



ICAO

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WORKING PAPER

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Fourth NAM/CAR Air Traffic Services Inter-facility Data Communication (AIDC) and North American Interface Control Document (NAM/IDC) Implementation Follow-up Meeting (AIDC/NAM/ICD/4)

Online, from 9 to 11 March 2021, 9AM to 12PM, GTM -6

Agenda Item 6: Alignment of the NAM/CAR Air Navigation Implementation Working Group (ANI/WG) AIDC Task Force with the programme of GREPECAS

AIDC TASK FORCE SUPPORT TO REGIONAL IMPLEMENTATION

(Presented by the Secretariat)

EXECUTIVE SUMMARY

This Working Paper summarizes the actions agreed at recent meetings of the NAM/CAR Air Navigation Implementation Working Group (ANI/WG) and the CAR/SAM Regional Planning and Implementation Group (GREPECAS) that directly affect the AIDC task group.

Action:	Suggested actions are presented in Section 3.
<i>Strategic Objectives:</i>	<ul style="list-style-type: none">• Safety• Air Navigation Capacity and Efficiency
<i>References:</i>	<ul style="list-style-type: none">• Fifth NAM/CAR Air Navigation Implementation Working Group Meeting (ANI/WG/5), Mexico City, Mexico, 27 - 31 May 2019.• ICAO Workshop on the new version of the Global Air Navigation Plan (GANP), Mexico, February 2020.• Virtual Meeting of the Executive Program and Project Review Committee (eCRPP/01) of the Regional RAC/SAM Planning and Implementation Group (GREPECAS), 27 May 2020.• Second Virtual Meeting of the Program and Project Review Committee (CRPP) of GREPECAS (eCRPP/02), October 2020.• Evaluation for CAR/SAM Planning and Implementation Regional Group (GREPECAS) Projects Updates Teleconference, on line, 18 November 2020.

1. Introduction

1.1 During the fifth ANI/WG meeting held in 2019 in Mexico City, the need to analyse the common challenges and objectives of the region was discussed. One of the first challenges for the region is updating the regional implementation plan and the development of the region in accordance with the new version of the Global Air Navigation Plan (GANP) that was discussed and approved at the 40th ICAO Assembly, held in October 2019.

1.2 The AIDC Task Group is part of the NAM/CAR Air Navigation Implementation Working Group (ANI/WG) which integrates all areas of air navigation and regional joint implementation objectives. This group has a defined structure, which is described under the following link: <https://www.icao.int/NACC/Pages/nacc-regionalgroups-aniwg.aspx>

1.3 During the meeting of the Task Groups rapporteurs members belonging to the ANI/WG in February 2020, the new version of the GANP and the different Aviation System Block Upgrade (ASBU) elements were discussed and it was concluded that it was necessary to establish a systematic process to decide the ASBU elements applicable to each air navigation area and their subsequent integration into the regional planning and implementation structure.

1.4 The Program and Project Review Executive Committee (eCRPP/01) of the CAR/SAM Regional Planning and Implementation Group (GREPECAS) online meeting in May 2020 discussed the need for an evaluation of GREPECAS Projects and for each project to be evaluated:

- ✓ Are the projects established by the States aligned with the regional strategic projects and the strategic objectives of the organization and in turn with the strategic plans outlined by the ICAO GANP?
- ✓ Have the objectives of the Programs and Projects been met?
- ✓ How is the need for one or the other determined?
- ✓ What is the follow-up given to them?
- ✓ When should they be updated or closed?

1.5 During the Second Virtual Meeting of the GREPECAS Program and Project Review Committee (CRPP) (eCRPP/02) in October 2020, regional implementation priorities were indicated, including the implementation of the AIDC.

1.6 In the Evaluation for the CAR/SAM Regional Planning and Implementation Group (GREPECAS) Project Update Teleconference in November 2020, the evaluation criteria was established for the Regional Projects determining:

- ✓ Update the information to determine if it is Valid or Obsolete.
- ✓ Make a decision whether the project is to be continued or closed.
- ✓ Launch new projects as Feasible or Not Feasible.

2. Discussion

2.1 The AIDC Task Force, through its activities, feeds the implementation progress of the GREPECAS Program C: ATM automation and situational awareness improvement in the region. The Program can be found in the **Appendix** to this working paper.

2.2 A new version of the Air Navigation Plan is available, establishing the implementation of the different ASBU elements to achieve operational objectives and with key performance indicators to better measure its implementation and benefit.

2.3 Regarding the responsibility of the AIDC Task Force, analysing and supporting the implementation of the elements Flight Information and Flow for the Cooperative Environment (FF-ICE), elements covered in agenda item 5 of this meeting are its responsibility.

