



Agenda Item 2: Optimization of the ATS routes

**REVIEW OF THE OPERATIONAL LETTER OF AGREEMENT BETWEEN THE
ROCHAMBEAU AREA CONTROL CENTER AND THE AMAZÔNICO AREA CONTROL
CENTER**

(Presented by Brazil)

Summary	
This Working Paper presents the proposal for updating the operational letter of agreement between the Rochambeau Area Control Center and the Amazônico Area Control Center, including the changes in Appendix 1 - Reference Table for Transfer of Responsibility and in Appendix 2 - contingency procedures between the ACC involved with the inclusion of new RNAV routes.	
References: <ul style="list-style-type: none">- Report of the SAM/IG/6 Meeting;- SAM ATS Routes Network Optimization Programme;- PANS/ATM (doc 4444); and- Letter of Operational Agreement Between Rochambeau Area Control Center and Amazônico Area Control Center	
ICAO Strategic Objectives:	<i>A – Safety</i> <i>C. Environmental Protection and Sustainable Development of Air Transport</i>

1 Background

1.1 In accordance with the provisions of items 10.1 and 10.2 of Chapter 10 (Coordination) of PANS-ATM - Doc. 4444 - Air Traffic Management, ATC units should establish standardized procedures relating to the coordination that has to be made with adjacent units of air traffic control services and also between operational positions of each unit, as well as apply particular coordination procedures according to the characteristics of each Flight Information Region by means of operational letters of agreement.

1.2 To this end, in addition to the foregoing, every time a new ATS route is deployed that includes airspaces of more than one Flight Information Region which are the subject of procedures agreed to in an operational letter of agreement between the Area Control Centers involved, the Appendices of said letters of agreement relating to the new coordination procedures should be updated to comply with the new route implemented.

2 Discussion

2.1 We are now proposing adjustments to the operational letter of agreement between the Amazônico and Rochambeau Area Control Centers, as presented in Appendix 1, in order to update the coordination procedures in light of new airways implemented on March 10 and that cross the Amazônica and Rochambeau Flight Information Regions, and we have also included the partial and total ATC contingency plan for the ATS communications of the Amazônico ACC.

2.2 In addition, and in light of new information, the Meeting may analyze this proposal and incorporate other items that are deemed necessary for the maintenance of safety on flights between the airspace that are subject of this operational letter of agreement.

3 Suggested action

3.1 The Meeting is invited to take note and analyze the proposed adjustments and updates to this operational letter of agreement between French Guyana and Brazil in **Appendix 1** of this Working Paper and, if applicable, sign it for its entry into force on a date to be defined in the Meeting.

APPENDIX 1

LETTER OF AGREEMENT BETWEEN ROCHAMBEAU AREA CONTROL CENTER AND AMAZÔNICO AREA CONTROL CENTER

SUBJECT: Procedures relating to the coordination of air traffic between the Rochambeau and Amazônico ACC.

1 INTRODUCTION

1.1 **EFFECTIVE DATE:** 26th May 2011

1.2 OBJECTIVE:

1.2.1 The objective of this Letter of Agreement is to establish operating procedures for the coordination and routing of air traffic between the Rochambeau and Amazônica CTA/FIR.

1.3 SCOPE:

1.3.1 The procedures contained in this Operational Letter of Agreement supplement or detail, when so required, the procedures prescribed by ICAO in the pertinent documents and shall be applied to all air traffic that cross the common boundary of the Rochambeau and Amazônica UTA/CTA/FIR.

1.3.2 Except as provided for in 1.3.1, in the event of disruption or potential disruption of ATS and related support services, the procedures as outlined in ATM Contingency Plan in Appendix 2 shall apply.

2 CONTROL PROCEDURES

2.1 ROUTING OF IFR AIR TRAFFIC:

2.1.1 Except for prior coordination effected individually for each flight off airways, the air traffic between the Rochambeau UTA/CTA and the Amazônica UTA/FIR shall be routed along ATS Routes published in the respective AIP.

