



International Civil Aviation Organization

NORTH AMERICAN, CENTRAL AMERICAN AND CARIBBEAN OFFICE

Twenty-Ninth Eastern Caribbean Working Group Meeting (29 E/CAR WG)

Saint Vincent and the Grenadines, 9 to 13 May 2005

29 E/CAR WG – WP/05

25/04/05

Agenda Item 3

Specific Air Navigation Activities and Developments

3.1 Aeronautical Information Services (AIS)

REPORT ON THE MEETING OF THE E/CAR AERONAUTICAL INFORMATION SERVICES COMMITTEE

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

SUMMARY
This Working Paper provides a report on the Meeting of The E/CAR Aeronautical Information Services Committee that was convened in Martinique 3-4 March 2005 in accordance with Conclusion 19/5 of the 19th DCA Meeting.
References: <ul style="list-style-type: none">• 28th Meeting of the E/CAR WG – Para 3.2.2 and Conclusion 28/3• 19th E/CAR DCA Meeting – Para 2.1.8 and Conclusion 19/5

1. Introduction

1.1 The 19th Meeting of Directors of Civil Aviation of the Eastern Caribbean held in Barbados 6-9 December 2004, took note of Conclusion 28/3 – Follow up to the total implementation of WGS-84 of the 28th Meeting of the E/CAR Working Group, held in Montserrat 26-30 April 2004. It was recognized that the AIS Committee had not been able to deal appropriately with this matter nor the task of standardizing common geographical coordinates of the FIR's and CTR/TMA's.

1.2 During the discussion on these matters France offered to host a short meeting of the AIS Committee to be convened prior to 30th March 2005. The Directors of Civil Aviation of the E/CAR agreed and accordingly that meeting took place in Martinique on 3-4 March 2005. As mandated, the meeting considered:

- a) the issues pertaining to the requirement for the World Aeronautical Chart in the E/CAR and
- b) standardizing common FIRs and CTR/TMAs geographical boundary WGS-84 coordinates with a view to reporting its findings to the 29th E/CAR WG meeting. The report of that meeting including the relevant draft conclusions is attached as Appendix to this Working Paper.

2. Discussion

2.1 The meeting in Martinique agreed that there is need for the production of the World Aeronautical Chart for the E/CAR area. However, production of such a chart by Eastern Caribbean States is constrained by a discrepancy between the ICAO Annex 4 Appendix 5 and the Caribbean and South American Regions Air Navigation Plan (ANP) Volume II FASID table. In Annex 4 the Eastern Caribbean is covered by blocks 2649, 2705, and 2772. Whereas in the ANP block 2649 does not exist, block 2705 has shifted and is assigned to the UK and block 2772 is assigned to Venezuela.

2.2 The matter pertaining to standardizing common FIRs and CTR/TMAs geographical boundary WGS-84 coordinates has been somewhat resolved. There is now the need for this meeting to decide whether to endorse the recommendations found at CONCLUSION 1/1 of the report.

2.3 It should be noted that the meeting took the opportunity to also address some of the other issues pertaining to the work programme assigned to the AIS Committee such as:

- a) the implementation of AIS/MAP Automation System and the AIS/Map Quality Assurance Programme. It was noted that Trinidad and Tobago has greatly improved its automation capability;
- b) establishment of procedures to access online AIS information in accordance with ICAO guidelines. (The ICAO guidelines are not yet available); and
- c) the identification of and proposal to resolve deficiencies in E/CAR AIS facilities.

3. Action Required

3.1 ICAO is requested to resolve the discrepancy identified at 2.1 above and to provide the appropriate guidance to the AIS Committee.

3.2 The meeting is invited to take note of the Report of the AIS Committee and its draft conclusion and decide on what further action is required.

DRAFT REPORT

**THE FIRST MEETING OF THE
EASTERN CARIBBEAN AIS
COMMITTEE**

1ST E/CAR AIS COMMITTEE

SUMMARY OF DISCUSSIONS

**FORT-DE-FRANCE, MARTINIQUE
3RD – 4TH MARCH 2005**

FIRST MEETING OF THE EASTERN CARIBBEAN AIS COMMITTEE – MARTINIQUE
3RD – 4TH MARCH 2005

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Report on Agenda Item 3

Brief review of:

- a) **Implementation of AIS/MAP Automation System and the AIS Map Quality Assurance Programme for the Eastern Caribbean.....3-1**
- b) **Establishment of procedures to access online AIS information in accordance with ICAO guidelines.....3-1**
- c) **Identification, study and proposal of actions to resolve deficiencies in all AIS/MAP facilities in the Eastern Caribbean.....3-1**

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HISTORY

1. Establishment of the meeting

The 1st Meeting of the Eastern Caribbean AIS Committee was intended to harmonize the publication of common WGS84 significant points in the AIP's of Barbados, French Car Sam Nam and Eastern Caribbean.

2. Site and Duration of the meeting

The meeting took place at the head office of the Direction Régionale de l'Aviation Civile in Martinique on 3rd and 4th March. The meeting worked from 0900 to 1800hrs on 3rd March and from 0900 to 1600hrs on 4th March.

3. Participants

- Mr. Randy Gomez, AIS Trinidad and Tobago – Chaired the Meeting in the absence of Shirley Forde, AIS Barbados
- Ms. Francisca Moses, AIS Trinidad and Tobago
- Mr. Roger Gabriel-Prudent, AIS France
- Ms. Catherine Arnaud, AIS France

4. Opening of the meeting

The meeting was opened at 9:00am by Ms. Isabelle Monnier the Chief of Air Navigation Services, who made the commitment to help in any way possible to ensure that the meeting was productive.

Following this, it was observed by the meeting that the absence of Barbados was unfortunate, since making of final decision needed all three members of the Eastern Caribbean AIS Committee.

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LIST OF PARTICIPANTS

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**FIRST MEETING OF THE EASTERN CARIBBEAN AIS COMMITTEE – MARTINIQUE
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**Agenda Item 1: Standardization of common FIRs and CTR/TMAs
geographical boundary WGS 84 Coordinates.**

- 1.1** CONCLUSION 19/5 of the 19th DCAs Meeting and CONCLUSION 28/3 of the 28th Eastern Caribbean Working Group Meeting.
- 1.1.1** The members of the committee using GEODEASY*, software developed by French Civil Aviation for calculation of WGS84 coordinates, reviewed all coordinates on the Boundary of the French Antilles TMAs along with other related coordinates.
- 1.1.2** The members of the committee then compared the result with present published coordinates and made the following conclusions.

CONCLUSION 1/1 –

- a) That the E/CAR states AIS will publish coordinates in accordance with the publication resolution standard stated in Annex 15:3.2.7 and found in the ICAO Aeronautical data requirement list in Appendix 7 of Annex 15.
- b) That E/CAR states AIS will publish the fixes in the column labelled coordinates published in Appendix A attached.
- c) That the AIS Committee will urge Trinidad and Tobago and France to adjust the Annex to the Convention signed 19th July 2002 to reflect the newly calculated Boundary Coordinates FF/C and FF/D

**see Appendix E for more information on GEODEASY*

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APPENDIX A

To Agenda Item 1

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Notes on Appendix A.

****Use the chart labelled Appendix D for identification of points.***

- 1) Each of the points listed were recalculated except the agreed declared points FF/A, FF/B, FF/E, FF/F, FF/G, FR/A, FR/C, FR/D, FR/E, FR/H* found in the Annex to the Convention between France and Trinidad and Tobago signed 19th July 2002 (*See Appendix B*)
- 2) The 'Definition' column lists points used to form the various intersections.
- 3) The 'Coordinates for Calculation' column contains the actual coordinates computed.
- 4) The 'Coordinates Published' column lists the coordinates that would appear in the various publications.
- 5) The 'To' column lists the bearing and distance of the relevant point to the NAVAID/fix listed in this column.
- 6) The 'Variation' column lists the variation of the location of the Navigation Aid or fixes contained in the 'To' column
- 7) The variation was used in determining the route radials so on the same route direction there may be a varying bearing if it crosses the boundary into a TMA with a different magnetic variation from the previous one that it transits.

