INTERNATIONAL CIVIL AVIATION ORGANIZATION

CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP

(GREPECAS)

SECOND MEETING OF THE COMMUNICATIONS, NAVIGATION AND SURVEILLANCE/ AIR TRAFFIC MANAGEMENT SUBGROUP

(CNS/ATM/SG/2)

FINAL REPORT

Mexico City, Mexico, 16 to 19 November 2010

Prepared by the Secretariat

November 2010

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HISTORY OF THE MEETING

ii.1 Place and Duration of the Meeting

The Second Meeting of the Communications, Navigation and Surveillance/Air Traffic Management Subgroup (CNS/ATM/SG/2) of GREPECAS was held at the ICAO NACC Regional Office, in Mexico City, Mexico, from 16 to 19 November 2010.

ii.2 Opening Ceremony and other matters

On behalf of Mrs. Loretta Martin, Regional Director of the ICAO NACC Regional Office, and Mr. Franklin Hoyer, Director of the ICAO SAM Regional Office, and Secretary of GREPECAS, Mr. Víctor Hernández, Regional Officer, Air Traffic Management and Search and Rescue, welcomed the participants to Mexico City and officially opened the Meeting.

ii.3 Organization, Officers and Secretariat

In accordance with the GREPECAS Procedural Handbook, the Meeting elected Mr. Julio César de Souza Pereira (Brazil) as Chairperson and Mrs. Veronica Ramdath (Trinidad and Tobago) as Vice-chairperson of the CNS/ATM/SG for a three-year term, or three consecutive meetings. The Secretariat of the Meeting was conducted by Mr. Onofrio Smarrelli, Regional Officer, Communications, Navigation and Surveillance, ICAO SAM Regional Office and Secretary of the CNS/ATM Subgroup, together with Mr. Víctor Hernández, Regional Officer, Air Traffic Management and Search and Rescue and Co-Secretary of the CNS/ATM Subgroup; assisted by Messrs. Julio Siu, Regional Officer, Communications, Navigation and Surveillance; Jacques Boursiquot, Regional Officer, Air Traffic Management; Adolfo Zavala, Regional Officer, Air Traffic Management, all from the ICAO NACC Regional Office; Hindupur Sudarshan, Air Navigation Bureau Consultant at ICAO Headquarters; and Aldo Martinez, Communications, Navigation and Surveillance Consultant of the ICAO Technical Cooperation Bureau.

ii.4 Working Languages

The working languages of the Meeting were English and Spanish. The documentation and the Report of the Meeting were issued in both languages. Some information papers were published in Spanish and English, others in one language only.

ii.5 Agenda

The following agenda was adopted:

Agenda Item 1: Review implementation status of valid conclusions and measures to mitigate ATM and CNS air navigation deficiencies in the CAR/SAM Regions

Agenda Item 2: Follow-up to implementation status of the performance based navigation systems plans for the CAR and SAM Regions and to the latest amendments to the ATM and CNS related SARPs

Agenda Item 3: Review progress achieved in the implementation of the CNS/ATM Subgroup Work programmes

3.1 Follow-up activities taking into consideration the performance based navigation (PBN) programme

3.2 Follow-up activities taking into consideration the air traffic flow management (ATFM) programme

3.3 Follow-up activities taking into consideration the automation and ATM situational awareness programme

3.4 Follow-up activities taking into consideration the ground-ground and ground-air communications infrastructure programme

Agenda Item 4: Other matters

ii.6 **Schedule and Working Methods**

The Meeting agreed to carry out its working sessions from 09:00 to 15:30 hours, with appropriate breaks, and agreed to create Ad hoc Groups on 18 November 2010.

ii.7 **Attendance**

The Meeting was attended by 43 participants from 13 States and 3 International Organizations.

ii.8 **Conclusions and Decisions**

The CNS/ATM Subgroup records its activities in the form of Draft Conclusions, Draft Decisions, and Decisions, as follows:

Draft Conclusions: *Conclusions that require approval by GREPECAS prior to their implementation.*

Draft Decisions: *Decisions that require approval by GREPECAS prior to their implementation*

Decisions: *Decisions that deal with internal matters to the CNS/ATM Subgroup.*

ii.9 **List of Draft Conclusions**

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LIST OF DOCUMENTATION

WORKING PAPERS

Number	Agenda Item	Title	Prepared and Presented by
WP/1	--	Tentative Agenda, Schedule and Proposed Working Methods	Secretariat
WP/2	1	Review to the status of implementation of valid conclusions and measures to mitigate ATM and CNS air navigation deficiencies in the CAR/SAM Regions. REVIEW AND UPDATE OF OUTSTANDING GREPECAS CONCLUSIONS/DECISIONS CONCERNING THE ATM AND CNS AREAS	Secretariat
WP/3	1	Review to the status of implementation of valid conclusions and measures to mitigate ATM and CNS air navigation deficiencies in the CAR/SAM Regions. REVIEW OF ATM AND CNS DEFICIENCIES	Secretariat
WP/4	2	Follow-up to the implementation status of the performance based navigation systems plans for the CAR and SAM Regions and to the latest amendments to the ATM- and CNS-related SARPS. MANUAL ON COLLABORATIVE DECISION MAKING (CDM) FOR THE SAM REGION	Secretariat
WP/5	2	Follow-up to the implementation status of the performance based navigation systems plans for the CAR and SAM Regions and to the latest amendments to the ATM- and CNS-related SARPS PROGRESS OF THE PERFORMANCE BASED AIR NAVIGATION IMPLEMENTATION PLAN FOR THE NAM/CAR REGIONS	Secetariat
WP/6	3	Review to the progress achieved in the implementation of the CNS/ATM Subgroup Work programmes. REVIEW TO THE WORK PROGRAMMES OF THE CNS/ATM SUBGROUP	Secretariat
WP/7	3.1	Follow-up to the activities taken into account in the performance based navigation (PBN) programme	A1 Project Coordinator
WP/8	---	Cancelled	---
WP/9	2	Follow-up to the implementation status of the performance based navigation systems plans for the CAR and SAM Regions and to the latest amendments to the ATM- and CNS-related SARPS. PERFORMANCE-BASED NAVIGATION – THE IMPLEMENTATION CHALLENGE	Secretariat
WP/10	2	Follow-up to the implementation status of the performance based navigation systems plans for the CAR and SAM Regions and to the latest amendments to the ATM- and CNS-related SARPS. PERFORMANCE-BASED GLOBAL AIR NAVIGATION SYSTEM – DEVELOPMENTS IN IMPLEMENTATION	Secretariat
WP/11	3.3	Follow-up to the activities taken into account in the automation and ATM situational awareness programme. PROJECT C1: AUTOMATION,	C1 Project Coordinator
WP/12	3.3	Follow-up to the activities taken into account in the automation and ATM situational awareness programme. Project C2 : PROGRESS REPORT OF ACTIVITIES AND WORK PLAN UPDATE PROJECT TO IMPROVE ATM SITUATIONAL AWARNESS	C2 Project Coordinator

Number	Agenda Item	Title	Prepared and Presented by
WP/13	3.3	Follow-up to the activities taken into account in the automation and ATM situational awareness programme. C3 - IMPLEMENTATION OF THE NEW ICAO FLIGHT PLAN FORMAT WORK PROGRAMME AND ACTIVITIES	C3 Project Coordinator
WP/14	3.4	Follow-up to activities taken into account in the ground-ground and ground-air communications infrastructure programme. ACTIVITIES CARRIED OUT BY THE PROJECT ON CAR/SAM ATN ARCHITECTURE	D1 Project Coordinator
WP/15	3.4	Follow-up to activities taken into account in the ground-ground and ground-air communications infrastructure programme. D2 - ATN GROUND-GROUND AND GROUND-AIR APPLICATIONS WORK PROGRAMME AND ACTIVITIES	D2 Project Coordinator
WP/16	2	Follow-up to the implementation status of the performance based navigation systems plans for the CAR and SAM Regions and to the latest amendments to the ATM- and CNS-related SARPS. FOLLOW UP TO THE TRAINING ACTIVITIES ON COMPETENCIES OF AERONAUTICAL PROFESSIONALS	Secretariat
WP/17	2	Follow-up to the implementation status of the performance based navigation systems plans for the CAR and SAM Regions and to the latest amendments to the ATM- and CNS-related SARPS. CIVIL/MILITARY COOPERATION IN SUPPORT OF OPTIMUM USE OF THE AIRSPACE	Secretariat
WP/18	2	Follow-up to the implementation status of the performance based navigation systems plans for the CAR and SAM Regions and to the latest amendments to the ATM- and CNS-related SARPS. PERFORMANCE OF THE MEVA II / REDDIG INTERCONNECTION	Secretariat
WP/19	2	Follow-up to the implementation status of the performance based navigation systems plans for the CAR and SAM Regions and to the latest amendments to the ATM- and CNS-related SARPS. STATES' SUPPORT TO THE ICAO POSITION FOR THE ITU RADIO COMMUNICATION CONFERENCE 2012 (WRC-2012)	Secretariat
WP/20	2	Follow-up to the implementation status of the performance based navigation systems plans for the CAR and SAM Regions and to the latest amendments to the ATM- and CNS-related SARPS. IMPLEMENTATION OF THE NEW ICAO FLIGHT PLAN FORM (FPL)	Secretariat
WP/21	2	Follow-up to the implementation status of the performance based navigation systems plans for the CAR and SAM Regions and to the latest amendments to the ATM- and CNS-related SARPS. A GLOBAL CNS TECHNOLOGY ROADMAP – A TOOL TO AID INVESTMENT DECISIONS	Secretaríat
WP/22	2	Follow-up to the implementation status of the performance based navigation systems plans for the CAR and SAM Regions and to the latest amendments to the ATM- and CNS-related SARPS. CAR/SAM ATFM MANUAL	Secretariat
WP/23	4	Other Matters. CURRENT STATUS OF THE WAFS INTERNET FILE SERVICE (WIFS)	United States

Number	Agenda Item	Title	Prepared and Presented by
WP/24	2	Follow-up to the implementation status of the performance based navigation systems plans for the CAR and SAM Regions and to the latest amendments to the ATM- and CNS-related SARPS. ICAO 2012 FLIGHT PLAN – INTER-REGIONAL IMPLEMENTATION ISSUES	United States
WP/25	2	Follow-up to the implementation status of the performance based navigation systems plans for the CAR and SAM Regions and to the latest amendments to the ATM- and CNS-related SARPS. KEEPING STANDARDS RELEVANT	Secretariat
WP/26	2	Follow-up to the implementation status of the performance based navigation systems plans for the CAR and SAM Regions and to the latest amendments to the ATM- and CNS-related SARPS. RESULTADOS DE LA SÉPTIMA REUNIÓN DEL COMITÉ DE COORDINACIÓN DEL PROYECTO REGIONAL OACI RLA/03/902 – SACCSA Y SU IMPACTO EN LA IMPLEMENTACIÓN REGIONAL PBN	Secretariat
WP/27	2	Follow-up to the implementation status of the performance based navigation systems plans for the CAR and SAM Regions and to the latest amendments to the ATM- and CNS-related SARPS. CONTRIBUTIONS FOR THE GNSS IMPLEMENTATION ACCORDING TO PBN PLAN AND BASED ON THE PROGRESS AND FIRST RESULTS OF SACCSA PROJECT – PHASE III-A	Secretariat
WP/28	2	Follow-up to the implementation status of the performance based navigation systems plans for the CAR and SAM Regions and to the latest amendments to the ATM- and CNS-related SARPS. PROPOSED CHANGES FOR THE CAR REGION ATS ROUTE STRUCTURE	Secretariat
WP/29	2	Follow-up to the implementation status of the performance based navigation systems plans for the CAR and SAM Regions and to the latest amendments to the ATM- and CNS-related SARPS. UPDATED PBN AIRSPACE CONCEPT FOR THE CAR REGION	Secretariat

INFORMATION PAPERS

Number	Agenda Item	Title	Prepared and Presented by
IP/1	--	General Information	Secretariat
IP/2	--	List of working and information papers	Secretariat
IP/3	2	Agenda Item 2: Follow-up to the implementation status of the performance based navigation systems plans for the CAR and SAM Regions and to the latest amendments to the ATM- and CNS-related SARPS. UPDATING TO CNS SARPS AND FUTURE WORK OF THE ICAO CNS PANELS	Secretariat
IP/4	4	Other matters. ICAO AIR NAVIGATION PANELS, STUDY GROUPS AND TASK FORCES – WORK PROGRAMME	Secretariat

Number	Agenda Item	Title	Prepared and Presented by
IP/5	2	Follow-up to the implementation status of the performance based navigation systems plans for the CAR and SAM Regions and to the latest amendments to the ATM- and CNS-related SARPS. PERFORMANCE BASED IMPLEMENTATION PLAN FOR THE SOUTH AMERICAN REGION	Secretariat
IP/6	2	Follow-up to the implementation status of the performance based navigation systems plans for the CAR and SAM Regions and to the latest amendments to the ATM- and CNS-related SARPS. AUTOMATIC DEPENDENT SURVEILLANCE – BROADCAST (ADS-B)	United States
IP/7	2	Follow-up to the implementation status of the performance based navigation systems plans for the CAR and SAM Regions and to the latest amendments to the ATM- and CNS-related SARPS. STATUS OF PERFORMANCE BASED NAVIGATION (PBN) IMPLEMENTATION IN THE UNITED STATES	United States
IP/8	2	Follow-up to the implementation status of the performance based navigation systems plans for the CAR and SAM Regions and to the latest amendments to the ATM- and CNS-related SARPS. STATUS OF FAA IMPLEMENTATION OF AMENDMENT 1 TO DOC 4444, 15TH EDITION	United States
IP/9	2	Follow-up to the implementation status of the performance based navigation systems plans for the CAR and SAM Regions and to the latest amendments to the ATM- and CNS-related SARPS. FIRST RESULTS AND DEMONSTRATIONS OF SACSSA PROJECT PHASE III-A TOWARDS GNSS IMPLEMENTATION (*Spanish only*)	Secretariat
IP/10	2	Follow-up to the implementation status of the performance based navigation systems plans for the CAR and SAM Regions and to the latest amendments to the ATM and CNS related SARPS. GULF OF MEXICO RNAV ROUTE PROJECT	United States
IP/11	2	Follow-up to the implementation status of the performance based navigation systems plans for the CAR and SAM Regions and to the latest amendments to the ATM and CNS related SARPS. WORKSHOP ON AMHS IMPLEMENTATION IN THE CAR NAM REGION	United States
IP/12	2	Follow-up to the implementation status of the performance based navigation systems plans for the CAR and SAM Regions and to the latest amendments to the ATM and CNS related SARPS. FAA GBAS UPDATE	United States
IP/13	2	Follow-up to the implementation status of the performance based navigation systems plans for the CAR and SAM Regions and to the latest amendments to the ATM and CNS related SARPS. CONTINUATION OF ADS-B TRIALS AND MODERNIZATION OF THE RADAR NETWORK IN CUBA (*Spanish only*)	Cuba
IP/14	2	Follow-up to the implementation status of the performance based navigation systems plans for the CAR and SAM Regions and to the latest amendments to the ATM and CNS related SARPS. MODEL ACTION PLAN FOR THE IMPLEMENTATION OF THE NEW ICAO FLIGHT PLAN FORMAT (*Spanish only*)	Brazil

Number	Agenda Item	Title	Prepared and Presented by
IP/15	2	Follow-up to the implementation status of the performance based navigation systems plans for the CAR and SAM Regions and to the latest amendments to the ATM and CNS related SARPS. FAA WAAS UPDATE	United States

All working papers and information papers are available for download at:

http://www.lima.icao.int/MeetProg/GREPECAS/

username: carsamrpg
password: ccretkode

Agenda Item 1: Review implementation status of valid conclusions and measures to mitigate ATM and CNS air navigation deficiencies in the CAR/SAM Regions

Valid CNS and ATM Conclusions and Decisions Adopted by GREPECAS

1.1 The Meeting reviewed the list of outstanding GREPECAS conclusions and decisions related with ATM and CNS fields prior to the CNS/ATM/SG/1 Meeting and reviewed during the first meeting of the CNS/ATM Subgroup, which is presented as Appendix A to this part of the Report.

1.2 In addition, the Meeting reviewed the conclusions and decisions drafted by the CNS/ATM/SG/1 meeting which were approved by the GREPECAS fast track mechanism and which are presented as Appendix B to this part of the report.

1.3 The Meeting noted that the updated list of conclusions and decisions of the CNS/ATM/SG will be presented by the Secretariat of the CNS/ATM Subgroup to the GREPECAS/16 meeting.

Analysis on the Status of CAR/SAM CNS, ATM and SAR Air Navigation Deficiencies

1.4 The Meeting reviewed and updated the status of the CNS, ATM and SAR fields priority A, B and U deficiencies in the CAR/SAM Regions. The current version of the database of deficiencies is always available at the following website: ICAO NACC Regional Office link www.mexico.icao.int/gandd2.html and ICAO SAM Regional Office: www.lima.icao.int/ under GANDD.

1.5 The Meeting urged States/Territories/COCESNA from the CAR/SAM Regions to update the GANDD deficiencies database and inform ICAO on the progress made to solve deficiencies.

APPENDIX A

VALID CNS AND ATM CONCLUSIONS AND DECISIONS ADOPTED BY GREPECAS

Conc/Dec and Strategic Objective(s)	Title of Conclusion/ Decision	Text of Conclusion/Decision	Proposed Follow-up	Responsibility	Deliverable	Action by ANC	Reporting/ Completion Date
C 13/53	**INFORMATION REQUEST ON AIRCRAFT CAPABILITY TO OPERATE SSR IN MODE S, ADS AND ADS-B**	That ICAO, a) request information from IATA on their airlines members capability to operate with Mode S transponders with elementary and enhanced capacity, as well as with ADS and ADS-B; and b) collect information from the States/Territories/International Organizations on the existing and planned ATC automation systems capabilities to support ADS-B systems.	ICAO requested IATA this information, including other avionics equipment. At ATM/CNS/SG/5 meeting, IATA presented preliminary information on the subject. AT SUR/TF/3 meeting, IATA also presented a new format to collect CNS-related avionics information, which includes a global data base on this topic. Once concluded, the information in this data base will provide complete information on the avionics systems installed on board aircraft. RLA/98/003 carried out a study on automation systems in the SAM States and in COCESNA, thus collecting the information required in item b). CNS/ATM/SG/1 meeting considered that the request for information on aircraft capability to operate SSR Mode S, as well as ADS and ADS-B, should be extended to include request for information on all CNS avionics equipment installed on board aircraft and, in this regard, formulated draft Conclusion CNS/ATM/1-4, which was approved by the GREPECAS fast track procedure.	ICAO	Information on IATA airlines capability to operate with Mode S transponders, with elementary or enhanced capacity, as well as with ADS and ADS-B. Information on the existing and planned ATC automation systems capabilities to support ADS-B systems in CAR/SAM States/Territories /International Organizations	Not analyzed by the ANC	Superseded by Conclusion CNS/ATM/1-4

Conc/Dec and Strategic Objective(s)	Title of Conclusion/ Decision	Text of Conclusion/Decision	Proposed Follow-up	Responsibility	Deliverable	Action by ANC	Reporting/ Completion Date
C 13/74 **D**	**PROPOSAL OF AMENDMENT TO ATN REGIONAL PLAN**	That ICAO consider the amendment to the ATN Regional Plan contained in the FASID Table CNS/1B, by replacing that table format with the following: • Table CNS 1Ba – CAR/SAM regional Plan of ATN routers • Table CNS 1Bb – CAR/SAM regional Plan of ground-ground applications • Table CNS 1Bc – CAR/SAM regional Plan of air-ground applications *Note: -The proposed Tables CNS 1Ba and CNS 1Bb formats are shown in Appendices AY and AZ respectively. The Table CNS 1Bc would be developed by the CNS Committee soon.*	As follow-up to the amendment to the ATN Regional Plan, we have: Table CNS 1Ba – Routers Regional Plan: There is a revised version (May 2010). Table CNS 1Bb – CAR/SAM ATN ground-ground applications plan: There is a revised version (May 2010). Table CNS 1Bc – CAR/SAM ATN ground air applications plan: there is a format proposal (GREPECAS/14). The ATN regional plan, Tables CNS 1Ba and 1Bb, will be examined/updated in 2010 and the corresponding amendment process will be made. The CAR/SAM ATN ground air applications plan (Table CNS 1Bc) would be ready by CNS/ATM/SG/3 meeting. Tables CNS 1BA and 1Bb are available. Table CNS 1Bc will be available by December 2011.	ICAO	Amendment to FASID: Tables CNS 1Ba, CNS 1Bb and CNS 1Bc	Not analyzed by ANC	December 2011

Conc/Dec and Strategic Objective(s)	Title of Conclusion/ Decision	Text of Conclusion/Decision	Proposed Follow-up	Responsibility	Deliverable	Action by ANC	Reporting/ Completion Date
C 13/79 **D**	**DEVELOPMENT OF NATIONAL PLANS TO PRIORITIZE THE AMHS AND AIDC IMPLEMENTATION AND CONTRIBUTE TO ATM AUTOMATION**	That the States/Territories/International Organizations develop their respective national plans for the prioritization of the AMHS and AIDC implementation, based on the ATN routers table, the ATN ground-ground applications plan, and the regional AMHS addressing plan, and relevant ATN – AMHS regional documentation, also contributing to the progress towards the development of ATM automation supporting air traffic services.	CAR/SAM States/Territories/ International Organizations should note that in the development of their performance based national plans, AMHS and AIDC implementation should be prioritized, on the basis of ATN router tables, ATN ground-ground applications plan, the AMHS addressing plan and regional documentation relevant to ATN AMHS. Within the NAM/CAM Regional Air Navigation Performance Based Implementation Plan, regional actions have been developed for AMHs and AIDC implementation. AMHS trials are being planned between United States (FAA) and various CAR/SAM States. Many CAR and SAM States have implemented AMHS systems (Argentina, Brazil, Chile, Colombia, Dominican Republic, Panama, Paraguay, Peru, Trinidad and Tobago, Venezuela and COCESNA). Implementation plans are scheduled for 2010 in Guyana and Suriname. In addition, MoU were drafted for the interconnection between some installed AMHS systems.	States/Territories/ International Organizations	National plans for AMHS and AIDC implementation	Not analyzed by ANC	December 2011
C 13/85 **D**	**FOSTER THE USE OF GNSS IN DIVERSE SECTORS OF THE STATES**	That States/Territories/International Organizations foster the use of GNSS in diverse sectors of their respective States and disseminate the results of the studies on the solution of SBAS.	Some States/Territories/ International Organizations have promoted the use of GNSS at various sectors in their respective countries. Studies for a SBAS system are under way. Consideration has been given to encouraging the cooperationa between national investigation and development entities, with the support of training centres (universities, other centres).	States/Territories/ International Organizations	That States promote, in their different sectors, the use of GNSS, and that they become aware of the results on SBAS augmentation studies.	Not analyzed by ANC	Superseded June 2011 Superseded by Conclusion CNS/ATM/1-3

Conc/Dec and Strategic Objective(s)	Title of Conclusion/ Decision	Text of Conclusion/Decision	Proposed Follow-up	Responsibility	Deliverable	Action by ANC	Reporting/ Completion Date
C 13/87 **D**	**ADS-B TRIALS PROGRAMME IN THE CAR/SAM REGIONS**	That, States/Territories/International Organizations in collaboration with the airspace users, establish and execute an ADS-B trials programme using the available technology and services, aimed at improving the ADS-B knowledge and evaluating the benefits for the Air Traffic Management in the CAR/SAM Regions.	Some CAR/SAM States/Territories/ International Organizations have carried out ADS-B trials. In the SAM Region, Brazil, Chile and Perú have carried out ADS-B tests. In the CAR/NAM Region, ADS B tests have been carried out Cuba, Jamaica, COCESNA and United States. A document on considerations to be taken into account for ADS-B trials has been prepared, and approved by GREPECAS/15. Other trials are scheduled in the short and medium term in the CAR/SAM Regions.	States/Territories/ International Organizations	ADS B trials programme	Not analyzed by ANC	December 2011
C 14/51 **A, D**	**RE-ORGANIZATION OF WORK PROGRAMMES TO SUPPORT ATM PERFORMANCE OBJECTIVES FOR THE CAR/ SAM REGIONS**	That to support the transition from a system-based to a performance-based approach for the planning and implementation of air navigation infrastructure: a) CAR/SAM States/Territories/ International Organizations take the necessary action to develop and implement national ATM work programmes in accordance with the performance objectives of the ATM Committee; and b) ICAO continue coordination of the re-organization of CAR/SAM ATM Work Programmes in accordance with the new Global Plan Initiatives (GPIs), and in support of ICAO Strategic Objectives.	ICAO has proposed the performance based approach (PBA) which urges all States to formulate their air navigation national plans under this approach – GREPECAS Conclusion 15/1.Therefore, GREPECAS AGA, ATM, AIS, CNS and MET contributory bodies must reorganize their work programmes to achieve the agreed performance objectives, inasmuch in the ATM area as in other air navigation fields. The CNS/ATM/SG reorganized the ATM work programme in the CAR and SAM Regions, in accordance with the new Global Plan Initiatives (GPI) and in support of the ICAO Strategic Objectives, and satisfying the agreed upon performance objectives.	States/Territories/ International Organizations ICAO NACC and SAM Regional Offices	Implementation of harmonized CAR/SAM ATM performance based objectives. Alignment of ATM work programme with performance objectives and ICAO strategic objectives.	Took note and requested the Secretariat to continue providing guidelines to the Regions for the formulation of regional performance objectives	a) This item is proposed to be superseded by GREPECAS Conclusion 15/1 b) Completed.

