareness; GPI/13: aerodrome design and management; GPI/14: runway operations; and GPI/16: decision support and alerting systems; GPI/17: implementation of data link applications; GPI/18: aeronautical Information; GPI/19: meteorological systems.

Performance Objectives

1) Optimize the ATS route structure in both terminal and en-route airspace

Benefits

The benefits of this performance objective are:

- reductions in fuel consumption;
- ability of aircraft to conduct flight more closely to preferred trajectories;
- increase in airspace capacity;
- facilitate utilization of advanced technologies (e.g., FMS based arrivals) and ATC decision support tools (e.g., metering and sequencing), thereby increasing efficiency.

Strategy

En-route airspace

In the near term:

(Target: mid 2008)

- analyze the en-route ATS route structure and implement all identifiable improvements;
- implement all remaining regional requirements (e.g. RNP 10 routes); and
- Finalize implementation of WGS-84.

In the medium term

(Target: 2011)

- develop a strategy and work programme to design and implement a trunk route network, connecting major city pairs in the upper airspace and for transit to/from aerodromes, on the basis of PBN and, in particular, RNAV/5, taking into account interregional harmonization;

- monitor implementation progress.

In terminal airspace

- develop a regional strategy and work programme for implementation of optimized standard instrument departures (SIDs), standard instrument arrivals (STARs), instrument flight procedures, holding, approach and associated procedures, on the basis of PBN and, in particular RNAV/1 and 2; and
- monitor implementation progress.

GPIs

The above performance objective is supported by GPI/5: performance-based navigation, GPI/7: dynamic and flexible ATS route management, GPI/8: collaborative airspace design and management, GPI/10: terminal area design and management, GPI/11: RNP and RNAV SIDs and STARs and GPI/12: FMS-based arrival procedures.

2) Improve demand and capacity balancing

Benefits

The benefits of this performance objective are:

- reduction in weather- and traffic-induced holding, leading to reduced fuel consumption and emissions;
- improved and smoother traffic flows;
- improved predictability;
- improved management of excess demand of service in ATC sectors and aerodromes;
- improved operational efficiency;
- enhanced airport capacity;
- enhanced airspace capacity; and
- improved safety management.

Strategy

Near term (2008)

- identify key stakeholders (ATC service providers and users, military authorities, airport authorities, aircraft operators and relevant international organisations) for purposes of coordination and cooperation, using a CDM process;
- identify and analyse traffic flow problems and develop methods for improving efficiencies on gradual basis, as needed, through enhancements in current:
 - airspace organization and management (AOM) and airway structure (unidirectional routes),
 - communications and surveillance systems,
 - aerodrome capacity,
 - ATS capacity, and
 - ATS letters of agreement;
- define common elements of situational awareness between FMUs;

- o common traffic displays,
 - o common weather displays (Internet),
 - o communications (teleconferences, web), and
 - o daily teleconference/messages advisories
- develop methods to establish demand/capacity forecasting
- develop a regional strategy and work programme for harmonized implementation of ATFM service ; and
- monitor implementation progress.

Strategy

Medium term (2010)

- develop a regional strategy for the implementation of flexible use of airspace (FUA)
- define common electronic information and minimum databases required for decision support and alerting systems for interoperable situational awareness between Centralized ATFM units
- develop regional procedures for efficient and optimum use of aerodrome and runway capacity
- develop a regional ATFM procedural manual to manage demand/capacity balancing;
- develop a regional strategy and framework for the implementation of Centralized ATFM unit.
- develop operational agreements between Centralized ATFM units for interregional demand/capacity balancing; and,
- monitor implementation progress.

GPIs

The above is supported by GPI/1: flexible use of airspace; GPI/6: air traffic flow management; and GPI/7: dynamic and flexible ATS route management; GPI/9: Situational awareness; GPI/13: aerodrome design and management; GPI/14: runway operations; and GPI/16: decision support and alerting systems.

