



ICAO

International Civil Aviation Organization
North American, Central American and Caribbean Office

WORKING PAPER

AIDC/NAM/ICD — WP/04
25/03/19

NAM/CAR Air Traffic Services Inter-facility Data Communication (AIDC) and North American Interface Control Document (NAM/ICD) Implementation Follow-up Meeting (AIDC/NAM/ICD)
Mexico City, Mexico, from 8 to 11 April 2019

Agenda Item 2: Pending NAM/CAR Regions AIDC Implementation Process

SURVEILLANCE DATA SHARING PROCESS AMONG STATES

(Presented by the Secretariat)

EXECUTIVE SUMMARY

This working paper guides the meeting on the activities to be carried out and important information to be taken into account by the States when they decide to share the data of their surveillance systems.

Action:	Suggested actions are presented in Section 4.
<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">• GREPECAS Task Force

1. Introduction

1.1 Automated protocols implementation is one of the identified elements in the region that minimizes the occurrence of the Large height deviation (LHD); this has being reported by the GREPECAS Task Force that verifies the LHD occurrences in the CAR/SAM region. It has also being identified a reduction to zero in the Cuba and Central America coordination after the NAM/ICD protocol was implemented in their coordination.

1.2 A fundamental part of the AIDC or NAM/ICD implementation implies that the involved control centres have surveillance coverage in the area of their coordination, even more, to have more than one surveillance data signal to allow the support of the information.

1.3 Many States have implemented sharing surveillance data in the areas of coordination because they are sensitive areas, which must ensure that the involved control centres are observing the same information at the time that the flights are coordinated.

1.4 Sharing surveillance data is highly recommended in the sensitive areas, such as the coordination areas between adjacent FIRs, taking also advantage of shared surveillance data to cover airspace where these data are not currently available, taking advantage of surveillance infrastructure of adjacent States.

2. Necessary requirements to share surveillance data between States.

2.1 For surveillance infrastructure sharing, the States must take into account, in first instance, that there are many benefits when carrying out this action, resulting in a safety increment.

2.2 However, the States must consider that data sharing entails an enormous responsibility, for which reason there are factors that must be analyzed by responsible technicians and operative staff defining the applicable responsibility to each of the States, both the State that provides the data and the States that receives it.

2.3 The States must identify the operational benefits of sharing surveillance data and develop a document that includes, among others:

1. The operational benefits of sharing surveillance data
2. Technical requirements that are needed for the implementation
3. Operative requirements (procedures, agreement letters modifications, etc.)
4. Definition of responsibility of each of the implicated States
5. The need for the signature of a document that frames all this information and that serves the initial States for the stipulation of requirements of the cooperation agreement.

2.4 The **Appendix** to this Working paper presents a draft the document "Agreement on sharing radar data between States", covering the minimum requirements that States must take into account when sharing the data of their surveillance infrastructure.

2.5 Likewise, the States that are in the process of purchasing new equipment and systems must take into account the operational requirements with the adjacent States and integrate, within the terms of reference of the equipment to be acquired, the interconnection requirements with the systems of the Adjacent States.

3. Suggested actions

3.1 The Meeting is invited to:

- a) Review the **Appendix** to this Working paper and send comments no later than 3 May 2019, with the objective that it becomes a base document, which the States can take as reference for the development of their Charter Agreement in the future.

- b) That the States take into account the requirements of regional standardization and interoperability at the moment of the development of the terms of reference of their new systems.

APPENDIX

RADAR DATA EXCHANGE AGREEMENT
BETWEEN [REDACTED] AND [REDACTED]

THIS PAGE HAS BEEN
LEFT BLANK INTENTIONALLY

Contents

1. Background
2. 2.
- 3.

Background

This section provides a brief description of each of the services and features of the States involved.

On the other hand, conclusion 10/33 of the Tenth GREPECAS Meeting of the International Civil Aviation Organization (ICAO), offers the following guidelines and considerations for the exchange of radar data between institutions and member states in the same: in compliance with the regional guidance on radar data exchange in the CAR/SAM Regions, and ICAO Standards and Recommended Practices (SARPs).

Radar data sharing between States supports: a) the implementation of the AIDC/PAC and NAM/ICD automation protocols of the NAM/CAR region, b) promotes safety, and c) supports operational and contingency procedures.

Taking into account the benefit of sharing surveillance data, [redacted] and [redacted] States agree to implement the exchange of radar information, among other aspects, in accordance with the following clauses.

Clause 1: Establishment of the agreement

[redacted] State through the [redacted] (It can be GDCA, CAA or any other responsible organization) and [redacted] State through the [redacted] (It can be GDCA, CAA or any other responsible organization) agree to carry out the exchange of radar data information among the radars under their charge in order to improve the availability of radar data coverage in the [redacted] State air space under their corresponding responsibility, according to the radar coverage diagrams stipulated in Annex A of this document.