Conc/Dec and Strategic Objective(s)	Title of Conclusion/ Decision	Text of Conclusion/Decision	Proposed Follow-up	Responsibility	Deliverable	Action by ANC	Reporting/ Completion Date
C 14/54 **D**	**COMMUNICATION ASPECTS FOR THE MIGRATION TOWARDS THE METEOROLOGICAL MESSAGE EXCHANGE IN BUFR CODE**	That the ATN Task Force of the CNS Committee, as well as the COM/MET Task Force of AERMET Subgroup, analyse in detail the following communication aspects considered necessary for the migration towards the meteorological message exchange in BUFR format in the CAR/SAM Regions for possible implementation for first and second transition stages: a) use of terminals with coding/decoding capacity; b) use of AMHS systems with extended service; and c) development of an Interface Control Document (ICD) to integrate AMHS and MET systems, establish standards for presentation systems and specifications for the conversion of templates and security aspects.	During GREPECAS/15, it was indicated that ANC, had approved to suspend the migration to BUFR code until studies on XML use of OPMET Exchange are completed by the WMO Group of Experts. In view of this situation, this conclusion is proposed as completed.	ATN/TF and COM/MET/TF	Analysis of communications aspects considered necessary for migration towards the Exchange of meteorological messages in BURF format in the CAR/SAM Regions.	Not analyzed by the ANC	Completed
C 14/56 **D**	**PROGRESSIVE DEACTIVATION OF NDB STATIONS**	That in order to develop progressive deactivation of NDB Stations without affecting safety, States, Territories, International Organizations and airspace users: a) analyse the service provided by each NDB station, its function, procedural existence with other aids such as VOR/DME, GNSS-RNAV, as well as the aircraft capacity/development that operate in serviced airspace; b) based on the analysis described in item a) above and in the Table format included in the Appendix AF to this part of the Report, develop a plan for the progressive deactivation of NDB stations; and c) inform the corresponding ICAO NACC or SAM Regional Office regarding their respective plan for the progressive deactivation of NDB stations before 30 November 2007.	CAR/SAM States/Territories/ International Organizations have informed of their plans for the progressive deactivation of NDB stations	States/Territories/ International Organizations and airspace users	Plans for progressive deactivation of NDB stations	Noted	December 2008 Completed

Conc/Dec and Strategic Objective(s)	Title of Conclusion/ Decision	Text of Conclusion/Decision	Proposed Follow-up	Responsibility	Deliverable	Action by ANC	Reporting/ Completion Date
D 14/57	**DEVELOPMENT OF A REGIONAL PLAN FOR THE PROGRESSIVE DEACTIVATION OF NDB STATIONS**	That the CNS Committee: a) prepare a regional plan for the progressive deactivation of NDB stations, taking into account the responses received from States, Territories, International Organizations and airspace users, Conclusion 14/X and the Table presented in the Appendix AF to this part of the Report; and b) based on the results of item a) above, propose the corresponding amendments to Table CNS 3 of the FASID.	Taking into account the plan for the progressive deactivation of NDB stations prepared by States/Territories, a CAR/SAM deactivation plan was established, which was included in FASID Table CNS 3, carrying out the corresponding proposal for amendment	GREPECAS CNS Committee	NDB stations regional deactivation plan	Noted.	2009 Completed

Conc/Dec and Strategic Objective(s)	Title of Conclusion/ Decision	Text of Conclusion/Decision	Proposed Follow-up	Responsibility	Deliverable	Action by ANC	Reporting/ Completion Date
C 15/1 **D**	**DEVELOPMENT OF PERFORMANCE BASED REGIONAL AND NATIONAL PLANS**	That, a) GREPECAS develop a performance-based regional plan in accordance with the Global Air Navigation Plan and the Global ATM Operational Concept. This plan should include identification of regional performance objectives and completion of performance framework forms for all air navigation areas such as ATM, CNS, AIM, MET and AGA/AOP; and b) States, Territories and International Organizations, taking into account user needs, develop performance-based national plans in accordance with the regional performance objectives included in the Regional Air Navigation Plan. These national plans should encompass identification of national performance objectives and completion of performance framework forms for all air navigation areas such as ATM, CNS, AIM, MET and AGA/AOP.	Identify regional performance objectives in the ATM and CNS fields. In 2009, the NACC and SAM Regional Offices held workshops on the elaboration of a national performance framework for air navigation systems. Within the NAM/CAR working groups, various performance objectives have been identified and extended through the C/CAR and E/CAR working groups, including same in the NAM/CAR Performance Based Air Navigation Implementation Plan. Coordination with States/Territories and International Organization s to develop national plans on the basis of regional performance objectives. Many CAR/SAM States have drafted their national plan on the basis of performance objectives. CNS/ATM/SG/1 meeting decided that a CAR/SAM regional plan would not be necessary. The SAM Region drafted an initial performance based air navigation implementation plan. Harmonization tasks will be carried out at the CNS/ATM/SG.	GREPECAS States/Territories and international organizations	Performance based Regional AN Plan Performance based National AN plans	Noted and that GREPECAS and States are requested to take into account the user expectations in the development of performance framework forms.	a) GREPECAS/ 16 b) December 2010
C 15/4 **D**	**D-VOLMET AERONAUTICAL DATA LINK REQUIREMENTS IN THE CAR/SAM REGIONS**	That the ICAO NACC and SAM Offices, in coordination with the ICAO SAM Office, amend Part VII Vol. I – ATS of the ANP to reflect the requirement for D-VOLMET aeronautical data link services in the CAR/SAM Regions.	The AERMET/SG, upon analyzing D-Volmet implementation in the CAR/SAM Regions, proposes an amendment in ANP Volume I Basic, Part VII ATS.	ICAO NACC and SAM RO	Amendment to ANP Vol I – Basic, Part VII-ATS	Not analyzed by the ANC	End of 2011

Conc/Dec and Strategic Objective(s)	Title of Conclusion/ Decision	Text of Conclusion/Decision	Proposed Follow-up	Responsibility	Deliverable	Action by ANC	Reporting/ Completion Date
D 15/34 **D**	**NEW CNS/ATM SUBGROUP**	That, in line with GREPECAS efforts to improve the treatment of ATM and CNS matters and the coordination required between these areas to ensure a performance-based approach to planning of a global ATM system, a re-engineering of the ATM/CNS Subgroup be carried out within the GREPECAS mechanism with the creation of the new CNS/ATM Subgroup and Terms of Reference as presented in **Appendix G** to Agenda Item 5 of this Report.	Coordination between the ATM and CNS Secretariat. CNS/ATM/SG/1 meeting analyzed and approved the structure of the new ICAO CNS/ATM Subgroup.	GREPECAS Secretariat	New CNS/ATM Subgroup with its terms of reference		Completed
C 15/35 **D**	**IMPLEMENTATION OF THE NEW ICAO FLIGHT PLAN MODEL**	Considering that States should take measures to implement the new ICAO flight plan model pursuant to Amendment No. 1 to the 15th Edition of the PANS-ATM (Doc 4444), and in order to establish a regional strategy to facilitate global implementation of this amendment that: a) based on the guidance material to be prepared by ICAO, CAR/SAM States/Territories and International Organizations take the necessary measures to prepare for the transition to the new flight plan model; and b) the Subgroup establish a contributory body to develop a regional strategy for the transition to the new flight plan model in the CAR/SAM Regions and the provisions associated with ATS messages.	Coordination between ICAO and States/Territories/International Organizations through meetings, missions and letters for the adoption of measures on the transition to the new flight plan. On the basis of directives for the implementation of Amendment No. 1 to PANS-ATM (Doc 4444), 15th Edition (ICAO Secretary General State letter AN 13/2.1-09/9) of 6 February 2009) : a) In the CAR Region, the E/CAR/WG elaborated a proposal PFF as an action plan to follow for this transition. b) In the SAM Region, an initial implementation strategy for the transition towards the new flight plan model was drafted. SAM/IG/4 meeting (19-23 October 2009) analyzed this strategy and considered it appropriate. CNS/ATM/SG/1 meeting approved the strategy and performance objective towards the transition to the new flight plan model, and a contributory body was established to monitor implementation Progress.	a) CAR/SAM States/Territories and International Organizations b) CNS/ATM/SG	Regional strategy for the implementation of a new ICAO flight plan model	Recognizing that many of the regions are progressing at a different pace for migration to new ICAO flight plan, the Commission reiterated the need for global coordination by ICAO HQ so as to ensure smooth transition at regional and national levels.	a) November 2012 b) Completed

Conc/Dec and Strategic Objective(s)	Title of Conclusion/ Decision	Text of Conclusion/Decision	Proposed Follow-up	Responsibility	Deliverable	Action by ANC	Reporting/ Completion Date
C 15/36 **D**	**MEASURES TO REDUCE OPERATIONAL ERRORS IN THE ATC COORDINATION LOOP BETWEEN ADJACENT ACCs**	That taking into account the impact of operational errors in the ATC coordination loop between adjacent ACCs on air operations safety: a) CAR/SAM States/Territories/ International Organizations apply, on an urgent basis among other measures, the programme for the prevention of errors in the coordination loop between adjacent ACCs described in Appendix F to this part of the Report in order to reduce LHDs caused by errors in traffic coordination messages between ATC units to achieve an acceptable target level of safety; b) CAR/SAM States/Territories/International Organizations gradually implement the interface for data exchange among ATC units (AIDC); and c) ICAO coordinate, provides assistance, and conduct follow-up on the implementation of these corrective measures.	Coordination with States by ICAO Regional Offices Lima and Mexico. Various measures have been discussed through CAR and SAM bilateral and multilateral meetings. In addition, the Scrutiny Working Group (GTE) and CARSAMMA carry out bi-annual evaluations of the reported LHDs. ICAO NACC and SAM Regional Offices have provided assistance and sent a letter to States for application of this conclusion. AIDC implementation is contemplated in States National Plans (See Conclusion 13/79).	a) and b) States/Territories/ International Organizations c) ICAO	ATC coordination error reduction through: Error-preventing programme in the coordination loop between adjacent ACCs. AIDC Implementation	Noted and supported the idea of remedial actions such as implementation of AIDC. Also, agreed that ICAO should provide all the necessary support to States in the regions to implement the corrective measures.	Completed
C 15/37 **D**	**REVIEW OF THE METHODOLOGY USED FOR SAFETY ASSESSMENT**	That ICAO review the methodology used for conducting post RVSM implementation safety assessments considering the fact that type M and N errors identified and used to perform this assessment may not be related to RVSM implementation.	The Air Navigation Commission agreed that the M and N errors should be taken into account in the evaluation of safety.	ICAO Regional Office, Lima ICAO HQ ANB/ATM	Issue form sent to HQ New methodology to assess LHD.M and N errors	Did not agree with the view of GREPECAS and reiterated that the Secretary General should take into account all types of errors in the RVSM airspace, including the M and N during the evaluation of the risk.	Completed

Conc/Dec and Strategic Objective(s)	Title of Conclusion/ Decision	Text of Conclusion/Decision	Proposed Follow-up	Responsibility	Deliverable	Action by ANC	Reporting/ Completion Date
C 15/38 **A, D**	**NATIONAL PBN IMPLEMENTATION PLANS**	That in order to initiate PBN implementation and in accordance with Resolution 36/23, CAR/SAM States/Territories: a) develop their PBN national implementation plans by December 2009, and present them to the corresponding Regional Offices; b) consider using the PBN action plans models presented in Appendix G to this part of the Report as guidance material; and c) designate a Point-of-Contact who will coordinate PBN implementation activities in each State/Territory.	Coordination with States by ICAO Regional Offices Lima and Mexico. The NAM/CAR performance based air navigation implementation plan has been drafted. Action plans have been developed for the Central America, Habana, Miami, San Juan, Mexico, Santo Domingo and Piarco FIRS, and PBN procedures have been implemented in various CAR international airports. In the SAM Region, PBN implementation action plans have been drafted. Contact points for the coordination of PBN implementation activities have been assigned. Argentina, Bolivia, Brazil, Chile, Colombia, Guyana, Paraguay, Peru and Uruguay have presented their national PBN implementation plans, in follow-up to the SAM region al programme.	States	National PBN Implementation Plans using the models provided. Point of contact for each State/Territory	Noted	Completed
C 15/39 **A, D**	**ADOPTION OF STRATEGIC LATERAL OFFSET PROCEDURES (SLOP)**	That, recognizing that Strategic Lateral Offset Procedures (SLOP) may provide safety enhancements in the CAR/SAM Regions, ICAO take the necessary measures to initiate an amendment to Doc 7030, based on the PANS-ATM (Doc 4444), for the application of SLOP in areas where route separation is at least 30 NM and no ATS surveillance system coverage exists (i.e., radar, ADS-B, etc).	Proposal for amendment on Strategic Lateral Offset Procedures in process and under coordination with ICAO HQ.	ICAO Regional Office, Lima ICAO Regional Office, Lima ICAO HQ ANB/ATM	Issue form sent to HQ Amendment to DOC 7030 concerning Application of SLOP in areas where route separation is at least 30 NM	Agreed with the proposal and requested the Secretary General to take the necessary measures for the application of SLOP in areas where route separation is at least 30 NM	Completed

Conc/Dec and Strategic Objective(s)	Title of Conclusion/ Decision	Text of Conclusion/Decision	Proposed Follow-up	Responsibility	Deliverable	Action by ANC	Reporting/ Completion Date
C 15/40 **D**	**SEMINAR/WORKSHOP ON THE IMPLEMENTATION OF AIR-GROUND DATA LINKS AND THEIR APPLICATIONS**	In order to support the study of a plan to conduct air-ground data links transmission trials and the functionalities or applications implemented through such links, ICAO is urged to organize and conduct a seminar/workshop on this topic the last quarter of 2009.	Event carried out in Santo Domingo, Dominican Republic, 23-27 November 2009, which counted with participation of 70 delegates from NAM/CAR/SAM and EUR States.	ICAO Regional Offices Lima and Mexico	Seminar concluded	Noted and requested the Secretariat to conduct such workshops on a global basis.	November 2009 Completed
C 15/41 **D**	**AMENDMENT TO THE REGIONAL AIR NAVIGATION PLAN – TABLE CNS/3 OF FASID**	That ICAO consider amending the format of the Regional Air Navigation Plan FASID Table CNS 3 by adding a new column under GNSS requirements to reflect the planning of ABAS requirements as shown in the Appendix N to this part of the Report.	Activity carried out through the approval of amendment to ANP, Vol II – FASID, Table CNS 3 (July 2009).	ICAO Regional Office, Lima ICAO Regional Office Lima and ICAO HQ ANB/CNS	Issue form sent to HQ Submission of the proposal to HQ Approved amendment	Concurred with GREPECAS and requested the Secretariat to amend the format of the Regional Air Navigation Plan, FASID, Table CNS 3 accordingly.	Completed
C 15/42 **D**	**AVAILABILITY OF GNSS RECEIVERS FOR PROJECT RLA/03/902 IONOSPHERIC ANALYSES AND STUDIES**	order to support the ionospheric analyses and studies being conducted by project RLA/03/902, CAR/SAM States/Territories/International Organizations are urged to inform ICAO, through their respective Regional Offices **no later than 15 July 2009,** about the existence and availability of GNSS receivers with an L1 and L2 data collection capability per second**,** reporting their geographic location and the type of equipment.	Letter to States/Territories and International Organization as to the requirement.	States/Territories/ International Organizations	Information on GNSS receivers with L1 and L2 data collection capacity	Not analyzed by ANC	July 2009 Completed

Conc/Dec and Strategic Objective(s)	Title of Conclusion/ Decision	Text of Conclusion/Decision	Proposed Follow-up	Responsibility	Deliverable	Action by ANC	Reporting/ Completion Date
C 15/43 **D**	**SUPPORT FOR PROJECT RLA/03/902-SACCSA**	Bearing in mind: • that Phase III of SACCSA could provide definitive elements for decision-making by the CAR/SAM Regions with regard to the implementation of SBAS; • that the proposed ionospheric studies are of considerable importance for gaining knowledge and characterizing actual behaviour for consequent implementation/planning of the GNSS solution; and • the importance of having CAR/SAM States willing to participate in Phase III of RLA/03/902 SACCSA for the efficient completion of the project; ICAO is requested to circulate, as soon as possible through its Regional Offices, a letter to States/Territories/International Organizations, asking them to identify by 31 December 2008, whether or not they are interested in participating in Phase III of project RLA/03/902 - SACCSA in order to determine those interested in conducting Phase III and making a decision in this regard.	Letter to States/Territories and international organizations requesting information. Letter to States/Territories and international organizations on result of consultation.	ICAO Regional Offices Lima and Mexico	Information from States/ territories and international organizations on their participation in Project RLA/03/902 SACCSA, Phase III	Noted	June 2009 Completed
C 15/44 **D**	**USE OF GNSS IN THE SHORT-TERM**	In order to comply with the implementation of the CAR/SAM PBN Roadmap, States/Territories/International Organizations are urged to complete the development and approval of GPS-based NPA operations, establishing regulations and procedures (NOTAM, AIC, etc.) for the use of RAIM GPS and Baro-VNAV GPS in the short-term.	Letter to States/Territories, meetings and missions. These considerations have been included in the objectives of the NAM/CAR performance based Air Navigation Plan and in the SAM PBN implementation action plans. The CAR/SAM Regions have drafted Advisory Circulars (AC) relative to aircraft and user approval for RNAV 10 operations (named and authorized as RNP 10), RNAV 5, RNAV 1, RNAV 2, basic RNP 1, RNP APCH, RNP AR APCH and APV/baro-VNAV.	States/Territories and International Organizations	Approval of GPS based NPA operations	Not analyzed by the ANC	December 2010

Conc/Dec and Strategic Objective(s)	Title of Conclusion/ Decision	Text of Conclusion/Decision	Proposed Follow-up	Responsibility	Deliverable	Action by ANC	Reporting/ Completion Date
C 15/45 **D**	**REVIEW OF THE PLAN FOR THE PHASE-OUT OF NDB STATIONS**	That States/Territories/International Organizations review and complete the information contained in the Regional Plan for the Phase-out of NDB Stations in the CAR and SAM Regions that appears in **Appendix O** to this part of the Report and send missing information to the respective ICAO Regional Offices before **15 July 2009.**	Letter to States/Territories/ International Organizations	States/Territories/ International Organizations	Complete NDB deactivation regional plan	Not analyzed by ANC	Completed
C 15/46 **D**	**CAR/SAM REGIONAL ACTION FOR THE PREPARATION AND SUPPORT OF THE ICAO POSITION FOR WRC-11**	That CAR/SAM States and International Organizations, in preparation and support of the ICAO position for the ITU World Radio Communication Conference – 2011 (WRC-11): a) support and follow-up on the work of ICAO to prepare and update its position for WRC-11; b) appoint a focal point or a contact person to serve as a liaison with ICAO and with the national radio frequency spectrum management authority to coordinate matters concerning WRC-11; c) participate actively in the Organization of American States (OAS) CITEL meetings in preparation for WRC-11; d) participate actively in any meetings and seminars convened by ICAO to explain and analyze the position of this organization for WRC-11; e) participate actively in WRC-11 in support of the ICAO position; and f) recommend and implement other appropriate measures.	Letter to States/ Territories and International organizations. Within the NAM/CAR performance based Air Navigation Plan, a new performance objective has been included for the follow-up of this task, with the respective Points of Contact list. In the SAM Region, an action plan to prepare for the ICAO position at WRC-12 has been prepared. Also, CAR/SAM contact points have been assigned. The Regional NAM/CAR/SAM Preparatory Meeting (RNCSPM) for ITU WRC-2012 was held in Mexico City, Mexico, from 21 to 22 April 2010, which counted with the presence of the Secretariat of the Aeronautical Communications Panel (ACP) Working Group F (ACP-WG/F). In 2011, follow-up will continue through the Working Groups and Projects in the CAR and SAM Regions.	States/Territories/ International Organizations	a) Support from States and international organizations on the ICAO position at WRC-11 through submission of progress reports. b) Nominate focal points for WRC-2012 c) Active participation in CITEL meetings. d) Active participation in ICAO meetings on WRC-2012. e) Participate in WRC-2012. f) Recommend other measures.	Noted and requested the Secretary General to urge States to continue to participate at various levels in different fora to provide support for the ICAO position.	January 2012 (WRC-2012)

Conc/Dec and Strategic Objective(s)	Title of Conclusion/ Decision	Text of Conclusion/Decision	Proposed Follow-up	Responsibility	Deliverable	Action by ANC	Reporting/ Completion Date
D 15/49 D	**ASPECTS TO BE CONSIDERED IN DEVELOPING THE WORK PROGRAMMES OF GREPECAS CONTRIBUTORY BODIES**	That, in developing the work programmes of the GREPECAS contributory bodies, the following aspects be considered: a) the related strategic objective; b) the contribution made to achieve that strategic objective; c) other relevant tasks in the overall programme of GREPECAS contributory bodies; d) the relationship to the Regional Air Navigation Plan and/or SARPs implementation; *Note: Until the new Regional Air Navigation Plan is developed, GREPECAS Contributory Bodies should refer tasks to Global Plan Initiatives (GPIs).* e) detail specific deliverables into the work programme in order to clarify understanding of the expected results; and f) identify the completion date of the task.	The drafting of the new Subgroup's work programme, as well as of the contributory bodies that might be established, took into account these aspects.	CNS/ATM/SG	Work programme of CNS/ATM/SG and of possible contributory bodies to be established through the inclusion of the aspects indicated in this Decision.	Not analyzed by the ANC	Completed
D 15/53 D	**NEW FORMAT FOR GREPECAS CONRIBUTORY BODIES WORK PROGRAMME**	That GREPECAS contributory bodies: a) use the format included as Appendix H to this part of the Report to present their work programmes to GREPECAS; and b) use the format included as Appendix I to this part of the Report to be reviewed by the ACG.	The format in Appendices H and I was used to represent the work programme to GREPECAS and ACG, respectively.	CNS/ATM/SG Secretariat	CNS/ATM/SG work programme	Not analyzed by the ANC	Completed

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APPENDIX B

CONCLUSIONS AND DECISIONS FORMULATED DURING CNS/ATM/SG/1 MEETING AND APPROVED BY THE GREPECAS FAST TRACK MECHANISM

Conc/Dec and Strategic Objective(s)	Title of Conclusion/ Decision	Text of Conclusion/Decision	Proposed Follow-up	Responsibility	Deliverable	Action by ANC	Reporting/ Completion Date
Decision CNS/ATM/1/1	Regional Performance-based implementation Plan for the South American Region	That SAM States, with the assistance of ICAO, taking as a basis the available documentation in the CAR and SAM Regions: a) Prepare a performance-based regional implementation plan in compliance with the Global Air Navigation Plan and the Global ATM Operational Concept that includes the regional performance objectives, the performance framework forms (PFF) to be completed by all air navigation areas, such as ATM, CNS, AIM, MET and AGA/AOP, and the corresponding metrics that enable the implementation of performance objectives achievement not later than the end of 2010; and b) Develop their performance-based national plans harmonized with the SAM Implementation Regional Plan, not later than June 2011.	An initial Performance Based Air Navigation Implementation Plan for the South American Region has been drafted. The final document will be presented at the RAAC/12 meeting, to be held in October 2011, for its approval	SAM States	Performance Based Air Navigation Implementation Plan for the South American Region	Not analyzed by ANC	October 2011

Conc/Dec and Strategic Objective(s)	Title of Conclusion/ Decision	Text of Conclusion/Decision	Proposed Follow-up	Responsibility	Deliverable	Action by ANC	Reporting/ Completion Date
Conclusion CNS/ATM/1/2	Adoption of performance monitoring and measurement programme for the CAR/SAM Regions	Considering the importance to monitor and measure the achievement of the performance objectives defined for the CAR/SAM Regions, that States, Territories and International Organizations of CAR/SAM Regions: a) adopt the set of metrics related to key performance areas of access, capacity, cost effectiveness, efficiency, environment, flexibility, predictability and safety; described in Appendix A of this part of the report, to monitor and measure the implementation advances of the regional performance objectives; b) incorporate these metrics into their performance monitoring programmes, collect relevant data and submit to the ICAO Lima and Mexico regional offices on a regular basis; c) coordinate with ATM community members to promote information and data collection; and d) inform ICAO Regional Offices of their advances by 30 November 2010.	CAR/SAM States have taken note of the conclusion and started identifying and adopting the metrics in their national plans performance objectives Within the measuring of results and achievements of the NAM/CAR RPBANIP, monitoring and performance measurement have been adopted.	States, Territories and International Organizations	Adoption of a performance monitoring and measuring programme	Not analyzed by ANC	Completed

Conc/Dec and Strategic Objective(s)	Title of Conclusion/ Decision	Text of Conclusion/Decision	Proposed Follow-up	Responsibility	Deliverable	Action by ANC	Reporting/ Completion Date
Conclusion CNS/ATM/1/3	Follow-up, participation and cooperation to ICAO RLA/03/902 regional project	That, with the objective of concluding technical-financial viability studies of the SBAS implementation within the CAR/SAM Regions, under the ICAO RLA/03/902 regional project, the States, international organizations and users are invited to: a) Participate in Phase III of the RLA/03/902 – SACCSA project and promote cooperation between national entities and make progress on development with support of educational institutions so as to provide scientific and technical support; and b) Increase coordination and exchange of information on the results obtained and experience gained in RLA/03/902 project, GBAS national projects and other initiatives regarding GNSS implementation.	This conclusion replaces GREPECAS Conclusion 13/85 The seventh coordination committee meeting (RCC/7) of RLA/03/902 Project "Transition to GNSS in the CAR/SAM Regions" was held in San Carlos de Bariloche, Argentina, from 11 to 15 October 2010. At the various CAR Working Groups, as well as at the level of GREPECAS, follow-up to this Project and dissemination of its results are given.	States, Territories and International Organizations	a) Participation of new States/Territories and International Organization in Project RLA/03/902 Phase II Cooperation between national entities in order to provide scientific and technical support. b) Increase in the coordination and Exchange of information between RLA/03/902 project and national projects on GNSS	Not analyzed by ANC	June 2011
Conclusion CNS/ATM/1/4	Adoption of the CAR/SAM ATFM Manual	That, considering the importance to harmonize the implementation of ATFM in the CAR/SAM Regions, States, Territories and International Organizations of the CAR/AM Regions adopt the ATFM Manual shown in Appendix A to this part of the Report.	States/Territories/International Organizations The Manual was amended during the CNS/ATM/SG/2 Meeting, the CDM Manual presented to the meeting as working paper 4 was drafted as an appendix.	States, Territories and International Organizations	Manual adopted by CAR/SAM States, Territories and International Organizations	Not analyzed by ANC	Completed

Conc/Dec and Strategic Objective(s)	Title of Conclusion/ Decision	Text of Conclusion/Decision	Proposed Follow-up	Responsibility	Deliverable	Action by ANC	Reporting/ Completion Date
Conclusion CNS/ATM/1/5	Collection of information on existing and future avionics in the CAR/SAM Regions	Taking into account the importance of having information on avionics already installed and to be installed on user aircraft, for purposes of planning and cost/benefit analyses, it is urged that: a) States/Territories and International Organisations are urged to collect information on avionics already installed and to be installed in non-IATA domestic fleets and other general aviation users, suggesting the adoption of a format similar to that of the IATA survey form (Appendix D to this part of the Report), the results to be sent to the respective ICAO Regional Office by December 2010; b) IATA include the aforementioned information in the IATA database, informing the ICAO CAR/SAM Regional Offices about the response to this request; and c) The information collected to date in the SAM and CAR Regions be included in the mentioned data base, as well as any information that can be provided by the avionics manufacturers.	CAR and SAM Regions have collected part of the information on avionics installed in IATA domestic airlines and other general aviation users aircraft, nevertheless, a greater term to complete this activity is required, proposing to finalize it in July 2011.	States, Territories and International Organizations	Information on current and future avionics in non-IATA and other general aviation users aircraft	Not analyzed by ANC	a) July 2011 b) July 2011 c) December 2011
Conclusion CNS/ATM/1/6	Proposed routing scheme for IPv4 for inter and intra regional communications links for ATN ground to ground applications	That, the CAR/SAM Regions use the IPv4 routing scheme for inter and intra regional communications links in ATN ground to ground applications for described in Appendix E to this part of the Report.	In the SAM Region, IPv4 addressing scheme has been implemented in the communications links, in order to have interconnection between the Argentina-Brazil, Argentina-Paraguay and Peru-Colombia AMHS In the CAR Region, the IPv4 addressing scheme.	States, Territories and International Organizations	Use of the IPv4 addressing scheme for CAR/SAM inter-and intra-regional communications links	Not analyzed by ANC	Completed

Conc/Dec and Strategic Objective(s)	Title of Conclusion/ Decision	Text of Conclusion/Decision	Proposed Follow-up	Responsibility	Deliverable	Action by ANC	Reporting/ Completion Date
Conclusion CNS/ATM/1/7	Improvements to the activities referred in ADS-B trials	That, States/Territories/International Organizations who are carrying out ADS-B trials are urged to: a) Continue with the data collection and analysis, in accordance with GREPECAS guidelines (GREPECAS/15 report, Appendix Q); b) Search for the Exchange of data between States, particularly with regard to coverage superposition and analysis criteria; c) Solve, with the respective airspace users, the duplicate or illegal 24-bit Address cases identified, and inform in this respect to the ICAO Regional Offices; d) Inform airspace users on any anomaly in the received ADS-B messages, in preparation of future ADS-B implementation; and e) Duly inform the ICAO Regional Offices on the trial results, for their publication.	States/Territories/ International Organizations have taken note of the improvements in the activities referred to ADS-B trials. With regard to the current ADS B status of implementation in the CAR/SAM Regions, Brazil continues installing ADS B in the Macae Cuenca de Campos TMA, whose implementation date is scheduled for December 2010. Peru will have an ADS-B station operational in 2012. In the CAR Region, various ADS-B trials have been carried out in COCESNA, Cuba and Gulf of Mexico, and in Jamaica and Trinidad & Tobago, the ADS-B trials have been included in the NAM/CAR RPBANIP action plans, planned for November 2012. Therefore, the term for these activities is proposed to be extended to December 2012.	States, Territories and International Organizations	Improvement in activities related to ADS B trials	Not analyzed by ANC	December 2012

Conc/Dec and Strategic Objective(s)	Title of Conclusion/ Decision	Text of Conclusion/Decision	Proposed Follow-up	Responsibility	Deliverable	Action by ANC	Reporting/ Completion Date
Conclusion CNS/ATM/1/8	Implementation of the new flight plan format in the CAR/SAM Regions	That, considering the importance of the implementation of Amendment 1 to the Fifteenth Edition of Doc 4444, whose application is foreseen for 2012, CAR/SAM States/Territories/ International Organizations: a) Adopt the strategy for the implementation of Amendment 1 to Doc 4444 (PANS-ATM) (15th edition) shown in Appendix J to this Agenda Item; b) Develop action plans, taking into account the regional strategy and the action plan based in a performance scope, which includes as Appendix J to this working paper, for the harmonious implementation of the new ICAO flight plan format and the ATS messages related; c) Designate experts who participate as points of contact to coordinate with other air navigation services providers of States/Territories/International Organizations from adjacent flight information regions (FIRs), implementation matters of ATS messages related with the implementation of the new ICAO flight plan format (FPL); and d) Send the result of this implementation to the ICAO NACC and SAM Regional Offices, not later than 30 November 2011.	a) Some CAR/SAM States have completed their action plan for the implementation of the new flight plan format; the remainder would be having it completed by the end of 2010. b) All CAR/SAM States/Territories and International Organizations count with focal points to coordinate the implementation of the new FPL. Two seminars/ workshops have been carried out in support of CAR/SAM States/ Territories and International Organizations, one in Mexico city, 12-13 July 2010 and another in Lima, 13-15 September 2010. An action plan in agreement with the NAM/CAR RPBANIP and the CAR/SAM strategy has been agreed upon for this implementation. By December 2010, the evaluation on the impact in the systems and services in the CAR Region will be completed, and coordinations are being carried out to carry out preliminary tests, in accordance with the activities scheduled for the transition stage.	States, Territories and International Organizations	Implementation of the new flight plan format	Not analyzed by ANC	November 2012