2.4 Information regarding the activities of the AIDC Task Force is under the following link: <https://www.icao.int/NACC/Pages/regional-group-AIDC.aspx>.

2.5 The AIDC Task Force works jointly with the ANI/WG Task Forces, therefore the decision of regional operational objectives and their implementation planning are crucial, as they will support regional harmonization. The implementation of automated protocols serves as a basis for improving the efficiency of air traffic control operations.

2.6 The region is currently working on the CANSNET (Caribbean Air Navigation Services Network). This project is a regional communications network that will become the region's IP communications network, a digital network that will integrate not only the operational requirements of the different States currently part of the MEVA network, the region's current communications network, but also the new requirements to support current and future air navigation services.

2.7 In this sense, we have started, within the MEVA Ad-hoc Groups, working to test the exchange of MET aeronautical messages with IWXXM format. Successful tests were carried out between Cuba and the United States and these same tests are being coordinated between Cuba and COCESNA. In addition to obtaining information about the bandwidth requirements of the communication channels; information is being obtained on the capacity of the AMHS systems to handle this type of messages.

2.8 Establishing the requirements for the exchange of information on the elements of the FFICE is important for the region.

2.9 The ICAO NACC Regional Office in conjunction with the States has identified the need to update regional objectives and update all action plans to better align them to common goals and to focused them on regional benefit.

2.10 In accordance with the ANI/WG planning for 2021, a series of activities have been established with the objective of having the regional plan and action plans of each Task Group updated by the end of 2021.

3. Suggested Actions

3.1T The Meeting is invited to:

- a) conduct an assessment of the current action plan of the AIDC Task Group and indicate the activities that are still valid;
- b) conduct an evaluation of the Flight and Flow Information for the cooperative environment (FF-ICE) together with the other ANI/WG Task Forces to validate their regional implementation; and
- c) support the development of regional air navigation plans.

**APPENDIX
PROJECT C**

CAR Region	PROJECT DESCRIPTION	DP N° C	
Programme	Title of the Project	Start	End
AUTOMATION AND ATM SITUATIONAL AWARENESS (ICAO programme coordinator: Mayda Ávila)	<p style="text-align: center;">AUTOMATION AND IMPROVED ATM SITUATIONAL AWARENESS IN THE CAR REGION</p> Project Coordinador: Carlos M. Jimenez (Cuba) Fernando Casso Dulce Roses Experts contributing to the project: Carlos Miguel Jimenez, Jorge Centella (Cuba) Julio Cesar Mejia (Dominican Republic) Dulce Roses (United States) Jenny Lee (COCESNA) ANI/WG	October	June 2020
Objectives	Based on the NAM/CAR Regional Performance-Based Air Navigation Implementation Plan (RPBANIP) regional performance objectives: <ol style="list-style-type: none"> 1. Support NAM/CAR States with implementation of automated systems and interconnection at a regional level. 2. Support the implementation of Situational Awareness improvements at CAR Region ATS units. 		
Scope	The scope of the project foresees the assessment and identification of the main levels of automation, production of guidelines for the use of existing capabilities, proposed improvements to automation levels to enhance operations and safety, development of studies and guidelines for automation and operational use of capabilities to reach these situational awareness improvements, supporting the implementation of different applications, such as: common display of traffic, common display of meteorological conditions, and communications in general.		
Metrics	<ul style="list-style-type: none"> • Number of States/ANSPs participating in regional automation tests • Number of States/ANSPs implementing ATC automation functionalities between systems • Complete proposals and guidance material for the reduction of operational errors with before and after effective date of implementation guides for the CAR/NAM Region • Number of States/ANSPs reporting a reduction of incidents resulting from implementing improvements in electronic ground and air alerts • Number of States/ANSPs conducting ADS-B data using the guides developed 		
Goals	With this Project is expected to support States with the operational improvement implementation resulting from the implementation of ATM systems: <ul style="list-style-type: none"> • NAM/CAR RPBANIP ASBU-ASUR 		