The following derivation of coordinates are examples chosen to reflect the general methods used to check all coordinates in Appendix A.

8) COORDINATES FOR BIRNO AND BORUS –

A) Definition for BIRNO:

Intersection of two lines formed by (‘ANU’ VOR to ‘BGI’ VOR) and (TMA boundary from 135357.27N0603501.98W (*labelled FF/C*) to 145230.00N0594800.00W (*labelled FF/B*))

FF/B is an agreed declared point. The point to be double-checked was FF/C. To do this:

- i) The point FF/C was defined as the intersection of the 25NM arc projected from ‘BNE’ VOR and a line formed by 145230.00N0594800.00W and 135525N0603430W (old coordinates).
- ii) The old coordinates for FF/C (135525N0603430W) were used along with FF/B to determine the true bearing. (*See attached Appendix C Sheet 1*).
- iii) Then, using GEODEASY, the points FF/B, the existing true bearing in ii) above and the 25NM arc centered on BNE VOR was computed resulting in a new coordinate for FF/C – 135428.125N0603516.076W. (*See attached Appendix C Sheet 2*)
- iv) After much discussion it was decided that the coordinate given by the survey contractor – 135357.27N0603501.98W would be adopted since the bearing when computed with the FF/B coordinate was very close to the computed bearing and it also was positioned on the 25NM Arc from ‘BNE’ VOR. (*See attached Appendix C Sheet 3*)
- v) It was noted that there is a need for a change of Annex 1 the agreed Convention between France and Trinidad and Tobago signed on 19th July 2002 regarding this point, replacing the old point 135525N0603430W. (*See Appendix B*)
- vi) Using the line projected between FF/C and FF/B another line was projected between ‘ANU VOR to ‘BGI’ VOR using the GEODEASY software and the coordinates stated in Appendix A resulted. (*See attached Appendix C Sheet 5*).

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B) Definition for BORUS:

Intersection of two lines formed by ('FOF' VOR to 'BGI' VOR) and TMA Boundary from (135357.27N0603501.98W to 145230.00N0594800.00W)

- i) Using the line projected between FF/C and FF/B another line was projected between 'FOF' VOR to 'BGI' VOR using the GEODEASY software and the coordinates stated in Appendix A resulted. (See attached Appendix C Sheet 4)

9) COORDINATES FOR DAMOV

A) Definition for DAMOV:

Intersection of line from 'FOF' VOR to 'TIM' VOR and 25 NM Arc from 'BNE' VOR.

- i) LOGAN was used instead of 'TIM' VOR as the southernmost end of this line.
- ii) Logan was computed as seen on Appendix C Sheet 11
- iii) Using the line projected between Logan and 'FOF' VOR, along with the 25 NM area projected from 'BNE' VOR, the coordinates for DAMOV was computed as stated in Appendix A. (*See Appendix C Sheet 12*)

10) COORDINATES FOR POINT FF/D:

This point was changed by SATNAV Resources to 131854.83N0605941.29W from 131900N0605930W. There is a need reflect this change in Annex 1 to the Convention between France and Trinidad and Tobago. (*See Appendix B*)

11) COORDINATES FOR POINT FF/E

It was noted that the coordinates for FF/E that appeared in section 3 MAP 2 of the document 'PIARCO ENROUTE FIX COORDINATES' submitted to Piarco AIS by SATNAV Resources was not the agreed Declared Coordinates found in the Annex to the Convention in Appendix B. Therefore, it was agreed that the coordinates to be used is the agreed coordinate 133400N0613000W and not the coordinates 133400N0613100W that appears in the document referred to from SATNAV Resources. (*See attached agreement labelled Appendix B.*)

12) COORDINATES FOR POINT PROJECTED FROM TMA1/C TO ARC CENTRED ON 'BNE' VOR.

It was agreed that there was need for a slight change in the definition of the St. Lucia CTR where it states that point 141300N0605200W, labelled TMA 1/C in Appendix D, joins point 140200N0604000W. The point 140200N0604000W should be the beginning of the 25NM Arc that defines the St Lucia Boundary. However, a tangent projected from this point does not touch the 25NM Arc at 140200N0604000W but instead touches the ARC at 140147.005N0604028.643W. (*See Appendix C Sheet 27*)

It was therefore agreed that in the description of the St. Lucia CTR coordinates 140147N0604029W would replace 140200N0604000W.

APPENDIX A

FIRST MEETING OF THE EASTERN CARIBBEAN AIS COMMITTEE – MARTINIQUE 3RD – 4TH MARCH 2005

POINTS	DEFINITIONS (Intersection of)	COORDINATES FOR CALCULATION	COORDINATES PUBLISHED	TO	VAR
BORUS	FOF / BGI FF/B / FF/C	14 02 46.239 060 27 59.07	14 02 46N 060 27 59W	FOF : 149/329/46NM BGI : 150/330/82NM	14° 15°
BIRNO	ANU / BGI FFB / FFC	14 21 54.672 060 12 38.446	14 21 55N 060 12 38W	TASAR : 165/345/89NM BGI : 166/346/88 NM	14° 15°
TEDDY	SLU / BGI Circle BNE 25 NM	13 44 02.114 060 32 56.322	13 44 02N 060 32 56W	SLU : 317/137/31NM BGI : 137/317/74NM	15° 15°
TIBOT	BNE/BGI Circle BNE 25 NM	13 33 44.572 060 35 11.335	13 33 45N 060 35 11W	BNE : 309/129/25NM BGI : 129/309/71NM	15° 15°
LOGAN	BGI/TAB Circle BGI 68NM	12 08 27.795N 060 08 47.365	12 08 28N 060 08 47W	BGI : 50/230/68 NM TAB : 230/50/72NM	15° 15°
DAMOV	FOF/LOGAN Circle BNE 25NM	13 29 31.621 060 37 38.813	13 29 32N 060 37 39W	FOF : 355/175/70NM LOGAN : 176/356/85NM	14° 15°
RIBOR	BNE/SV FFD/FFE	13 22 49.804 061 07 32.34	13 22 50N 061 07 32W	BNE : 37/217/23NM SV : 216/36/15NM	15° 14°
SOMON	FOF/ONGAL FF/G / FF/E	14 09 14.648 061 41 51.208	14 09 15N 061 41 51W	FOF : 70/250/47NM ONGAL : 250/70/138NM	14° 14°
EMOLA	FOF/ILURI FFG/FFA	15 08 06.513 061 38 47.088	15 08 07N 061 38 47W	FOF : 146/326/49NM ILURI 326/146/105NM	14° 14°
DUNTA	PPR/ITEGO ILURI/FOF	15 36 31.519 062 11 35.443	15 36 32N 062 11 35W	PPR : 58/238/54NM TULEX : 238/58/24NM EMOLA : 146/326/42NM ILURI : 326/146/62NM	14° 14° 14° 14°
TULEX	PPR/ITEGO FR/C / FF/G	15 19 30.653 062 28 24.21	15 19 31N 062 28 24W	PPR 58/238/78NM PELMA 238/58/98NM	14° 14°

APPENDIX A

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POINTS	DEFINITIONS (Intersection of)	COORDINATES FOR CALCULATION	COORDINATES PUBLISHED	TO	VAR
GORET	PPR/MODUX FR/E / FR/H	16 33 52.9 062 10 19.448	16 33 53N 062 10 19W	PPR : 130/310/41NM MODUX : 310/130/53NM	14° 14°
BIMBO	PPR/SKB FR/E/ FR/H	16 37 36.481 061 57 37.35	16 37 36N 061 57 37W	PPR 146/326/32NM SKB : 326/146/60NM	14° 14°
KASKI	PPR/ANU FR/E / FR/H	16 42 37.144 061 40 27.517	16 42 37N 061 40 28W	PPR : 178/358/28NM ANU : 359/179/26NM	14° 15°
MEDUS	BGI/ANU FR/E / FR/H	16 44 21.626 061 34 28.287	16 44 22N 061 34 28W	TASAR : 165/345/73NM ANU : 166/346/26NM	14° 15°
FR/A		17 25 00 060 46 00			
FR/B		16 48 10 060 32 10			
FR/C		15 45 00 063 00 00			
FR/D		16 46 00 063 00 00			
FR/E		16 30 00 062 23 30			
FR/F		15 55 50 061 31 57			
FR/G		16 02 40 061 16 50			
FR/H		16 50 00 061 15 00			