Conc/Dec and Strategic Objective(s)	Title of Conclusion/ Decision	Text of Conclusion/Decision	Proposed Follow-up	Responsibility	Deliverable	Action by ANC	Reporting/ Completion Date
Decision CNS/ATM/1/9	Revision of the work programme of CNS/ATM Subgroup projects	That the project coordinator, together with the corresponding programme coordinator, carry out before 30 June 2010, the following activities: a) Revision of the tasks of projects work programmes presented in Appendix to this part of the report; b) Definition of responsible officers for the carrying out of the tasks; c) Identification of deliverables expected for each task; d) Break down of tasks into sub-tasks; and e) Remittance of the information corresponding pertaining to items a), b), c) and d) above to the ICAO NACC and SAM Regional Offices.	Projects items a, b, c, d and e have been carried out	Project Coordinator and Programme Coordinator	Revised Projects work programmes	Not analyzed by the ANC	Completed
Conclusion CNS/ATM/1/10	Training for aeronautical professional competence	That CAR/SAM States/Territories and International Organizations, take into consideration the list of short and mid-term and training requirements shown in Appendix D to this part of the Report, so that CATCs, in coordination with civil that CAR/SAM States/Territories and International Organizations, aviation authorities, prepare aeronautical training programmes which contemplate regional air navigation and safety requirements.	This information has been disseminated and informed at the CAR working groups, as well as in the survey sent to CAR States for the drafting of a CAR 2012-2016 training plan. In the SAM Region, this information has been disseminated at CATC meetings, in addition, training requirements were included in the SAM performance based implementation plan.	CAR/SAM States, Territories and International Organizations	Aeronautical training programmes taking under consideration regional requirements as regards air navigation and safety	Not analyzed by the ANC	December 2011

Conc/Dec and Strategic Objective(s)	Title of Conclusion/ Decision	Text of Conclusion/Decision	Proposed Follow-up	Responsibility	Deliverable	Action by ANC	Reporting/ Completion Date
Conclusion CNS/ATM/1/11	GNSS training	That, taking into account that training of a larger number of experts is essential for the future implementation of GNSS systems in the CAR/SAM Regions, as well as the various ICAO recommendations for the provision of GNSS technical training, and the ICAO initiative on the next generation of aviation professionals: a) States/Territories and International Organisations are urged to foster the training of national instructors, based, inter alia, on courses promoted by ICAO, as a way of supporting the internal dissemination of acquired knowledge; b) The States/Territories and International Organisations that have not yet included GNSS in their training programmes, include this type of training in their plans as of 2010; and c) ICAO is urged to include the necessary considerations on the technical training of professionals, e.g. training on GNSS systems, in the initiative on next generation aviation professionals and its corresponding instances.	This information has been disseminated and informed at the CAR working groups, as well as in the survey sent to CAR States for the drafting of a CAR 2012-2016 training plan. In the SAM Region, this information has been disseminated at CATC meetings, in addition, training requirements were included in the SAM performance based implementation plan.	CAR/SAM States, Territories and International Organizations ICAO	a) Encourage training of GNSS instructors b) Inclusion of GNSS systems training in the GNSS training plans c) Inclusion, within ICAO initiative on the next generation of aviation professionals, of professionals in GNSS systems	Not analyzed by the ANC	a) December 2010 b) December 2010 c) June 2011

Agenda Item 2: Follow-up to implementation status of the performance based navigation systems plans for the CAR and SAM Regions and to the latest amendments to the ATM and CNS related SARPs

2.1 Under this Agenda Item, 17 Working Papers and 12 Information Papers were presented. These working papers and information papers were grouped under the following areas and were discussed in the following order:

- Air navigation plan (WP/10, WP/05, IP/05, WP/21 and WP/25);
- PBN (WP/09, WP/28, WP/29, IP/07, IP/10, IP/12, IP/15, WP/26, WP/27 and IP/09);
- ATFM (WP/04, WP/22 and WP/17);
- New Flight Plan Format (WP/20, WP/24, IP/08 and IP/14);
- Situational awareness (IP/06 and NI/13);
- Communications aspects, frequency management, CNS SARPs (WP/18, WP/19, IP/11 and NI/03); and
- Training (WP/16).

Air Navigation Plan

2.2 Considering that the NAM/CAR and SAM Regions had adopted performance-based air navigation planning, through GREPECAS Conclusion 15/1, the Meeting acknowledged that the next step entails performance monitoring through an established measurement strategy (WP/10). This strategy should provide a set of measures in terms of performance indicators and performance metrics.

2.3 In addition to this, and as a part of air navigation systems performance monitoring and measurement process, the Meeting noted that ICAO is focused on introducing at every PIRG meeting, a "regional performance review report (RPRR) for air navigation systems". In order to facilitate a uniform approach, ICAO HQ, in consultation with Regional Offices and PIRGs, will develop by end of 2011 a standardized format for this RPRR.

2.4 Referring to the Regional Performance Based Air Navigation Implementation Plan for the NAM/CAR Regions (NAM/CAR RPBANIP), available at the ICAO NACC Regional Office website, the Meeting noted several operational performance measures described in the Appendix to WP/5 achieved in the fields of safety and efficiency. Metrics were considered as an initial step to develop regional guidelines on performance measurement and monitoring programme. Also, the Meeting noted that the implementation of initiatives in the ICAO global air navigation plan (Doc 9750) such as RVSM, the "A" classification of airspace above FL195 and the harmonization of flight levels have now been completed in the CAR Region.

2.5 On the subject of protection of data submitted by States for safety metrics, the Meeting was assured that it will be addressed per ICAO requirements on State data protection. With reference to the efficiency metrics reported at the airports, it was noted that 15 minutes or more delays are related to SLOT allocation and airport acceptance rate (AAR).

2.6 As follow up to Decision CNS/ATM/SG/1/1, the Meeting was presented a draft performance-based air navigation implementation plan for the SAM Region in the Appendix to IP/05. This draft plan would be reviewed by all States and international organizations of the SAM Region and then submitted to the upcoming Twelfth Civil Aviation Directors Meeting (RACC/12) to be held in Lima, Peru, from 3 to 6 October 2011. After its adoption by the RACC/12 meeting, the plan will be harmonized with the NAM/CAR Plan during the GREPECAS/17 meeting.

2.7 The Meeting was informed (WP/21) that an extensive analysis of the NextGen and SESAR programmes was conducted to determine their impact on ICAO Standards, manuals and circulars. In total, over 300 changes to ICAO documentation were identified. In order to address SARPs development, ICAO has initiated the "standards roundtable" process in which ICAO will meet regularly with the management personnel of NextGen and SESAR and the various industry standards-making bodies and determine work schedules.

2.8 The Meeting also noted that many other States have developed next generation plans for air navigation modernization. As the number of modernization plans increases, so does the challenge of ensuring harmonization. In this sense, these States should submit this information to ICAO for review so that the impact on ICAO's work programme and standards development activities can be determined. The information would then be forwarded by ICAO to the air navigation service providers concerned with appropriate recommendations and, if necessary, a standards roundtable process like that applied to NextGen and SESAR will be initiated.

2.9 The Meeting noted that Resolution A37-12 acknowledged the need to amend the Global Air Navigation Plan (GANP) to include a framework which will allow ICAO to easily analyze the impact of other States' air navigation modernization plans on the global ATM system and then take appropriate action needed to ensure global harmonization.

2.10 In this respect, the Meeting considered that, if a State/Territory/International Organization of the CAR/SAM Regions, when developing their performance-based national plan notices that it might have an impact on ICAO SARPs, share those plans in a timely manner with ICAO for review and assessment in order to ensure global compatibility and harmonization.

2.11 The Meeting recognized the existence of many CNS technologies with similar names yet very different capabilities which caused confusion. In addition to this, the operational benefits that can be achieved with the various technologies are not clear. Many technological roadmaps exist; however, they are limited in scope. Consequently, the Meeting was informed that ICAO Assembly 37 endorsed the proposal of ICAO, to develop of a global CNS technology roadmap that will assist States and other stakeholders with their implementation decisions. The benefits of this roadmap would include predictable implementation, with early achievement of operational benefits and returns on investment and widespread deployment which will ease transition issues.

2.12 This web-based global CNS roadmap will be an interactive, graphics-based, information tool. This interactive roadmap will address who it applies to, where it applies and what/when/why equipment and capability is required. The development of a global CNS roadmap will require the cooperation of all stakeholders, who will be consulted on a regular basis. It was noted that many ICAO CNS Panels and working groups now enjoy regular participation by industry stakeholders. As a result, updates to the CNS Technology Roadmap will be made a standing agenda item for these ICAO CNS Panels and working group meetings. In discussing this proposal for a CNS roadmap, the Meeting emphasized that such a CNS roadmap will need to be driven by operational requirements rather than technology. The Meeting invited States to take this roadmap, scheduled to be available in 2012, into consideration for the regional and national planning and implementation of air navigation systems. Furthermore, the Meeting noted that the CNS roadmap will be included in the annex of the proposed revision to Global Air Navigation Plan.

2.13 In this respect, the Meeting considered that, in view that an evolutionary strategy of the air navigation systems for the CAR/SAM Regions has been approved in the CAR/SAM Regions, an evolutionary strategy for surveillance systems for the CAR/SAM Regions be sent to ICAO Headquarters for contribution to the definition of the CNS systems roadmap.

Performance Based Navigation (PBN)

2.14 The Meeting recalled that all ICAO regional implementation plans for PBN (WP/09) have been approved, through the PIRG process. Based on these regional plans, a growing number of States have developed their national plans. The Meeting was informed that a minimum of eight PBN airspace workshops are planned between 2010 and 2011 that provides a basic understanding of introducing PBN into an airspace concept. In order to expedite PBN implementation, ICAO, the International Air Transport Association (IATA) and representatives of States, industry and International Organizations came together and established the Global PBN Task Force (GPBNTF).

2.15 The delay in implementation by some States can be attributed to the complexity of PBN and the time required for States to gain proper understanding of the implementation issues. The Meeting acknowledged that the runway-aligned LNAV procedures result in a safety improvement of the order of twenty-five times while the additional vertical guidance enhanced this a further eight times. Consequently, this initial safety benefit justified an intermediate step to be included in the Resolution adopted for PBN.

2.16 Recognizing that not all airports have the infrastructure to support APV operations, not all aircraft are currently capable of APV and that many States already have the requisite infrastructure and aircraft capable of performing straight-in approaches with lateral guidance (LNAV approaches) based on the RNP specifications and that straight in approaches provide demonstrated and significant safety enhancements over circling approaches, the Meeting noted that the 37th Session of the Assembly adopted Resolution 37-12.

2.17 The Meeting considered that the States complete a PBN implementation plan as a matter of urgency to achieve:

a) implementation of RNAV and RNP operations (where required) for en route and terminal area according to established timelines and intermediate milestones;

b) implementation of approach procedures with vertical guidance (APV) (Baro-VNAV and/or augmented GNSS), including LNAV only minima, for all instrument runway ends, either as the primary approach or as a back-up for precision approaches by 2016 with intermediate milestones as follows: 30 per cent by 2010, 70 per cent by 2014; and

c) implementation of straight-in LNAV only procedures, as an exception to b) above, for instrument runways at aerodromes where there is no local altimeter setting available and where there are no aircraft suitably equipped for APV operations with a maximum certificated take-off mass of 5 700 kg or more.

2.18 The Meeting concluding discussions on this subject urged States to provide annual updates on implementation issues and requested to complete the development of national implementation plans and ensure compliance.

2.19 The Meeting noted that several RNAV routes and PBN procedures have been implemented in the CAR/SAM Regions that have provided important operational and economic benefits. Some examples are RNP-10 implementation in the WATRS airspace, and the near term implementation of RNP-10 in the Gulf of Mexico. However, the Meeting considered that States should continue the review and improvement of the ATS route network focused on PBN implementation.

2.20 In order to optimize the regional ATS routes network, the Secretariat presented WP/29 on PBN Airspace Concept for CAR Region, developed in accordance with ICAO PBN provisions, which may be implemented in three stages:

Stage	Operational Improvement
Stage I (2010 - 2011)	<u>Review of ATS route network in the CAR Region</u> • Gathering data on aircraft PBN capacity • Review CNS infrastructure • Realignment and implementation of new RNAV routes in the upper airspace based on RNAV 5 • Implementation of RNAV routes in the lower airspace based on RNAV 1, RNAV 2 and RNP 1, as required • Implementation of approach procedures PBN APV (BARO-VNAV) in accordance with Assembly Resolution A37-12
Stage II (2011 - 2012)	<u>Review and interface of the ATS routes network in the CAR/SAM Regions</u> • Realignment and implementation of new RNAV routes in the interface of the upper airspace between the CAR and SAM Regions, based on RNAV 5 or RNAV 2, as applicable • Implementation of CDO in international airports, as required
Stage III (2012 - 2014)	• Elimination of conventional ATS routes in the upper and lower airspace, as required • Implementation of random routes, by airspace altitude stratum • Review of the upper airspace configuration • Review of the lower airspace configuration • Implementation of flexible use of airspace (FUA) • Implementation of dynamic ATS route management

2.21 The comprehensive approach of PBN airspace concept implementation involves optimization of an ATS route network as well airspace organization and management (AOM), and will also have an improving impact on airport operations, as well as other ATM automation enhancements, airspace and airports demand and capacity, the provision of meteorological information, AIP information publication, etc.

2.22 In the framework of PBN implementation, the Secretariat presented to the Meeting an overview of current proposals submitted by States to improve the ATS route network in the CAR Region, which have been analyzed by respective States/Territories/International Organizations.

2.23 The Meeting also reviewed inter-regional CAR/SAM routes with regard to new routes, realignment, renaming and removal of non necessary segments. **Appendix A** to this part of the report shows information on changes to the ATS routes network to develop a proposal for amendment to the Air Navigation Plan for the CAR/SAM Regions (CAR/SAM ANP). The entrance in force of the amendment will be no later than May 2011.

2.24 The Meeting urged States to publish minimum en route altitudes and the corresponding PBN specification for the new routes and the RNAV routes already published in the upper airspace of their respective FIRs, in accordance with regional agreements and each State's needs.

2.25 Further analysis will continue on a permanent basis to implement improvements in the RNAV route network within the CAR/SAM Regions in accordance with the PBN airspace concept.

2.26 Under IP/07, United States expressed the importance of the PBN as fundamental technology of the NextGen Program and informed the Meeting of the advances and aspects of their PBN implementation and planning issues, including the RNAV2 implementation in their domestic airspace, RNAV1 in terminal areas, the number of published PBN procedures, the published U.S. guidance material for PBN and their SBAS/WAAS consideration as sensor input for PBN applications.

2.27 The Meeting was also informed by United States (IP/10) on the activities carried out in the Gulf of Mexico RNAV Route Project (FAA/ SENEAM), whose objectives are to reduce lateral separation in the Gulf of Mexico (GoMex) from 100 nautical miles (NM) to 50 NM for RNP 10/RNP 4 authorized aircraft, apply 30 NM lateral separation between RNAV/5 authorized aircraft for certain routes and implement a new, more efficient area navigation (RNAV) route structure. The Meeting took note of the list of tasks to be conducted and of the target implementation date of 20 October 2011.

2.28 United States briefed the Meeting, under IP/12, on their updates to GBAS, resulting from the research and progress in the development of GBAS technology, the support to the international development and implementation of GBAS, the achievements in the International GBAS Working Group (IGWG) and their GBAS strategy for a single frequency GBAS Category-I service and its improvement to provide GBAS Category-III service.

2.29 Similarly, under WP/15, United States informed the Meeting of the enhancements to their SBAS/WAAS to increase LPV-200 availability in the USA National Airspace System (NAS), the provision of the WAAS Signal in Space by three GEO satellites, and the on-going activities in support of the future integration of the GPS L5 frequency into WAAS in support of L1/L5 Dual Frequency Operations. The Meeting was indicated that, for the GBAS and SBAS/WAAS Projects, more information is available under the FAA's GPS website at http://gps.faa.gov for up-to-date FAA GNSS program information.

2.30 The Meeting, through WP/26, WP/27 and IP/9 noted the first results of Phase III of Project RLA/03/902 –SACCSA.

2.31 The Meeting noted that the results of Phase II and the first results obtained through the implementation of Phase III-A, including the studies of data on ionosphere during the last eleven years, as well as the development of a prototype of ionospheric algorithm and the tests recently carried out with broadcast of signal SBAS-SACCSA by a GEO satellite and the magicSBAS tests, are promising with regard to the implementation of the SBAS system in the CAR/SAM Regions.

2.32 The Meeting took note of Project RLA/03/902 – SACCSA's strategy to study the viability of implementing a SBAS system using the available GPS consellation capabilities (GPS L1), that is to say, monofrequency and monoconstellation, but conditioned to it scaling up to multifrequency and multiconstellation, and keeping the capacity to initially operate in the event of loss of frequency and supplementary constellations. This development and implementation strategy enables promoting the gradual use of the available GNSS capabilities and the obtaining of short and medium term benefits by States, international organizations, aeronautical sectors and non-aeronautical sectors. In addition, it would provide a sound base of knowledge and experience in the use of GNSS that would also favour the rapid use of future new constellations and GNSS frequencies when they become available, and hence increase the securing of its benefits.

2.33 Notwithstanding, the Meeting supported the agreement of the RCC/7 meeting of Project RLA/03/902, in the sense that, as an additional complementary activity to Phase III-A of this project, it should be considered to implement a test platform of the SBAS-SACCSA system allowing to cover the objectives indicated in **Appendix B** to this part of the Report. In this respect, the Meeting formulated the following draft conclusion:

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CONCLUSION CNS/ATM/SG/2-1 SUPPORT IN THE COMPLETION OF PROJECT RLA/03/902 SACCSA STUDIES AND PARTICIPATION IN THE TEST-BED IMPLEMENTATION

In view of the first results obtained by the SACCSA Project – Phase III-A, and its contribution to the implementation of PBN and in order to support the completion of this Project, CAR/SAM States/Territories/International Organizations are urged to:

a) facilitate/coordinate with their corresponding national authorities, the access and provision of data to the SACCSA Project from networks with 1-second GPS receiving stations with FTP or NTRIP access and RINEX files; and

b) taking into consideration the objectives indicated in Appendix B to this part of the report, consider participation in the SACCSA-SBAS test-bed implementation by notifying ICAO by **30 June 2011**.

2.34 Considering the contribution programme coordinated by Project RLA/03/902 presented in the Appendix to WP/26, which includes offers from the Project participant States/International Organizations that contribute to foster the implementation of performance-based navigation (PBN) and to support the work of this CNS/ATM Subgroup, the Meeting noted and thanked the offer formulated by the Project.

2.35 The Meeting supported the initiative of Project RLA/03/902 in the sense of the common information and diffusion strategy of its programmes and results; likewise, with the support of ICAO, to continue presenting the SACCSA Project in the meetings of expert groups, users, organizations and international bodies who follow-up the development of GNSS, described in paragraph 2.5 of WP/26.

ATFM

2.36 When reviewing the ATFM implementation progress, the Meeting took note that ICAO is developing global implementation guidelines. This work will take into account development of ATFM service in the different regions.

2.37 Based on Conclusion CNS/ATM/1/4, *Adoption of the CAR/SAM ATFM Manual*, the Secretariat presented a revised version of the ATFM Manual, with minor changes (WP/22), aimed at guiding States/Territories/International Organizations to an orderly ATFM implementation process.

2.38 The CDM subject described in WP/054 and the amendments to the ATFM Manual be reviewed by an Ad-hoc Group formed by Argentina, Brazil, Trinidad and Tobago, United States and Uruguay. As a result of this review, the Meeting agreed amending the ATFM manual with minor changes and include the CDM aspects as an appendix to the ATFM document. The updated version of the ATFM manual will be included in the NACC Regional Office (http://www.mexico.icao.int/ATM.html) and SAM (http://www.lima.icao.int/) web sites.

Civil Military Coordination

2.39 The Meeting noted through the presentation of WP/17 that the Global Air Traffic Management Forum on Civil/Military Cooperation, held in Montréal in October 2009, emphasized that a flexible and efficient use of the airspace both for civil and military operations would provide benefits in terms of more efficient aircraft operations and improvement of the environment. One of the key conditions for increasing the effective use of available airspace, while maintaining safety and security, was the commitment both from civil and military authorities to improve cooperation and coordination. The follow-up to the forum includes using ICAO as an open forum for civil/military cooperation, collaboration and the sharing of best practices; working together toward ensuring the safe and efficient integration of unmanned aircraft systems into non-segregated airspace; PIRGs and all partners collaborating in supporting regional civil/military events; and ICAO convening a second global forum at an appropriate time to measure progress in civil/military cooperation. Also, as follow-up, the Meeting was informed that ICAO has completed the development of manuals on civil/military cooperation as well as on unmanned aircraft system (UAS).

2.40 To ensure the momentum gained at the Forum is strengthened at high levels within the States' administrations and international organizations, the Meeting noted that the 37th Session of the ICAO Assembly had approved an amendment to A36-13 Resolution, Appendix O, *Cooperation and coordination of civil and military air traffic*, (A37-15 Resolution refers) aimed at strengthening States' commitment to enhancing cooperation between civil and military authorities.

2.41 In concluding the discussions on this subject, the Meeting urged States to work with air navigation service providers and their militaries, to take action to establish political, develop institutional arrangements, performance objectives, and formulate practical and operational measures to enhance civil/military cooperation in optimizing safe and efficient use of airspace for all users.

2.42 The Meeting highlighted that within the Assembly resolutions for civil/military coordination, Contracting States could include as part of their delegations that are attending ICAO Meetings, representatives from military authorities, whenever necessary.

2.43 As an example of civil/military coordination, Brazil informed the Meeting that during the South Cruzeiro military operations carried out in Brazil with the participation of 15 States, military and civil operations in the Brazil FIR airspace were performed in a coordinated manner without any issues.

Implementation of the New Flight Plan Format

2.44 Under WP/20, the Meeting took note of the ICAO guidelines for the implementation of the new Flight Plan format and followed up on the implementation activities carried out in the CAR/SAM Regions. The Meeting took into account the regional CAR/SAM strategy for the implementation of the new flight plan format and the provisions associated with ATS messages. This was developed by the CNS/ATM/SG/1 meeting and based on Conclusion CNS/ATM/1/8, to develop corresponding national action plans, designate experts to participate as points-of-contact (PoC) to coordinate with air navigation services providers (ANSP) of States/Territories/International Organizations from adjacent flight information regions (FIRs). Implementation matters regarding ATS messages and the implementation of the new ICAO flight plan format (FPL) were discussed in conformity with Conclusion CNS/ATM/SG/1-8. States were asked to report the results of this implementation to the ICAO NACC and SAM Regional Offices, by ***30 November 2011***.

2.45 The Meeting took note that for this implementation, States have adopted many agreements at the various meetings of civil aviation Directors of the NAM/CAR Regions, SAM Implementation Group (SAM/IG) and that implementation work is being carried out for the CAR Region through the E/CAR, C/CAR and CA/ANE working groups work programmes regarding Regional Performance Objective (RPO) *Implementation of the New Flight Plan Format* within the NAM/CAR RPBANIP; and for the SAM Region through the coordination of the meetings of the SAM/IG, with the support of RLA/06/901 Project.

2.46 In addition, the Meeting took note of the results of the two workshops held by ICAO in the SAM and NAM/CAR Regions as well as the list of CAR/SAM Regions PoCs designated by States for the coordination of this implementation. Likewise, as a follow-up on the CAR/SAM regional strategy for the preparation phase, the Meeting took note of the progress made on the new flight plan format implementation impact evaluation carried out in the NAM/CAR and SAM Regions.

2.47 The Meeting reiterated the importance that States, ANSPs and International Organizations should examine the implementation activities schedule in the strategy and corresponding action plans, with particular attention to complying with the critical dates in the transition phase. In addition, it is important to coordinate their implementation plans with the respective ICAO Regional Office well in advance of the target date, in order that airspace users and ANSPs can coordinate and solve any unforeseen operational problems.

2.48 The Meeting also took note of GREPECAS' Project C3, entitled *Implementation of the New ICAO Flight Plan Format*, which intends to support the implementation, through the generation of various products.

2.49 To facilitate the States work regarding the implementation, the Meeting took note of the web pages created by the ICAO Regional Offices as well as the updates to the information contained on the ICAO "Flight Plan Implementation Tracking System" (FITS) website. The meeting also noted the importance to report the status of implementation by FIR; have a discussion forum and detail on how to carry out this implementation (*team discussion*); follow-up on consultations (*issue tracking list*); having a calendar of global/regional meetings (*calendar*); and availability of reference documentation to support this implementation.

2.50 The Meeting also took note that the ICAO NACC and SAM Regional Offices are planning several follow-up implementation meetings as well as convening workshops to assist States in the compliance of their activities and dates of the CAR/SAM Regional Strategy

2.51 Under WP/24, United States informed the Meeting about the interpretation of the amendment for the implementation of the new flight plan format, each region is making implementation decisions and it is important that these interpretations be coordinated and reconciled to ensure compatible implementation and consistent guidance while recommending that, at a minimum, regions post their decisions/interpretations/guidelines on the FITS website, actively communicate issues of concern in order to work towards compatible solutions, and that all ANSPs regularly update their status on the FITS website.

2.52 In addition, United States informed the Meeting of their interest in flight plan filer implementation and testing with ANSPs, in order to determine if joint plans can lead to optimal testing with minimum required impact on filers and the importance of ANSP testing and interfacing. United States commented about Eurocontrol's proposal to implement region-specific item 18 indicators (EUR/RVR/) and its impact on flight plan filers and on other regions. In this regard, the Meeting was of the opinion that while these considerations may not be necessarily applicable for the CAR/SAM Regions, they should be analyzed thoroughly.

2.53 Under IP/08, United States provided a summary of their current implementation status for the new ICAO FPL format, informing the meeting of their progress, plans and status relative to each phase of their implementation strategy. They identified four major flight data processing systems and four flight plan filing systems that will require modification they have begun engineering activities to implement the changes. Also, changes required by Amendment 1 will require corresponding changes to International Interface Control Documents (ICD), notably the North Atlantic (NAT), Pacific (PAC) and North American (NAM) ICDs.

2.54 Under NI/14, Brazil presented its national action plan for the implementation of the new flight plan format, which is based on four action modules: legislation, safety assessment, automated systems and education and training. The Meeting agreed that this information could be considered as reference material to support the States when developing their national implementation plans in accordance with the CAR/SAM regional strategy.

Situational awareness

2.55 Under IP/06, the United States informed the Meeting on the progress of the ADS-B implementation for both air traffic control separation services (also known as 'ADS-B critical services') and the up-linking of Traffic Information Services - Broadcast (TIS-B) and Flight Information Services – Broadcast (FIS-B) to properly equipped aircraft (also known as 'ADS-B essential services'). United States' plan is to approximately have the same ADS-B coverage as its current radar coverage (2010), by 2013.

2.56 The Meeting agreed that IP/06 provided very useful information for States exploring ADS-B infrastructure and potential regulatory efforts to require ADS-B on aircraft within controlled airspace, and therefore invited the CAR/SAM States to consider the possible benefits with ADS-B in 3 NM separation for terminal area operations, airport surface operations and especially the numerous and highly beneficial ADS-B in applications, as well as take into account the safety and efficiency gains achieved through these operations.

2.57 Under NI/13, Cuba informed the Meeting on the continuity of their ADS-B trials and the progress in the modernization plan for their MSSR Radars. As a conclusion to the updated ADS-B trial results, a low percentage of aircraft responding to ADS-B data was observed, and the ADS-B data received was of low NIC indication. These ADS trials continue in parallel with the MSSR modernization plan.

Communications Aspects, Frequency Management, CNS SARPs

Communications aspects

2.58 The Meeting took note that the implementation work for the MEVA II and REDDIG interconnection are being carried out in two parts:

a) interconnection of the Caracas and Bogota REDDIG nodes to the MEVA II network; and
b) interconnection of the COCESNA MEVA II node to REDDIG.

2.59 In this regard, the Meeting was informed that the installation works for the interconnection of the Bogota and Caracas REDDIG nodes to MEVA II network were completed from 1 to 17 March 2010. The installation details are presented in WP/18.