CAR Region	PROJECT DESCRIPTION		DP N° C	
Programme	Title of the Project		Start	End
	<ul style="list-style-type: none"> • NAM/CAR RPBANIP ASBU-SNET • NAM/CAR RPBANIP ASBU-FICE AIDC Target • Improvement of the ATM Situational Awareness 			
Strategy	<ul style="list-style-type: none"> • The Project activities execution will be coordinated among the project members, the project coordinator, and the programme coordinator, mainly through teleconferences and meetings held from time to time in accordance with the activities work programme. • The project coordinator will coordinate, as necessary, with the Programme Coordinator, the requirements for other projects and information from the NAM/CAR implementation Working Groups. Additional experts have been included according to the tasks and specialised works. 			
Justification	<p>With the emergence of new technologies in ATM automated systems, as well as the standardization of communication protocols, data exchange in ATS units is actually viable in different ways. Available protocols in the systems such as OLDI and AIDC allow ATS units to establish automated coordination, improving operational reliability and procedural effectiveness.</p> <p>Likewise, the standardization in processing surveillance data in ASTERIX format allows easy radar data exchange between FIRs.</p> <p>These automated exchanges will result in a significant reduction of ATS incident rates and operational errors.</p> <p>Improving situational awareness facilitates coordination, improves efficiency and safety, and ensures that the different members of the ATM community have the same information when adopting decisions collaboratively.</p>			
Related projects	This project is related with Programme D Project (ATN and its ground-ground and air-ground applications)			

Project Deliverables	Relationship with the regional performance-Objectives (RPO) and ASBU B0 modules	Responsible Party	Status of Implementation	Date of Delivery	Comments
Level of automation existing in the CAR Region	RPO 4 and 6 of NAM/CAR RPBANIP/RSEQ-SURF-ASUR-SNET-TBO-ACDM-FICE	ICAO - Carlos Jimenez, Cuba		Completed	
Guidance material and considerations for the drafting of automation agreements/ Sample of MoU for automation between States	RPO 4 and 6 of NAM/CAR RPBANIP/RSEQ-SURF-ASUR-SNET-TBO-ACDM-FICE	Carlos Jiménez, Cuba		Completed	Several MOU proposals are available.
Proposals or guidelines for improving the operation and performance of flight plan data processing system, and automatic exchange of ATS messages	RPO 4 of NAM/CAR RPBANIP/RSEQ-SURF-ASUR-SNET-TBO	Jenny Lee COCESNA Fernando Casso Dominican Republic		Completed	According with the AIDC TF activities
Implementation of the errors regional plan of the flight plan	RPO 4 of the NAM/CAR RPBANIP/RSEQ-SURF-ASUR-SNET-TBO	Fernando Casso – Dominican Republic		Completed	According with the AIDC TF activities
Implementation of the standardization of the rejects message of the flight plan for the Region	RPO 4 of the NAM/CAR RPBANIP/RSEQ-SURF-ASUR-SNET-TBO	Dan Evans/FAA		December 2019	According with the AIDC TF activities

Project Deliverables	Relationship with the regional performance-Objectives (RPO) and ASBU B0 modules	Responsible Party	Status of Implementation	Date of Delivery	Comments
Proposals and guidance on the use and benefits of additional/advanced automation support tools to increase aeronautical information sharing	RPO 4 of the NAM/CAR RPBANIP/RSEQ-SURF-ASUR-SNET-TBO	Dulce Roses/FAA		Canceled	New date for June 2018 is proposed due to lack of responses
Monitor the implementation of ATM automation and surveillance data exchange – Progress Report	RPO 4 of NAM/CAR RPBANIP/RSEQ-SURF-ASUR-SNET-TBO	Fernando Casso – Dominican Republic		Completed	An AIDC implementation regional plan has been developed as part of the ATM automation.
Monitor that the AIDC implementation plan in each State has the capacity to use this facility.	RPO 4 of the NAM/CAR RPBANIP/RSEQ-SURF-ASUR-SNET-TBO	Jenny Lee COCESNA Fernando Casso Dominican Republic		December 2018	Jenny Lee for Central America Fernando Casso for the Caribbean
Guidelines for the operational implementation of ADS-B and data exchange	RPO 4 and 6 of NAM/CAR RPBANIP/RSEQ-SURF-ASUR-SNET-TBO-ACDM-FICE	Carlos Jimenez – Cuba		August 2019	CONOPS of ADS-B implementation under development. The ADS-B CONOPS initial draft is available
Guidance on the use of AIDC to reduce coordination errors	RPO 4 and 6 of NAM/CAR RPBANIP/RSEQ-SURF-ASUR-SNET-TBO-ACDM-FICE	Fernando Casso – Dominican Republic		Completed	Date adjusted to the AIDC TF

Project Deliverables	Relationship with the regional performance-Objectives (RPO) and ASBU B0 modules	Responsible Party	Status of Implementation	Date of Delivery	Comments
Encourage States to share radar data	RPO 4 and 6 del NAM/CAR RPBANIP/RSEQ-SURF-ASUR-SNET-TBO-ACDM-FICE	Carlos Jimenez – Cuba		In progress Implemented	According to the working program of the Surveillance Group of the NAM/CAR region.
Resources needed	<ul style="list-style-type: none"> • Designation of experts for the execution of the deliverables • Implement required facilities that allow interconnection of automated systems according to the established dates in the elaborated and signed MoU, respectively. 				