3) Enhance civil/military coordination and co-operation

Benefits

The benefits of this performance objective are:

- make available military restricted airspace more hours of the day so that aircraft can fly on their preferred trajectories;
- increase airspace capacity;
- allow a more efficient ATS route structure;
- ensure safe and efficient action in the event of unlawful interference; and
- improve search and rescue services.

Strategy

(Target: 2008 and 2012)

- develop guidance material on civil/military coordination and co-operation to be used by States/Territories to develop national policies, procedures and rules;
- establish civil/military coordination bodies;
- arrange for permanent liaison and close cooperation between civil ATS units and appropriate air defense units;
- conduct a regional review of special use airspace;
- develop a regional strategy and work programme for implementation of flexible use of airspace in a phased approach beginning with more dynamic sharing of restricted airspace while working towards full integration of civil and military aviation activities by **2012**; and
- monitor implementation progress

GPIs

The above is supported by GPI/1: flexible use of airspace.

4) Align upper airspace classification

Benefits

The benefits of this performance objective are:

- better utilization of data link communication;
- optimize use of flight plan data processing systems;
- enhance airspace management coordination, message exchange capabilities and utilization of flexible and dynamic airspace management techniques;
- harmonization of interregional coordination processes;
- improvement of airspace interoperability and seamlessness; and
- ensure the provision of positive air traffic control services to all aircraft operations.

Strategy

(Target: 2008)

Develop a regional implementation strategy and work programme for the implementation of ICAO Annex 11 airspace Class A above FL 195.

GPIs

The above is supported by GPI/4: align upper airspace classification.