2.60 The Meeting was informed that for the COCESNA MEVA II node interconnection to REDDIG, an agreement between ICAO and COCESNA for the MEVA II / REDDIG interconnection was signed on 21 April 2010, to carry out the interconnection through RLA/09/901 Project. The project considers technical, service, and economic aspects for the implementation of the COCESNA MEVA II node interconnection with REDDIG. Initial services envisaged by the project are the ATS speech circuits between the COCESNA ACC (CENAMER) and the Bogota and Guayaquil ACCs.

2.61 The Meeting was informed about the installation works of the REDDIG MODEM in the COCESNA MEVA II node, and about the implementation of ATS speech circuits between CENAMER-Bogota and CENAMER-Guayaquil which is planned to be carried out during the week of 22 to 26 November 2010.

2.62 Currently, all ATS speech circuits planned for the MEVA II / REDDIG interconnection are operational. Regarding the AFTN circuits scheduled in the MEVA II / REDDIG interconnection, they were initially programmed with the Memotec equipment, but were unable to be tested due to compatibility problems between the protocol used by the instrumentation equipment versus the protocol configured in the Memotec equipment.

2.63 The Meeting took note that for the implementation of AFTN circuits for the MEVA II / REDDIG interconnection, the configuration of the local interfaces installed in each of the States involved in the MEVA II / REDDIG interconnection will be taken into account. In this regard, the Meeting considered that due to the delays in the implementation of AFTN circuits for the MEVA II / REDDIG interconnection, ICAO will coordinate with States involved and the MEVA II service provider to launch the circuits before 31 December 2010.

2.64 The meeting took note of the results of the Workshop on the Implementation of the ATS Message Handling System (AMHS) in the NAM/CAR Regions that was held in Miami, United States in October 2010, which was organized by the FAA in coordination with the ICAO NACC Regional Office. The information regarding this event is contained in IP/11.

Frequency Management, CNS SARPs

2.65 Under WP/19, the Meeting followed-up on the support from States to the ICAO position for the ITU World Radiocommunication Conference – 2012 (WRC-12), taking note of the results and recommendations made by the ICAO NAM/CAR/SAM Regional Preparatory Meeting (NCSRPM) for ITU WRC-2012 held in the ICAO NACC Regional Office from 21 to 22 April 2010 with the support of the ICAO Aeronautical Communications Panel (ACP). In addition, the Meeting took note that the updated COM1, COM2 and COM3 frequency designation lists are available on the website of each Regional Office, for follow-up and consideration by CAR/SAM States and users.

2.66 The Meeting acknowledged that the support to the ICAO position for WRC-2012 can only be accomplished through a national and regional effort with the active participation of civil aviation administrations, in coordination with their telecommunication regulating authorities. For this purpose, it is important that States designate a point-of-contact for any necessary coordination.

2.67 In this sense, the Meeting took note that ICAO will facilitate, the access through its website to documentation related with the ICAO position for the ITU Radiocommunication Conference – 2012. In addition, the management and efficient use of the radiofrequency spectrum will be a part of the global roadmap on CNS technology as described in WP/21. Likewise, the Meeting was informed about the availability of the fifth edition of Doc 9718 – *Handbook on Radio Frequency Spectrum Requirements for Civil Aviation including Statement of Approved ICAO Policies*, which includes the policy approved by ICAO at the ITU WRC-2007, as well as the detailed ICAO position for WRC-2012.

2.68 The Meeting was informed through IP/03 about the latest amendments applicable to Annex 10, as well as other CNS related documentation, the proposals for amendment and future work of the ICAO Panels on CNS issues, and other CNS relevant aspects, such as the activities to implement the electronic Air Navigation Plan (eANP), among others.

Training

2.69 Under WP/16, the Meeting recognized the importance of *human performance* in the successful and efficient implementation of systems and services based on performance, and of the impact on safety and efficiency of air operations and on systems' performance, and therefore, the need to create the necessary competencies when developing the human resources training and planning programmes in the various aviation areas.

2.70 In this regard, the Meeting was informed of training and qualification activities launched by the ICAO initiative on the next generation aviation professional (NGAP) and follow-up on CNS/ATM/SG/1 conclusions concerning training and regional activities to assist CAR/SAM States in developing their aviation training programmes.

2.71 The Meeting recognized that civil aviation is facing difficulties on human resources foreseeing that in the future the demand for aeronautical professionals will exceed availability, in view of which ICAO launched the NGAP initiative to ensure that sufficient competent and qualified aeronautical professionals are available to operate, manage and maintain the future air transport international system. In this regard, the Meeting took note of the results of the NGAP Symposium held in ICAO Headquarters from 1 to 4 March 2010, as well as the NGAP Task Force planning programme.

2.72 The Meeting took note of the drafting of an Aviation Training Plan proposal for the CAR Region (2012–2016), to be presented to the Directors at the next NACC/DCA/4 meeting, as well as the activities considered by the Directors of Civil Aviation Training Centres (CIAC) Meeting of the SAM Region, on planning for the development of human resources and competency management.

2.73 In this regard, the Meeting recognized the importance of having information on the existing training needs and capacities in the CAR/SAM Regions for educating human resources and agreed to formulate the following draft conclusion to follow-up on training activities for the competency of aeronautical professionals for the CAR/SAM Regions:

DRAFT
CONCLUSION CNS/ATM/2-2 - CNS/ATM FIELDS TRAINING PROGRAMME FOR THE COMPETENCY OF AERONAUTICAL PROFESSIONALS FOR THE CAR/SAM REGIONS

That, to train aeronautical professionals with regards to necessary competencies, CAR/SAM States/Territories/International Organizations:

a) follow-up and take into consideration the recommendations of the Symposium on Next Generation Aeronautical Professionals (NGAP) and the results of the NGAP Task Force;

b) in coordination with the ICAO Regional Offices, establish a training programme that responds to the performance objectives identified in the CAR and SAM Regions performance based implementation plans for the 2012-2016 period; and

c) inform the ICAO Regional Offices on the progress made in the development of this Programme, by **30 September 2011**.

2.74 The Meeting took note that United States will not inform on the requirements requested, but offered to provide information on the FAA training programme, under State requirement.

2.75 Likewise, the Meeting was informed of the new ICAO civil aviation training policy featuring an endorsement process of training organizations and training courses addressing all aspects of civil aviation safety and security and complements the NGAP work. The complete detail of this Policy can be found in the ICAO Electronic Bulletin No. EB 2010/40 dated 28 September 2010. Likewise, the Meeting was informed of the new ICAO TRAINAIR PLUS Programme, which includes a significantly revised course development methodology, a new approach to an educational material exchange network and a self-sustaining budgetary mechanism (the complete description is available in the ICAO Electronic Bulletin No. EB 2010/45 dated 6 October 2010).

APPENDIX A

PROPOSAL FOR AMENDMENT TO THE CAR/SAM ANP

REPORT OF THE ATS ROUTE AD HOC GROUP

The AIRAC date of May 2011 has been agreed for the implementation of this amendment for the CAR/SAM Regions. States/International Organizations will provide the exact data for amendment and will inform ICAO before publication.

1. Cuba and COCESNA supported the implementation of the following routes:

   - TADPO-AUR
   - TADPO-TALAG
   - TADPO-MGA
   - TADPO-IMOLA

2. Panama and COCESNA supported the implementation of the new route between TABOGA and SIGMA

   - TBG-SIGMA

3. Costa Rica, Panama and COCESNA supported the implementation of the route TABOGA and PARRI

   - TBG-PARRI

4. Costa Rica, Jamaica, Panama and COCESNA supported the implementation of the route:

   - BENET-TIO

5. Cuba Jamaica and Panama in coordination with the SAM Region agreed with the route:

   - PML-UCA-URSUS and to remove G/UG437

6. Dominican Republic and Panama agreed with the renaming of A319 to become RNAV M597

   - PALAS-TUM

7. Colombia, Trinidad and Tobago and Venezuela agreed on the new route PPR-PBL to be extended until BOGOTA and the existing route name A550 to be changed to a new name to be determined

   - PPR-PBL-BOG

8. Colombia, Trinidad and Tobago and Venezuela agreed on the extension of route UM662 from Guayaquil (Ecuador MTA) to be extended to FOF

   - GYV-MTA-FOF

9. Brazil, Curacao and Venezuela agreed to extend route UL216 from Porto Alegre to MIQ to ARMUR replacing UG432

- MIQ-ARMUR

10. Brazil, Trinidad and Tobago and Venezuela agreed to eliminate route A300 from ATA until KIKER and replace it by UM423

- GNA-MTA-KIKER-DOP-LENNT

11. Brazil, Trinidad and Tobago and Venezuela agreed to rename UG449 as UL454 and to extend it until Salvador de Baiha

- UL454: ELMUC-ANADA-POS-OTONI-SVD

12. Brazil and Trinidad and Tobago agreed to extend route UL776 from KAISO to ANU to keep the name UL776 until ANU

- KAISO-ANU

13. Jamaica and Panama agreed to replace G/UG434 by RNAV… between MLY and TBG

- MLY-TBG

14. Jamaica and Panama agreed to replace B/UB510 by RNAV… between SIA and TBG

- SIA-TBG

15. Colombia, Curacao and Haiti supported the realignment of G/UG444 between BOG and BOTES

- BOG-BOTES

16. Colombia and Curacao agreed to implement a new RNAV route between NERVA and SCAPA

- NERVA-SCAPA

17. Trinidad and Tobago and Venezuela agreed to implement a new route between FOF and PBL

- FOF-PBL

18. Brazil Trinidad and Tobago and Venezuela agreed to implement a new route between BVI and POS

- BVI-POS

APPENDIX B

IMPLEMENTATION OBJECTIVES OF THE SBAS-SACCSA SYSTEM TRIALS PLATFORM IN THE CAR/SAM REGIONS

a) Analyse the behaviour of the ionospheric algorithm model in high solar activities that are expected to occur in the current cycle until 2012-2013.

b) To be able to provide non-aeronautical services and non SoL (Safety of Life) to other sectors and users, this is denominated “open service”, which will make possible the obtaining of numerous benefits.

c) Have a multi-frequency and multi-constellation platform that allows analyzing the advantages and the comparison with different future technologies like the multi-frequency (L1/L5) and the multi-constellation.

d) Analyze the impact of the ionosphere on the GEO.

e) To allow the Civil Aviation Authorities, companies, universities and users to deepen in the study and use of SBAS systems, including the development of procedures, applications and advanced services based on the GNSS.

f) Provide an improvement service of the precision based on SBAS.

g) Other aspects.

Agenda Item 3: Review progress achieved in the implementation of the CNS/ATM Subgroup Work programmes

3.1 Under this Agenda Item, working papers WP/6, WP/7, WP/11, WP/12, WP/13, WP/14 and WP/15 were analyzed. The Meeting, through the presentation of WP/06, took note of the names of the experts designated by the States/Territories/International Organizations in each one of the projects and the review of the work programme of the projects defined in the first meeting of the CNS/ATM Subgroup.

3.2 The Meeting noted that most of the projects' work programmes had been initially reviewed between the project coordinator and the ICAO programme coordinator in accordance with the statement of item a) of Decision CNS/ATM/SG/1/9 *Revision of the work programme of CNS/ATM Subgroup projects.* However, in some of the Projects, the review of the work programmes was not finalized and the task was completed during the Meeting through Ad-hoc groups.

3.3 The Meeting, taking into account that one of the important tasks of this meeting was to update the work programmes of the CNS/ATM Subgroup Projects, in scope, tasks to develop, person responsible for task execution, tasks completion dates, and deliverables definition, the Meeting observed with concern the lack of experts nominated by States to support the projects' work.

3.4 The Meeting recognized that the presence of experts nominated by States is a basic expectation for achieving objectives proposed by the projects, in accordance with the CNS/ATM Subgroup work methodology and structure approved by GREPECAS. The experts nominated by the States/Territories/International Organizations should have total support of resources from their entities. In this regard, the Meeting formulated the following draft conclusion:

DRAFT
CONCLUSION CNS/ATM/SG/2-3 SUPPORT TO EXPERTS DESIGNATED FOR THE CNS/ATM SUBGROUP PROJECTS

That the CAR/SAM States/Territories/International Organizations that have nominated experts for the CNS/ATM Subgroup projects provide them with total support of resources and time aimed at achieving the accomplishment of tasks assigned, as indicated in the CNS/ATM Subgroup work methodology and structure approved by GREPECAS.

3.5 While reviewing the list of experts from the Projects, some States expressed their intention to contribute with experts in order to support, if necessary, the implementation of the projects tasks. In addition, towards the efficacy in the work of the projects, the Meeting considered that States/Territories/international organizations should analyze the convenience of designating one same expert in the Subgroup's various projects. In this regard, as indicated in the letter sent by the GREPECAS Secretary in accordance with the agreements reached during the First Meeting of the CNS/ATM Subgroup. States shall send an official letter with the nomination of experts to the corresponding ICAO Regional Offices. The updated list of the project experts is presented as **Appendix A** to this part of the Report.

3.6 The Project coordinators considered that in order to coordinate progress on the activities, they need to convene meetings in 2011. The tentative dates for these meetings will be coordinated between the programme coordinators and project coordinators, and will be informed in the ICAO Regional Offices meetings programme.

3.7 As a follow-up to the activities indicated in Decision CNS/ATM/SG/1-9, the Meeting finalized most of the activities during its sessions. **Appendix B** to this part of the report presents the revised project work programmes. Details on the C1, C2, C3, D1 and D2 Projects work programmes are included, most of which are presented through the Microsoft Project application. Working papers WP/07, WP/11, WP/12, WP/13, WP/14 and WP/15 presented by the coordinators of projects A1, C1, C2, C3, D1 and D2 provides additional information in this regard.

APPENDIX A / APÉNDICE A

A. PROGRAMME: PERFORMANCE BASED NAVIGATION
PROGRAMA: NAVEGACIÓN BASADA EN LA PERFORMANCE
Coordinator/Coordinador: Víctor Hernández

A1 **PROJECT:** OPTIMIZATION OF THE ATS ROUTES NETWORK STRUCTURE IN THE EN-ROUTE AIRSPACE
PROYECTO: OPTIMIZACIÓN DE LA ESTRUCTURA DE RUTAS ATS EN EL ESPACIO AEREO EN RUTA
Coordinator/Coordinador: Julio Pereira (Brazil/Brasil) Tel.: +55 21 2101 6278
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A2 **PROJECT:** AIR NAVIGATION SYSTEMS IN SUPPORT OF PBN
PROYECTO: SISTEMAS DE NAVEGACIÓN AÉREA EN APOYO DE LA PBN
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B. PROGRAMME: AIR TRAFFIC FLOW MANAGEMENT
PROGRAMA: GESTIÓN DE AFLUENCIA DEL TRÁNSITO AÉREO
Coordinator/Coordinador: Jorge Fernández

B1 **PROJECT:** IMPROVE THE BALANCE BETWEEN DEMAND AND CAPACITY
PROYECTO: MEJORAR EL EQUILIBRIO ENTRE LA DEMANDA Y LA CAPACIDAD
Coordinator/Coordinador: Tobin Miller (United States/Estados Unidos) Tel.: +703 904-4525 Email: tobin.h.miller@faa.gov

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B2 **PROJECT:** FLEXIBLE USE OF THE AIRSPACE
PROYECTO: USO FLEXIBLE DEL ESPACIO AÉREO
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C. PROGRAMME: AUTOMATION AND ATM SITUATIONAL AWARENESS
PROGRAMA: AUTOMATIZACIÓN Y COMPRENSIÓN SITUACIONAL ATM
Coordinator/Coordinador: Julio Siu

C1 **PROJECT:** AUTOMATION (SYSTEMS INTERCONNECTION)
PROYECTO: AUTOMATIZACIÓN (INTERCONEXIÓN DE SISTEMAS)
Coordinator/Coordinador: Alessander de Andrade Santoro (Brazil/Brasil) Tel +55 21 2101 6209 E-mail ddte7@decea.gov.br

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C2 **PROJECT:** PROJECT: IMPROVE ATM SITUATIONAL AWARENESS
PROYECTO: MEJORA A LA COMPRENSIÓN SITUACIONAL ATM
Coordinator/Coordinador: Alejandro Romero (COCESNA) Tel + 502 2234 3360 E-mail aromero@cocesna.org

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C3 **PROJECT:** IMPLEMENT THE NEW ICAO FLIGHT PLAN FORMAT
PROYECTO: IMPLEMENTAR EL NUEVO FORMATO DE PLAN DE VUELO DE LA OACI
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D. PROGRAMME: GROUND-GROUND AND GROUND-AIR COMMUNICATIONS INFRASTRUCTURE
PROGRAMA: INFRAESTRUCTURA DE COMUNICACIONES TIERRA-TIERRA Y TIERRA-AIRE
Coordinator/Coordinador: Onofrio Smarrelli

D1 **PROJECT:** CAR/SAM ATN ARCHITECTURE
PROYECTO: ARQUITECTURA DE LA ATN CAR/SAM
Coordinator/Coordinador: Athayde Frauche (Brazil/Brasil) Tel.: +55 219 2101 6584
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D2 **PROJECT:** ATN GROUND-GROUND AND GROUND-AIR APPLICATIONS
PROYECTO: APLICACIONES TIERRA-TIERRA Y TIERRA-AIRE DE LA ATN
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APPENDIX B / APENDICE B
PROJECT WORK PROGRAMME / PROGRAMA DE TRABAJO DEL PROYECTO

PROGRAMME/PROGRAMA: PBN
PROJECT/PROYECTO: A1. OPTIMIZE THE ATS ROUTE STRUCTURE EN-ROUTE AIRSPACE / OPTIMIZACION DE LA ESTRUCTURA DE RUTAS ATS EN EL ESPACIO AEREO EN RUTA

PROJECT COORDINATOR/ COORDINADOR DEL PROYECTO: Julio Pereira

No.	Tarea / Task	Inicio Fin / Start End	Responsable / Responsible	Estado / Status	Entregable / Deliverable
1	2	3	4	5	6
A 1.1	Develop the regional action plan Elaborar el plan de acción regional	2007	GREPECAS	Completed/Finalizada	Regional action plan / Plan de acción regional
A.1.2	Develop an interface between SAM Region Version 1 and CAR Region Phase 1 Route Network Desarrollar una interface entre la versión 1 de la Región SAM y la Fase 1 de la red de rutas ATS de la Región CAR	Nov/2010	A1 Project Members / Miembros del proyecto A1	Completed/Finalizada	Interface between SAM Region Version 1 and CAR Region Phase 1 Route Network Interface entre la red de rutas version 1 de la Región SAM y la Fase 1 de la Región CAR
A.1.3	Develop proposal for amendment to the CAR/SAM Air Navigation Plan, including the interface between SAM Region Version 1 and CAR Region Phase 1 Route Network Desarrollar propuesta de enmienda al Plan de Navegación Aérea CAR/SAM, incluyendo la interface entre la versión 1 de la Región SAM y la Fase 1 de la red de rutas ATS de la Región CAR	Jan 2011/ Enero 2011	NACC Office / Oficina NACC	Valid /Válida	Proposal for amendment to the CAR/SAM Air Navigation Plan / Propuesta de enmienda al Plan de Navegación Aérea CAR/SAM
A.1.4	Publish new Version of the CAR/SAM Inter-regional ATS Routes Network, including the interface between SAM Region Version 1 and CAR Region Phase 1 Route Network Publicar la nueva versión de la Red de Rutas ATS, incluyendo la interface entre la versión 1 de la Región SAM y la Fase 1 de la red de rutas ATS de la Región CAR	2011	States /Territories Estados/Territorios	Valid/Válida	Publication in AIP new RNAV routes/ Publicación en AIP de nuevas rutas RNAV
A 1.6	Conduct the first workshop among NAM, CAR and SAM States experts to review and validate the interregional routes network proposed in A 1.2 Realizar un taller de trabajo entre expertos de los Estados NAM, CAR y SAM, a fin de revisar la Red de Rutas Inter-Regional propuesta en A 1.2	May/mayo 2011 and/y May/mayo 2012	NACC and SAM Regional Offices / Oficinas Regionales NACC y SAM	Valid/Válida	Draft of ATS route network Interface between CAR and SAM Regions Network and RNP10 Gulf of Mexico Airspace/ Borrador de interface de red de rutas ATS Entre las Regiones CAR/SAM, y RNP en el espacio aéreo del Golfo de México

No.	Tarea / Task	Inicio Fin / Start End	Responsable / Responsible	Estado / Status	Entregable / Deliverable
1	2	3	4	5	6
A 1.7	Develop an airspace concept based on CAR/SAM PBN Roadmap and in the CAR and SAM implementation plans, in order to design and implement a inter-regional trunk route network, in the upper airspace, on the basis of PBN and, in particular, RNAV/5, taking into account interregional harmonization Elaborar un concepto del espacio aéreo basado en la hoja de ruta PBN CAR/SAM y en los Planes de Implantación CAR y SAM para diseñar e implantar una red de rutas troncales inter-regionales, en el espacio aéreo superior, basado en PBN y, en particular, RNAV/5, tomando en cuenta la armonización interregional	2012	Project Coordinator / Coordinador Proyecto	Valid/Válida	Draft inter-regional routes network / Borrador de red de rutas inter-regional
A 1.8	Conduct the second workshop among NAM, CAR and SAM States experts to review the interregional routes network proposed in A 1.2 Realizar un segundo taller de trabajo entre expertos de los Estados NAM, CAR y SAM, a fin de revisar y validar la Red de Rutas Inter-Regional propuesta en A 1.2	2012	NACC and SAM Regional Offices / Oficinas Regionales NACC y SAM	Valid/Válida	Reviewed Interregional RNAV routes network. / Red de rutas RNAV inter-Regional revisada.
A 1.9	Develop proposal for amendment to the CAR/SAM Air Navigation Plan Desarrollar propuesta de enmienda al Plan de Navegación Aérea CAR/SAM	2012	NACC and SAM Regional Offices / Oficinas Regionales NACC y SAM	Valid/Válida	Proposal for amendment to the CAR/SAM Air Navigation Plan / Propuesta de enmienda al Plan de Navegación Aérea CAR/SAM
A 1.10	Publish new Version of the CAR/SAM Inter-regional ATS Routes Network Publicar la nueva versión de la Red de Rutas ATS Inter-regional CAR/SAM	2012	States/Territories Estados/Territorios	Valid/Válida	Publication in AIP new RNAV routes/ Publicación en AIP de nuevas rutas RNAV

PROGRAMME/
PROGRAMME/PROGRAMA: PBN
PROJECT/PROYECTO: A2. PBN SUPPORTING AIR NAVIGATION SYSTEMS / SISTEMAS DE NAVEGACION AEREA EN APOYO A LA PBN

PROJECT COORDINATOR/
COORDINADOR DEL PROYECTO: Jose Antonio Perez y Perez

No.	Tarea/Task	Inicio Fin / Start End	Responsable / Responsible	Estado/Status	Deliverable/Entregable
1	2	3	4	5	6
A 2.1	Feasibility of regional application, technical aspects, operational benefits, associated costs, for an SBAS (WAAS/SACSA) implementation. Implications for airborne equipment (factory delivered and retrofits) and other relevant aspects. Factibilidad de la aplicación regional, los aspectos técnicos, los beneficios operacionales, los costos asociados, de la implantación del SBAS (WAAS / SACCSA). Así como las implicaciones para los equipos de a bordo (nuevas o actualización de aviónicas) y otros aspectos pertinentes	2008-2012	ICAO / OACI A2 Project/Proyecto A2 (assisted by SACCSA y/and WAAS)	Valid /Válida	Feasibility study on the regional application, technical aspects, operational benefits, associated cost, for an SBAS (WAAS/SACSA) implementation. Implications for the on board equipment (factory delivered and retrofits) and other relevant aspects/ Estudio sobre la factibilidad de la aplicación regional, los aspectos técnicos, los beneficios operacionales, los costos asociados, la implantación del SBAS (WAAS / SACCSA). Así como las implicancias para los equipos de a bordo (nuevas o actualización de aviónicas) y otros aspectos pertinentes.
A 2.2	Provide practical guidance for the implementation of GBAS systems Desarrollar guía práctica para la implementación del sistema GBAS	2008-2011	A2 Project/Proyecto A2 (with States with GBAS programs in progress/ / con Estados con programas GBAS en curso)	Valid/Válida	Guide on the practical guidance for the implementation of GBAS Systems/ Guía práctica para implementación de sistemas GBAS
A 2.3	Review and update the regional conventional navaids infrastructure Table FASID-AIP (delivered for GNSS TF4) Revisar y actualizar la Tabla FASID-AIP (preparada para el GNSS TF4) de infraestructura regional actual de ayudas para la navegación convencionales	2011	States/ Territories/ ICAO Estados/ Territorios/ OACI	Valid/Valida	Revised and updated regional conventional navaids infrastructure CNS Table 4 FASID Tabla CNS 4: revisada y actualizada con infraestructura regional actual de ayudas convencionales para la navegación

No.	Tarea/Task	Inicio Fin / Start End	Responsable / Responsible	Estado/Status	Deliverable/Entregable
1	2	3	4	5	6
A 2.4	Analyse the DME/DME and GNSS infrastructure and coverage supporting PBN implementation Analizar la infraestructura y cobertura DME / DME y GNSS requerida para dar soporte a la implantación de la PBN	2011-2012	A2 Project/Proyecto A2 ICAO coordinates States/ Territories/ International Organizations inputs La OACI coordinara los aportes de los Estados/ Territorios/ Organizaciones In ternacionales	Valid/Válida	analysis of the DME/ DME and GNSS infrastructure supporting PBN implementation análisis de la infraestructura DME / DME y GNSS requerida para apoyar la implementación de la PBN
A 2.5	Development of guidance on use of and available tools required for assessment of GNSS performance and service prediction. Desarrollo de orientación sobre el uso y disponibilidad de herramientas de previsión / validación de prestaciones del GNSS	2011	A2 Project/Proyecto A2 ICAO coordinates States/ Territories/ National and International Organizations inputs La OACI coordinara los aportes con los Estados/Territorios/o rganizaciones nacionales e internacionales	Valid/Válida	Guidance on use of and available tools required for assessment of GNSS performance and service prediction. Orientación sobre el uso y disponibilidad de herramientas de previsión / validación de prestaciones del GNSS

PROGRAMME/PROGRAMA: ATFM
PROJECT/PROYECTO: B1. IMPROVE DEMAND AND CAPACITY BALANCING / MEJORAR EL EQUILIBRIO ENTRE LA DEMANDA Y LA CAPACIDAD

PROJECT COORDINATOR/ COORDINADOR DEL PROYECTO: Tobin Miller

No.	Tarea / Task	Inicio Fin / Start End	Responsable / Responsible	Estado / Status	Deliverable / Entregable
1	2	3	4	5	6
B 1.1	Develop a CAR/SAM ATFM Roadmap taking into consideration inter-regional harmonization Desarrollar una Hoja de Ruta ATFM CAR/SAM, tomando en cuenta la armonización inter-regional	2010 - 2011	B1 Project / Proyecto B1	Completed/Finalizada	CAR/SAM ATFM Roadmap Hoja de ruta ATFM CAR/SAM
B 1.2	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 Identificar a las partes interesadas clave (proveedores y usuarios de servicio ATC, autoridades militares, autoridades aeroportuarias, operadores de aeronaves y organizaciones internacionales relevantes) para coordinación y cooperación mediante un proceso CDM;	2008	GREPECAS	Completed/Finalizada	Key stakeholders for purposes of coordination and cooperation, using a CDM process identified Partes interesadas clave para coordinación y cooperación mediante un proceso CDM identificadas
B 1.3	Develop methods to establish demand/capacity forecasting; Elaborar métodos para establecer pronósticos de demanda/capacidad	2007- 2012	B1 Project / Proyecto B1	Completed/Finalizada	Methods to establish demand/capacity forecasting Métodos para establecer pronósticos de demanda/capacidad
B 1.4	Develop regional procedures for efficient and optimum use of aerodrome and runway capacity Desarrollar procedimientos regionales para un uso eficiente y optimo de la capacidad de aeródromo y de pista	2008- 2012	B1 Project / Proyecto B1	Valid/Válida	Regional procedures for efficient and optimum use of aerodrome and runway capacity/ Procedimientos regionales para un uso eficiente y optimo de la capacidad de aeródromo y de pista
B 1.5	Develop a regional ATFM procedural manual to manage demand/capacity balancing Desarrollar un manual regional de procedimientos ATFM para la gestión del equilibrio entre demanda y capacidad	2008- 2011		Completed/Finalizada	Regional ATFM procedural manual to manage demand/capacity balancing Manual regional de procedimientos ATFM para la gestión del equilibrio entre demanda y capacidad