APPENDIX A

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POINTS	DEFINITIONS (Intersection of)	COORDINATES FOR CALCULATION	COORDINATES PUBLISHED	TO	VAR
FF/A		16 10 00 060 18 00			
FF/B		14 52 30 059 48 00			
FF/C		13 53 57.27 060 35 01.98			
FF/D		13 18 54.83 060 59 41.29			
FF/E		13 34 00 061 30 00			
FF/F		14 02 04.83 061 40 05.50			
FF/G		14 54 00 061 57 00			
Tangent to ARC BNE		14 01 47.005 060 40 28.643	14 01 47N 060 40 29W		

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APPENDIX B

To Agenda Item 1

APPENDIX B

1-B-1

FIRST MEETING OF THE EASTERN CARIBBEAN AIS COMMITTEE – MARTINIQUE 3RD – 4TH MARCH 2005

CONVENTION

Between Trinidad and Tobago and France
Related to the Delegation given by Trinidad and Tobago to France
To provide Air Traffic Services in part of the Piarco FIR

1. Preamble

- 1.1 According to ICAO Annex 11, Chapter 2, the objective of this Convention is to formalise the delegation given by Trinidad and Tobago to France to provide Air Traffic Services in part of the Piarco FIR.
- 1.2 This Convention cancels and replaces all previous Conventions on this subject.

2. Definitions

- 2.1 "Convention" means the present Convention and associated Annex.
- 2.2 "Air Traffic Services" includes Air Traffic Control Service, Flight Information Service and Alerting Service.

3. Article 1

- 3.1 This Convention is made in duplicate between the Republic of Trinidad and Tobago (the First Party) and the Republic of France (the Second Party) and shall be executed by the Statutory Bodies having due authority for civil aviation in Trinidad and Tobago and France respectively.
- 3.2 The Parties agree to delegate to France the responsibility to provide Air Traffic Services in the delegated area described in Annex 1 to this Convention.

4. Article 2

- 4.1 Except when bilaterally agreed and published, Air Traffic Services shall be provided in the delegated area according to French regulations.
- 4.2 French Air Traffic Controllers shall communicate with flight crew members in the delegated area in English or French language, according to the choice of the flight crew members.

5. Article 3

When needed, technical procedures concerning each domain of Air Traffic Services shall be described in appropriate Letters of Agreement.

R JOT
② 19/07/0

FIRST MEETING OF THE EASTERN CARIBBEAN AIS COMMITTEE – MARTINIQUE **3RD – 4TH MARCH 2005**

6. Article 4

A specific Letter of Agreement shall describe the organisation and management of Aeronautical Information.

7. Article 5

Responsibility for French ATS staff is governed by French regulations.

8. Article 6

8.1 This Convention shall remain in force for two (2) years and will continue indefinitely until cancelled or modified in writing in accordance with Article 6.

8.2 The Parties can modify and cancel this Convention by mutual written agreement.

8.3 This Convention can also be cancelled by either Party by written notification to the other Party with an effective date twelve (12) months after receipt of the notification.

9. Article 7

The present Convention made in duplicate is signed by the First Party hereto on19th.....day of July 2002 and by the Second Party on the26th.....day of July 2002 and containing seven (7) Articles and one (1) Annex becomes effective on the 11th July 2002.

SIGNED by the Director General of Civil Aviation **RAMESH LUTCHMEDIAL** with due authority for and on behalf of the **TRINIDAD AND TOBAGO CIVIL AVIATION AUTHORITY** in the presence of:

Sandra Warner
 Corporate Secretary / Legal Officer, Civil Aviation Authority
 P.O. Box 2163 National Mail Centre
 Port of Spain, Trinidad

Ramesh Lutchmedial

SIGNED by *Adjoint au Directeur régional* with due authority for and on behalf of the **DIRECTION REGIONALE DE L'AVIATION CIVILE AUX ANTILLES - GUYANE** in the presence of: *Roger Gabriel ARBOUR*

Head of ATS studies, training and quality of service supervision
 BP 644 97262 Fort de France
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RL JA



I. Monnier
 Directeur Regional de l'Aviation Civile
 Aux Antilles et en Guyane, p.l.

IT1
19/07/02

APPENDIX B

1-B-3

FIRST MEETING OF THE EASTERN CARIBBEAN AIS COMMITTEE – MARTINIQUE 3RD – 4TH MARCH 2005

Annex 1

to the Convention related to
the delegation given by Trinidad and Tobago to France
to provide Air Traffic Services in part of the Piarco FIR

Description of the delegation of airspace

<p>Broken line joining points: 16°10'00"N, 060°18'00"W – 14°52'30"N, 059°48'00"W – 13°55'25"N, 060°34'30"W – ——— 13 53 57.27 N 06 03 51.98 W Arc of circle radius 25 NM centered on VOR « BNE » (13°44'04"N, 060°58'37"W) joining preceding point to: 13°19'00"N, 060°59'30"W – 13 18 51.83 N 13°34'00"N, 061°30'00"W – 06 05 41.29 W 14°54'00"N, 061°57'00"W – 15°45'00"N, 063°00'00"W – 16°46'00"N, 063°00'00"W – 16°30'00"N, 062°23'30"W – 16°50'00"N, 061°15'00"W – 17°25'00"N, 060°46'00"W and back to origin 16°10'00"N, 060°18'00"W</p>	<p><u>FL245</u> Surface</p>
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K. JH
19/07/0

FIRST MEETING OF THE EASTERN CARIBBEAN AIS COMMITTEE – MARTINIQUE
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APPENDIX C

To Agenda Item 1

APPENDIX C

1

Distance calculation between

a position

P₀ 1: N14°52'30", W059°48'00"

OLD FF B

and

a position

P₀ 2: N13°55'25", W060°34'30"

OLD FF C

geometry: wgs84

compute again

3D view

Distance

134 409.808 m

Calculated Azimuths

P₀1 → P₀2: 218°32'47.749"

P₀2 → P₀1: 38°21'13.903"

Intersection calculation between

R_1 : a route defined by a position and a direction

P: N14°52'30", W059°48'00", direction: 218°32'48"

R_2 : a circle

center C: N13°44'00.13", W060°58'37.41"

distance to center: 25, altitude: 0

geometry: wgs84

compute again

3D view

First solution (see second solution)

Intersection



N13°54'28.125"
W060°35'16.076"

NEW FF C

Azimuts from the intersection to

P: 38°21'03.073"

C: 245°24'39.436"

Distance between the intersection and

P: 73.779 NM

Second solution

Intersection



N13°19'22.193"
W061°03'36.201"

Azimuts from the intersection to

P: 38°14'22.853"

C: 11°10'46.489"

Distance between the intersection and

P: 118.306 NM

3

Distance calculation between

a position

P₀ 1: N14°52'30", W059°48'00"

and

a position

P₀ 2: N13°53'57.27", W060°35'01.98"

FFB (NEBBIVOR declared)

FFC (TAT) (EBWVOR)

geometry: wgs84

compute again

3D view

Distance	74.04 NM	
Calculated Azimuths	P ₀ 1 → P ₀ 2: 218°09'43.578"	P ₀ 2 → P ₀ 1: 37°58'02.359"

TAT

Bearing FFB/FFC

Intersection calculation between

R₁: a route defined by 2 positions

P₁: N14°35'26.692", W061°01'22.111"

P₂: N13°04'30.17", W059°29'01.79"

and

R₂: a route defined by 2 positions

P₁: N14°52'30", W059°48'00"

P₂: N13°53'57.27", W060°35'01.98"

geometry: wgs84

compute again

3D view

First solution (see second solution)