5) Implement RNP approaches

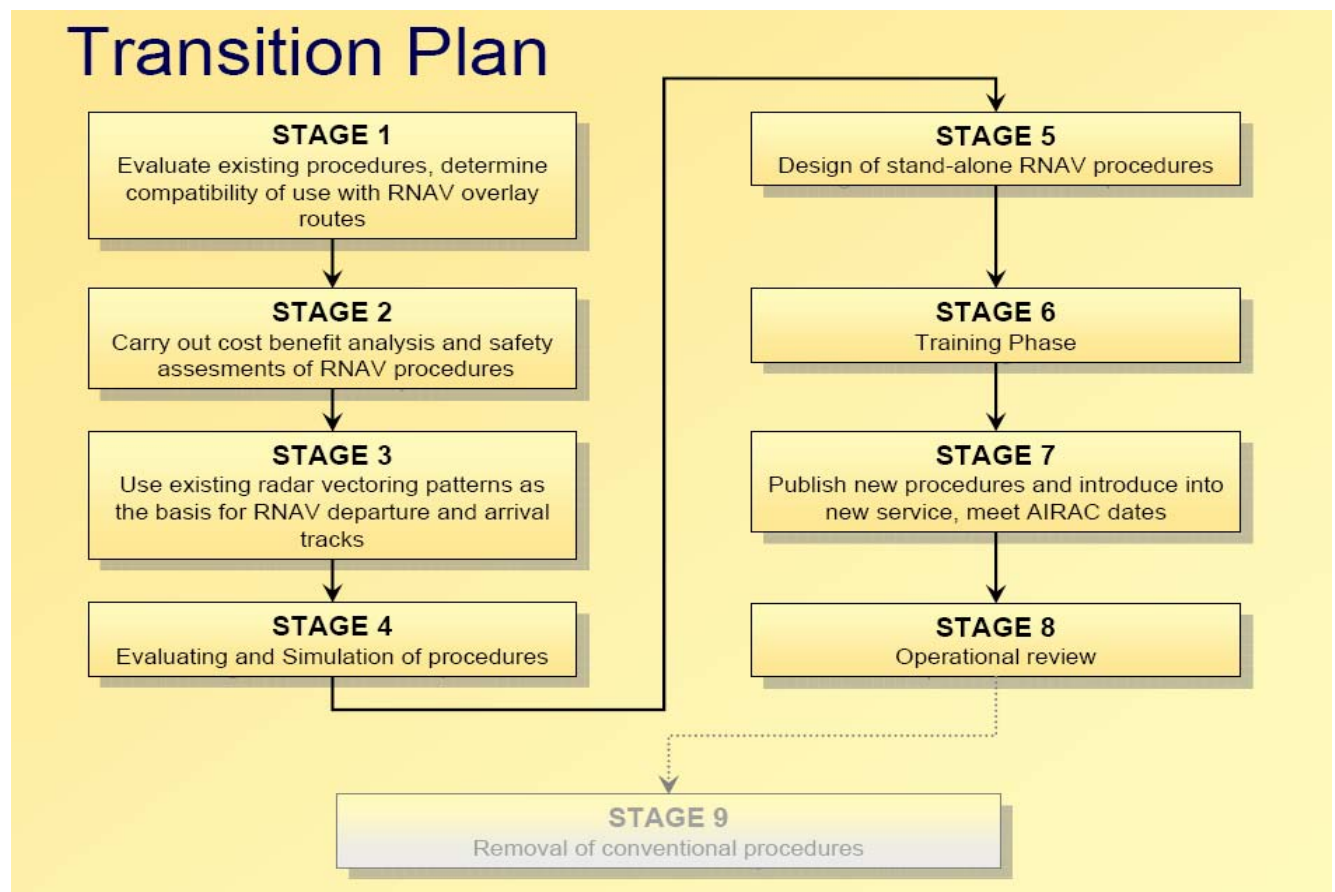
Benefits

The benefits of this performance objective are improvements in capacity, efficiency and safety at aerodromes.

Strategy

(Target: 2012)

- development of a regional strategy and work programme for implementation of RNP approaches at aerodromes where aircraft weighing 5700 kg or more are operated, on the basis of the transition plan below; and
- monitor implementation progress.



GPIs

The above performance objective is supported by GPI/5: performance-based navigation, GPI/7: dynamic and flexible ATS route management, GPI/8: collaborative airspace design and management, GPI/10: terminal area design and management, GPI/11: RNP and RNAV SIDs and STARs and GPI/12: FMS-based arrival procedures.

Agenda Item 7 Other business

7.1 Next Meeting Site

7.1.1 The Meeting reviewed the rotation programme shown in **Appendix A** and the historical list of hosts for E/CAR Working Group Meetings shown in **Appendix B** through the current one. The Meeting expressed concern regarding the Secretariat's proposal to postpone the next E/CAR WG a year in order to convene a CAR regional WG. It was felt that E/CAR work would suffer in the interim. As such, the Meeting decided to continue with the previously agreed Rotation Schedule. The delegate from Trinidad and Tobago expressed his satisfaction for being the host of the next Working Group Meeting informing that his State will organize the next meeting in 2007.

7.1.2 Also, keeping in mind the priority interests of the CAR Region aimed at optimizing human resources, financial savings, as well as the use of communications means between States such as Internet video conference, teleconferencing, e-mail, telephone and facsimile, it was noted that the ICAO NACC Office is in the process of reorganizing regional work programmes and the terms of reference of the different Working Groups of the NAM and CAR Regions. Also, taking into consideration the budget constraints and the Global Plan Initiatives (GPIs) of the new version of Global Air Navigation Plan (Doc 9750), this process will ensure that the performance objectives are appropriately measured against timelines and they are met without unnecessary or duplicated work.

7.1.3 The Meeting considered very important that ICAO takes appropriate actions in order that the Civil Aviation Administrations of St. Maarten and San Juan integrate their work carried out in the E/CAR on an annual basis, and therefore adopted the following Draft Conclusion:

DRAFT
CONCLUSION 30/19 PARTICIPATION OF ST. MAARTEN AND SAN JUAN
PERSONNEL IN E/CAR MEETINGS

That ICAO carry out appropriate actions to contact the administrations of the Netherlands Antilles and United States and inform them of the importance of participation of personnel of St. Maarten and San Juan in E/CAR WG meetings to resolve issues affecting their respective facilities.

Licensing of Air Traffic Controllers in the OECS

7.1.4 The Eastern Caribbean Civil Aviation (ECCAA) presented information on the progress towards licensing of Air Traffic Controllers in the States/Territories of the OECS to address various factors over the years.