No.	Tarea / Task	Inicio Fin / Start End	Responsable / Responsible	Estado / Status	Deliverable / Entregable
1	2	3	4	5	6
B 1.6	Develop a regional strategy and framework for the implementation of Centralized ATFM units Desarrollar una estrategia y marco de referencia para la implantación de unidades centralizadas ATFM	2008- 2014	B1 Project / Proyecto B1	Valid/Válida	Regional strategy and framework for the implementation of Centralized ATFM units/ Estrategia y marco de referencia para la implantación de unidades centralizadas ATFM
B 1.7	Develop template/contents for operational agreements between Centralized ATFM units for interregional demand/capacity balancing Desarrollar formulario/contenido para acuerdos operacionales entre unidades ATFM centralizadas para el equilibrio entre demanda y capacidad interregional	2008- 2014	B1 Project / Proyecto B1	Valid/Válida	Operational agreements between Centralized ATFM units for interregional demand/capacity balancing / Acuerdos operacionales entre unidades ATFM centralizadas para el equilibrio entre demanda y capacidad interregional
B 1.8	Define common elements of situational awareness between FMUs; ▪ common traffic displays, ▪ common weather displays (Internet), ▪ communications (teleconferences, web), and ▪ daily teleconference/messages methodology advisories Definir los elementos comunes de conciencia situacional; ▪ visualización común de tránsito, ▪ visualización común de condiciones meteorológicas (Internet), ▪ comunicaciones (conferencias telefónicas, web), y ▪ metodología de asesorías diarias por medio de conferencias telefónica	2008- 2012	B1 Project / Proyecto B1	Valid/Válida	Define common elements of situational awareness between FMUs/ Definir los elementos comunes de conciencia situacional entre FMUs
B 1.9	Define common electronic information and minimum databases required to support decision making process and alerting systems for interoperable situational awareness between Centralized ATFM units Definir la información electrónica y bases de datos mínimas comunes requeridas para apoyar los procesos de toma de decisiones y sistemas de alerta para una conciencia situacional interoperable entre las unidades ATFM centralizadas	2008- 2014	B1 Project / Proyecto B1	Valid/Válida	Definiton of common electronic information and minimum databases required to support decision making process and alerting systems / Definir la información electrónica y bases de datos mínimas comunes requeridas para apoyar los procesos de toma de decisiones y sistemas de alerta

No.	Tarea / Task	Inicio Fin / Start End	Responsable / Responsible	Estado / Status	Deliverable / Entregable
1	2	3	4	5	6
B 1.10	Implement additional/advanced automation support tools to increase aeronautical information sharing ▪ ETMS or similar ▪ MET information ▪ AIS/NOTAM dissemination ▪ Surveillance tools to identify airspace sector boundaries ▪ Use of A-SMGC in specific aerodromes Implantar herramientas de apoyo adicionales/avanzados de automatización, para aumentar la compartición de información aeronáutica: ▪ ETMS o similar ▪ información MET ▪ Difusión AIS/NOTAM ▪ Herramientas de vigilancia para identificar los límites de sector del espacio aéreo ▪ Uso del A-SMGC en aeródromos específicos	2008- 2014	B1 Project / Proyecto B1	Completed/Finalizada	Implement additional/advanced automation support tools to increase aeronautical information sharing Implantar herramientas de apoyo adicionales/avanzados de automatización, para aumentar la compartición de información aeronáutica
B 1.11	Identify training needs and develop corresponding guidelines Identificar necesidades de entrenamiento y desarrollar lineamientos correspondientes	2011-2012	B1 Project / Proyecto B1	Valid/Válida	Identification of training needs and develop corresponding guidelines / Identificación necesidades de entrenamiento y desarrollar lineamientos correspondientes
B 1.12	Formulate an ATFM system performance monitoring plan Formular un plan para la supervisión de la performance del sistema ATFM	2010-2011	B1 Project / Proyecto B1	Valid/Válida	ATFM system performance monitoring plan / Plan para la supervisión de la performance del sistema ATFM
B 1.13	Develop a regional strategy and work programme for harmonized implementation of ATFM service Elaborar una estrategia y programa de trabajo regionales para la implementación del servicio ATFM	2007	GREPECAS	Completed/Finalizada	Regional strategy and work programme for harmonized implementation of ATFM service Estrategia y programa de trabajo regionales para la implementación del servicio ATFM

PROGRAMME/PROGRAMA: ATFM
PROJECT/PROYECTO: B2.FLEXIBLE USE OF AIRSPACE / USO FLEXIBLE DEL ESPACIO AEREO
PROJECT COORDINATOR/ COORDINADOR DEL PROYECTO: Tobin Miller

No.	Tarea/Task	Inicio Fin / Start End	Responsable / Responsible	Estado/Status	Deliverable/Entregable
1	2	3	4	5	6
B 2.1	Develop guidance material on civil/military coordination and co-operation to be used by States/Territories to develop national policies, procedures and rules Elaborar material de orientación sobre coordinación y cooperación civil/militar a utilizar por parte de los Estados/Territorios para elaborar políticas, procedimientos y normas nacionales	2011-2012	B2 Project / Proyecto B2	Completed/Finalizada	Guidance material on civil/military coordination and co-operation to be used by States/Territories Material de orientación sobre coordinación y cooperación civil/militar a utilizar por parte de los Estados/Territorio

No.	Tarea/Task	Inicio Fin / Start End	Responsable / Responsible	Estado/Status	Deliverable/Entregable
1	2	3	4	5	6
B 2.2	Develop a regional strategy to implement the use of a flexible upper airspace (FUA): • evaluate the management processes in the use of the airspace; • improve the current domestic airspace management to adjust dynamic changes to the traffic flows in tactical stages; • introduce improvements to the ground ATS systems and associated procedures for the extension of the FUA with dynamic management processes in the use of the airspace • dynamically implement ATC sectorization with the aim of providing a better balance between demand and capacity that responds in real time to changing situations in the traffic flows and to accommodate in the short-term the users preferred trajectories / Desarrollar una estrategia regional para la implantación del uso flexible del espacio aéreo (FUA) o evaluar los procesos de gestión en el uso del espacio aéreo; o mejorar la actual gestión del espacio aéreo nacional para ajustar cambios dinámicos a los flujos de tráfico en la etapa táctica; o introducir mejoras a los sistemas ATS de tierra y procedimientos asociados para la extensión del FUA con procesos dinámicos de gestión en el uso del espacio aéreo; o implantar dinámicamente la sectorización ATC a fin de proporcionar el mejor equilibrio entre demanda y capacidad que responda en tiempo real a las situaciones cambiantes en los flujos de tráfico y para acomodar a corto plazo las trayectorias preferidas de los usuarios	2008- 2015	B2 Project / Proyecto B2	Valid/Válida	Regional strategy to implement the use of a flexible upper airspace (FUA) / Estrategia regional para la implantación del uso flexible del espacio aéreo (FUA)
B 2.3	Identify training needs and develop corresponding guidelines Identificar las necesidades de capacitación y desarrollar las directrices correspondientes.	2011-2012	B2 Project / Proyecto B2	Valid/Válida	Guidelines on training needs on Flexible Use of Airspace / Directrices sobre necesidades de capacitación .en Uso Flexible del Espacio Aéreo

PROJECT WORK PROGRAMME / PROGRAMA DE TRABAJO DEL PROYECTO

PROGRAMME/PROGRAMA: AUTOMATION AND ATM SITUATIONAL AWARENESS / AUTOMATIZACION Y COMPRENSION SITUACIONAL ATM

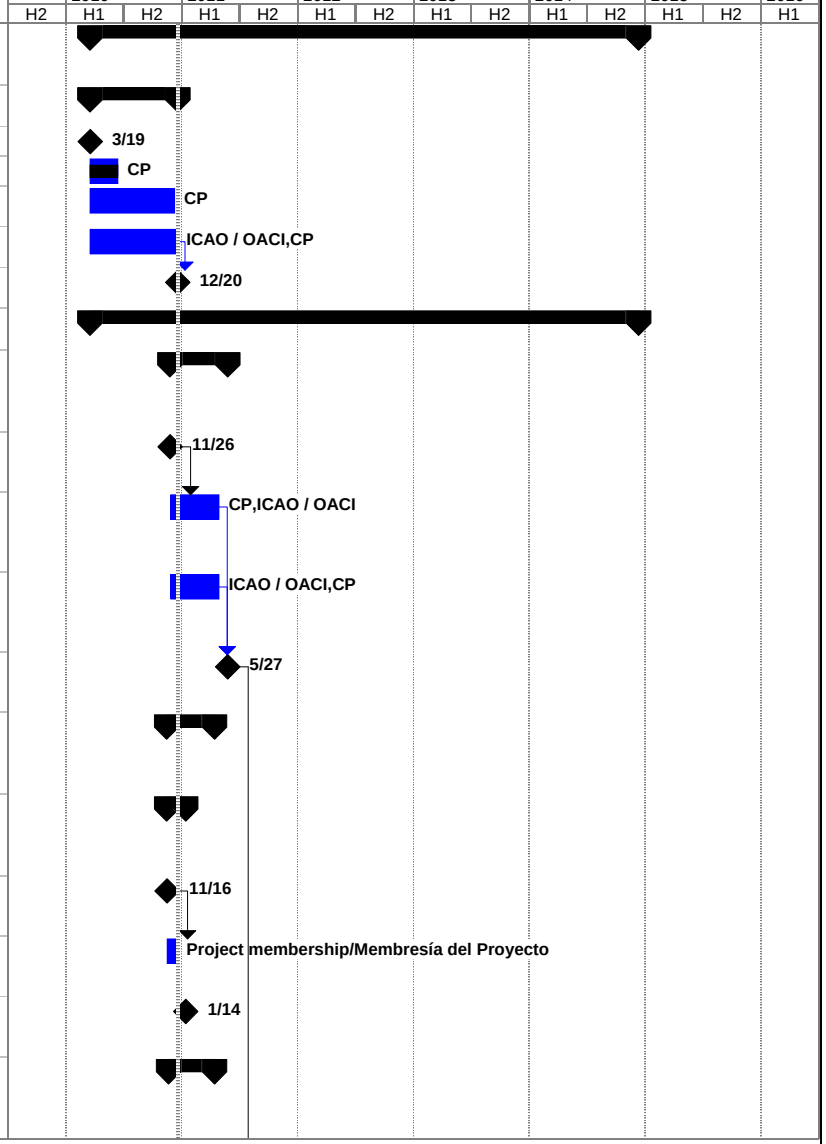
PROJECT/PROYECTO: C1. AUTOMATION / AUTOMATIZACION

PROJECT COORDINATOR/ COORDINADOR DEL PROYECTO: Alessander Santoro (Brasil)

No.	Tarea/Task	Inicio Fin / Start End	Responsable / Responsible	Estado/Status	Deliverable/ Entregable
1	2	3	4	5	6
C 1.1	Identify the automation level required according to the ATM service provided in airspace and international aerodromes, assessing ○ operational architecture design, ○ characteristics and attributes for interoperability, ○ data bases and software, and ○ technical requirements. Identificar el nivel de automatización requerido de acuerdo con el servicio ATM proporcionado en el espacio aéreo y los aeródromos internacionales, valorando: ○ el diseño de la arquitectura operacional, ○ características y atributos para la interfuncionalidad, ○ bases de datos y software, ○ FPL, CPL, CNL, RLA, etc., y ○ Requerimientos técnicos.	2008 - 2011	ICAO States/Territories OACI Estados/ Territorios	Valid / Válida	Existing level of automation in the CAR Regions/ Nivel de automatizacion existente en las Regiones CAR/SAM
C 1.2	Orientaciones para la elaboración de Memorándum de Entendimiento Interregional para la implantación de la interconexión de sistemas automatizados Guidelines for elaboration of Memorandum of Understanding for the implementation of the automation system interconnection	2010 - 2012	Project C1 / Proyecto C1	Valid / Válida	1. Interregional MoU model for the implementation of automation between States. 2. Guidelines and considerations for the drafting and agreement on automation/ 1 Ejemplo de MoU Interregional para la implementación de automatizaciones entre Estados 2 .Orientaciones y consideraciones para la elaboración y acuerdo para la automatización

No.	Tarea/Task	Inicio Fin / Start End	Responsable / Responsible	Estado/Status	Deliverable/ Entregable
1	2	3	4	5	6
C 1.3	Monitor the implementation of flight plan data processing system and electronic transmission tools Monitorear la implantación de sistema de proceso de datos de plan de vuelo, herramientas para la transmisión electrónica e intercambio automático de mensajes ATS	2008 - 2012	Project C1 / Proyecto C1	Valid / Válida	Proposals or guidelines for the improvement in the current operation and performance of the flight data plan process and tools for its electronic transmission Propuestas o orientaciones de mejora a la operación y al performance existente relacionados al sistema de proceso de datos de plan de vuelo, herramientas para la transmission electrónica e intercambio automático de mensajes ATS
C 1.4	Monitor ATM automation implementation and surveillance data exchange Monitorear la implantación de automatización ATM y el intercambio de datos de vigilancia	2008 - 2014	OACI / ICAO	Valid / Válida	
C 1.5	Monitor Implementation of additional/advanced automation support tools to increase aeronautical information sharing ● ETMS or similar ● MET information ● AIS/NOTAM dissemination ● Surveillance tools to identify airspace sector boundaries ● Use of A-SMGC in specific aerodromes, as required Monitorear la implantación de herramientas de apoyo adicionales/avanzadas de automatización para incrementar la compartición de la información aeronáutica ● ETMS o similar ● Información MET ● Divulgación AIS/NOTAM ● Herramientas de vigilancia para identificar los límites del sector en el espacio aéreo ● Uso de A-SMGC en aeródromos específicos, según sea requerido	2008 - 2014	Project C1 / Proyecto C1	Valid / Válida	Proposals or guidelines for the use and benefits of additional/advanced automation support tools to increase the sharing of aeronautical information. Propuestas o orientaciones para el uso y beneficios de herramientas de apoyo adicionales/avanzadas de automatización para incrementar la compartición de la información aeronáutica
C 1.6	Monitor implementation progress Monitorear el desarrollo de la implementación	2008 - 2014	OACI / ICAO	Valid / Válida	Proposals for the updating of GREPECAS guidelines on ATM systems automation Propuesta de actualización a las directrices de GREPECAS para la automatización de sistemas ATM

ID	Nome da tarefa	Start	Finish	Predecessors
1	**Automation project for the CAR/SAM Regions (systems interconnection) / Proyecto de automatización de la Región CAR/SAM (interconexión de sistemas)**	**Fri 3/19/10**	**Fri 12/12/14**	
2	**Project management process / Proceso de gerencia del proyecto**	**Fri 3/19/10**	**Mon 12/20/10**	
3	Define Project Manager/Definir el Gerente de Proyecto	Fri 3/19/10	Fri 3/19/10	
4	Identify States experts/Identificar expertos de los Estados	Fri 3/19/10	Mon 6/14/10	
5	Develop Project Opening Terms (TAP)/Desarrollar el Término de Apertura del Proyecto (TAP)	Fri 3/19/10	Fri 12/10/10	
6	Identify ICAO documentation applicable to the Project/Identificar la documentación ICAO aplicable al Proyecto	Fri 3/19/10	Fri 12/17/10	
7	Deliver ICAO documentation applicable to Project/Entregar la documentación ICAO aplicable al Proyecto	Mon 12/20/10	Mon 12/20/10	6
8	**Automated systems interconnection implementation process/Proceso de implantación interconexión sistemas automatizados**	**Fri 3/19/10**	**Fri 12/12/14**	
9	**C1.1 Identification of States level of automation and modernization plans / C1.1 Identificación de nivel de automatización de los Estados y sus planes de modernización**	**Fri 11/26/10**	**Fri 5/27/11**	
10	Deliver minimum requirements for States ICD composition/Entregar requisitos mínimos para composición ICD de los Estados	Fri 11/26/10	Fri 11/26/10	
11	Carry out consult to States and identify automated systems ICD and modernization plans/Realizar consulta a Estados e identificar ICD de los sistemas automatizados y planes de modernización	Mon 11/29/10	Fri 4/29/11	10
12	Carry out consult to States and identify channels available for radar data exchange and flight plans between States/Realizar consulta a los Estados e identificar canales disponibles para intercambio datos radar y planes de vuelo entre los Estados	Mon 11/29/10	Fri 4/29/11	
13	Deliver document with consolidated information from States to Project Coordinator/Entregar documento con información consolidada de los Estados al Coordinador del Proyecto	Fri 5/27/11	Fri 5/27/11	12,11
14	**C1.2 Guidelines for the drafting of MoU for the interconnection of automated systems / C1.2 Orientaciones para la elaboración de MoU para la interconexión de sistemas automatizados**	**Tue 11/16/10**	**Fri 4/15/11**	
15	**C1.2.1 Development of an interregional model of Memorandum of Understanding (MoU) / C1.2.1 Desarrollar un modelo de Memorando de Entendimiento (MoU) interregional**	**Tue 11/16/10**	**Fri 1/14/11**	
16	Present SAM Region MoU model as draft for CAR/SAM Regions MoU/Presentar modelo MoU de la Región SAM como borrador de MoU para las Regiones CAR/SAM	Tue 11/16/10	Tue 11/16/10	
17	Analyze MoU applicable for CAR Region, study and critique the draft MoU/Analizar MoU aplicables de la Región CAR, estudiar y realizar críticas al borrador	Wed 11/17/10	Fri 12/17/10	16
18	Delivery of interregional MoU model final version to ICAO/Entrega de la versión final de modelo de MoU interregional a OACI	Fri 1/14/11	Fri 1/14/11	
19	**C2.1.2 Guidelines and considerations for the drafting and agreement on automation / C2.1.2 Orientaciones y consideraciones para la elaboración y acuerdo para la automatización**	**Mon 11/22/10**	**Fri 4/15/11**	



Projeto: Proyecto de Automatización d
Data: Fri 12/17/10

Tarefa
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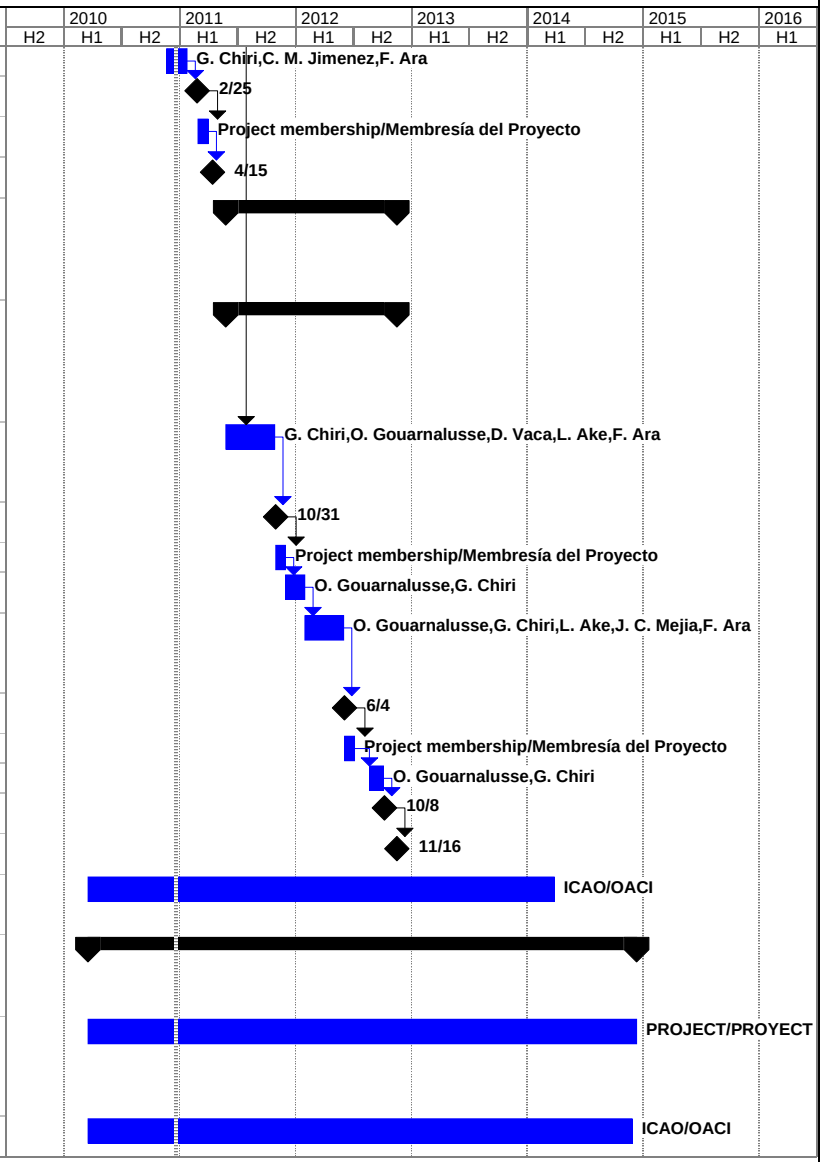
Etapa
Resumo
Resumo do projeto
Tarefas externas
Etapa externa
Data limite

PM = Programme Manager/Gerente Programa
PC = Project Coordinator/Coordinador Proyecto

ID	Nome da tarefa	Start	Finish	Predecessors
20	Elaborate a draft guide/Elaborar un borrador de orientaciones	Mon 11/22/10	Tue 1/25/11	
21	Present draft guide to Project Coordinator/Presentar borrador de orientaciones al Coordinador el Proyecto	Fri 2/25/11	Fri 2/25/11	20
22	Study and critique the draft/Estudiar y realizar críticas al borrador	Tue 3/1/11	Fri 4/1/11	21
23	Delivery of final guide version to ICAO/Entrega de versión final de orientaciones a OACI	Fri 4/15/11	Fri 4/15/11	22
24	**C1.3 Monitor flight plan data process implementation, electronic transmission tools & automatic ATS message exchange / C1.3 Monitorear implantación sistema proceso datos plan vuelo, herramientas transmisión electrónica e intercambio automático msgs ATS**	**Fri 5/27/11**	**Fri 11/16/12**	
25	**C1.3 Proposals/flight plan data process implementation, electronic transmission tools & automatic ATS message exchange / C1.3 Monitorear implantación sistema proceso datos plan vuelo, herramientas transmisión electrónica e intercambio automático msgs ATS**	**Fri 5/27/11**	**Fri 11/16/12**	
26	Identify various group States technological levels, including interconnection means/Identificar los diferentes niveles tecnológicos de grupos de Estados, incluyendo medios de interconexion	Fri 5/27/11	Fri 10/28/11	13
27	Presentation of draft to Project Coordinator/Presentar al Coordinador de Proyecto el borrador	Mon 10/31/11	Mon 10/31/11	26
28	Review of draft/Criticar el borrador	Tue 11/1/11	Thu 12/1/11	27
29	Consolidation of final document at technological levels/Consolidar un documento final con los niveles	Fri 12/2/11	Tue 1/31/12	28
30	Elaborate draft document with guidelines on improvement for each State group level/Elaborar borrador de documento con orientaciones de mejora para cada grupo de niveles de Estados	Wed 2/1/12	Fri 6/1/12	29
31	Present the Project Coordinator with guidelines draft/Presentar al Coordinador de Proyecto el borrador de	Mon 6/4/12	Mon 6/4/12	30
32	Review of guidelines draft/Criticar el borrador de orientaciones	Tue 6/5/12	Fri 7/6/12	31
33	Elaboration of final document/Elaborar el documento final	Wed 8/22/12	Fri 10/5/12	32
34	Delivery of final document to Project Coordinator/Entregar el documento final al Coordinador de Proyecto	Mon 10/8/12	Mon 10/8/12	33
35	Delivery of final document to ICAO/Entrega del documento final a OACI	Fri 11/16/12	Fri 11/16/12	34
36	C1.4 Monitor ATM automation implementaion and exchange of surveillance data/C1.4 Monitorear la implantación de automatización ATM y el intercambio de datos de vigilancia	Fri 3/19/10	Thu 3/27/14	
37	**C1.5 Monitor implementation of additional/advanced automation support tools/C1.5 Monitorear implantación herramientas de apoyo adicionales/avanzadas de automatización**	**Fri 3/19/10**	**Fri 12/12/14**	
38	C1.5.1 Proposals/guidelines use and benefit additional/advanced automation support tools increase aero info sharing/C1.5.1 Propuesta/orientacion uso y beneficios herramientas apoyo adicional/avanzada automatización incremento compartición info aeronáutica	Fri 3/19/10	Fri 12/12/14	
39	C1.6 Monitor the implementation development/C1.6 Monitorear el desarrollo de la implementación	Fri 3/19/10	Fri 11/28/14	



Projeto: Proyecto de Automatización d
Data: Fri 12/17/10

Tarefa
Divisão
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PROGRAMME/PROGRAMA: ATM AUTOMATION AND SITUATIONAL AWARENESS / AUTOMATIZACION ATM Y COMPRENSION SITUACIONAL

PROJECT/PROYECTO: C2. IMPROVE ATM SITUATIONAL AWARENESS / MEJORA A LA COMPRENSION SITUACIONAL ATM

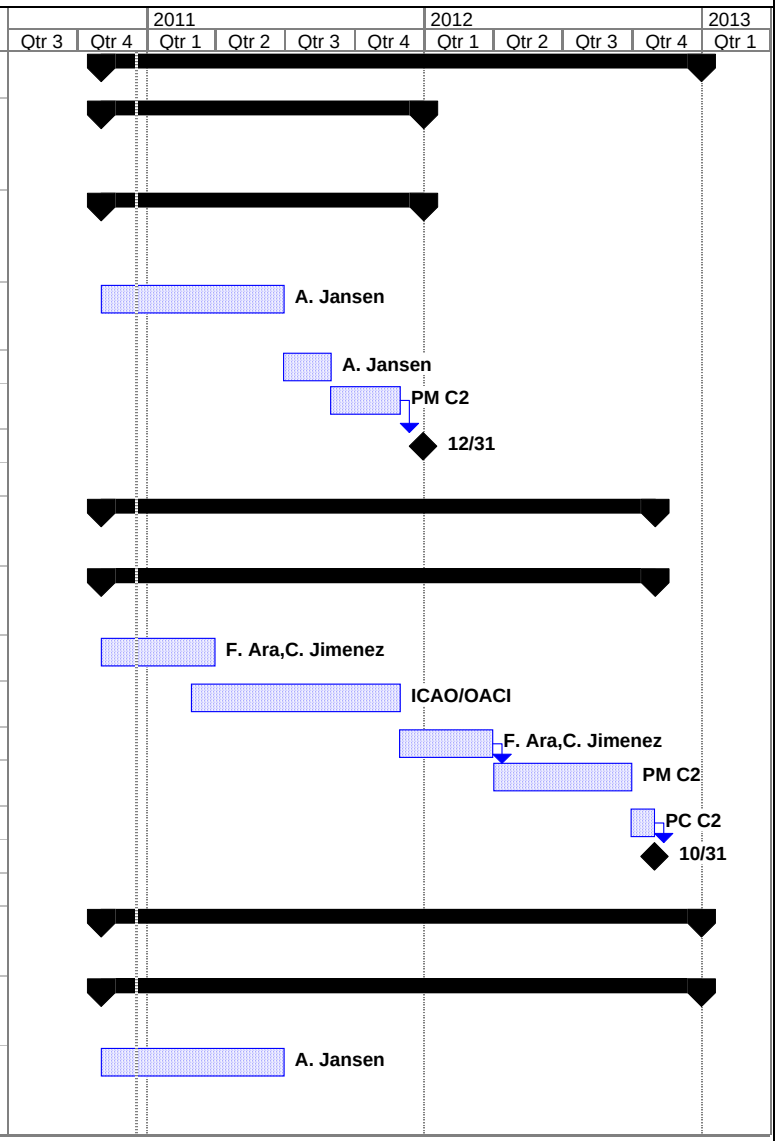
PROJECT COORDINATOR/ COORDINADOR DEL PROYECTO: Alejandro Romero

No.	Tarea/Task	Inicio Fin / Start End	Responsable / Responsible	Estado/Status	Deliverable/Entregable
1	2	3	4	5	6
C 2.1	Identify parties concerned Identificación de las partes interesadas	2009	GREPECAS	Completed/Finalizada	Identification of parties concerned Identificación de las partes interesadas
C 2.2	Evaluation of surveillance infrastructure and Identification of Surveillance system improvements to support continental en-route and terminal Airspace in CAR/SAM Regions, airspace classification, PBN and the ATFM Evaluación de la infraestructura de vigilancia e identificación de mejoras a los sistemas de vigilancia para apoyar los espacios aéreos enruta y terminal en las regiones CAR/SAM, la clasificación del espacio aéreo, la PBN y el ATFM	2009-2012	Project C2 / Proyecto C2	Valid/Válida	Revision to Regional surveillance system implementation strategy (surveillance system infrastructure analysis for PBN and ATFM implementation) Revisión a la Estrategia regional para la implantación del sistema de vigilancia (análisis de la infraestructura del sistema de vigilancia para la implantación de PBN y ATFM)
C 2.3	Monitor the implementation of ATM surveillance systems for situational traffic information and associated procedures Monitorear la implantación de sistemas de vigilancia ATM para la información de la situación del tránsito y procedimientos asociados	2010-2015	ICAO/OACI	Valid/Válida	

