Third NAM/CAR Air Navigation Implementation Working Group Meeting (ANI/WG) Air Traffic Services Inter-facility Data Communication (AIDC) Task Force (AIDC/TF/3) Meeting
Mexico City, Mexico, 8 April 2016

Agenda Item 2:   **Presentation of lessons learned by States**

DOMINICAN REPUBLIC AIDC IMPLEMENTATION UPDATE

(Presented by Dominican Republic)

EXECUTIVE SUMMARY
This working paper describes the latest activities regarding the implementation of AIDC in the Dominican Republic

Action:	Suggested actions are presented in section 5.
Strategic Objectives:	• Safety • Air Navigation Capacity and Efficiency • Environmental Protection

1.   Introduction

1.1.   1.1   The Dominican Republic has foreseen the use of AIDC to benefit operational security in terms of error and workload reduction, since the process of determining the ATC system upgrade. This functionality was requested for the new Thales ATC systems. Since then, there have been much activity during the ongoing implementation effort, the latest of which will be described in this working paper.

2.   Background

2.1.   The Dominican Republic acquired and installed two new ATC systems, one in Santo Domingo and another in Punta Cana. These systems were requested to have AIDC functionality, which included both AIDC (PAC) and NAM protocols. The supplier had enabled the NAM funcionality guided by the NAM ICD version D. The system became operational on the fourth quarter of 2014.

2.2.   The Dominican Republic also received the visit of the AIDC Go Team in September of 2014. The sessions were very helpful for the planning of the activities, and improved the focus of the implementation project.

**3.		Implementation activities**

3.1.		A technical visit from Thales was held in Santo Domingo during the week of December 9, 2014. During this visit a teleconference between IDAC, Thales and the FAA was held, to discuss issues for an interoperability test between the United States and Dominican Republic. A list of actions resulted from the teleconference, as well as certain agreements on both the operational and technical level. Among these actions were a few regarding the way the Thales' TopSky systems have implemented the NAM ICD. The systems came prepared to work with Class III directly, and at the time only Class I could be possible between Miami and Santo Domingo FIRs.

3.2.		During the week of June 22nd, the current LOA between Miami and Santo Domingo was updated in draft version, and an attachment dealing with ADE (Automatic Data Exchange) was included to establish the operational agreements regarding AIDC.

3.3.		An initial interoperability test between IDAC and FAA was conducted on October 6th, 2015, to assess the gaps and shortcomings between both systems. From there, important issues were identified, mostly regarding the Thales system configuration. These issues were consulted with the supplier, who answered with some user-configurable activities.

3.4.		A second interoperability test was scheduled for February 17 and 18, 2016, with the presence of a Thales technician on site in Santo Domingo. Since the last test, FAA had implemented Class II with Canada, and so was ready to test Class II with Santo Domingo. It was considered that having all messages up to Class III enabled in Topsky would not pose a problem, due to the fact that Class III messages are user-initiated, and so would not be transmitted automatically by Santo Domingo during the tests. The test gave light to additional issues:

a)	Carriage return/line feed characters were received between elements in CPL messages generated from Santo Domingo, and also from FAA via AMHS.

b)	CPLs were being generated for VFR flights, where the FAA system will only accept IFR flights.

c)	The Thales system had interface management messages enabled (IRQ/IRS/TRQ/TRS). The FAA system currently does not use those messages.

d)	Difficulties in sending NAM messages manually from Santo Domingo, for testing purposes.

These issues were documented by the supplier for correction.

4. **Conclusion**

4.1. The implementation of AIDC has been an endless learning process. A very important issue has been the adherence to the NAM ICD. It should be expected that systems comply 100% with the NAM ICD, which is not always the case. But also it is important to have the flexibility to define and be able to use the message sets considered necessary at each phase, and to have those messages sets agreed upon bilaterally. This is the case for the use of CPL/LAM/LRM for Class I, whereas LRM is actually a Class II message. This could be interpreted as a Class II interface, using only LRM from the Class II message set. This approach will permit FIRs to define and use the subsets of messages deemed necessary. Of course, the software should provide this capability per FIR, as the subset agreed with one FIR may be different from another.

5. **Suggested Actions**

5.1. The meeting is invited to:

    a) take note of the implementation experience described in this working paper;

    b) discuss the proposals detailed in the conclusion; and

    c) agree on any other action as deemed necessary.

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