International Civil Aviation Organization
South American Regional Office
Twenty-Fourth Workshop/Meeting of the SAM Implementation Group (SAM/IG/24) - Regional Project RLA/06/901
(Lima, Peru, 4 to 8 November 2019)

SAM/IG/24-IP/5.2
18/10/2019

Agenda Item 5: Operational implementation of new ATM automated systems and integration of the existing systems

STATUS OF AIDC INTERCONNECTIONS IN CHILE

(Presented by Chile)

SUMMARY

This information paper presents the status of interconnectivity of the AIDC system of Chile.

References:

- Report of the Twenty-Third Workshop/Meeting of the SAM Implementation Group (SAM/IG/23)
- Declaration of Bogotá, 6 December 2013

ICAO strategic objectives	*A.- Safety* *B.- Air navigation capacity and efficiency*

1. Background

1.1. The implementation of the AIDC system in the South American Region has been one of the objectives set forth in Project RLA/06/901. Accordingly, the States have been working at a professional level towards the implementation of the AIDC system and to achieve effective interconnection with adjacent States.

1.2. Various difficulties have been encountered in facing this challenge of achieving an active implementation and real interconnection from the point of view of availability, integrity, reliability and accuracy.

1.3. This has led us to the establishment of alternate courses of action to mitigate operational events through “dead reckoning messaging”, in order to overcome LHDs generated by the absence of a tool as fundamental as the AIDC system, a technology that the industry has made available to air navigation service providers (ANSP) and that could not be implemented so far for different reasons, with the consequences known to all.

2. Analysis

Current situation

2.1. Teleconferences have been an excellent means for the participating States (Chile, Peru, and Argentina), led by the Secretariat of the ICAO South American Regional Office, to establish pre-operational agreements on a trial basis, to significantly reduce LHDs during the second half of this year in our country.

Short term

2.2. Three out of the five area control centres serving the five FIRs assigned to Chile, and two approach control units, which use automated air traffic control systems, have INDRA display subsystems in place capable of ATS interfacility data communication under ASIA/PAC ICD v3.0.

2.3. During the Meeting for AIDC implementation in the NAM/CAR/SAM Regions, held in Lima, Peru, on 16-20 April 2018, in which a review was made of AIDC performance and interconnection trial results, Chile reported the implementation of the AIDC connection between the Punta Arenas and Puerto Montt ACCs, and between the Iquique ACC and the Antofagasta APP.

2.4. The meeting agreed to conduct a technical validation of the AIDC interconnection between the control centres of Iquique and Lima in order to establish the operational interconnection mode between the two ACCs.

2.5. At that time, AIDC trials with Argentina were postponed for 2019. At the meeting, Argentina noted that they would first implement the AIDC interconnection among all their ACCs and then would proceed with the interconnection with neighbouring States.

2.6. In May 2018, technical validation trials of the AIDC interconnection between the control centres of Lima and Iquique started. These trials proved successful, and the operational interconnection phase between the two ACCs formally started on 17 August 2018.

2.7. The ICAO South American Regional Office coordinated with Chile the visit of an expert from EASA (European Union Aviation Safety Agency), accompanied by personnel from INDRA Chile, to the Iquique control centre to assist in the establishment of AIDC between this control centre and the one in Córdoba. This visit took place on 5-6 August 2019.

2.8. Trials were conducted during the visit to allow experts of EASA and INDRA to verify the progress made in AIDC interconnection between the two units.

2.9. AIDC message exchange trials between the Iquique and Córdoba control centres were not as successful as expected.

2.10. Continuity of interconnection trials is subject to the solution that may be provided by the communication service provider in Córdoba and to database updates to meet ICAO recommendations contained in amendments 15 and 16 to the PANS ATM (Doc 4444).

2.11. It is estimated that the new AMHS equipment will start operating on 4 November 2019 in Chile. This will solve the mutilation problem observed in AIDC messages sent to Argentina, which currently need to be converted (Gateway) from AFTN to AMHS, and the mutilation occurs in the AMHS system of Argentina.

2.12. This could mean a step forward in AIDC interconnection trials between the Iquique and Córdoba ACCs.

2.13. The area control centre of Santiago (ACCS) and the Oceanic area control centre (ACCO) are equipped with ATM systems and THALES display subsystems not capable of AIDC.

2.14. In order to overcome this lack of interoperability, Chile signed a contract with THALES LAS FRANCE SAS on 9 January 2019 to enable AIDC under ASIA/PAC ICD v3.0 and data link (ADS-C / CPDLC) in its existing TOPSKY system.

2.15. This capacity will allow ACCS and ACCO to have a proper exchange of ATS data with any other ATSU that meets the required standard. Thus, it will permit interconnectivity with the other control centres of Chile and the control centres of Lima, Auckland, and Tahiti.

2.16. Pre-operational trials for the Santiago and Oceanic area control centres will be carried out during the first quarter of 2020 and, according to the contract, testing of the new capacities is scheduled to begin at the end of the first semester of 2020. Accordingly, this tool will be fully available as of the second semester of 2020.

3. Suggested action

3.1. The Meeting is invited to:

a) take note of the information provided herein; and

b) ask States that have a close operational link with Chile not to spare efforts to achieve proper AIDC interconnectivity as soon as possible and to the extent possible.

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