No.	Tarea/Task	Inicio Fin / Start End	Responsable / Responsible	Estado/Status	Deliverable/Entregable
1	2	3	4	5	6
C 2.4	Monitor the implementation of ground and air electronic warnings, as needed • Conflict prediction • Terrain proximity • MSAW • DAIW • Surveillance system for surface movement Monitorear la implantación de avisos terrestres y aéreos electrónicos, según sea necesario • predicción de conflictos • proximidad en el terreno • MSAW • DAIW • Sistema de vigilancia para el movimiento en la superficie	2008-2014	Project C2 / Proyecto C2	Valid/Válida	Guidelines for improvement to ground and air electronic warnings/ Directrices sobre la mejora de avisos terrestres y aéreos electrónicos
C 2.5	Elaboración de un plan regional para la implantación del ADS- C y ADS B Elaboration of a Regional Plan for the implementation of ADS –C and ADS B	2008-2014	Project C2 / Proyecto C2	Valid/Válida	Guidelines for an operational ADS-B implementation and data exchange (initial steps to the operational implementation of ADS B)/ Directrices para la implantación operacional del ADS B y el intercambio de datos (pasos iniciales para la implantación operacional del ADS B)
C 2.6	Monitor the regional activities to optimize the use of radio frequency environment Monitorear las actividades para optimizar el uso del entorno de radio frecuencia	2009/2011	ICAO/OACI	Valid/Válida	

CNS/ATM/SG PROJECT/PROYECTO C2
IMPROVE ATM SITUATIONAL AWARENESS / MEJORA A LA COMPRENSION SITUACIONAL ATM

ID	Task Name	Start	Finish
1	**C2 IMPROVE ATM SITUATIONAL AWARENESS / C2 MEJORA A LA COMPRENSION SITUACIONAL ATM**	**Tue 11/2/10**	**Mon 12/31/12**
2	**C 2.2 Evaluation of surveillance infrastructure and identification of surveillance system improvements / C 2.2 Evaluación de la infraestructura de vigilancia e identificación de mejoras a los sistemas de vigilancia**	**Tue 11/2/10**	**Sat 12/31/11**
3	**DELIVERABLE: Revision and updating proposal to regional surveillance system implementation strategy / ENTREGABLE: Revisión y propuesta de actualización a la estrategia regional para la implantación sistema de vigilancia**	**Tue 11/2/10**	**Sat 12/31/11**
4	Gather information related with the regional strategy for the implementation of a surveillance system / Reunir información relacionada a la estrategia regional para la implantación del sistema de vigilancia	Tue 11/2/10	Thu 6/30/11
5	Delivery of draft proposal / Entrega de propuesta borrador	Thu 6/30/11	Wed 8/31/11
6	Monitoring or review to draft plan / Supervision o revisiones del plan borrador	Wed 8/31/11	Wed 11/30/11
7	Deliverable C 2.2 (final document) / Entregable C 2.2 (Documento Final)	Sat 12/31/11	Sat 12/31/11
8			
9	**C 2.4 Monitor the implementation of ground and air electronic warnings / C 2.4 Monitorear la implantación de avisos/alarmas electronicas terrestres y aéreos**	**Tue 11/2/10**	**Wed 10/31/12**
10	**DELIVERABLE: Guidelines for improvement to ground and air electronic warnings / ENTREGABLE: Lineamientos para mejoras en alarmas electrónicas terrestres y aéreas**	**Tue 11/2/10**	**Wed 10/31/12**
11	Collect information requirements to be requested / Recolectar requisitos de informacion a ser solicitada	Tue 11/2/10	Thu 3/31/11
12	ICAO collection of related information / Recoleccion de Informacion relacionada por parte de OACI	Mon 2/28/11	Wed 11/30/11
13	Delivery of draft document / Entrega del borrador del documento	Wed 11/30/11	Sat 3/31/12
14	Monitoring and review from the Project members / Supervision y revisiones por parte de miembros del Proyecto	Mon 4/2/12	Sun 9/30/12
15	Final adjustments to document/ Ajustes finales al documento	Sun 9/30/12	Tue 10/30/12
16	Deliverable C 2.4/ Entregable C 2.4	Wed 10/31/12	Wed 10/31/12
17			
18	**C 2.5 Elaboration of a Regional Plan for the implementation of ADS-C and ADS-B / C 2.5 Elaboración de un plan regional para la implantación del ADS-C y ADS-B**	**Tue 11/2/10**	**Mon 12/31/12**
19	**DELIVERABLE: Guidelines for an operational ADS-B implementation and data exchange / ENTREGABLE: Lineamientos para la implementación operacional del ADS-B e intercambio de datos**	**Tue 11/2/10**	**Mon 12/31/12**
20	Collection of information related with references for the drafting of guidelines for ADS-B and ADS-C implementation and operation / Recolección de información para la elaboración de directrices para la implantación y operación del ADS-B y ADS-C	Tue 11/2/10	Thu 6/30/11



Project: C2 Project proposal
Date: Fri 12/17/10

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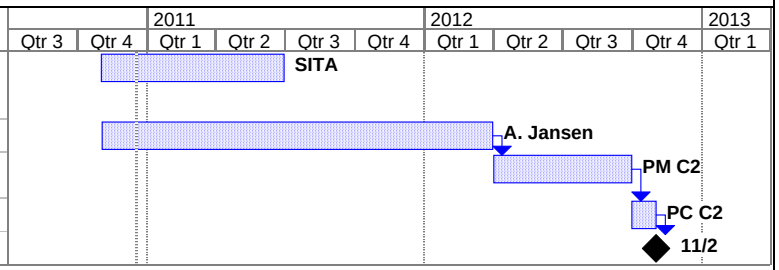
PM = Project Members / Miembros Proyecto
S/T = States/Territorries - Estados/Territorios

CNS/ATM/SG PROJECT/PROYECTO C2
IMPROVE ATM SITUATIONAL AWARENESS / MEJORA A LA COMPRENSION SITUACIONAL ATM

ID	Task Name	Start	Finish
21	Support in the provision of information related to existing initiatives / Apoyo en el suministro de información referente a las iniciativas existentes	Tue 11/2/10	Thu 6/30/11
22	Delivery of draft document / Entrega borrador del documento	Wed 11/3/10	Sat 3/31/12
23	Monitoring or review to draft document / Supervisión o revisiones del borrador del documento	Mon 4/2/12	Sun 9/30/12
24	Final adjustments to document / Ajustes finales al documento	Mon 10/1/12	Thu 11/1/12
25	Deliverable C 2.5 / Entregable C 2.5	Fri 11/2/12	Mon 12/31/12



Project: C2 Project proposal
Date: Fri 12/17/10

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PROGRAMME/PROGRAMA: ATM AUTOMATION AND SITUATIONAL AWARENESS / AUTOMATIZACION ATM Y COMPRENSION SITUACIONAL

PROJECT/PROYECTO: C3. IMPLEMENTATION OF THE NEW ICAO FLIGHT PLAN MODEL / IMPLANTACION DEL NUEVO MODELO DE PLAN DE VUELO DE LA OACI

PROJECT COORDINATOR/ COORDINADOR DEL PROYECTO: Jorge Avila

No.	Tarea/Task	Inicio Fin / Start End	Responsable / Responsible	Estado/Status	Deliverable/Entregable
1	2	3	4	5	6
C 3.1	Guidelines on transition to new Flight Plan Format Guías sobre la transición al Nuevo Formato de Plan de Vuelo Presentado.	2009	ICAO/OACI	Completed/Finalizada	Guidelines on transition to new Flight Plan Format Guías sobre la transición al Nuevo Formato de Plan de Vuelo Presentado
C 3.2	Develop regional strategy for transition to new Flight Plan Format Elaborar una estrategia regional de transición al nuevo formato de plan de vuelo presentado	2009/ 2010	ICAO/OACI	Completed/Finalizada	Strategy was reviewed and approved during the CNS/ATM/SG/1 meeting Estrategia fue revisada y aprobada durante la reunión CNS/ATM/SG/1
C 3.3	Identification of stakeholders involved and possible impact by implementation of New Flight Plan Format (FPL/RPL/CPL) Identificación de interesados involucrados y posible impacto de la implantación del nuevo formato de plan de vuelo presentado (FPL/RPL/CPL)	1/10/2009-30/11/2010	States/ Territories/ International Organizations Estados/ Territorios/ Organizaciones Internacionales	Valid/Válida	
		1/12/2010-28/02/2011	Project C3/ Proyecto C3	Valid/Válida	Consolidated analysis of the evaluations performed by the Status of the possible impacts of the implementation of the new FPL format. Análisis consolidado de las evaluaciones realizadas por los Estados de los posibles impactos de la implementación del nuevo formato de FPL.
C 3.4	Evaluation of current/future flight plan processing capabilities regarding the New Flight Plan Format Evaluación de las capacidades actuales/futuras de procesamiento de plan de vuelo con respecto al Nuevo formato de plan de vuelo presentado	1/10/2009-30/12/2010	ICAO/OACI	Valid/Válida	

No.	Tarea/Task	Inicio Fin / Start End	Responsable / Responsible	Estado/Status	Deliverable/Entregable
1	2	3	4	5	6
C 3.5	Conduct trials between systems with new flight plan processing capacity Conducir ensayos entre sistemas con capacidad de procesamiento del nuevo plan de vuelo	18/7/2011- 28/10/2011	Project C3/ Proyecto C3	Valid/Válida	Proposed considerations to conduct trials between systems with new flight plan processing capacity. Propuesta de consideraciones para realizar los ensayos entre sistemas con capacidad de procesamiento del nuevo plan de vuelo.
		1/11/2011- 30/6/2012	States/ Territories/ International Organizations Estados/ Territorios/ Organizaciones Internacionales	Valid/Válida	
C 3.6	Development of contingency procedures and determination of operational/ technical considerations for the transition Elaboración de procedimientos de contingencia y determinación de consideraciones técnicas/operacionales para la transición	3/1/2011- 31/05/2011	Project C3/ Proyecto C3	Valid/Válida	Proposed contingency procedures. Propuesta de procedimientos de contingencias.
		1/06/2011- 30/6/2011	States/ Territories/ International Organizations Estados/ Territorios/ Organizaciones Internacionales	Valid/Válida	
C 3.7	Identification of major parties considering FP data flow and definition of transition steps based on: a) Systems with capability to process both formats: current and new. b) Systems to be upgraded/implemented before 2012 and that will be capable to process New Flight Plan Format Identificación de las partes principales que consideren la afluencia de datos de FP y definición de los pasos de transición basados en: a) sistemas con capacidad de procesar ambos formatos: actual y nuevo. b) sistemas a modernizarse/implementarse antes del 2012 y que serán capaces de procesar el nuevo formato de plan de vuelo presentado	1/1/2011-30/6/2011	ICAO/OACI	Valid/Válida	

No.	Tarea/Task	Inicio Fin / Start End	Responsable / Responsible	Estado/Status	Deliverable/Entregable
1	2	3	4	5	6
C 3.8	Publication on transition actions, trials and other publication for the users and stakeholders Publicación de acciones de transición, ensayos y otras publicaciones para los usuarios e interesados	30/6/2011-30/6/2012	States/ Territories/ International Organizations Estados/ Territorios/ Organizaciones Internacionales	Valid/Válida	
		30/6/2011-30/3/2012	Project C3/ Proyecto C3	Valid/Válida	Proposed technical/ operational considerations for the transition. Propuesta de consideraciones técnicas/operacionales para la transición.
C 3.9	Assessment of transition actions and make adjustments Evaluación de las acciones de transición y hacer ajustes	18/7/2011-30/6/2012	ICAO/OACI	Valid/Válida	
C 3.10	Conduct transition plan Realizar el plan de transición	1/4/2012-30/6/2012	States/ Territories/ International Organizations Estados/ Territorios/ Organizaciones Internacionales	Valid/Válida	
C 3.11	Monitor the transition activities Monitorear las actividades de transición	1/10/2009-15/12/2012	ICAO/OACI	Valid/Válida	

CNS/ATM/SG PROJECT/PROYECTO C3
IMPLEMENTATION OF THE NEW ICAO FLIGHT PLAN MODEL /
IMPLANTACION DEL NUEVO MODELO DE PLAN DE VUELO DE LA OACI

Id	Tarea / Task	Inicio / Start	Fin / End	Recursos / Resources
1	**1. Etapa de preparación** **1. Preparation stage**	**2/01/09**	**28/06/12**	
2	1.1) Guías sobre la transición al nuevo formato de plan de vuelo presentado 1.1) Guidelines on the transition to the new flight plan format	2/01/09	31/12/09	OACI/ICAO
3	1.2) Elaborar una estrategia regional de transición al nuevo formato de plan de vuelo presentado 1.2) Develop regional strategy for transition to the new flight plan format	15/03/10	19/03/10	OACI/ICAO
4	1.3) Identificación de interesados involucrados y posible impacto de la implantación del nuevo formato de plan de vuelo presentado (FPL/RPL/CPL). 1.3) Identification of the stakeholders involved and possible impact of the implementation of the new flight plan format (FLP/RPL/CPL**)**	**1/10/09**	**28/02/11**	
5	1.3.1) Identificación de los Puntos Focales 1.3.1) Focal Point Identification	1/10/09	30/07/10	Estados, Territorios y Org Int States, Territories and Int Org
6	1.3.2) Identificación de los posibles impactos 1.3.2) Posible impact identification	15/03/10	30/09/10	Estados, Territorios y Org Int States, Territories and Int Org
7	1.3.3) Recolectar las evaluaciones 1.3.3) Collect the evaluations	1/10/10	30/11/10	OACI/ICAO
8	1.3.4) Análisis consolidado de las evaluaciones realizadas por los Estados 1.3.4) Consolidated analysis of the evaluations performed by the States	1/12/10	31/01/11	Miembros del Proyecto Project Members
9	1.3.5) Elaboración de informe con el análisis consolidado de las evaluaciones realizadas por los Estados 1.3.5) Preparation of the report with the consolidated analysis of the evaluations performed by the States	1/12/11	28/02/12	Coordinador del Proyecto Project Coordinator
10	1.4) Evaluación de las capacidades actuales/futuras de procesamiento de plan de vuelo con respecto al nuevo formato de plan de vuelo presentado 1.4) Evaluation of the current/future flight plan processing capabilities regarding the new flight plan format	1/10/09	30/12/10	OACI/ICAO

Id	Tarea / Task	Inicio / Start	Fin / End	Recursos / Resources
11	**1.5) Ensayos de conducta entre sistemas con capacidad de procesamiento del NUEVO plan de vuelo** **1.5) Conduct trials between the systems with new flight plan processing capacity**	**18/07/11**	**28/06/12**	
12	1.5.1) Propuesta de consideraciones para realizar los ensayos entre sistemas con capacidad de procesamiento del nuevo plan de vuelo 1.5.1) Proposed considerations to conduct trials between systems with the capacity to process the new flight plan	18/07/11	28/10/11	Proyecto C3/C3 Project
13	1.5.2) Realización de ensayos 1.5.2) Conduct trials	1/07/11	28/06/12	Estados y Territorios States and Territorios
14	**1.6) Elaboración de procedimientos de contingencia y determinación de consideraciones técnicas/operacionales para la transición** **1.6) Development of contingency procedures and determination of the technical/operational considerations for the transition**	**3/01/11**	**30/06/11**	
15	1.6.1) Elaboración de una guía con consideraciones para la elaboración de los procedimientos de contingencias 1.6.1) Preparation of a guideline with considerations for the development of contingency procedures	3/01/11	31/05/11	Proyecto C3/C3 Project
16	1.6.2) Elaboración de los procedimientos de contingencias 1.6.2) Development of contingency procedures	1/06/11	30/06/11	Estados y Territorios States and Territories
17	**1.7) Identificación de las partes principales que consideren la afluencia de datos de FP y definición de los pasos de transición basados en:** **1.7) Identification of major parties considering FP data flow and definition of transition steps based on:**	**3/01/11**	**30/06/11**	
18	1.7.1) sistemas con capacidad de procesar ambos formatos: actual y nuevo 1.7.1) systems with capability to process both formats: current and new	3/01/11	30/06/11	OACI/ICAO
19	1.7.2) sistemas a modernizarse/implementarse antes del 2012 y que serán capaces de procesar el nuevo formato de plan de vuelo presentado 1.7.2) systems to be updated/implemented before 2012 and that will be capable to process the new flight plan format	3/01/11	30/06/11	OACI/ICAO
20	**2. Etapa de transición** **2. Transition stage**	**30/06/11**	**30/06/12**	
21	**2.1) Publicación de acciones de transición, ensayos y otras publicaciones para los usuarios e interesados** **2.1) Publication of the transition actions, trials and other publications for the users and stakeholders**	**30/06/11**	**30/06/12**	

Id	Tarea / Task	Inicio / Start	Fin / End	Recursos / Resources
22	2.1.1) Publicación de acciones de transición 2.1.1) Publication of the transition actions	30/06/11	30/06/12	Estados, Territorios y Org Int. States, Territories and Int Org.
23	2.1.2) Propuesta de consideraciones técnicas/operacionales para la transición 2.1.2) Proposed technical/operational considerations for the transition	30/06/11	30/03/12	Proyecto C3/C3 Project
24	2.2) Evaluación de las acciones de transición y hacer ajustes 2.2) Assessment of the transition actions and make adjustments	18/07/11	29/06/12	OACI/ICAO
25	2.3) Realizar el plan de transición 2.3) Conduct a transition plan	1/04/12	30/06/12	Estados y Territorios States and Territories
26	**3. Etapa de monitoreo** **3. Monitoring step**	**1/10/09**	**15/12/12**	
27	3.1) Monitorear las actividades de transición 3.1) Monitor the transition activities	1/10/09	15/12/12	OACI/ICAO

PROGRAMME/PROGRAMA: GROUND-GROUND AND AIR-GROUND TELECOMMUNICATIONS INFRASTRUCTURE/ INFRAESTUCTURA DE COMUNICACIONES TIERRA-TIERRA Y TIERRA-AIRE

PROJECT/PROYECTO: D1. CAR/SAM ATN ARCHITECTURE / ARQUITECTURA DE LA ATN CAR/SAM

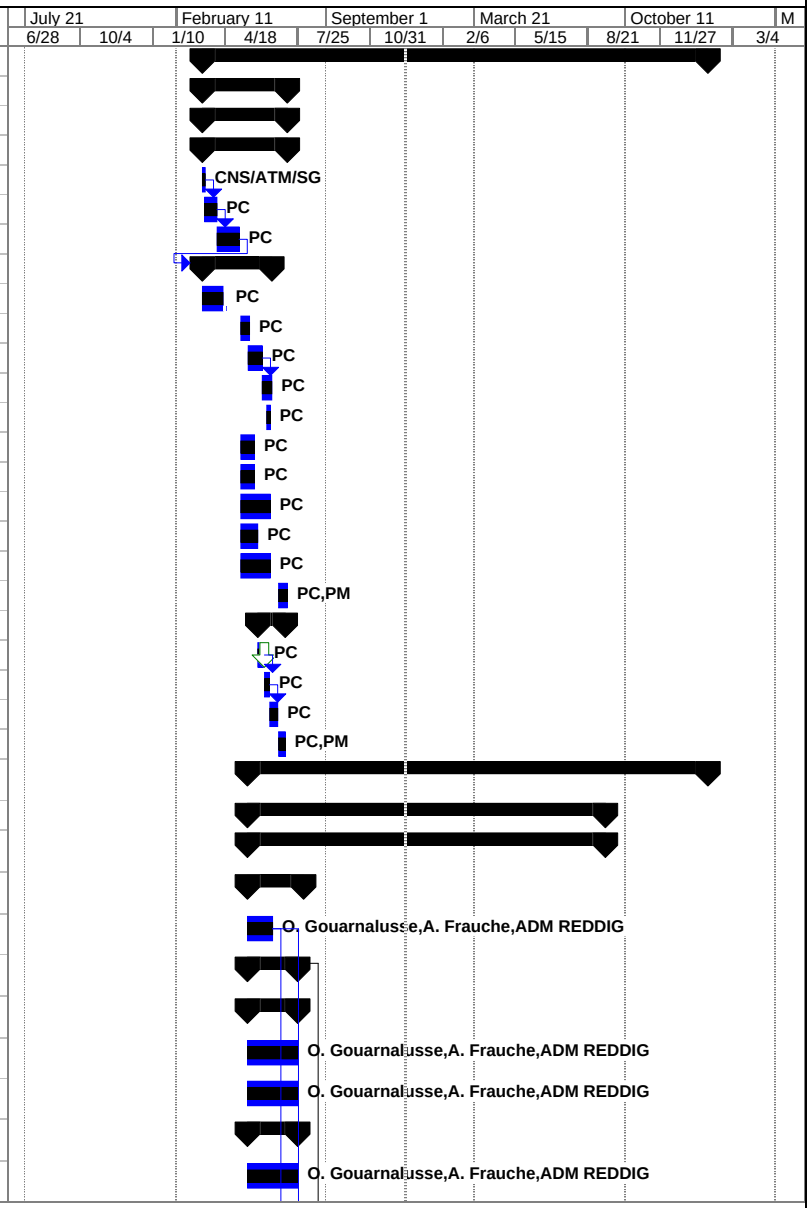
PROJECT COORDINATOR/ COORDINADOR DEL PROYECTO: Athayde Frauche

No.	Tarea/Task	Inicio Fin / Start End	Responsable / Responsible	Estado/Status	Deliverable/Entregable
1	2	3	4	5	6
D 1.1	Guide the interconnection/integration of Communications digital networks Guiar la interconexión/ integración de redes digitales de comunicaciones	Mar-Dec 2010 / Mar-Dic 2010	ICAO REDDIG Administration MEVA TMG Group OACI Administración REDDIG Grupo MEVA TMG	Valid/Válida	Evaluation of the performance of the interconnection of MEVA II/REDDIG Evaluación del desempeño de la interconexión MEVA II REDDIG
D 1.2	Technical revision of Regional Telecommunication Network for ATN implementation Revisión técnica de redes regionales de telecomunicaciones para la implantación de la ATN	Jun 2009- Jul 2011	ICAO REDDIG Administration MEVA TMG Group OACI Administración REDDIG Grupo MEVA TMG/	Valid/Válida	Technical study of MEVA II and REDDIG networks for ATN implementation Estudio técnico de las redes MEVA II y REDDIG para la implementación de la ATN
D 1.3	Trial implementation to determine ATN bandwidth to support ground application Implantación de pruebas para determinar el ancho de banda de la ATN para soportar las aplicaciones terrestre	2009-Sep 2010	Project D1 / Proyecto D1	Valid/Válida	Evaluation of the preliminary trials results on the definition of the CAR/SAM ATN bandwidth requirement Evaluación de los resultados de las pruebas preliminares para determinar ancho banda requerido para la red ATN en las Regiones CAR y SAM
D 1.4	Study for an IP ATN CAR/SAM backbone network configuration Estudio para la configuración de una red medular IP para las Regiones CAR/SAM	2009-Dec 2011 / 2009-Dic 2011	Project D1 / Proyecto D1	Valid/Válida	Study for the configuration of an IP backbone network Estudio para la configuración de una red medular IP
D 1.5	Update of CAR/SAM Router Plan Actualización del plan regional CAR/SAM de encaminadores	Jan 2012 / Ene 2012	OACI /ICAO	Valid/Válida	Update to CAR/SAM Regional Plan on ATN Routers Actualización al Plan regional CAR/SAM de encaminadores del ATN

No.	Tarea/Task	Inicio Fin / Start End	Responsable / Responsible	Estado/Status	Deliverable/Entregable
1	2	3	4	5	6
D 1.6	Analyze proposals for data Communications infrastructure in support of ATFM implementation This activity supports the activity *Support PBN and ATFM implementation, optimization of ATM routes and guidance for ATM service automation* covered in the communication area. Analizar las propuestas de infraestructura de comunicaciones de datos en apoyo de la implantación de la ATFM Esta actividad apoya la actividad *Soporte a la implantación del PBN el ATFM, optimización de las rutas ATM y guías para el servicio de automatización ATM* cubierta en el área de comunicaciones.	2009 - Dec 2011 / 2009 - Dic 2011	Project D1 / Proyecto D1 **Note**: Coordination needed with Programmes A (PBN), B (ATFM) and C (Situational Awareness) **Nota**: Coordinación requerida con Programas A (PBN), B (ATFM) y C (Comprensión Situacional)	Valid/Válida	Study of communication requirements to support ATFM implantation Estudio de requerimientos de las comunicaciones para soportar la implantación de la ATFM
D 1.7	Elaborate a CAR/SAM plan for the establishment of the communications system needed for the migration towards aeronautical MET messages exchange (METAR/SPECI and TAF) in the new format to be defined Elaborar un plan CAR/SAM para establecer el sistema de comunicaciones necesario para la migración hacia el intercambio de mensajes aeronáuticos MET (METAR/SPECI y TAF) en el nuevo formato a definirse	Jun 2011- Jun 2012	ICAO/OACI **Note**: Coordination needed with AERMET/SG **Nota**: Coordinación requerida con AERMET/SG	Valid/Válida	Study of communication requirement to support the migration to new OPMET format Estudio de requerimientos de comunicaciones para soportar la migración al nuevo formato OPMET

CNS/ATM/SG PROJECT/PROYECTO D1
STUDY FOR AN ATN NETWORK ARCHITECTURE FOR THE CAR/SAM REGIONS
ESTUDIO DE UNA ARQUITECTURA DE RED ATN PARA LAS REGIONES CAR/SAM

ID	WBS	Nombre de la tarea
1	**1**	**STUDY OF THE CAR/SAM ATN ARQUITECTURE /ESTUDIO DE LA ARQUITECTURA ATN CAR/SAM**
2	**1.1**	**PROJECT MANAGEMENT PROCESS / PROCESOS DE GERENCIAMIENTO DEL PROYECTO**
3	**1.1.1**	**FORMALIZATION OF THE PROJECT / FORMALIZACIÓN DEL PROYECTO**
4	**1.1.1.1**	**DP (Description of the Project / Descripición del Proyecto)**
5	1.1.1.1.1	Selection of the Project Coordinator / Elección del Coordinador del Proyecto
6	1.1.1.1.2	Selection of the Project Team of Brazil / Eleccion del Equipo de Proyecto de Brasil
7	1.1.1.1.3	Analysis of ICAO strategic planning / Analizar planificación estratégica OACI
8	**1.1.1.1.4**	**DRAFTING OF DP / ELABORACIÓN DE LA DP**
9	1.1.1.1.4.1	Project application environment / Ámbito de Aplicación del Proyecto
10	1.1.1.1.4.2	Project background / Antecedentes del Proyecto
11	1.1.1.1.4.3	Definition and analysis of main results / Definición y análisis de los principales resultados
12	1.1.1.1.4.4	Selection of whole Project team / Selección del equipo completo de proyecto
13	1.1.1.1.4.5	Assumptions definition and analysis / Definición y análisis de los supuestos
14	1.1.1.1.4.6	Restrictioins definition and analysis / Definición y análisis de restricciones
15	1.1.1.1.4.7	Risk definition and analysis / Definición y análisis de riesgo
16	1.1.1.1.4.8	Human resources definition and analysis / Definición y análisis de los recursos necesarios
17	1.1.1.1.4.9	Related projects definition and analysis / Definición y análisis de los proyectos relacionados
18	1.1.1.1.4.10	Project responsibility matrix / Matriz de responsabilidad del proyecto
19	1.1.1.1.5	**Project responsibility matrix / Entrega/aprobación del Documento (DP)**
20	**1.1.1.2**	**EAP**
21	1.1.1.2.1	Define initial project scope / Definir alcance inicial del proyecto
22	1.1.1.2.2	Define initial project framework / Definir marcos iniciales del proyecto
23	1.1.1.2.3	Define initial analytical structure of the project / Definir la estructura analítica inicial del proyecto
24	1.1.1.2.4	**EAP DELIVERY/APPROVAL / ENTREGA/APROBACIÓN DEL EAP**
25	**1.2**	**PROCESS FOR THE STUDY OF A CAR/SAM ATN INFRASTRUCTURE / PROCESOS DE ESTUDIOS DE UNA INFRAESTRUCTURA DE LA ATN CAR/SAM**
26	**1.2.1**	**START OF THE PROJECT / INICIO DEL PROYECTO**
27	**1.2.1.1**	**Collect and analyze current networks infrastructure and applications/services / Levantar y Analizar la infraestructura y Aplicaciones/Servicios de las Redes Actuales**
28	**1.2.1.1.1**	**Analysis of the current SAM communications network (REDDIG) / Analisis de la situación actual de la red de comunicaciones SAM (REDDIG)**
29	1.2.1.1.1.1	Analysis of REDDIGs current infrastructure / Análisis de la Infraestructura actual de la REDDIG
30	**1.2.1.1.1.2**	**Analysis of bandwidth used in REDDIG / Análisis del ancho de banda utilizado en la REDDIG**
31	**1.2.1.1.1.2.1**	**Analyze bandwidth for AFTN service / Analizar el ancho de Banda para el Servicio AFTN**
32	1.2.1.1.1.2.1.1	Identify and analyze traffic generated by the application / Identificar e analizar el tránsito generado por la aplicación
33	1.2.1.1.1.2.1.2	Analysis of the bandwidth used by the application / Análisis del ancho de banda utilizado por la aplicación
34	**1.2.1.1.1.2.2**	**Analyze band for voice over frame relay / Analizar Banda para Voz Over Frame Relay**
35	1.2.1.1.1.2.2.1	Identify and analyze traffic generated by the application / Identificar y analizar el tránsito generado por la aplicación