Intersection		⁴⁶ N14°02'46.239" W060°27'59.07" ^{59.}	
R ₁ : R ₂ : 		BORUS	
FOF		Azimuts from the intersection to	
^{add 14°} P ₁ (R ₁): 315°10'34.082"		¹⁴⁹ P ₂ (R ₁): 135°10'34.082"	
^{add 15°} P ₁ (R ₂): 37°59'44.475"		^{add 15°} P ₂ (R ₂): 217°59'44.475"	
FOF		Distance between the intersection and	
^{46 NM} P ₁ (R ₁): 45.923 NM		⁸² P ₂ (R ₁): 81.628 NM	
P ₁ (R ₂): 62.904 NM		P ₂ (R ₂): 11.137 NM	

Second solution

Intersection calculation between

5

R₁: a route defined by 2 positions

P₁ (ANU VOR-DME): N17°07'33.16" , W061°48'00.6"

P₂ (BGI VOR-DME): N13°04'30.17" , W059°29'01.79"

and

R₂: a route defined by 2 positions

P₁ : N14°52'30" , W059°48'00"

P₂ : N13°53'57.27" , W060°35'01.98"

FF B (727)



FF C (727)

geometry: wgs84

compute again

3D view

First solution (see second solution)

Intersection		35° N14°21'54.672" W060°12'38.446" 38°		Poin No
R ₁ : 	R ₂ : 			
Azimuts from the intersection to				
P ₁ (R ₁): 331°04'02.294" 346°		P ₂ (R ₁): 151°04'02.294" 166°		
P ₁ (R ₂): 38°03'30.401"		P ₂ (R ₂): 218°03'30.4"		
Distance between the intersection and				
P ₁ (R ₁): 188.856 NM		P ₂ (R ₁): 87.989 NM 88 NM		
P ₁ (R ₂): 38.71 NM		P ₂ (R ₂): 35.331 NM		

Second solution

Intersection calculation between

R₁: a route defined by 2 positions

P₁ (SLU): N14°00'50.91", W061°00'21.81"

P₂ (BGI VOR-DME): N13°04'30.17", W059°29'01.79"

and

R₂: a circle

center C (BNE VOR-DME): N13°44'00.13", W060°58'37.41"


distance to center: 25, altitude: 0

geometry: wgs84


compute again

3D view

First solution (see second solution)

Intersection	
R ₁ : 	N14°06'36.777" W061°09'48.06" 48.
Azimuts from the intersection to	
P ₁ : 122°00'55.139"	P ₂ : 122°00'55.139"
Distance between the intersection and	
P ₁ : 10.821 NM 10. NM	P ₂ : 115.999 NM

Second solution

Intersection	
R ₁ : 	N13°44'02.114" W060°32'56.322" 56.
Azimuts from the intersection to	
P ₁ : 302°09'47.295" 317.	P ₂ : 122°09'47.295" 137.
Distance between the intersection and	
P ₁ : 31.495 NM 31	P ₂ : 73.683 NM 74.

Intersection calculation between

7

R₁: a route defined by 2 positions

P₁ (BNE VOR-DME): N13°44'00.13" ; W060°58'37.41"

P₂ (BGI VOR-DME): N13°04'30.17" , W059°29'01.79"

and

R₂: a circle

center C (BNE VOR-DME): N13°44'00.13" , W060°58'37.41"



distance to center: 25 , altitude: 0

geometry: wgs84



compute again

3D view

First solution (see second solution)

Intersection		13 33 45 060 35 11 T i BGI	
R ₁ : 		N13°33'44.572"	
		W060°35'11.335"	
Azimuts from the intersection to			
BNE		BGI	
P ₁ : 294°09'43.075"	True add 15° 309	P ₂ : 114°09'43.075"	129
C: 294°09'43.075"	300		
Distance between the intersection and			
BNE		BGI	
P ₁ : 25 NM		P ₂ : 70.771 NM	71 NM
The circle center and the first position of the route are identicals			

Second solution

Intersection		N13°54'13.452" W061°22'05.52"	
R ₁ : 			
			
Azimuts from the intersection to			
P ₁ : 113°58'34.978"		P ₂ : 113°58'34.978"	
C: 113°58'34.978"			
Distance between the intersection and			
P ₁ : 25 NM		P ₂ : 120.771 NM	
The circle center and the first position of the route are identicals			

Distance calculation between

a position

P₀ 1: N15°40'03.61", W060°57'15.75"

TASIR

and

a position

P₀ 2: N14°21'54.672", W060°12'38.446"

BIRNU

geometry: wgs84

compute again

3D view

Distance	88.997 NM	
Calculated Azimuths	P ₀ 1 → P ₀ 2: 150°52'28.634" 14	P ₀ 2 → P ₀ 1: 331°04'02.366" 14

165

345

IN FOR TMA
14°W



Distance calculation between

9

a position

P₀ 1: N16°44'21.63" , W061°34'28.29"

MF Bus

and

a position

P₀ 2: N15°40'03.61" , W060°57'15.75"

TAS An

geometry: wgs84

compute again 3D view

Distance	73.364 NM	
Calculated Azimuths	P ₀ 1 → P ₀ 2: 150°42'05.448"	P ₀ 2 → P ₀ 1: 330°52'28.47"

Modes Tasar

Tasar Modes

P₀1 → P₀2: 150°42'05.448"

P₀2 → P₀1: 330°52'28.47"

165

345

IN PPR TAM 14°W

10

Distance calculation between

a position

P₀ 1: N16°44'21.63", W061°34'28.29"

MEDUS

and

a position

P₀ 2 (ANU VOR-DME;): N17°07'33.16", W061°48'00.6"

15° W

geometry: wgs84

compute again

3D view

Distance	26.494 NM <i>Meds - Anu</i>	
Calculated Azimuths	P ₀ 1 → P ₀ 2: 330°42'05.605" <i>345</i>	P ₀ 2 → P ₀ 1: 150°38'09.02" <i>165</i>

Intersection calculation between

11

R₁: a route defined by 2 positions

P₁ (BGI VOR-DME): N13°04'30.17", W059°29'01.79"

P₂: N11°09'10.05", W060°50'29.04"

and

R₂: a circle

center C (BGI VOR-DME): N13°04'30.17", W059°29'01.79"

distance to center: 68 , altitude: 0


geometry: wgs84

compute again

3D view

First solution (see second solution)

Intersection

R₁: 



N12°08'27.795"
W060°08'47.365"

49W

Locat

Azimuts from the intersection to

P₁: 34°47'53.064"

C: 34°47'53.064"

P₂: 214°47'53.064"

Distance between the intersection and

P₁: 68 NM

P₂: 71.822 NM

The circle center and the first position of the route are identicals

Second solution

Intersection

R₁: 



N14°00'26.137"
W058°48'58.215"

Azimuts from the intersection to

P₁: 215°05'56.618"

C: 215°05'56.618"

P₂: 215°05'56.618"

Distance between the intersection and

P₁: 68 NM

P₂: 207.822 NM

The circle center and the first position of the route are identicals

Intersection calculation between

R₁: a route defined by 2 positions

P₁ (FOF VOR-DME): N14°35'26.692", W061°01'22.111"

P₂: N12°08'27.795", W060°08'47.365"

and

R₂: a circle

center C (BNE VOR-DME): N13°44'00.13", W060°58'37.41"


distance to center: 25 , altitude: 0

geometry: wgs84


compute again

3D view

First solution (see second solution)

Intersection	
R ₁ : 	N14°08'07.819" W060°51'30.568"
Azimuts from the intersection to	
P ₁ : 340°38'04.7"	P ₂ : 160°38'04.7"
Distance between the intersection and	
P ₁ : 28.832 NM	P ₂ : 126.222 NM

Second solution

Intersection	
R ₁ : 	N13°29'31.621" W060°37'38.813"
Azimuts from the intersection to	
P ₁ : 340°41'23.299"	P ₂ : 160°41'23.299"
Distance between the intersection and	
P ₁ : 69.566 NM	P ₂ : 85.488 NM

Definition of A312:
goes from DALCA to Logan
and then Logan to FOF.
VOR/DME. (define Logan in
brackets).

