



**Agenda Item 4 Establishment of Interfaces for ATM Automated Systems between Adjacent
ATS Units**

**CONSIDERATIONS FOR THE IMPLEMENTATION OF ACTIONS FOR THE ATM
AUTOMATED SYSTEMS INTERFACES ESTABLISHMENT**

(Presented by the Secretariat)

SUMMARY	
This working paper presents a summary of the considerations and aspects to be taken into account for the implementation of ATM automated interfaces within the framework of an Action Plan, especially considering Phase I and Phase II of the Action Plan.	
References:	
<ul style="list-style-type: none">• CAR/WG/1 Meeting Report• GREPECAS/12, 13 and 14 Meeting Reports	
<i>Strategic Objectives</i>	<i>This working paper relates to Strategic Objectives A and D.</i>

**1. Regional Strategy for Automated Systems and Considerations for their
implementation**

1.1 GREPECAS Conclusion 12/31 – *Regional strategy for the integration of ATM Automated Systems*, encouraged States/Territories/International Organizations to define an action plan for the integration of ATM automated systems using the strategy contained in Appendix A to the Report on Agenda Item 4 of the CAR/WG/1 Meeting.

1.2 GREPECAS Conclusion 14/43 – *Agreements for ATM Automated Systems Interface*, encouraged States/Territories/International Organizations to take into account technical feasibility studies and operational benefits, and coordinate the establishment of bilateral and multilateral agreements for the interface of automated systems between adjacent units and use guidance material specified as the “*Interface Control Document for Data Communications between ATS Units in the Caribbean and South American Regions (CAR/SAM ICD)*”. The ICD is published in the ICAO NACC webpage, under “eDocuments”.

1.3 GREPECAS Conclusion 14/44 – *Establishment of an Action Plan for the Interface of ATM Automated Systems*, encouraged States/Territories/International Organizations to formulate an Action Plan for the interface of ATM automated systems, using the Table of ATS Operational Requirements for Automated Systems contained in Appendix B to the Report on Agenda Item 4 of the CAR/WG/1 Meeting.

1.4 The CAR/WG/1 Meeting analysed regional references and guidelines for the implementation of ATM automation and it formulated Draft Conclusion 1/17 which urges States/Territories/International Organisations to define their respective action plan for interface implementation to establish ATM automated systems between adjacent units based on the format contained in Appendix C to the Report on Agenda Item 4 of the CAR/WG/1 Meeting.

1.5 Considering paragraphs 1.1 to 1.4, the Meeting is expected to have the aforementioned report and documentation for ease of reference.

2. Discussion

2.1 Taking into account the guidelines and considerations exposed, the Meeting must follow-up on the implementation of ATM automation interfaces. Therefore, this paper proposes the following considerations and follow-up:

Considerations and Guidelines contained in Doc 4444

2.2 Chapter 10 of the PANS/ATM — *Air Traffic Management* (Doc 4444), defines the coordination and flight control transfer contains procedures regarding the coordination to be effected between air traffic services units, between control positions within such units, and between such units and associated aeronautical telecommunication stations. Chapter 11 of the same document contains procedures relating to the air traffic services messages which are necessary for the effective operation of air traffic services. Equally, Appendix 6 describes the types of messages and their contents to be used for operational communications between ATS unit computer systems. This type of data transfer is referred to as ATS interfacility data communications (AIDC) and is to be the basis for migration of data communications to the aeronautical telecommunication network (ATN). The current flight plan (CPL) is referred to within the coordination messages.

Considerations for the development of digital networks and data processing automated systems

2.3 The current communications infrastructure in the CAR/NAM Region has been improved with the implementation of digital networks as it is clearly explained in Agenda Item 3. The infrastructure is prone to the implementation of new communications services, such as the case of the ATN implementation in the AMHS system as well as its use in the surveillance data sharing/exchange. This digital network implementation has lead to improvement in the performance of the Aeronautical Fixed Services network, both in the level of voice communications as well as ground communications through the AFTN network.

2.4 An outstanding percentage of Control Centres and ATS Units in the Region have been modernized allowing a greater data processing capacity with the implementation of flight data processing systems (FDPS), radar processing (RDP), support systems and other message displays and switching, thus improving service efficiency and operations volume possible with the considerable increase of prevention tools and safety increase (MSAW, DAIW, MTCA, etc.). This system automation must be coherent with the guidelines set in the GREPECAS approved table regarding airspace classification and future use (see paragraph 1.3 of this working paper).

2.5 In accordance with the analysis and data provided in the Surveillance Systems contained in the FASID Table, as well as new surveillance systems such as the ADS-B, Mode S and Multilateration, described in Agenda Item 3, it is noted that there are surveillance radar and non radar data sources available that could be useful to improve service precision, availability, safety and provision in the Region.

2.6 Considering the previous considerations and taking into account the regional strategy contained in paragraph 1.1 and 1.4, the Meeting is invited to define more specific actions to achieve Phase I and II of this strategy, by including them in their corresponding action plans.

Considerations and guidelines contained in the Interface Control Document for Data Communications between ATS Units (ICD)

2.7 The purpose of this document is to provide a common document for data exchange among ATS units, Air Traffic Service Providers in the CAR/SAM Regions as well as the provision of an instrument to coordinate, in a centralized manner, the changes to the model. The ICAO proposes the use of coordination messages among ATS units, especially for flight plan coordination and radar transfer, just as it has been implemented by Canada, Mexico and the United States, based on Doc 4444 and several key messages that can be adjusted for needs identified in each automated system.

2.8 The document complies with the ATS message coordination requirements, and, at the same time it allows the development of Phases I and II and the evolution of the regional automation strategy, through the definition of required ATFM implementation messages and control transference provided by ADS data. The interface activities should be coordinated between the specialists of States involved.

National Action Plan for the Implementation of ATM Automated Systems Interface among ATS Units – Improvement and Development of the ATM Situational Awareness

2.9 In accordance with paragraph 1.4, the Meeting is proposed to present their national action plans for the implementation of an ATM Automated Systems Interface among ATS units – Improvement and Development of the ATM Situational Awareness using the recommended format.

3. Suggested action

3.1 The Meeting is proposed to:

- a) take note of the information contained in this working paper;
- b) consider national action plans that participants will present in accordance with paragraph 2.8;
- c) based on the considerations presented in paragraphs 2.2 to 2.7, and, taking into account the regional strategy mentioned in paragraph 1.1, analyze the progress status of the implementation and action suggested in paragraph 2.6;
- d) recommend and suggest other considerations for the evolution of the ICD, as necessary, considering paragraph 2.7; and
- e) consider and recommend other actions deemed appropriate.

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