2.2 ASSIGNMENT OF FLIGHT LEVELS:

2.2.1 ALLOCATION OF NON RVSM LEVELS

2.2.1.1 Except for prior coordination, the Rochambeau and Amazônico ACC shall assign Flight Levels corresponding to the magnetic tracks for aircraft operating at FL 280 and/or below and FL 430 and/or above as shown in the table of cruising levels in Appendix 3 of ICAO Annex 2.

2.2.1.1.1 ALLOCATION OF RVSM FLIGHT LEVELS

REPORTING POINT	TRACK 000–179° (EAST)	TRACK 180–359° (WEST)
OTONI	ODD LEVELS	EVEN LEVELS
OIAPOQUE	ODD LEVEL	EVEN LEVEL
ARNAM	ODD LEVEL	EVEN LEVEL

2.3 SEPARATION

2.3.1 LONGITUDINAL

2.3.1.1 Except as stated in paragraph 2.3.1.2, the applicable longitudinal separation minimum between turbojet aircraft at or above FL250 shall be ten (10) minutes or 80 NM RNAV distance based separation minimum with the utilization of the Mach Number Technique (MNT).

2.3.1.2 In all other circumstances the longitudinal separation minima shall be fifteen (15) minutes.

2.3.2 VERTICAL

2.3.2.1 Vertical separation shall be as follows:

Aircraft	Separation		
	FL 290 and bellow	FL 290 – FL 410	FL 410 and above
RVSM Approved	1000 feet	1000 feet	2000 feet
Non-RVSM approved		2000 feet	

2.4 TRANSFER OF RESPONSIBILITY FOR AIR TRAFFIC SERVICES:

2.4.1 Except for prior coordination, the transfer of responsibility for aircraft operating between the Rochambeau UTA/CTA and the Amazônica FIR/UTA shall be the common boundary or ATS route transfer point, according to Appendix 1 - Reference TABLE for the transfer of responsibility.

3. COORDINATION PROCEDURES

3.1 GENERAL:

3.1.1 Coordination between the Rochambeau and Amazônico ACC shall be effected in accordance with standards, recommended practices, and procedures prescribed by ICAO.

3.1.2 The primary means of coordination for all active air traffic between the Rochambeau and Amazônica FIR shall be the direct speech circuit (REDDIG).

3.1.3 All coordination/approval involving active air traffic shall be effected with the appropriate ATS Unit at least twenty (20) minutes prior to the aircraft's estimate for the transfer of control point.

3.1.4 Departure and arrival messages shall be required for VFR flights originating and terminating at airports located within the Rochambeau and Amazônica FIR boundaries.

3.1.5 In the event that the above procedures cannot be carried out because of failure of the Rochambeau/Amazônico direct speech circuit, coordination of all air traffic shall be effected.

3.1.5.1 Via telephone

Rochambeau ACC: ?????????????????????????

Amazônico ACC: (55 - 92) 3652-1401; 36525318

5.1.5.2 Via AFTN.

IFR traffic shall be held within the area of responsibility of the transferring ACC until an acceptance message is received.

3.1.5.3 Via Facsimile:

Rochambeau Facsimile: ??????????????????????

Amazônico Facsimile: (55 - 92) 3652-1401; 36525318

3.1.5.4 Via HF

3.1.5.5 Via aircraft

(i) IFR aircraft shall be cleared to a point within the area of responsibility of the transferring ACC at an appropriate level for direction of flight and aircraft shall be requested to contact receiving ACC and obtain clearance to enter airspace under jurisdiction of receiving ACC.

(ii) The receiving ACC shall clear aircraft into its area of responsibility and shall not authorize flight level or route changes until the aircraft advises that the transferring ACC has concurred.

(iii) The receiving ACC shall instruct the aircraft to advise the transferring ACC when crossing the common boundary.