Projeto: ESTRUCTURA ANALÍTICA P
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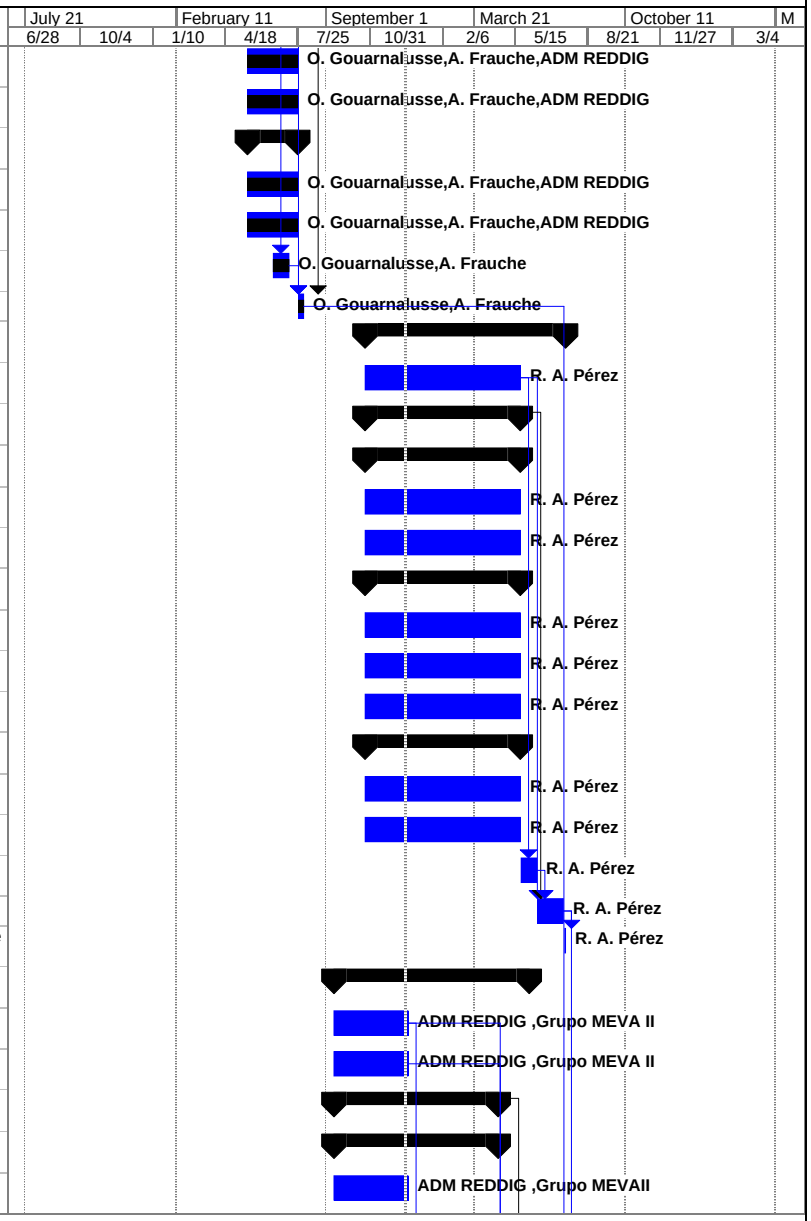
CNS/ATM/SG PROJECT/PROYECTO D1
STUDY FOR AN ATN NETWORK ARCHITECTURE FOR THE CAR/SAM REGIONS
ESTUDIO DE UNA ARQUITECTURA DE RED ATN PARA LAS REGIONES CAR/SAM

ID	WBS	Nombre de la tarea
36	1.2.1.1.1.2.2.2	Analysis of the bandwidth used with DAMA / Análisis del ancho de banda utilizado con la utilización de DAMA
37	1.2.1.1.1.2.2.3	Analysis of the bandwidth used with PAMA / Análisis del ancho de banda utilizado con la utilización de PAMA
38	**1.2.1.1.1.2.3**	**Analyze band for surveillance/automated systems / Analizar banda para sistema de vigilancia/automatizados**
39	1.2.1.1.1.2.3.1	Identify and analyze traffic generated by the application /Identificar e analizar el tránsito generado por la aplicación
40	1.2.1.1.1.2.3.2	Analysis of the bandwidth used by the application / Análisis del ancho de banda utilizado por la aplicación
41	1.2.1.1.1.3	Identify possible logistical problems in terms of equipment discontinuity / Identificar posibles problemas logísticos en términos de discontinuidad de equipos
42	1.2.1.1.1.4	Final report / Informe Final
43	**1.2.1.1.2**	**Analysis of the current CAR communications network (MEVA II) / Analisis de la situación actual de la red de comunicaciones car (MEVA II)**
44	1.2.1.1.2.1	Analysis of the MEVA II current infrastructure / Análisis de la Infraestructura actual de la MEVA II
45	**1.2.1.1.2.2**	**Analysis of the bandwidth used by MEVA II / Análisis del ancho de banda utilizado en la MEVA II**
46	**1.2.1.1.2.2.1**	**Analyze bandwidth for AFTN service /Analizar el ancho de Banda para el Servicio AFTN**
47	1.2.1.1.2.2.1.1	Identify and analyze traffic generated by the application / Identificar y analizar el tránsito generado por la aplicación
48	1.2.1.1.2.2.1.2	Analysis of the bandwidth used by the application / Análisis del ancho de banda utilizado por la aplicación
49	**1.2.1.1.2.2.2**	**Analyze band for voice over frame relay / Analizar Banda para Voz Over Frame Relay**
50	1.2.1.1.2.2.2.1	Identify and analyze traffic generated by the application / Identificar e analizar el tránsito generado por la aplicación
51	1.2.1.1.2.2.2.2	Analysis of the bandwidth used with DAMA / Análisis del ancho de banda utilizado com la utilización de DAMA
52	1.2.1.1.2.2.2.3	Analysis of the bandwidth used with PAMA / Análisis del ancho de banda utilizado com la utilización de PAMA
53	**1.2.1.1.2.2.3**	**Analyze band for surveillance/automated systems / Analizar Banda para Sistema de Vigilancia/automatizados**
54	1.2.1.1.2.2.3.1	Identify and analyze traffic generated by the application / Identificar e analizar el tránsito generado por la aplicación
55	1.2.1.1.2.2.3.2	Analysis of the bandwidth used by the application / Análisis del ancho de banda utilizado por la aplicación
56	1.2.1.1.2.3	Identify possible logistical problems in terms of equipment discontinuity / Identificar posibles problemas logísticos em términos de discontinuidad de equipos
57	1.2.1.1.2.4	Final report / Informe Final
58	1.2.1.1.2.5	Remittance of information to Project Coordinator /Envío de las Informaciones al Coordinador de Proyecto
59	**1.2.1.1.3**	**Analysis of the current MEVA II/REDDIG interconnection / Analisis de la situacion atual de la Interconexión MEVA II/REDDIG**
60	1.2.1.1.3.1	Analysis of the current interconnection infrastructure / Análisis de la Infraestructura actual de interconexión
61	1.2.1.1.3.2	MEVA II/REDDIG interconnection performance analysis / Análisis del desempeño de la interconexión MEVA II / REDDIG
62	**1.2.1.1.3.3**	**Analysis of the bandwidth used in the interconneciton / Análisis del ancho de banda utilizado en la interconexión**
63	**1.2.1.1.3.3.1**	**Analysis of bandwidth for AFTN service / Analizar el ancho de Banda para el Servicio AFTN**
64	1.2.1.1.3.3.1.1	Identify and analyze traffic generated by the application / Identificar y analizar el tránsito generado por la aplicación



Projeto: ESTRUCTURA ANALÍTICA P
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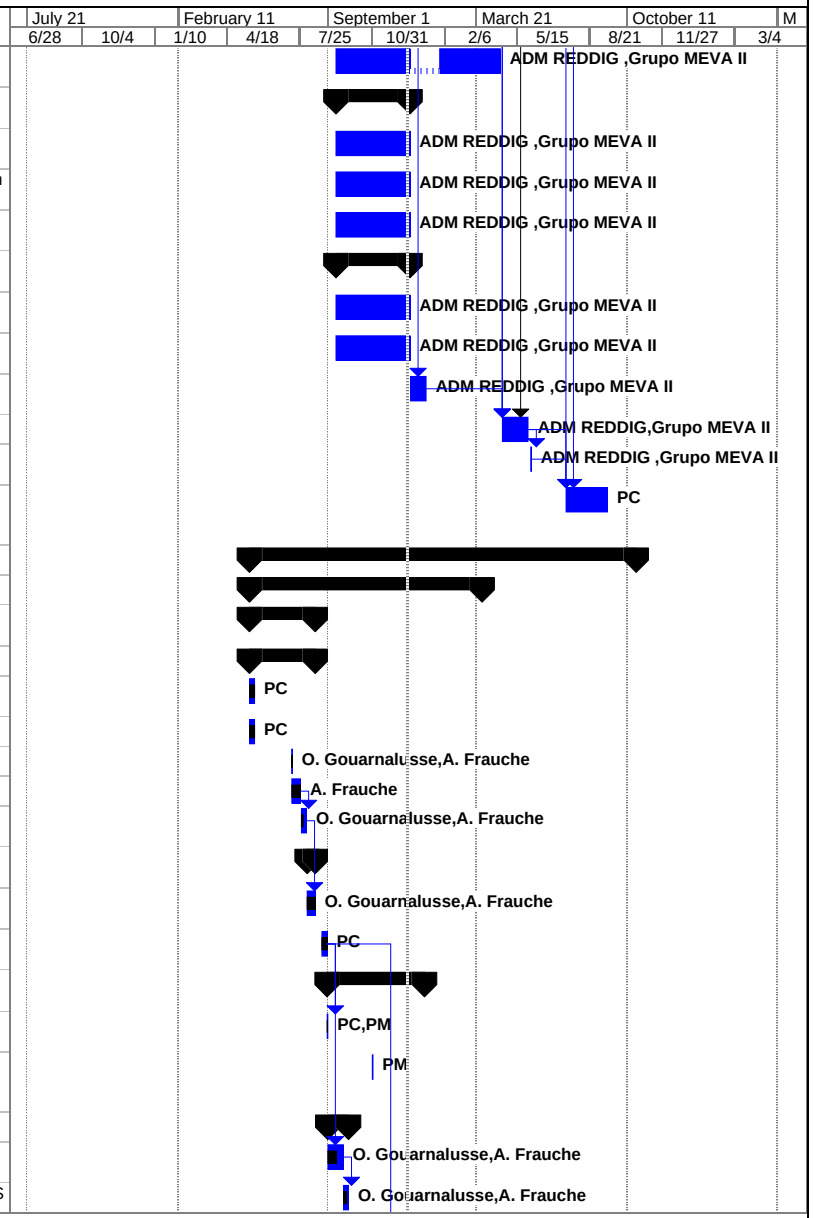
CNS/ATM/SG PROJECT/PROYECTO D1
STUDY FOR AN ATN NETWORK ARCHITECTURE FOR THE CAR/SAM REGIONS
ESTUDIO DE UNA ARQUITECTURA DE RED ATN PARA LAS REGIONES CAR/SAM

ID	WBS	Nombre de la tarea
65	1.2.1.1.3.3.1.2	Analysis of the bandwidth used by the services / Análisis del ancho de banda utilizado por los servicios
66	**1.2.1.1.3.3.2**	**Analyze band for voice over frame relay / Analizar Banda para Voz Over Frame Relay**
67	1.2.1.1.3.3.2.1	Identify and analyze traffic generated by the application / Identificar e analizar el tránsito generado por la aplicación
68	1.2.1.1.3.3.2.2	Analysis of the bandwidth used with DAMA /Análisis del ancho de banda utilizado con la utilización de DAMA
69	1.2.1.1.3.3.2.3	Analysis of the bandwidth used with PAMA / Análisis del ancho de banda utilizado con la utilización de PAMA
70	**1.2.1.1.3.3.3**	**Analyze band for surveillance/automated systems / Analizar Banda para Sistema de Vigilancia/automatizados**
71	1.2.1.1.3.3.3.1	Identify and analyze traffic generated by the application / Identificar y analizar el tránsito generado por la aplicación
72	1.2.1.1.3.3.3.2	Analysis of the bandwidth used by the application / Análisis del ancho de banda utilizado por la aplicación
73	1.2.1.1.3.4	Identify possible logistical problems in terms of equipment discontinuity / Identificar posibles problemas logísticos en términos de dIscontinuidad de equipos
74	1.2.1.1.3.5	Final report / Informe Final
75	1.2.1.1.3.6	Remittance of information to Programme Coordinator / Envío de la información al Coordinador de Programa
76	1.2.1.1.4	Consolidated report on the survey and analysis of the current network infrastructure and applications/services / Informe Consolidado del levantamiento y análisis de la infraestructura y aplicaciones/servicios de la red actual
77	**1.2.2**	**DESARROLLO DEL PROYECTO**
78	**1.2.2.1**	**Comunicaciones de datos en apoyo a la ATM**
79	**1.2.2.1.1**	**Trials to determine the ATN bandwidth to support ATM applications / Pruebas para Determinar el Ancho de Banda de la ATN para soportar aplicaciones ATM**
80	**1.2.2.1.1.1**	**Trials guideline for AMHS bandwidth / Guia de pruebas de Ancho de Banda AMHS**
81	1.2.2.1.1.1.1	Study the message statistics among States /Estudiar las estadísticas de mensajes entre Estados
82	1.2.2.1.1.1.2	Prepare the simulation script / Preparar el "script" para la simulación
83	1.2.2.1.1.1.3	Trials schedules / cronogramas de pruebas
84	1.2.2.1.1.1.4	Trials types / Tipos de pruebas
85	1.2.2.1.1.1.5	Carry out trials between Argentina (Ezeiza) and Brazil (Manaos) / Realizar las Pruebas entre Argentina (Ezeiza) y Brasil (Manaos)
86	**1.2.2.1.1.6**	**Analysis of the data and AMHS bandwidth determination / Análisis de los Datos y Determinación del Ancho de Banda para AMHS**
87	1.2.2.1.1.6.1	Analysis of the trials AMHS data between Argentina (Ezeiza) and Brasil (Manaus) / Análisis de los datos de las pruebas de AMHS entre Argentina (Ezeiza) y Brasil
88	1.2.2.1.2	Final report on bandwidth necessary for AMHS / Informe Final de la determinación del ancho de banda necesario para AMHS
89	**1.2.2.1.3**	**Analysis to the bandwidth impact in the current satellite infrastructure / Análisis del impacto del ancho de banda en la infraestructura actual satelital**
90	1.2.2.1.3.1	Inform REDDIG Administration of the trial results between Ezeiza and Manaos / Informar a la Administración de la REDDIG los resultados de las pruebas entre Manaos y Ezeiza
91	1.2.2.1.3.2	Inform MEVA II Administration (TMG) on the trial results between Ezeiza and Manaos / Informar a la Administración de la MEVA II (TMG) los resultados de las pruebas entre Manaos y Ezeiza
92	**1.2.2.1.3.3**	**Bandwidth in REDDIG / Ancho de Banda en la REDDIG**
93	1.2.2.1.3.3.1	Study the bandwidth necessary for AMHS under current configuration / Estudiar el ancho de banda necesario para AMHS con la configuración actual
94	1.2.2.1.3.3.2	Determine the costs increase for AMHS / Determinar el incremiento de costos para AMHS



Projeto: ESTRUCTURA ANALÍTICA P
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Tarefa		Etapa		Tarefas externas	
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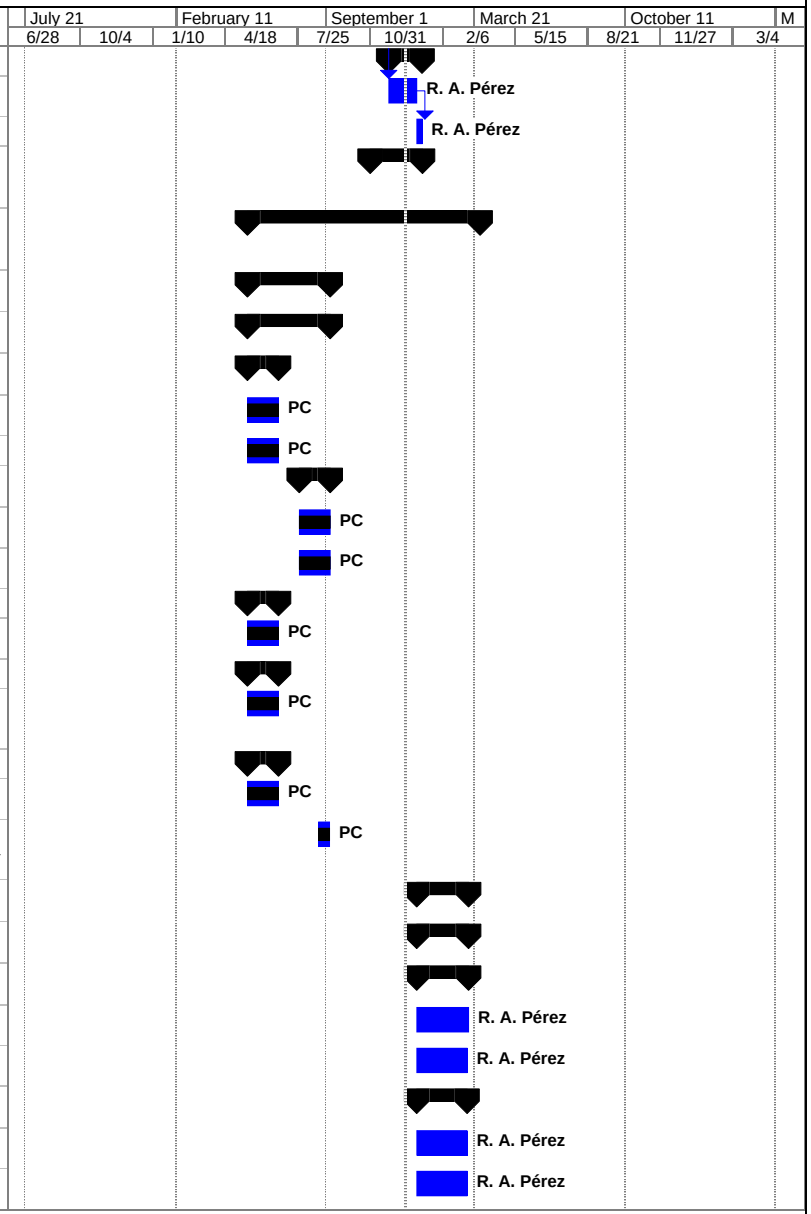
Andamento		Resumo do projeto		Data limite	

CNS/ATM/SG PROJECT/PROYECTO D1
STUDY FOR AN ATN NETWORK ARCHITECTURE FOR THE CAR/SAM REGIONS
ESTUDIO DE UNA ARQUITECTURA DE RED ATN PARA LAS REGIONES CAR/SAM

ID	WBS	Nombre de la tarea
95	**1.2.2.1.3.4**	**Bandwidth in MEVA II / Ancho de Banda en la MEVA II**
96	1.2.2.1.3.4.1	Study the bandwidth necessary for AMHS under current configuration / Estudiar el ancho de banda necesario para AMHS com la configuración actual
97	1.2.2.1.3.4.2	Determine the costs increase for AMHS / Determinar el incremiento de costos para AMHS
98	**1.2.2.1.3.5**	**Study and analysis of bandwidth in the MEVAII/REDDIG interconexion / Estudio y analisis de la utilización de ancho de banda em la interconexión de las redes MEVA II/ REDDIG**
101	**1.2.2.1.4**	**Identify and study the new services and applications in the CAR/SAM Regions / Identificar y estudiar los nuevos servicios e aplicaciones ATN en las Regiones CAR/SAM**
102	**1.2.2.1.4.1**	**Long term applications requirements for the SAM Region / Requerimientos de Aplicaciones a lo largo del tiempo em la Región SAM**
103	**1.2.2.1.4.1.1**	**ATM AUTOMATION AND SITUATIONAL AWARENESS / AUTOMATIZACION ATM Y CONPRENSION SITUACIONAL**
104	**1.2.2.1.4.1.1.1**	**Automation (systems interconnection) / Automatización (Interconexión de Sistemas)**
105	1.2.2.1.4.1.1.1.1	Analysis of bandwidth requirements for AIDC/OLDI application / Analizar los requerimientos de ancho de banda para la aplicación AIDC/OLDI
106	1.2.2.1.4.1.1.1.2	Analizar los requerimientos de ancho de banda para la aplicación de datos radar
107	**1.2.2.1.4.1.1.2**	**Improvement to the situational awareness / Mejora a la Comprensión Situacional**
108	1.2.2.1.4.1.1.2.1	Analysis of bandwidth requirements for ADS application / Analizar los requerimientos de ancho de banda para las aplicación ADS
109	1.2.2.1.4.1.1.2.2	Analysis of bandwidth requirements for Multilateration application / Analizar los requerimientos de ancho de banda para la aplicación Multilataración
110	**1.2.2.1.4.1.2**	**AIM**
111	1.2.2.1.4.1.2.1	Analyze the bandwidth requirements for related applications / Analizar los requerimientos de ancho de banda para las aplicaciones relacionadas
112	**1.2.2.1.4.1.3**	**ATFM**
113	1.2.2.1.4.1.3.1	Analysis of bandwidth requriements for applications in support of ATFM implementation / Analizar los requerimientos de ancho de banda para las aplicaciones en apoyo de la Implantación de la ATFM
114	**1.2.2.1.4.1.4**	**MET**
115	1.2.2.1.4.1.4.1	Analyze bandwidth requirements for MET applications / Analizar los requerimientos de ancho de banda para las aplicaciones MET
116	1.2.2.1.4.2	Consolidated report on the study for new services and ATM/ATN applications in the SAM Region / Informe Consolidado del Estudio de Nuevos Servicios y Aplicaciones ATM / ATN en la Región SAM
117	**1.2.2.1.4.3**	**Long term applications requirements for the CAR Region / Requerimientos de Aplicaciones a lo largo del tiempo em la Región CAR**
118	**1.2.2.1.4.3.1**	**ATM AUTOMATION AND SITUATIONAL AWARENESS / AUTOMATIZACION ATM Y CONPRENSION SITUACIONAL**
119	**1.2.2.1.4.3.1.1**	**Automation (systems interconnection) / Automatización (Interconexión de Sistemas)**
120	1.2.2.1.4.3.1.1.1	Analysis of bandwidth requirements for AIDC/OLDI application / Analizar los requerimientos de ancho de banda para la aplicación AIDC/OLDI
121	1.2.2.1.4.3.1.1.2	Analysis of bandwidth requirements for radar data application / Analizar los requerimientos de ancho de banda para la aplicación de datos radar
122	**1.2.2.1.4.3.1.2**	**Improvement to the situational awareness / Mejora a la Comprensión Situacional**
123	1.2.2.1.4.3.1.2.1	Analysis of bandwidth requirements for ADS application / Analizar los requerimientos de ancho de banda para las aplicación ADS
124	1.2.2.1.4.3.1.2.2	Analysis of bandwidth requirements for Multilateration I application / Analizar los requerimientos de ancho de banda para la aplicación Multilataración I



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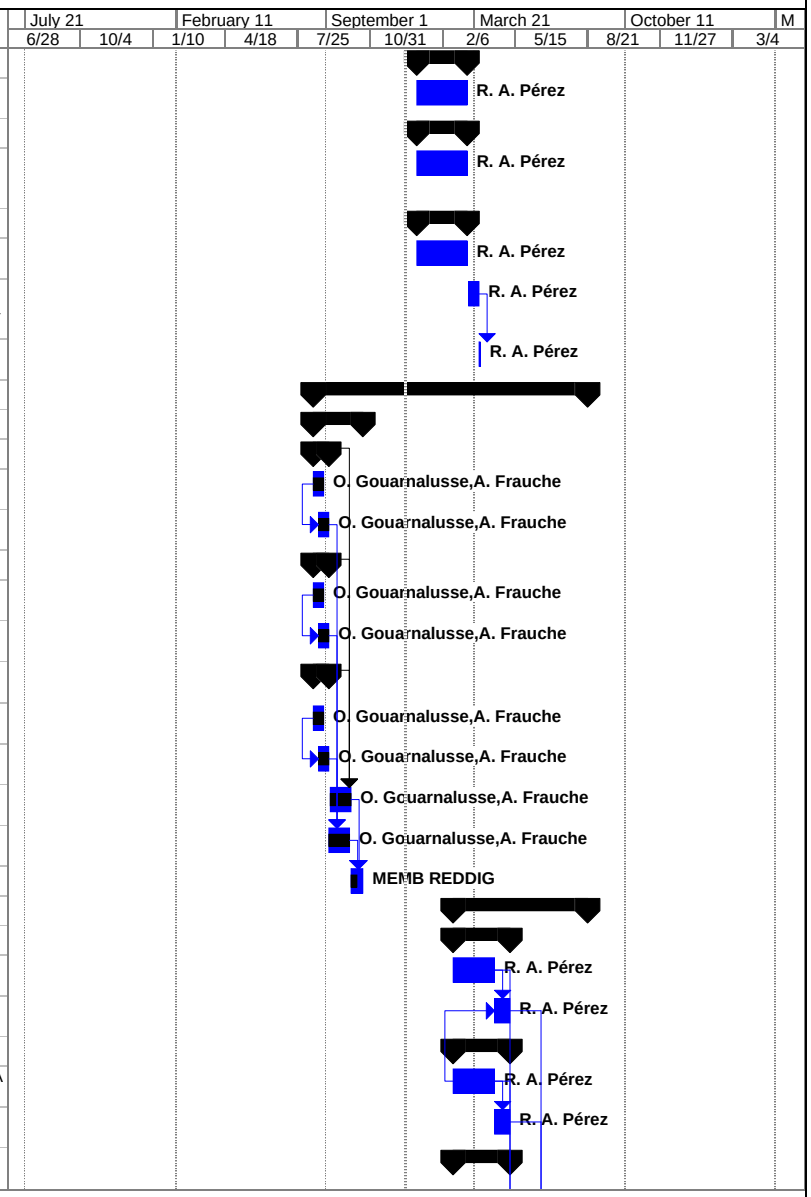
CNS/ATM/SG PROJECT/PROYECTO D1
STUDY FOR AN ATN NETWORK ARCHITECTURE FOR THE CAR/SAM REGIONS
ESTUDIO DE UNA ARQUITECTURA DE RED ATN PARA LAS REGIONES CAR/SAM