FOF 14° for FOF
15° for BGS
355°
BNE
FOF 70 to FOF

DAMON 1

Logan
176
125

85 NM to Logan
LOGAN

Distance calculation between

13

a position

P₀ 1: N12°08'27.795", W060°08'47.365" Locian

and

a position

P₀ 2: N08°55'08.77", W059°04'39.63" DALCA

geometry: wgs84

(TIM) var is 0.

compute again

3D view

Distance	202.533 NM	
Calculated Azimuths	P ₀ 1 → P ₀ 2: 161°43'34.722" 177	P ₀ 2 → P ₀ 1: 341°55'18.201" 357

Var 861 15° W.

Distance calculation between

a position

P₀ 1: N13°34'00", W061°30'00"

FFE declared

and

a position

P₀ 2: N13°18'54.83", W060°59'41.29"

FFD ~~Schiff~~ SATNAV

14

geometry: wgs84

compute again

3D view

Distance

33.139 NM

Calculated Azimuths

P₀1 → P₀2: 116°53'35.616"

P₀2 → P₀1: 297°00'38.367"

Intersection calculation between

R₁: a route defined by 2 positions

P₁ (BNE VOR-DME): N13°44'00.13", W060°58'37.41"

P₂ (SV): N13°08'29.6", W061°13'33.6"

and

R₂: a route defined by 2 positions

P₁: N13°18'54.83", W060°59'41.29"

P₂: N13°34'00", W061°30'00"

FFD (TT) accepted

FFE Convention Agreed declared pt.

geometry: wgs84

compute again

3D view

First solution (see second solution)

Intersection

R₁: R₂:



N13°22'49.804"
W061°07'32.34"

Ri Bon

Azimuts from the intersection to

P₁(R₁): 22°22'22.376"

P₂(R₁): 202°22'22.376"

P₁(R₂): 116°58'49.619"

P₂(R₂): 296°58'49.619"

Distance between the intersection and

P₁(R₁): 22.799 NM

P₂(R₁): 15.434 NM

P₁(R₂): 8.59 NM

P₂(R₂): 24.549 NM

Second solution

Intersection calculation between

R₁: a route defined by 2 positions

P₁: N14°54'00", W061°57'00"

P₂: N13°34'00", W061°30'00"

and

R₂: a route defined by 2 positions

P₁ (FOF VOR-DME): N14°35'26.692", W061°01'22.111"



P₂: N12°52'01.81", W063°39'18.33"

geometry: wgs84

compute again

3D view

First solution (see second solution)

Intersection		15	
R ₁ : 	R ₂ : 	N14°09'14.648" W061°41'51.208"	Intersection
Azimuts from the intersection to			
FFG P ₁ (R ₁): 341°47'07.513"		FFG P ₂ (R ₁): 161°47'07.513"	
FOF P ₁ (R ₂): 56°20'13.643"	70°	ON GAL P ₂ (R ₂): 236°20'13.643"	250°
Distance between the intersection and			
P ₁ (R ₁): 46.923 NM	47	P ₂ (R ₁): 36.937 NM	
FOF P ₁ (R ₂): 47.168 NM	47 NM	ON GAL P ₂ (R ₂): 137.852 NM	138

Second solution

Intersection calculation between

R₁: a route defined by 2 positions

P₁: N14°54'00", W061°57'00"

P₂: N16°10'00", W060°18'00"

and

R₂: a route defined by 2 positions

P₁ (ILURI): N16°18'04.13", W063°00'00"



P₂ (FOF VOR-DME): N14°35'26.692", W061°01'22.111" 14°W

geometry: wgs84

compute again

3D view

First solution (see second solution)

Intersection		N15°08'06.513" W061°38'47.088"		ENOLA
R ₁ : 	R ₂ : 			
Azimuts from the intersection to				
P ₁ (R ₁): 231°29'13.61"		P ₂ (R ₁): 51°29'13.61"		
P ₁ (R ₂): 311°49'44.933" 326		P ₂ (R ₂): 131°49'44.933" 146		
Distance between the intersection and				
P ₁ (R ₁): 22.542 NM		P ₂ (R ₁): 99.369 NM		
P ₁ (R ₂): 104.834 NM 105 NM		P ₂ (R ₂): 48.693 NM 49 NM		
Algorithm error.		FOF		

Second solution

Intersection calculation between

18

R₁: a route defined by 2 positions

P₁: N13°37'33.53", W064°07'48.79" - ITEGO

P₂ (PPR VOR DME): N16°15'54.662", W061°32'24.47"

and

R₂: a route defined by 2 positions

P₁ (ILURI): N16°18'04.13", W063°00'00"

P₂ (FOF VOR-DME): N14°35'26.692", W061°01'22.111"

geometry: wgs84

compute again

3D view

PPR-ITEGO 218
ITEGO-PELMA - 112
DUNTA-PPR - 54

First solution (see second solution)

Intersection		32	
R ₁ : <input checked="" type="checkbox"/> R ₂ : <input checked="" type="checkbox"/>		N15°36'31.519"	DUNTA
<input checked="" type="checkbox"/> - 24 NM		W062°11'35.443"	
Azimuts from the intersection to			
P ₁ (R ₁): 223°49'05.867"		P ₂ (R ₁): 43°49'05.867"	
P ₁ (R ₂): 311°41'03.145"		P ₂ (R ₂): 131°41'03.145"	
Distance between the intersection and			
P ₁ (R ₁): 163.49 NM	163 NM	P ₂ (R ₁): 54.44 NM	54 NM
P ₁ (R ₂): 62.344 NM	62 NM	P ₂ (R ₂): 91.183 NM	91 NM

Second solution

Intersection calculation between

R₁: a route defined by 2 positions

P₁ (PPR VOR DME): N16°15'54.662", W061°32'24.47"

P₂: N13°37'33.53", W064°07'48.79" **ITEGO**

and

R₂: a route defined by 2 positions

P₁: N15°45'00", W063°00'00" **FR/C**




P₂: N14°54'00", W061°57'00" **FF/G**

geometry: wgs84

compute again

3D view

First solution (see second solution)

Intersection		31 N15°19'30.653" W062°28'24.21" 24		TUL EX	
R ₁ :  R ₂ :  					
Azimuts from the intersection to					
PPR P ₁ (R ₁): 43°44'36.845" 58°		SLEGO P ₂ (R ₁): 223°44'36.845" 238°			
PPR P ₁ (R ₂): 309°50'02.859"		FR/C P ₂ (R ₂): 129°50'02.859"			
Distance between the intersection and					
PPR P ₁ (R ₁): 77.907 NM 78		SLEGO P ₂ (R ₁): 140.023 NM 140 NM			
P ₁ (R ₂): 39.683 NM		P ₂ (R ₂): 39.6 NM			

Second solution

Intersection calculation between

20

R₁: a route defined by 2 positions

P₁ (PPR VOR DME): N16°15'54.662", W061°32'24.47"

P₂: N16°57'10.05", W063°00'00" MODUX

and

R₂: a route defined by 2 positions

P₁: N16°30'00", W062°23'30"

P₂: N16°50'00", W061°15'00"

FR/E



FR/H

geometry: wgs84

compute again

3D view

First solution (see second solution)

Intersection		SB N16°33'52.9" W062°10'19.448" GORET	
R ₁ : 	R ₂ : 		
Azimuts from the intersection to			
P ₁ (R ₁): 116°03'49.571"	130	MODUX P ₂ (R ₁): 296°03'49.571"	810
P ₁ (R ₂): 253°02'51.723"		FR/H P ₂ (R ₂): 73°02'51.723"	
Distance between the intersection and			
P ₁ (R ₁): 40.603 NM	41 NM	MODUX P ₂ (R ₁): 53.007 NM	53 NM
P ₁ (R ₂): 13.234 NM		P ₂ (R ₂): 55.474 NM	

Second solution

21

Intersection calculation between

R_1 : a route defined by 2 positions

P_1 (PPR VOR DME): N16°15'54.662", W061°32'24.47"

P_2 : N17°17'42.66", W062°44'38.42" SKB 14

and

R_2 : a route defined by 2 positions

P_1 : N16°30'00", W062°23'30" FR/E




P_2 : N16°50'00", W061°15'00" FR/H

geometry: wgs84

compute again

3D view

First solution (see second solution)

