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WORKING PAPER

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**Second NAM/CAR Air Navigation Implementation Working Group (ANI/WG) Air Traffic Services
Inter-facility Data Communication (AIDC) Task Force (AIDC/TF/2) Meeting
Mexico City, Mexico, 27 February 2015**

- Agenda Item 3** **Implementation issues discussion**
3.2 **Harmonization of North America Interface Control Document
(NAM-ICD) with Pan Regional (NAT and APAC) Interface Control
Document (PAN-ICD)**

Harmonization of AIDC Interface Control Document

(Presented by Secretariat)

EXECUTIVE SUMMARY	
The following paper provides an overview of the existing AIDC ICDs and the efforts for the harmonization for a global AIDC guidance material by the ICAO OPLINK panel, and the regional actions required by GREPECAS for a consolidation of this ICD.	
Action:	The suggested action is 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">• NACC/WG/04• GREPECAS/17

1. Introduction

1.1 Due to the great need for a communications and data interchange infrastructure to significantly reduce the need for verbal coordination between ATSU, the different Region have developed different AIDC ICDs to serve this need.

2. Discussion

CAR/SAM ICD

2.1 For the CAR/SAM Regions, the GREPECAS/14 Meeting adopted the *Interface Control Document (ICD) for data communications between ATS units in the CAR and SAM regions (CAR/SAM ICD)* version 1.0 dated 13 November 2006 for implementing AIDC. The CAR/SAM ICD is based on the North American Common Coordination Interface Control Document used by Canada, the United States and Mexico.

2.2 The CAR/SAM ICD includes guidance on applicable Policy and Units of Measurement, ATS Coordination Messages and Communications and Support Mechanisms, a list of error messages, Implementation Guidance Material for the message sets and a model describing a specific Common Boundary Agreement to be followed by ATS providers, noting the level of the interface that is supported and any deviations from the core message definitions.

NAM ICD

2.3 Within the North American Aviation Trilateral (NAAT/5), Canada, Mexico, and the United States agreed to cooperate on development of a seamless interface between automation systems, focusing on automated exchange of ICAO flight data and achieve cross-border automation. This agreement resulted in the development of the North American (NAM) Common Coordination Interface Control Document (ICD), whose current valid version is Revision D, dated January 20, 2012

2.4 In October 2011 the FAA at Miami ARTCC (KZMA) and the Instituto de Aeronáutica Civil de Cuba (IACC) Havana ACC successfully implemented an automation interface between the two air traffic control facilities, modeled after the U.S.-Mexico Class 1 cross border interface. The automation initiative extends the NAM automation flight data exchange capability well into the Caribbean.

2.5 In March 2012, building on the foundation of automated data exchange between Miami and Havana, SENEAM and the IACC implemented a NAM interface between Merida and Havana. The interface extends the automation compatibility of the North American region well into the Caribbean and the Gulf of Mexico and also lays the foundation for eventual interconnection between adjacent member states automation systems.

2.6 During the NACC/WG/04 Meeting, the ANI/WG AIDC TF conducted an evaluation and comparison of NAM and CAR/SAM ICD, and based on he practical experience using the NAM ICD, the NACC/WG agreed on the following conclusion:

CONCLUSION NACC/WG/4/9

ADOPTION OF NAM INTERFACE CONTROL DOCUMENT (ICD)

That the NAM ICD be adopted as the preferred ICD in the CAR region, not precluding the use of other ICDs under circumstances favourable to the latter.

2.7 Dominican Republic and COCESNA are implementing AIDC using the NAM ICD.

ASIA/PACIFIC REGIONAL ICD FOR AIDC

2.8 The ASIA/PAC Regions through the ASIA/PAC Air Navigation Planning and Implementation Regional Group (APANPIRG), at its fifth meeting in 1994, undertook the task of developing the inter- facility message exchanges needed to support automation in the regions. The ICAO OPLINK Panel then adopted the AIDC message set and included it as guidance material.

2.9 The ASIA/PAC Regional ICD for AIDC has been evolving to include additional clarification of certain message types; improved consistency of the terminology used in the document; incorporation of recent changes proposed changes to PANS-ATM Doc. 4444 and Doc. 9694, and other SARPs amendments. Version 3.0 of the Asia/Pacific Regional ICD for AIDC was adopted by APANPIRG/18 in September 2007 under Conclusion 18/8.