7.1.5 The ECCAA has proceeded with an interim method for conducting medical assessments by the temporary utilization of non-AME certified doctors to conduct medical assessments in accordance with the basic Class 3 medical requirements of Annex 1 where necessary, issuing a waiver in this regard for a period of one year only, to those States that require this facilitation. In the meantime, in accordance with the Air Navigation (Overseas Territories) Order, and in conjunction with Air Safety Support International, the controllers in the British overseas territories of Anguilla and Montserrat are already licensed, albeit with temporary medical-certification exemptions.

7.1.6 Their medical certification process is required to be completed by the end of October of this year. It is hoped that this initial program for the licensing of the remaining Air Traffic Controllers in the OECS will be completed by December 2006.

APPENDIX A

AGREED MEETING HOST ROTATION PROGRAMME

YEAR	STATES OR GROUP OF TERRITORIES
2007	Trinidad and Tobago
2008	Antigua and Barbuda
2009	Netherlands Antilles
2010	Barbados
2011	French Antilles
2012	United States
2013	Saint Kitts and Nevis
2014	UK Overseas Territories (Anguilla, British Virgin Islands, Montserrat)
2015	Saint Vincent and the Grenadines

APPENDIX B

**E/CAR WORKING GROUP MEETING
HISTORICAL MEETING HOSTS**

YEAR	MEETING	VENUE
1976	1 st E/CAR Informal Working Group Meeting	St. John's, Antigua and Barbuda
1977	2 nd E/CAR Informal Working Group Meeting	Port of Spain, Trinidad and Tobago
1978	3 rd E/CAR Informal Working Group Meeting	Barbados
1979	4 th E/CAR Informal Working Group Meeting	Guadeloupe, French Antilles
1980	5 th E/CAR Informal Working Group Meeting	Port of Spain, Trinidad and Tobago
1980	6 th E/CAR Informal Working Group Meeting	Mexico City
1981	7 th E/CAR Informal Working Group Meeting	Antigua and Barbuda
1982	8 th E/ CAR Informal Working Group Meeting	Saint Lucia
1983	9 th E/CAR Informal Working Group Meeting	St. Maarten, Netherlands Antilles
1984	10 th E/CAR Informal Working Group Meeting	Barbados
1986	11 th E/CAR Informal Working Group Meeting	Saint Lucia
1987	12 th E/CAR Informal Working Group Meeting	San Juan, Puerto Rico
1988	13 th E/CAR Informal Working Group Meeting	Port of Spain, Trinidad and Tobago
1989	14 th E/CAR Informal Working Group Meeting	Grenada
1991	15 th E/CAR Informal Working Group Meeting	Saint Vincent and the Grenadines
1992	16 th E/CAR Informal Working Group Meeting	San Juan, Puerto Rico
1993	17 th E/CAR Informal Working Group Meeting	Montserrat
1994	18 th E/CAR Informal Working Group Meeting	Castries, Saint Lucia
1995	19 th E/CAR Informal Working Group Meeting	Tobago
1996	20 th E/CAR Informal Working Group Meeting	Antigua and Barbuda
1997	21 st E/CAR Informal Working Group Meeting	Aruba
1998	22 nd E/CAR Informal Working Group Meeting	Barbados
1999	23 rd E/CAR Informal Working Group Meeting	Fort-de-France, French Antilles
2000	24 th E/CAR Informal Working Group Meeting	San Juan, Puerto Rico
2001	25 th E/CAR Informal Working Group Meeting	Grenada
2002	26 th E/CAR Informal Working Group Meeting	Barbados
2003	27 th E/CAR Informal Working Group Meeting	St. John's, Antigua and Barbuda
2004	28 th E/CAR Working Group Meeting	Old Towne, Montserrat
2005	29 th E/CAR Working Group Meeting	Saint Vincent and the Grenadines
2006	30 th E/CAR Working Group Meeting	Castries, Saint Lucia

- END -