Intersection	
R_1 :  R_2 :  	36 N16°37'36.481" W061°57'37.35" 37 BimBO
Azimuts from the intersection to	
PPR $P_1(R_1)$: 131°39'45.971" 146°	SKB $P_2(R_1)$: 311°39'45.971" 326°
$P_1(R_2)$: 253°06'29.391"	$P_2(R_2)$: 73°06'29.391"
Distance between the intersection and	
PPR $P_1(R_1)$: 32.467 NM 32 NM	SKB $P_2(R_1)$: 60.218 NM 60 NM
$P_1(R_2)$: 25.984 NM	$P_2(R_2)$: 42.724 NM

Second solution

Intersection calculation between

22

R₁: a route defined by 2 positions

P₁ (PPR VOR DME): N16°15'54.662" , W061°32'24.47"

P₂ (ANU VOR-DME): N17°07'33.16" , W061°48'00.6"

and

R₂: a route defined by 2 positions

P₁: N16°30'00" , W062°23'30"

P₂: N16°50'00" , W061°15'00"




FR/E
FR/H

geometry: wgs84

compute again

3D view

First solution (see second solution)

Intersection	
R ₁ :  R ₂ :  	37 N16°42'37.144" W061°40'27.517" 28. KASKI
Azimuts from the intersection to	
PPR P ₁ (R ₁): 163°45'53.113" 178° 179°	ANU P ₂ (R ₁): 343°45'53.113" 35° 359°
P ₁ (R ₂): 253°11'24.784"	P ₂ (R ₂): 73°11'24.784"
Distance between the intersection and	
PPR P ₁ (R ₁): 27.7 NM 28	ANU P ₂ (R ₁): 25.866 NM 26 NM
P ₁ (R ₂): 43.2 NM	P ₂ (R ₂): 25.508 NM

Second solution

Intersection calculation between

23

R₁: a route defined by 2 positions

P₁ (BGI VOR-DME): N13°04'30.17", W059°29'01.79"

P₂ (ANU VOR-DME): N17°07'33.16", W061°48'00.6"

and

R₂: a route defined by 2 positions

P₁: N16°30'00", W062°23'30"

P₂: N16°50'00", W061°15'00"



FR/E
FR/14

geometry: wgs84

compute again

3D view

First solution (see second solution)

Intersection	
R ₁ :  R ₂ : 	<p>22</p> <p>N16°44'21.626"</p> <p>W061°34'28.287"</p> <p>28.</p> <p>MEDUS</p>
Azimuths from the intersection to	
P ₁ (R ₁): 150°42'05.538"	P ₂ (R ₁): 330°42'05.538"
P ₁ (R ₂): 253°13'08.162"	P ₂ (R ₂): 73°13'08.162"
Distance between the intersection and	
P ₁ (R ₁): 250.35 NM	P ₂ (R ₁): 26.495 NM
P ₁ (R ₂): 49.202 NM	P ₂ (R ₂): 19.507 NM

Second solution

Distance calculation between

a position

P₀ 1: N15°36'31.519" , W062°11'35.443"

DUNTA

and

a position

P₀ 2: N15°19'30.653" , W062°28'24.21"

TULEX

geometry: wgs84

compute again 3D view

Distance	23.467 NM	
Calculated Azimuts	P ₀ 1 → P ₀ 2: 223°49'05.848"	P ₀ 2 → P ₀ 1: 43°44'36.826"

Distance calculation between

a position

P₀ 1: N15°36'31.519", W062°11'35.443"

DUNTA

and

a position

P₀ 2: N15°08'06.513", W061°38'47.088"

EMOLA

geometry: wgs84

compute again

3D view

Distance	42.49 NM	
Calculated Azimuts	P ₀ 1 → P ₀ 2: 131°41'03.138"	P ₀ 2 → P ₀ 1: 311°49'44.926"

132
14
146

312
14
326

Distance calculation between

26

a position

P₀ 1: N15°19'30.653" , W062°28'24.21"

TULEX

and

a position

P₀ 2: N14°07'59.11" , W063°38'22.2"

PELMA

geometry: wgs84

compute again

3D view

Distance	98.334 NM	
Calculated Azimuths	P ₀ 1 → P ₀ 2: 223°44'30.129"	P ₀ 2 → P ₀ 1: 43°26'42.698"

223°

50°

Tangency calculation between

CTR S^{th} line

R_1 : a position

P_0 : N14°13'00", W060°52'00"

and

R_2 : a circle

center C (BNE VOR-DME): N13°44'00.13", W060°58'37.41"

distance to center: 25 , altitude: 0

geometry: wgs84

compute again 3D view

First solution (see second solution)

Tangent	A: N14°01'47.005" ✓ W060°40'28.643" ✓ Azimut: 314°57'01.838"
Azimut	P A: 134°54'13.142"
Distance	P A: 15.814 NM

Second solution

Tangent	B: N14°07'37.833" ✓ W061°07'19.188" ✓ Azimut: 70°12'34.585"
Azimut	P B: 250°16'19.632"
Distance	P B: 15.814 NM

FIRST MEETING OF THE EASTERN CARIBBEAN AIS COMMITTEE – MARTINIQUE
3RD – 4TH MARCH 2005

APPENDIX D

To Agenda Item 1



FIRST MEETING OF THE EASTERN CARIBBEAN AIS COMMITTEE – MARTINIQUE
3RD – 4TH MARCH 2005

APPENDIX E

To Agenda Item 1

FIRST MEETING OF THE EASTERN CARIBBEAN AIS COMMITTEE – MARTINIQUE 3RD – 4TH MARCH 2005

ABOUT GEODEASY

GEODEASY is a calculation and transformation software in the World Geodetic System.

The GEODEASY software requirements were compiled by a working group managed by the Air Navigation Directorate (DNA), and including the different departments affected by the WGS-84 operation.

GEODEASY was developed under the French AIS project management, with the partnership of the National Geographic Institute (IGN) and a computing company (CS CISI), and then officially validated by IGN.

Functions of GEODEASY

1) Geodesic calculations based on the ellipsoid WGS-84

The calculation function is used to determine, in ellipsoid geometry, the coordinates of points of intersection between two routes, a route and an arc or two arcs of a circle;

It is also used to determine the distance between two points or a point and a route.

Its accuracy is to about one centimetre.

2) Transformations between the WGS-84 and Lambert coordinate system.

The transformation function is used to convert coordinates from the WGS-84 system to the Lambert system and inverse, based on a general algorithm and an interpolation grid of 17000 points.

The grid of points enables an accuracy of about one centimetre.

**FIRST MEETING OF THE EASTERN CARIBBEAN AIS COMMITTEE – MARTINIQUE
3RD – 4TH MARCH 2005**

Agenda Item 2: Requirements for World Aeronautical Charts in the E/CAR.

2.1 CONCLUSION 19/5 of the 19th DCA's Meeting and CONCLUSION 18/16 of the 18th DCA's Meeting.

2.1.1 The meeting noted that in Annex 4 Appendix 5, the responsibility for publication of the World Aeronautical Chart (WAC) for the Eastern Caribbean region is covered by blocks #2649, #2705 and #2772. In the CAR/SAM FASID Chart AIS2 however, block #2649 does not exist and block #2705 has shifted to East of 60° Longitude off the Island chain. The assignments of these blocks are as follows: #2705 assigned to U.K., #2772 assigned to Venezuela. After discussion the meeting agreed to the following;

CONCLUSION 1/2 –

- a) There is need for production of the W.A.C. for the Eastern Caribbean area in accordance with Annex 4 Ch 16 par 2.1.
- b) Venezuela's intention to fulfil its requirement in this respect must be verified.
- c) ICAO must clarify the assignment of responsibilities in view of the differences in Annex 4 Appendix 5 and the FASID table.
- d) Eastern Caribbean States must indicate their ability to collect the necessary information and to verify its authenticity as well as provide timely updates. To this end, Trinidad and Tobago will design a questionnaire to be approved by Barbados and the French Antilles, which will be sent to E/CAR States AIS by the end of April.
- e) The E/CAR AIS Committee Rapporteur will send this questionnaire to state and collect replies.
- f) Trinidad and Tobago is committed to producing this chart using whichever agency is agreed to by E/CAR States.
- g) That states must study the cost/benefit factor as well as get an assessment of potential customers.
- h) That one E/CAR State or Agency will be assigned to collect all physical Aeronautical data and send it to whichever state or agency is approved to produce this chart.