3. Harmonization of ICDs

GREPECAS effort for AIDC ICD harmonization

3.1 In GREPECAS/17 Meeting, taking into account the work being done by the Implementation Groups in the NAM/CAR Regions and the SAM region as well as the tasks under the GREPECAS D Programme in the CAR and SAM Regions regarding AIDC implementation, the Meeting endorsed the analysis for application of the PAN AIDC ICD in the CAR/SAM Regions for current and future interface using the AIDC protocol; and agreed on the:

CONCLUSION 17/9 ACTIVITIES FOR A CONSOLIDATED INTERFACE CONTROL DOCUMENT (ICD) FOR AIDC IMPLEMENTATION IN THE CAR AND SAM REGIONS

That, in order to ensure efficient and practical implementation of AIDC functionality at both intra- and inter-regional levels between the CAR and SAM Regions:

- a) ICAO, through the GREPECAS D Programme, shall assess the existing ICDs and coordinate the necessary activities for development of a consolidated Interface Control Document (ICD) for AIDC implementation in the CAR and SAM Regions; and
- b) D Programme Projects shall submit the results of coordination for a consolidated ICD for the CAR and SAM Regions at the GREPECAS PPRC/3 Meeting.

PAN ICD

3.2 Looking to harmonize Air Traffic Service Inter-facility Data Communications (AIDC) and consolidate an Interface Control Document (ICD) for the North Atlantic (NAT) and Asia/Pacific (APAC) Regions, the ICAO Inter-regional AIDC Task Force (IRAIDCTF) was formed.

3.3 The IRAIDCTF conducted three meeting, several WebEx meetings and email exchange with participation of Australia, Canada, Hong Kong China, India, Japan, Iceland, New Zealand, United States of America, Singapore, Thailand, and Vietnam

3.4 The Pan Regional Interface Control Document (PAN ICD) for ATS Interfacility Data Communications (AIDC) Version 1.0 dated September 2014 has been issued by the IRAIDCTF for the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG) and the North Atlantic Systems Planning Group (NAT SPG).

3.5 The Pan Regional Interface Control Document (PAN ICD) for ATS Interfacility Data Communications (AIDC) is the result of the progressive evolution of the Asia/Pacific Regional ICD for AIDC, issued by the ICAO Asia/Pacific Regional Office on behalf of the Asia Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG), and the North Atlantic Common Coordination ICD, published by the ICAO European and North Atlantic Office, on behalf of the North Atlantic Systems Planning Group (NAT SPG).

3.6 Each of the two founding documents provided guidance on a regional basis. However, in recognition of the need to provide globally harmonized guidance for AIDC, the PAN ICD First Edition, merging the APAC and NAT guidance material, was adopted by the APAC and NAT Regions in 2014. The PAN ICD addresses the ground-ground data link provision from a technical and operational point of view taking into account lessons learned, global implications and guidance on recent initiatives.

3.7 The PAN-ICD provides guidance and information concerning ground-ground data link operations and is intended to facilitate the uniform application of ICAO Standards and Recommended Practices specifying the facilities and messages to be used for the exchange of notification, coordination, transfer of control, and related data between automated Air Traffic Service (ATS) systems. The material is intended to improve safety and maximize operational benefits by promoting standardized ground-ground data link operations throughout the world.

3.8 The PAN ICD will support the following activities:

- Safety regulatory oversight of air navigation services;
- The development of letters of agreements between ANSPs;
- The development of operational procedures;
- The implementation activities; and,
- Operational monitoring, analysis, and exchange of operational data among regions and States.

3.9 The message sets and procedures described in the PAN ICD have been designed for use with the ATS Message Handling System (AMHS) and/or Aeronautical Fixed Telecommunications Network (AFTN). They can also be exchanged over dedicated private communication lines

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Montreal, 6–17 October 2014***

3.10 The OPLINKP acts as a focal point for the consolidation and development of air traffic management (ATM) data link operational requirements, undertaking specific studies, as approved by the Air Navigation Commission.

3.11 In the Second meeting of the OPLINKP, it was noted that the PAN AIDC ICD was the result of the progressive evolution of the Regional ICD for AIDC, issued by the ICAO APAC Regional Office on behalf of the Asia Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG), and the North Atlantic Common Coordination ICD, published by the ICAO European and North Atlantic (EUR/NAT) Office, on behalf of the North Atlantic Systems Planning Group (NAT SPG).

3.12 The meeting considering that the ATN AIDC application has never been implemented and current AIDC applications include European Online Data Interchange (OLDI), and the character-based application used in the APAC and NAT regions, the meeting agreed to focus, in the near term, on the development of global guidance material, which would update the material in Doc 9694 based on the guidance available with AIDC using the character based conventions in PANS-ATM Doc 4444 Appendix 3 and other regional implementations of automated ground-ground data communications. A drafting group was established to see if clarification can be obtained on the future of AIDC in light of the retention of character based AIDC implementations in the APAC and the NAT and the European OLDI and to identify new material from the PAN AIDC ICD and other sources that warrant inclusion in the global AIDC guidance material.

3.13 The NAM ICD was suggested to the OPLINKP for its inclusion in the global AIDC guidance material.

4. Suggested Actions

4.1 The meeting is invited to:

- a) review the information of the different AIDC ICDs and the effort for harmonizing into a global AIDC guidance material;
- b) take actions for responding to the GREPECAS Conclusion 17/9; and.
- c) suggest any other action as deem necessary.

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