[redacted] and [redacted] States also agree to implement all those actions that allow the quality improvement of air navigation services provided by their States by integrating the data onto their respective air control centres of the radars stipulated in Annex B of this document.

Clause 2: Criteria for the use of data

[redacted] and [redacted] States commit to make use of the data stipulated in this agreement to:

1. Support air traffic control services.
2. Make the respective confidentiality agreements between the States so that the data is not relayed to third parties. In addition, States undertake:

- a) Not to transfer (give away, lend, rent, sell or other type of transfer) or allow in any way the use of the information in question by third parties.
 - b) Not to initiate actions that could damage the interests of the programs and applications.
 - c) Not to use the information for purposes and activities different from those defined in this document.
3. Each State will be responsible for the hardware and software necessary for the integration and visualization in their own Air traffic surveillance system respectively.
4. Each State undertakes to deliver the Information according to the technical parameters stipulated in Annex B of this document.
5. States shall maintain all the intellectual property rights of the programs and applications that operate in the respective data delivery system.
6. The delivery of radar data information will be done through the means established in Annex C of this document.

Clause 3: Operational Agreements

1. Both parties shall inform of any updates made to the radar detection systems that are of operational interest for the control of air traffic in the airspace under their respective responsibility.
2. The parties agree to meet as many times as necessary to jointly review the work program and analyse possible changes or new procedures or requirements.

This space can include the operational agreements and coordination letter agreements, if applicable.

Clause 4: Operational and Technical procedures

States will coordinate and apply technical and operational procedures that ensure the correct communication among States in order to ensure the correct and continuous exchange of radar data:

1. Implement communication mechanisms that allow interested parties to know the status of the operation of their radar systems.
2. Implement mechanisms to coordinate system maintenance and lack of data in specific periods.

3. Implement mechanisms that ensure the quality of the data. Annex D of this document provides the initial technical and operational data by signing this agreement.

Clause 4: Improvement and analysis of data

Fifth

Procedures for improvement and analysis of information:

1. The State must ensure and stipulate the mechanisms implemented to analyse the data and to continuously verify the information received.
2. Mechanisms to ensure the detection of faults and the coordination procedures to solve them.
3. Implementation of operational procedures that indicate the steps to follow if the reception of the information is interrupted.

States must ensure continuous monitoring of the information received and develop the necessary mechanisms for the continuous improvement of their operations.

Clause 5: Responsibility for the use of the Data.

States must define the responsibility of each State, both for sharing the data and for the use that the State that receives it and gives to it.

Clause 6: Termination of the agreement

The following are grounds for termination of this agreement:

1. By mutual agreement of both parties.
2. For non-compliance with the conditions expressed in the same.
3. Unilaterally, as long as the other party is notified at least 60 days in advance.

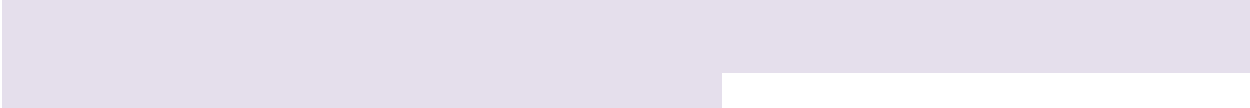
Clause 8: Discrepancies

Discrepancies

_____ and _____ States declare by means of this "Agreement" made through their organizations _____ and _____, that they have the power to enter into this agreement under the laws of their States, which enables them to establish the present agreement of _____

Clause 9: Validity of the Agreement

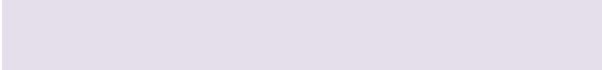
Validity of the Agreement



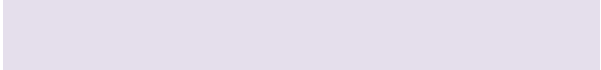
Ninth
Signatories of the Agreement.

State A	State B <i>Usually, contact information of the representatives authorized by law to sign the current agreement is included here.</i>
---------	---

State 1



Director xxxxx



Director xxx

ANNEX A

Radars Information

1. Manufacturer information
2. Radar technical data
3. Technical information of the protocols used by the radar to export data
4. Characteristics of the physical location of the radar
5. Radar coverage diagrams at different levels.

Annex B

1. Each State indicates the Technical Information of the Control Center in which the radar signal will be integrated
2. Technical specifications
3. Air navigation services provided
4. Improvements to their services with the implementation of a new radar signal.

Important: It is important that State A performs a technical/operational analysis of the information provided in Annex A.

Annex C

Media.

- Establish the means of communication that will be established for sending and receiving data
- Teams involved
- Block diagrams and the systems involved
- Diagramas de bloque e los sistemas que intervienen
- Declare the necessary mechanisms to establish coordination in case communication signals fail.
- Other matters.

Annex D

Procedures to ensure the quality of the information.

1. Mechanisms for data monitoring
2. Periodical review of data integration
3. Others

— END —