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APPENDIX A

To Agenda Item 2

APPENDIX A

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FIRST MEETING OF THE EASTERN CARIBBEAN AIS COMMITTEE – MARTINIQUE 3RD – 4TH MARCH 2005

Table AIS 7 — Tableau AIS 7 — Tabla AIS 7

**PRODUCTION RESPONSIBILITY FOR SHEETS OF THE
WORLD AERONAUTICAL CHART — ICAO 1:1 000 000**

**RESPONSABILITÉ DE LA PRODUCTION DES FEUILLES DE
LA CARTE AÉRONAUTIQUE DU MONDE AU 1/1 000 000 — OACI**

**RESPONSABILIDAD DE LA PRODUCCIÓN DE LAS HOJAS DE
LA CARTA AERONÁUTICA MUNDIAL — OACI 1:1 000 000**

EXPLANATION OF THE TABLE

Column

- | | |
|---|---|
| 1 | Name of State accepting production responsibility |
| 2 | World Aeronautical Chart — ICAO 1:1 000 000 sheet number(s) for which production responsibility is accepted |
| 3 | Remarks |

EXPLICATION DU TABLEAU

Colonne

- | | |
|---|---|
| 1 | Nom de l'État qui a accepté de produire des feuilles |
| 2 | Numéros des feuilles de la Carte aéronautique du monde au 1/1 000 000 — OACI que l'État a accepté de produire |
| 3 | Remarques |

APPENDIX A

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AIS

VII-AIS 7-3

State État Estado	Sheet number(s) Numéros de feuilles Números de las hojas	Remarks Remarques Observaciones
Argentina	3259, 3260, 3314, 3315, 3316, 3381, 3382, 3383, 3434, 3435, 3436, 3490, 3491, 3492, 3537, 3538, 3585, 3625, 3627, 3668, 3672, 3699, 3737, 3738, 3762, 3789	
Bolivia	3193	Will be published in the future./Sera publiée ultérieurement./Se publicará más adelante.
Brazil	2826, 2892, 2893, 2894, 2895, 2943, 2944, 2945, 2946, 2947, 2948, 2949, 3013, 3014, 3015, 3016, 3017, 3018, 3066, 3067, 3068, 3069, 3070, 3071, 3137, 3138, 3139, 3140, 3141, 3189, 3190, 3191, 3192, 3261, 3262, 3263, 3265, 3313, 3384	
Chile	3194, 3258, 3317, 3381, 3436, 3437, 3490, 3538, 3585, 3627, 3668, 3737, 3762, 3789	
Colombia	2769, 2770, 2828, 2829, 2890, 2891*	*Only to cover its own territory./Pour son propre territoire seulement./ Sólo para cubrir su propio territorio.
Cuba	2585, 2586, 2587	
Dominican Republic	2648	
Ecuador	2888, 2890*, 2951, 2953	*Only to cover its own territory./Pour son propre territoire seulement./ Sólo para cubrir su propio territorio.
El Salvador	2710*	*Only to cover its own territory./Pour son propre territoire seulement./ Sólo para cubrir su propio territorio.
France	2825	Chart at 1: 740 000 covering French Guiana is published./Une carte au 1/740 000 de la Guyane française est publiée./Se publica la carta al 1: 740 000, cubriendo la Guayana Francesa.
Haiti	2647	
Honduras	2710	
Mexico	2471, 2472, 2520, 2521, 2588, 2589, 2590, 2591, 2642, 2643, 2644, 2645	
Nicaragua	2709, 2768	
Panama	2769, 2830	Covered by Aeronautical Chart - ICAO 1:500 000, to cover its own continental territory and territorial waters./Couvert par la Carte aéronautique au 1/500 000 — OACI. Pour son propre territoire et ses eaux territoriales./Cubierta por la carta aeronáutica — OACI 1:500 000, para cubrir su propio territorio continental y aguas territoriales.
Paraguay	3260, 3314	
Peru	2950*, 3011*, 3012, 3072, 3073*, 3135*, 3136*, 3194*	* Will be published in the future./Sera publiée ultérieurement./ Se publicará más adelante.
United Kingdom	2646, 2705, 3499, 3530, 3672**, 3699**, 3737**, 3738**, 3762**, 3789**	** These charts are also published by Argentina./Ces cartes sont aussi publiées par l'Argentine./Estas cartas también son publicadas por la Argentina.
Uruguay	3434*	* Will be published in the future./Sera publiée ultérieurement./Se publicará más adelante.

APPENDIX A

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VIII-AIS 7-4

CAR/SAM FASID

State État Estado	Sheet number(s) Numéros de feuilles Números de las hojas	Remarks Remarques Observaciones
Venezuela	2707, 2770, 2771, 2772, 2827, 2828	With modified sheetlines and covering its own territory only./Découpage modifié. Pour son propre territoire seulement./Con los límites de las hojas modificados y cubriendo solamente su propio territorio.

Note.— In those instances where the production responsibility for certain sheets has been accepted by more than one State, these States by mutual agreement should define limits of responsibility for those sheets.

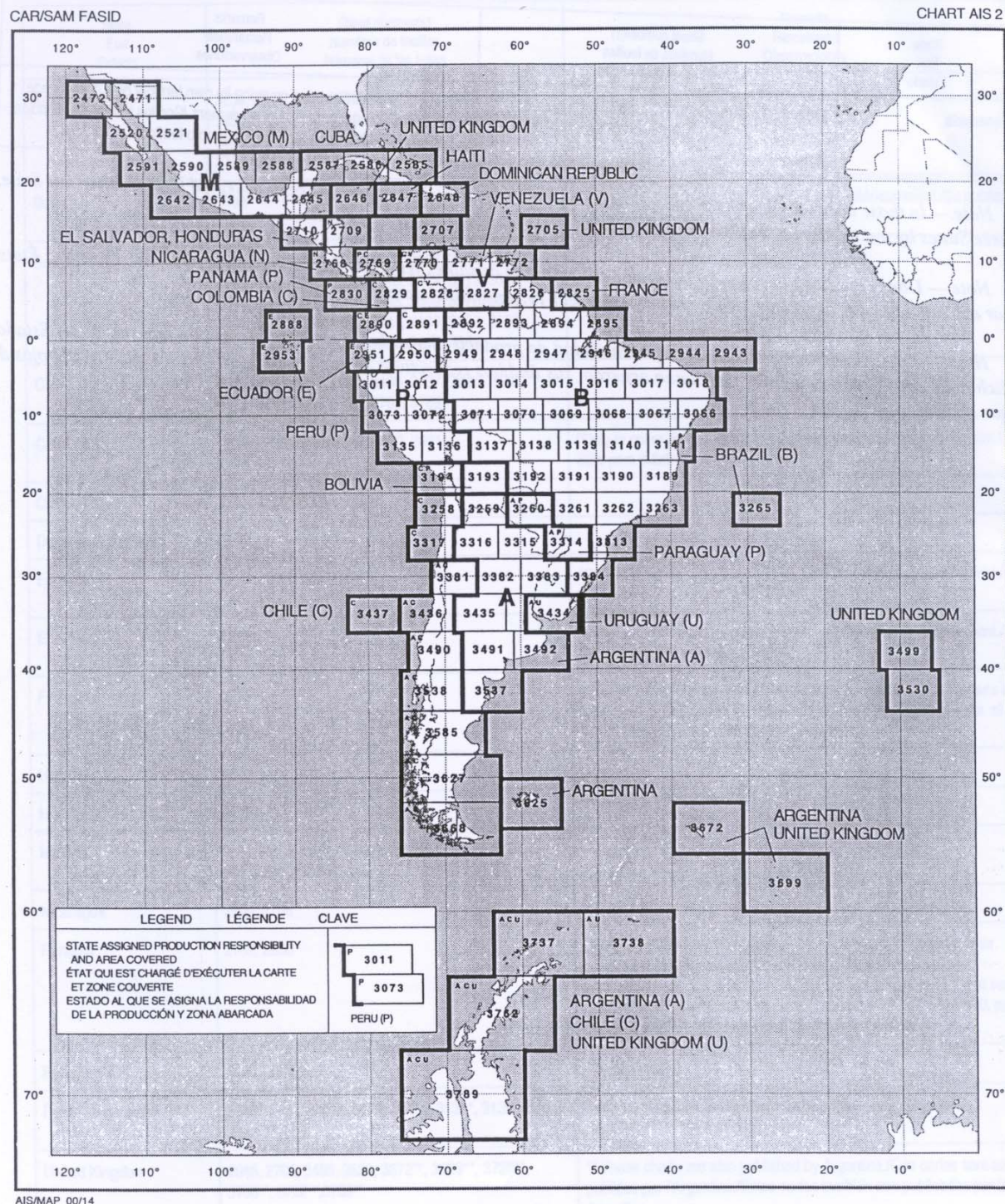
Note.— Dans les cas où la responsabilité de l'exécution de certaines feuilles a été acceptée par plusieurs États, ces États, par entente mutuelle, devraient définir les limites de leur responsabilité pour ces feuilles.