ID	WBS	Nombre de la tarea
125	**1.2.2.1.4.3.2**	**AIM**
126	1.2.2.1.4.3.2.1	Analyze the bandwidth requirements for related applications / Analizar los requerimientos de ancho de banda para las aplicaciones relacionadas
127	**1.2.2.1.4.3.3**	**ATFM**
128	1.2.2.1.4.3.3.1	Analysis of bandwidth requriements for applications in support of ATFM implementation / Analizar los requerimientos de ancho de banda para las aplicaciones en apoyo de la Implantación de la ATFM
129	**1.2.2.1.4.3.4**	**MET**
130	1.2.2.1.4.3.4.1	Analysis of bandwidth requirements for MET applications / Analizar los requerimientos de ancho de banda para las aplicaciones MET
131	1.2.2.1.4.4	Consolidated report on the study for new services and ATM/ATN applications in the CAR Region / Informe Consolidado del Estudio de Nuevos Servicios y Aplicaciones ATM / ATN en la Región CAR
132	1.2.2.1.4.5	Remittance of information to the Project Coordinator / Envío de las Informaciones al Coordinador del Proyecto
133	**1.2.2.2**	**Study of the desired scenario / Estudio del escenário deseado**
134	**1.2.2.2.1**	**SAM Network / Red SAM**
135	**1.2.2.2.1.1**	**Infrastructure of a satellite network / Infraestructura de una Red Satélite**
136	1.2.2.2.1.1.1	Study on a SAM satellite IP network structure / Estudiar una estructura de rede IP SAM satelital
137	1.2.2.2.1.1.2	Determination of SAM satellite network costs / Determinación de los costos de Red SAM Satelital
138	**1.2.2.2.1.2**	**Infrastructure of a ground network / Infraestructura de una Red Terrestre**
139	1.2.2.2.1.2.1	Study on a SAM ground IP network structure / Estudiar una estructura de rede IP SAM Terrestre
140	1.2.2.2.1.2.2	Determination of SAM ground network costs / Determinación de los costos de Red SAM Terrestre
141	**1.2.2.2.1.3**	**Infrastructure of a mixed network (satellite + ground) / Infraestructura de una Red Mixta (Satélite + Terrestre)**
142	1.2.2.2.1.3.1	Study on a SAM mixed IP network structure (satellite + ground) / Estudiar una estructura de rede IP SAM Mixta (terrestre y satélite)
143	1.2.2.2.1.3.2	Determination of SAM mixed network costs / Determinación de los costos de Red SAM Mixta
144	1.2.2.2.1.4	Comparative analysis between network infrastructures / Análisis comparativo entre las infraestructuras de red
145	1.2.2.2.1.5	Analysis of desired platform implementation costs / Análisis de costos de implementación de la plataforma deseada
146	1.2.2.2.1.6	Definition of desired platform / Definición de la Plataforma deseada
147	**1.2.2.2.2**	**CAR Network / Red CAR**
148	**1.2.2.2.2.1**	**Infrastructure of a satellite network / Infraestructura de una Red Satélite**
149	1.2.2.2.2.1.1	Study on a MEVA II satellite IP network structure / Estudiar uma estructura de rede IP MEVAII satelital
150	1.2.2.2.2.1.2	Determination of MEVA II satellite network costs / Determinación de los costos de Red MEVAII Satelital
151	**1.2.2.2.2.2**	**Infrastructure of a ground network /Infraestructura de una Red Terrestre**
152	1.2.2.2.2.2.1	Study on a MEVA II ground IP network structure / Estudiar uma estructura de red IP MEVA II Terrestre
153	1.2.2.2.2.2.2	Determination of MEVA II ground network costs / Determinación de los costos de Red MEVA II Terrestre
154	**1.2.2.2.2.3**	**Infrastructure of a mixed network (satellite + ground) / Infraestructura de una Red Mixta (Satélite + Terrestre)**



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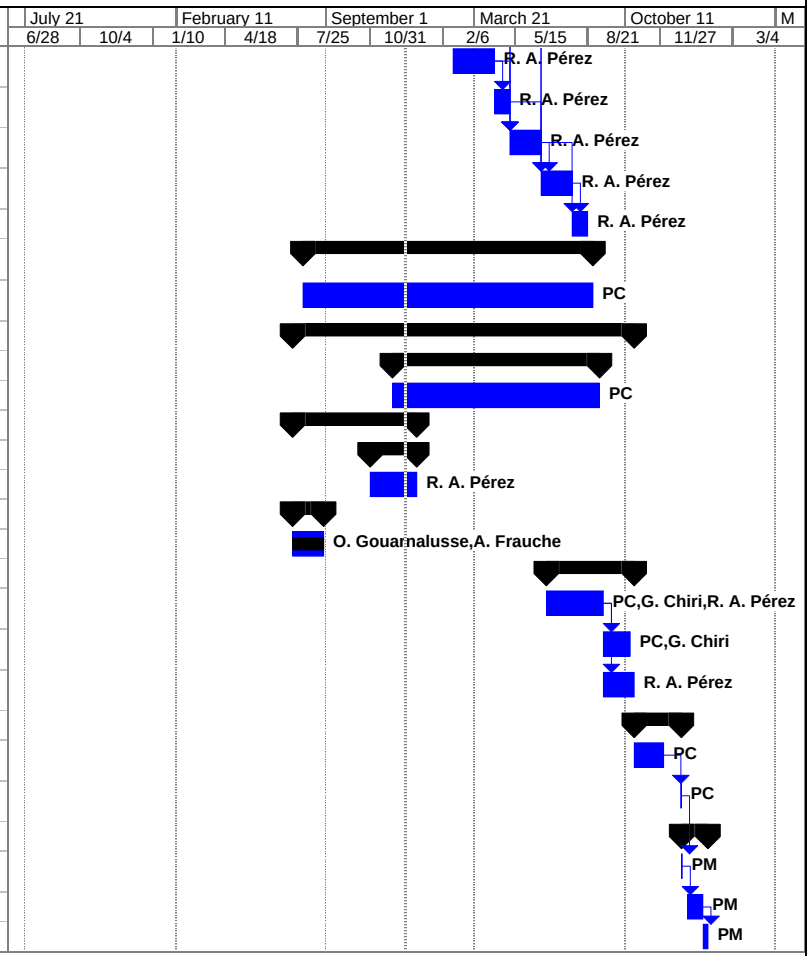
STUDY FOR AN ATN NETWORK ARCHITECTURE FOR THE CAR/SAM REGIONS
ESTUDIO DE UNA ARQUITECTURA DE RED ATN PARA LAS REGIONES CAR/SAM

ID	WBS	Nombre de la tarea
155	1.2.2.2.2.3.1	Study on a MEVA II mixed IP network structure (satellite + ground) / Estudiar una estructura de rede IP MEVA II Mixta (terrestre y satélite)
156	1.2.2.2.2.3.2	Determination of MEVA II mixed network costs / Determinación de los costos de red MEVA II mixta
157	1.2.2.2.2.4	Comparative analysis between network infrastructures / Análisis comparativo entre las infraestructuras de red
158	1.2.2.2.2.5	Analysis of desired platform implementation costs / Análisis de costos de implementación de la plataforma deseada
159	1.2.2.2.2.6	Definition of desired platform / Definición de la Plataforma deseada
160	**1.2.2.3**	**Drafting of guide on development of information security / Elaborar Guía de Desarrollo de Seguridad de la Información**
161	1.2.2.3.1	Completion of guide on MEVA II/REDDIG network communications security / Completar el guía de seguridad para las redes de comunicaciones MEVA II/REDDIG
162	**1.2.2.4**	**Networks addressing /Direccionamiento de las redes**
163	**1.2.2.4.1**	**Drafting of document on IP routing policy / Elaborar el documento IP Routing Policy**
164	1.2.2.4.1.1	Completion of IP routing policy document / Completar el documento IP Routing Policy
165	**1.2.2.4.2**	**IPv4 addressing / Direccionamiento IPv4**
166	**1.2.2.4.2.1**	**CAR Network / Rede CAR**
167	1.2.2.4.2.1.1	Completion of IPv4 addressing plan / Completar el plan de direccionamiento IPv4
168	**1.2.2.4.2.2**	**SAM NetworkRede SAM**
169	1.2.2.4.2.2.1	Completion of IPv4 addressing plan / Completar el plan de direccionamiento IPv4
170	**1.2.2.4.3**	**IPv6 addressing guide / Guía de Direccionamiento IPv6**
171	1.2.2.4.3.1	Draft a methodology of IPv6 addressing for the CAR and SAM Regions / Elaborar la metodología de direccionamiento IPv6 para las Regiones CAR y SAM
172	1.2.2.4.3.2	Drafting of an IPv6 addressing plan for the SAM Region / Elaborar el plan de direccionamiento IPv6 para la Región SAM
173	1.2.2.4.3.3	Drafting of an IPv6 addressing plan for the CAR Region / Elaborar el plan de direccionamiento IPv6 para la Región CAR
174	**1.2.3**	**IMPLEMENTATION MONITORING / MONITOREO DE IMPLANTACIÓN**
175	1.2.3.1	Consolidation of final project study documentation / Consolidación de la documentación Final del estúdios del proyecto
176	1.2.3.2	Delivery of final study documentation to ICAO SAM RO / Entrega de la documentación final de los Estudios a la OR SAM OACI
177	**1.2.4**	**PROJECT CLOSING / CIERRE DEL PROYECTO**
178	1.2.4.1	Reception of project documentation by CNS/ATM/SG / Recibo de documentación del proyecto por el CNS/ATM/SG
179	1.2.4.2	ICAO acceptance of studies / Proceso de Aceptación de los Estudios por la OACI
180	1.2.4.3	Documentation archiving / Archivo de la documentación



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PROGRAMME/PROGRAMA: GROUND-GROUND AND AIR-GROUND TELECOMMUNICATIONS INFRASTRUCTURE/ INFRAESTUCTURA DE COMUNICACIONES TIERRA-TIERRA Y TIERRA-AIRE

PROJECT/PROYECTO: D2. ATN GROUND-GROUND AND AIR-GROUND APPLICATIONS / APLICACIONES TIERRA-TIERRA Y AIRE-TIERRA DEL ATN

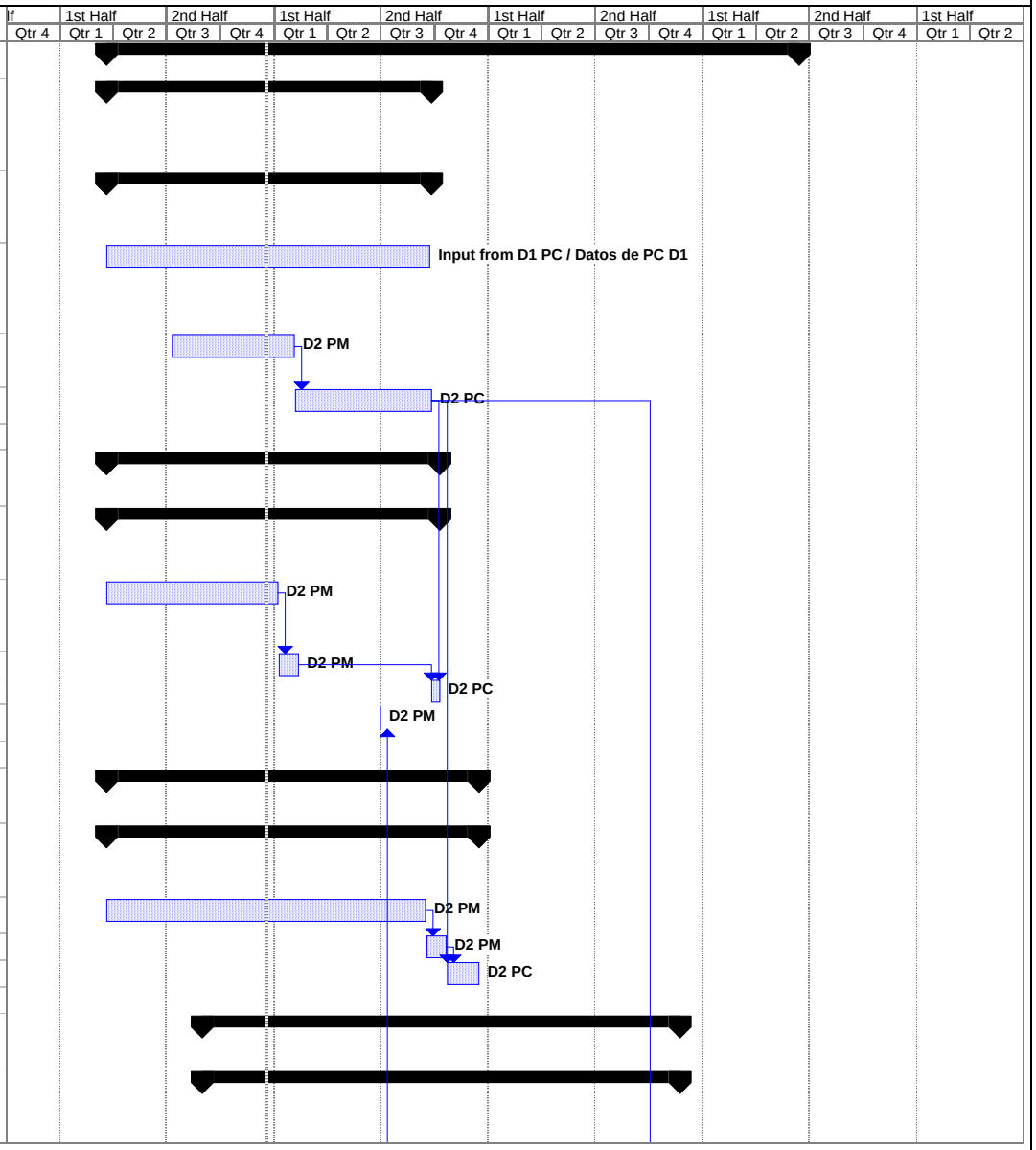
PROJECT COORDINATOR/ COORDINADOR DEL PROYECTO: Dulce Rosés

No.	Tarea/Task	Inicio Fin / Start End	Responsable / Responsible	Estado/Status	Entregable/ Deliverable
1	2	3	4	5	6
D 2.1	Review, update and complete initial transition plan for the evolutionary development of ATN and applications Revisar, actualizar y completar el plan de transición inicial para el desarrollo evolutivo de la ATN y sus aplicaciones	2003-Nov 2010	Project D2 / Proyecto D2 Note: Coordination needed with Project D1 Nota: Coordinación requerida con Proyecto D1	Valid/Válida	Transition Plan for the ATN and its applications in the CAR/SAM regions Plan de transición de la ATN y sus aplicaciones en las Regiones CAR/SAM/
D 2.2	Guide de development of ATN addressing plan according to ICAO technical principles and guidelines Orientar el desarrollo del plan de direccionamiento ATN, de conformidad con los principios y disposiciones técnicas de la OACI	2008-Feb 2011	ICAO/States/ Territories OACI/ Estados/ Territorios	Valid/Válida	AMHS addressing plan Plan de direccionamiento AMHS
D 2.3	Implementation Plan for ATN Ground-ground applications (AMHS) Plan de implantación de las Aplicacion tierra-tierra del ATN (AMHS)	2009–Jun 2011	Project D2 / Proyecto D2	Valid/Válida	1. Implementation plan for ground-ground ATN applications (AMHS) Plan de implantación de las aplicación tierra-tierra del ATN (AMHS) 2. Update proposal for CNS Table 1Bb Propuesta de actualización a Tabla CNS 1Bb
D 2.4	Implementation Plan for ATN Ground-ground applications (AIDC) Plan de implantación de las Aplicaciones tierra-tierra del ATN (AIDC)	2009-Dec 2011 / 2009–Dic 2011	Project D2 / Proyecto D2	Valid/Válida	1. Implementation Plan for Ground-ground ATN Applications (AIDC) Plan de implantación de las aplicaciones tierra-tierra del ATN (AIDC) 2. Proposal to update of CNS Table 1Bb Propuesta de actualización a Tabla CNS 1Bb
D 2.5	Coordination and trials for ATN ground applications implementation Coordinación y prueba para aspecto de implantación de aplicaciones tierra tierra de la ATN	2009-Dic 2012 / 2009–Dec 2012	Project D2 / Proyecto D2	Valid/Válida	Evaluation and recommendations on the AMHS coordination and trials conducted Evaluación y recomendaciones a la coordinación y pruebas realizadas sobre el AMHS

No.	Tarea/Task	Inicio Fin / Start End	Responsable / Responsible	Estado/Status	Entregable/ Deliverable
1	2	3	4	5	6
D 2.6	Develop a VDL implementation Plan and its application Desarrollar un plan de implantación VDL y su aplicación	Jun 2011– Jun 2012	ICAO/ OACI	Valid/Válida	CAR/SAM VDL Implementation Plan and its applications Plan de implantación del VDL y sus aplicaciones para las Regiones CAR y SAM
D 2.7	Monitor VDL implementation trials and its applications Monitorear iimplementación de ensayos de VDL y sus aplicaciones	Jun 2011- Jun 2013	Project D2 / Proyecto D2	Valid/Válida	Evaluation of results on the trials for the implementation of VDL and its applications Evaluación de los resultados de los ensayos para la implementación del VDL y sus aplicaciones
D 2.8	Initial transition plan of ground/air ATN application Plan de transición inicial de las aplicaciones tierra aire de la ATN	2009-Jun 2012	Project D2 / Proyecto D2	Valid/Válida	Transition plan for ground air ATN applications Plan de transición de las aplicaciones tierra aire de la ATN
D 2.9	Monitor implementation of technology available to facilitate ground and onboard applications Monitorear la implantación de tecnologías disponibles para facilitar aplicaciones en tierra y a bordo	2008-Jun 2013	ICAO/States/ Territories OACI/ Estados/ Territorios	Valid/Válida	Monitor available implementation technology for ATN ground air applications Monitorear la implantación de tecnología disponible para las aplicaciones tierra aire de la ATN

CNS/ATM/SG PROJECT/PROYECTO D2
ATN GROUND-GROUND AND AIR-GROUND APPLICATIONS
APLICACIONES TIERRA-TIERRA Y AIRE-TIERRA DE LA ATN

ID	Task Name	Start	Finish
1	**D2. ATN GROUND-GROUND AND AIR-GROUND APPLICATIONS / D2. APLICACIONES TIERRA-TIERRA Y AIRE-TIERRA DEL ATN**	**Mon 3/22/10**	**Fri 6/14/13**
2	**D 2.1 Review, update and complete initial transition plan for the evolutionary development of ATN and applications / Revisar, actualizar y completar el plan de transición inicial para el desarrollo evolutivo de la ATN y sus aplicaciones**	**Mon 3/22/10**	**Mon 9/26/11**
3	**DELIVERABLE: Transition Plan for the ATN and its applications in the CAR/SAM regions / Plan de transición de la ATN y sus aplicaciones en las Regiones CAR/SAM**	**Mon 3/22/10**	**Mon 9/26/11**
4	Revision and coordination with Project D1 on existing guides (security document, IP routing policy, IP addressing plan) / Revisión y coordinación con Proyecto D1 sobre guías existentes (documento seguridad, política enrutamiento IP, plan direccion IP)	Mon 3/22/10	Fri 9/23/11
5	Evaluation of transition aspects of ATN applications / Evaluación sobre aspectos de transición de las aplicaciones ATN	Mon 7/12/10	Fri 2/4/11
6	Elaboration of Draft Plan / Elaboración de borrador de Plan	Mon 2/7/11	Mon 9/26/11
7			
8	**D 2.3 Implementation Plan for ATN Ground-ground applications (AMHS) / Plan de implantación de las Aplicacion tierra-tierra del ATN (AMHS)**	**Mon 3/22/10**	**Mon 10/10/11**
9	**DELIVERABLE: Implementation Plan for Ground-ground ATN Applications (AMHS) / Plan de implantación de las aplicación tierra-tierra del ATN (AMHS)**	**Mon 3/22/10**	**Mon 10/10/11**
10	Information collection on technical, operational, transition and other implementation aspects for AMHS / Recolección de información sobre aspectos técnicos, operacionales, de transición e implantación sobre AMHS	Mon 3/22/10	Fri 1/7/11
11	Evaluation of information / Evaluación de la información	Mon 1/10/11	Fri 2/11/11
12	Draft Plan / Borrador de plan	Tue 9/27/11	Mon 10/10/11
13	Revision and new draft based on trial results / Revisión y nuevo borrador con base en resultados de ensayos	Fri 7/1/11	Fri 7/1/11
14			
15	**D 2.4 Implementation Plan for ATN Ground-ground applications (AIDC) / Plan de implantación de las aplicaciones tierra-tierra del ATN (AIDC)**	**Mon 3/22/10**	**Fri 12/16/11**
16	**DELIVERABLE: Implementation Plan for Ground-ground ATN Applications (AIDC) / Plan de implantación de las aplicaciones tierra-tierra del ATN (AIDC)**	**Mon 3/22/10**	**Fri 12/16/11**
17	Information collection on Technical, operational, transition and other implementation aspects for AIDC	Mon 3/22/10	Fri 9/16/11
18	Evaluation of information / Evaluación de la información	Mon 9/19/11	Fri 10/21/11
19	Draft Plan / Borrador de plan	Mon 10/24/11	Fri 12/16/11
20			
21	**D 2.5 Coordination and trials for ATN ground applications implementation / Coordinación y prueba para aspecto de implantación de aplicaciones tierra tierra de la ATN**	**Wed 9/1/10**	**Fri 11/23/12**
22	**DELIVERABLE: Evaluation and recomendations on the AMHS coordination and trials conducted / Evaluación y recomendaciones a la coordinación y pruebas realizadas sobre el AMHS**	**Wed 9/1/10**	**Fri 11/23/12**

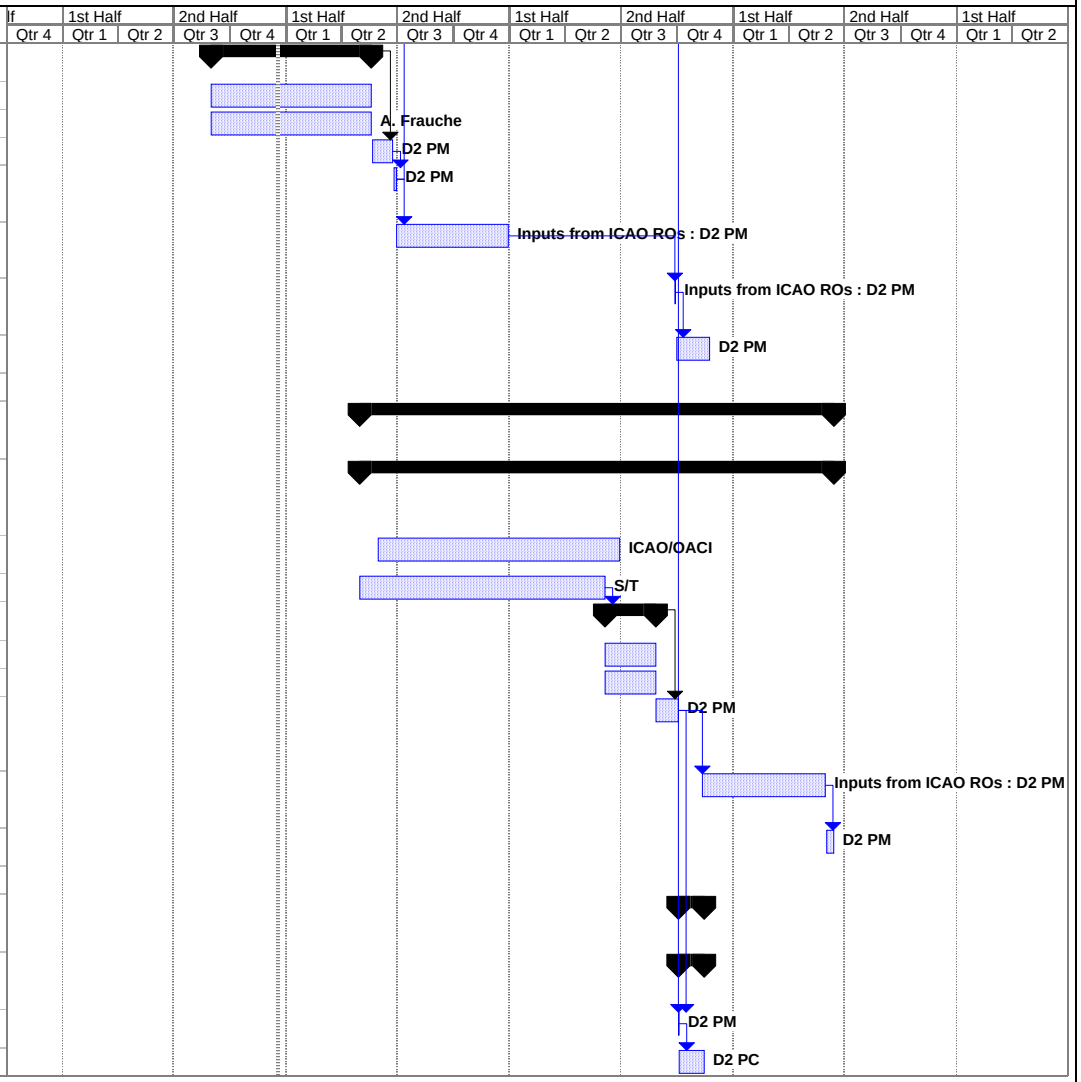


Project: D2 Project proposal
Date: Fri 12/17/10

Task | Progress | Summary | External Tasks | Split
Split | Milestone | Project Summary | External MileTask

PC = Project Coordinator / Coordinador de Proyecto
PM = Project Members / Miembros de Proyecto
S/T = States/Territories / Estados/Territorios

ID	Task Name	Start	Finish
23	**AMHS trial results / Resultados de los ensayos sobre AMHS**	**Wed 9/1/10**	**Fri 5/20/11**
24	CAR Region / Región CAR	Wed 9/1/10	Fri 5/20/11
25	SAM Region / Región SAM	Wed 9/1/10	Fri 5/20/11
26	Preliminary analisis / Análisis preliminar	Mon 5/23/11	Fri 6/24/11
27	Recommendations and consideration aimed to implementation / Recomendaciones y consideraciones hacia la implantación	Mon 6/27/11	Thu 6/30/11
28	Evaluation of trial results 2011 and make recommendations / Evaluar a los resultados de ensayos 2011 y efectuar recomendaciones	Fri 7/1/11	Fri 12/30/11
29	Evaluation of trial results 2012 and make recommendations / Evaluar a los resultados de ensayos 2012 y efectuar recomendaciones	Fri 9/28/12	Fri 9/28/12
30	If applicable, proposal of update to implementation Plan / Si aplicable, propuesta para actualizar Plan implantación	Mon 10/1/12	Fri 11/23/12
31			
32	**D 2.7 Monitor VDL implementation trials and its applications / Monitorear iimplementación de ensayos de VDL y sus aplicaciones**	**Mon 5/2/11**	**Fri 6/14/13**
33	**DELIVERABLE: Evaluation of results on the trials for the implementation of VDL and its applications / Evaluación de los resultados de los ensayos para la implementación del VDL y sus aplicaciones**	**Mon 5/2/11**	**Fri 6/14/13**
34	Development of VDL Implementation Plan / Desarrollo de plan de implantación VDL	Wed 6/1/11	Fri 6/29/12
35	Trial plans / Planes para los ensayos	Mon 5/2/11	Tue 6/5/12
36	**VDL applications trial results / Resultados de los ensayos sobre aplicaciones VDL**	**Wed 6/6/12**	**Mon 8/27/12**
37	CAR Region / Región CAR	Wed 6/6/12	Mon 8/27/12
38	SAM Region / Región SAM	Wed 6/6/12	Mon 8/27/12
39	Recommendations and consideration aimed to support ICAO's development of the Plan / Recomendaciones y consideraciones en apoyo al desarrollo del Plan por la OACI	Tue 8/28/12	Wed 10/3/12
40	Evaluation of trial results 2012/2013 and make recommendations / Evaluar a los resultados de ensayos 2012/2013 y efectuar recomendaciones	Mon 11/12/12	Fri 5/31/13
41	If applicable, proposal of update to implementation plan / Si aplicable, propuesta para actualizar plan implantación	Mon 6/3/13	Fri 6/14/13
42			
43	**D 2.8 Initial transition plan of ground/air ATN application / Plan de transición inicial de las aplicaciones tierra-aire de la ATN**	**Thu 10/4/12**	**Wed 11/14/12**
44	**DELIVERABLE: Transition plan for ground/air ATN applications / Plan de transición de las aplicaciones tierra-aire de la ATN**	**Thu 10/4/12**	**Wed 11/14/12**
45	Analysis of existing information / Análisis de información existente	Thu 10/4/12	Thu 10/4/12
46	Draft Plan / Borrador de Plan	Fri 10/5/12	Wed 11/14/12



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Agenda Item 4: Other matters

World Area Forecast System (WAFS) Internet File Service (WIFS)

4.1 The Meeting analyzed WP/23 presented by United States informing that the National Weather Service (NWS), in collaboration with the FAA, has already installed the service that will replace the International Satellite Communications System (ISCS).

4.2 The system that will replace the ISCS is the WAFS Internet File Service (WIFS). This new service provides secure access through the public Internet to multiple servers of files that host all the products currently available through the ISCS broadcast.

4.3 In this regard, the Meeting noted that the States/Territories/International Organizations of the CAR/SAM Regions that have implemented ISCS stations should begin the necessary coordination for the migration from ISCS to WIFS, considering that the ISCS service will only be available until June 2012.

ICAO Air Navigation Work Programmes

4.4 The Meeting took note of IP/4, describing all the air navigation work programmes of panels, study groups and task forces of ICAO. In this regard, the Meeting considered that this information is very useful as reference material for the activities of the CNS/ATM Subgroup programmes as well as other GREPECAS contributory bodies.