3.2 COORDINATION FOR RVSM OPERATIONS

3.2.1 Estimate messages (EST) shall be transmitted for all flights crossing the common FIR boundary, at least 60 minutes before the estimate time of the aircraft over the transference of the control point when non-RVSM approved aircraft are involved, with the intention to operate within RVSM airspace, as a mean to facilitate planning for the integration of such air traffic, according to a 2000 feet vertical separation minimum.

3.2.2 A clear indication should be made on the status of approval of non-RVSM approved aircraft and its request for a special treatment as an integral part of the estimated message:

- a) as a confirmation of the data filed in the flight plan;
- b) to anticipate the case of performance degradation of the flight planning systems;
- c) to anticipate the case the accepting unit has not received the flight plan.

3.2.3 Verbal coordination of estimate messages (EST)

3.2.3.1 When a verbal coordination process is being used, the ACC transmitting an estimate message shall include at the end of the same, the information included in box 18 of ICAO flight plan on RVSM operations.

3.2.3.2 If applicable, at the end of the estimate message, the term **NEGATIVE RVSM** *or* **NEGATIVE RVSM STATE AIRCRAFT** *or* **NEGATIVE RVSM HUMANITARIAN FLIGHT** *or* **NEGATIVE RVSM MAINTENANCE FLIGHT** *or* **NEGATIVE RVSM FERRY FLIGHT** , shall be included.

3.2.3.3 For the case in which only one aircraft experiences a flight contingency, the associated coordination messages shall be provided orally, with a description of the reason of the contingency. The associated coordination messages shall incorporate either the term:

- a) RVSM inability due to the equipment, or
- b) RVSM inability due to turbulence, as the case may be.

3.2.4 RVSM operations suspension

3.2.4.1 The Amazônico ACC and the Rochambeau ACC shall coordinate the procedures for RVSM suspension within the areas affected in the Amazônica FIR and Rochambeau FIR, when pilots report turbulence that is greater than moderate. Within the areas where RVSM procedures have been suspended, the vertical separation minimum between all aircraft shall be 2000 feet.

3.2.4.2 In case of RVSM operations suspension, the following Table of Cruising Levels shall be used:

Magnetic Track	000° a 179°	180° a 359°
Flight Level		FL 300
	FL 330	
		FL 360
	FL 390	

3.3 COMMUNICATIONS

3.3.1 The transfer of air-ground communications of an aircraft from a transferring ACC to the receiving ACC shall be made at the common Flight Information boundary.

3.3.2 The receiving ACC shall not notify the transferring ACC that it has established ground-air communications with the transferred aircraft unless specifically requested to do so.

3.3.3 The Amazônico ACC shall transfer aircraft communications to the Rochambeau ACC on frequency 128.000Mhz or Rochambeau Flight Information Center on frequency 124.200Mhz.

3.3.4 The Rochambeau ACC shall transfer aircraft communications to Amazônico ACC on a specific VHF frequency defined by the Supervisor of the Amazônico Center during the process.

4 REVISIONS

4.1. This agreement shall be subject to revision whenever a modification of Standards, recommended methods of supplementary regional procedures of ICAO occurs which might affect the procedures contained in this agreement, or when new communications facilities, or new air traffic services which might affect these procedures are commissioned. In the case of changes in ICAO regulations, the Rochambeau ACC or the Amazônico ACC shall initiate the amendment of this agreement and in the cases of new installations or modification of existing installations; the facility concerned shall initiate the modification procedure. For any other matter which might make it advisable to change the agreement, the interested facility shall propose the pertinent revision.

5 DISSEMINATION

5.1 The dissemination of the agreement and its subsequent modification shall be made in full by a pertinent AIC fifty – six days before the effective date, and furthermore, the facilities shall include in their respective AIP, Section RAC, those parts of interest to air operations.