Nota.— En aquellos casos en que la responsabilidad de producir ciertas hojas haya sido aceptada por más de un Estado, dichos Estados deberían definir, por mutuo acuerdo, sus ámbitos respectivos de responsabilidad con respecto a las hojas de que se trate.

APPENDIX A

FIRST MEETING OF THE EASTERN CARIBBEAN AIS COMMITTEE – MARTINIQUE 3RD – 4TH MARCH 2005

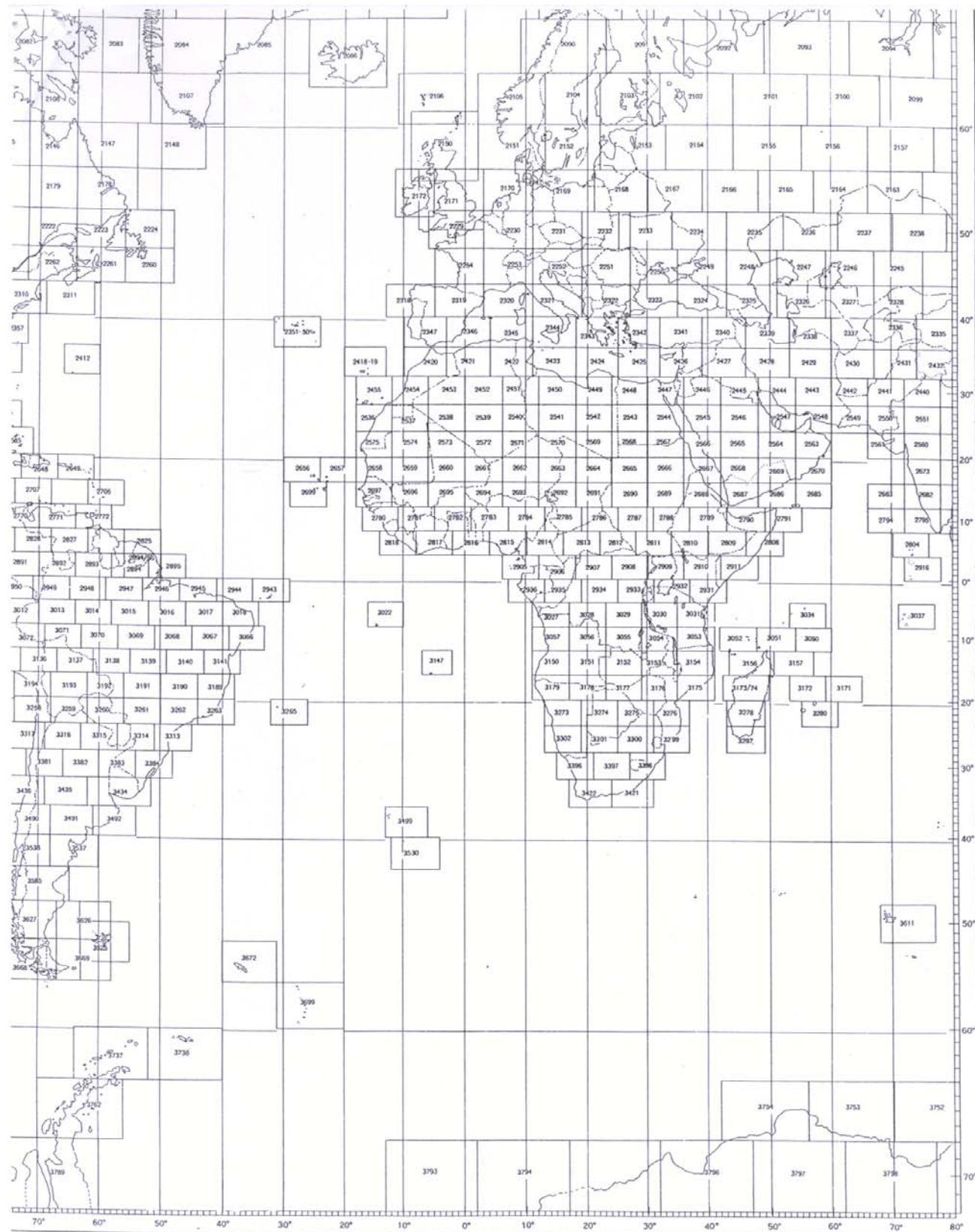
SHEET LAYOUT AND PRODUCTION RESPONSIBILITY FOR WORLD AERONAUTICAL CHART - ICAO 1:1 000 000
TABLEAU D'ASSEMBLAGE ET RESPONSABILITÉ DE L'EXÉCUTION DES FEUILLES DE LA CARTE AÉRONAUTIQUE DU MONDE AU 1:1 000 000 - OACI
DISPOSICIÓN DE LAS HOJAS Y RESPONSABILIDAD DE LA PRODUCCIÓN DE LA CARTA AERONÁUTICA MUNDIAL OACI 1:1 000 000



APPENDIX A

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**FIRST MEETING OF THE EASTERN CARIBBEAN AIS COMMITTEE – MARTINIQUE
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Agenda Item 3: Brief Review of:

a) Implementation of AIS/MAP Automation System and the AIS MAP Quality Assurance Programme

- 3 a) 1. The meeting acknowledged that Trinidad and Tobago has greatly improved its automation capability for receiving, processing, storing and transmitting of AIS messages. Retrieval of messages can be accomplished using a variety of formats including ICAO, Eurocontrol and other formats unique to this system. Trinidad and Tobago will issue an AIC to let other states know of new query procedures.

b) Establishment of procedures to access online AIS information in accordance with ICAO guidelines.

- 3 b) 1 The meeting acknowledged that ICAO has no formal guidelines on this matter.

c) Identification Study and proposal of actions to resolve deficiencies in all AIS/MAP facilities in the ECAR.

- 3 c) 1. The meeting considered the GREPECAS database of Air Navigation Deficiencies.

It was acknowledged that many of the deficiencies still noted by ICAO was due to the fact that ICAO was not informed that these were corrected.

The meeting then agreed to the following:

CONCLUSION 1/3

- a) That Trinidad and Tobago will issue an AIC informing of the different interrogation procedures available for its AIS system.
- b) That the French Antilles is already ISO 9000 compliant and that Trinidad and Tobago is moving toward an AIS quality system by the end of 2006.
- b1) That states should move ahead with developing their own on-line procedures until ICAO has submitted its guidelines and that states make information public by means of AIC.
- c) That E/CAR states check the ICAO website with the GREPECAS database of deficiencies and inform ICAO of those which have been corrected and
- c1) That states take decisive action to remove deficiencies that still exist.

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Agenda Item 4: Other Business

1.1. – Actions in View of Absence of Barbados

1.1.1. The meeting agreed that:

CONCLUSION 1/4

- a) All actions taken and decisions made would be sent to Barbados in a draft report for final comments before circulation to other members of the AIS Committee and
- b) that Barbados would provide the report to the 29th Eastern Caribbean Working group meeting.