In representation of French Guyana:

In representation of Brazil:

Luiz Ricardo de Souza Nascimento - Cel Av
Head of DECEA's Air Navigation Management
Center

APPENDIX 1

The letter of operational agreement signed between the Rochambeau and Amazônico Centers

Reference TABLE for the transfer of responsibility

Date of effectiveness: 26th of May 2011

ATS Route	Table of flight levels to be assigned by:		Agreed transfer points for each route	Minimum applicable for longitudinal separation	
	Amazônico ACC	Rochambeau ACC		Minutes	Comments
1	2	3	4	5	6
	FL	FL			
UG449	2	1	OTONI n02 39.98/w052 30.03	10(a)	(a) the separation will be increased in 5 minutes when fallen oral links of the ATS fixed service
G449	2	1	REBER n03 11.68/w052 18.03		
UA555 A555 G443	2	1	OIAPOQUE NDB n03 51.59/w051 47.87	10(a)	
UM791	2	1	ARNAM n04 44.00/w049 38.05	10(a)	

Notes "1" and "2" indicate the series of IFR cruising levels listed in Appendix 3 of Annex 2 to the Convention on International Civil Aviation – ICAO, from 000° to 179° and from 180° to 359°, respectively.

In representation of French Guyana:

In representation of Brazil:

Luiz Ricardo de Souza Nascimento - Cel Av
Head of DECEA's Air Navigation Management Center

APPENDIX 2

SIMPLIFIED NETWORK OF ROUTES IN CASE OF CONTINGENCY IN THE AMAZONICA FIR

CONTINGENCY PROCEDURES BETWEEN THE AMAZÔNICO ACC AND THE ROCHAMBEAU ACC				
PARTIAL CONTINGENCY PLAN IN THE AMAZÔNICA FIR				
FIR ROCHAMBEAU TMA MANAUS	TMA MANAUS FIR ROCHAMBEAU	DIMAS/UL306 SIROS/UL306 MNS VOR MNS VOR/UL306 SIROS/ UL306/DIMAS	SIROS	
			SIROS	To be assigned by the CGNA
FIR ROCHAMBEAU	TMA BELÉM	OIAPOQUE NDB/UA555 BEL VOR; OIAPOQUE NDB/A555 BEL VOR GEMO/A321 VOR BVI	OIA NDB	To be assigned by the CGNA
TMA BELÉM	FIR ROCHAMBEAU	BEL VOR/UA555 OIAPOQUE NDB; BEL VOR/A555 OIAPOQUE NDB	OIA NDB	To be assigned by the CGNA
FIR ROCHAMBEAU	TMA MANAUS	DIMAS/UL306 SIROS/UL306 MNS VOR	SIROS	To be assigned by the CGNA
TMA MANAUS	FIR ROCHAMBEAU	MNS VOR/UL306 SIROS/ UL306/DIMAS	SIROS	To be assigned by the CGNA
TOTAL CONTINGENCY PLAN IN THE AMAZÔNICA FIR				
ORIGIN	DESTINATION	ROUTE/SEGMENT	TRANSFER / AUTO TRANSFER	
			FIX	FLIGHT LEVEL
FIR ROCHAMBEAU	FIR BRASÍLIA	OIAPOQUE NDB/UA555 BEL VOR/UZ26 EGALE; OIAPOQUE NDB/A555 BEL VOR/G449 NOVOI	OIA NDB EGALE OIA NDB NOVOI	To be assigned by the CGNA
FIR BRASÍLIA	FIR ROCHAMBEAU	EGALE/UZ26 BEL VOR/UA555 OIAPOQUE NDB; NOVOI/G449 BEL VOR/A555 OIAPOQUE NDB	EGALE OIA NDB NOVOI OIA NDB	To be assigned by the CGNA
FIR ROCHAMBEAU	FIR RECIFE	ARMAN /UM791 KOGDO; OIA NDB/A555 BEL VOR/G677 GRAVE	ARMAN KOGDO OIA NDB GRAVE	To be assigned by the CGNA
FIR RECIFE	FIR ROCHAMBEAU	KOGDO /UM791 ARMAN; GRAVE/G677 BEL VOR/ A555 OIA NDB	KOGDO ARNAM GRAVE OIA NDB	To be assigned by the CGNA

In representation of Brazil:

Luiz Ricardo de Souza Nascimento - Cel Av
Head of DECEA's Air Navigation Management Center