



International Civil Aviation Organization
South American Regional Office - Regional Project RLA/06/901
Second Meeting on AIDC implementation (ATS data communications between facilities) in the SAM Region
(Lima, Peru, 21 to 23 September 2016)

Agenda Item 3: Review to the action plan for AIDC interconnection in the SAM Region

**ACTION PLAN FOR AIDC INTERCONECCION BETWEEN
ADJACENT ACCs IN THE SAM REGION**

(Presented by the Secretariat)

SUMMARY	
This working paper presents the updated action plan for the implementation of AIDC interconnections between adjacent ACCs in the Region.	
REFERENCES:	
<ul style="list-style-type: none">• Report of the First AIDC implementation Meeting (Lima, Peru, 28 to 30 March 2016)• Seventeenth workshop/meeting of the SAM Implementation Group (SAM/IG/17) Lima, Peru, 9-13 May 2016• SAT/21 Meeting (Lisbon, Portugal, 8-10 June 2016)• AIDC implementation Teleconferences (May to September 2016)• Tenth Coordination Committee Meeting of Project RLA/06/901 proyecto (Lima, Perú, del 25 al 26 de agosto de 2016)	
ICAO strategic objectives:	<i>A – Safety</i> <i>C – Environmental protection and sustainable development of air transport</i>

1. Introduction

1.1 The First AIDC Implementation Meeting (AIDC/1) reviewed the activities to be carried out in 2016 and agreed to hold the Second Meeting on AIDC Implementation in the SAM Region on 26 to 28 September 2016.

1.2 Likewise, the AIDC/1 Meeting concurred to schedule two practical courses on AIDC in Asuncion, Paraguay and Curitiba, Brazil on October 2016. Both courses will be supported by Project RLA/06/901 and delivered by two instructors specialized in automation systems in each site. These trainings will be one-week courses and conducted under the identical format as those delivered in Chile, Colombia, Panama and Peru in 2015. During the same week of the courses the AIDC interconnection tests will be conducted between Asuncion ACC–Resistencia ACC, Asuncion ACC–curitiba ACC and Curitiba ACC-Resistencia ACC.

1.3 The Meeting took note on the AIDC implementation activities for the period 2017-2019 approved by the Second Meeting of the Air Navigation and Safety Directors (AN&FLS/3) stating the AIDC interconnections should be completed by the end of 2019, if States that hasn't installed AIDC yet, do so. To date, Bolivia, Guyana, French Guiana, Suriname and Venezuela are pending installation of AIDC in their ACCs.

1.4 Taking into consideration the activities planned for 2016 and those scheduled for 2017-2019, the AIDC/1 Meeting updated and approved the action plan for the AIDC interconnection implementation.

2. Analysis

2.1 The Tenth Coordination Committee Meeting (RCC/10) of project RLA/06/901 reviewed the activities to be carried out by the project during 2017 and agreed the Third AIDC implementation Meeting to be held on June 2017 in Lima, Peru, providing support with 11 fellowships.

2.2 Through the teleconferences with States (May to September 2016) the status of the AIDC interconnection implementation was reported, as well as the new AIDC interconnections foreseen by the triennium 2017-2019.

2.3 During the teleconference hold on 8 September 2016, as a follow-up to Conclusion SAT/21/17, the AIDC implementation between SAM and AFI Regions was analyzed and it was agreed to carry out on 17 October 2017 the AIDC tests between Argentina and South Africa and for the first semester of 2017, between Brazil-Senegal and Brazil-South Africa.

2.4 In this sense, taking into account the activities performed so far in addition to those scheduled and approved for 2017 and the considered for 2017-2019, the Secretariat updated the action plan for the AIDC interconnection implementation same that is presented as **Appendix** to this working paper.

3 Suggested actions

3.1 The Meeting is invited to:

- a) Take note of the information presented herein;
- b) analyse the content of Section 2 and Appendix of this working paper for approval;
and
- c) other consideration that the meeting deem appropriate.

APPENDIX

PLAN OF ACTIVITIES FOR THE IMPLEMENTATION OF THE AIDC INTERCONNECTION BETWEEN ADJACENTS ACCs

	Start	End	Responsible party	Status
1. Establishment of initial activities for completing the technical implementation of AIDC	10/10/2014	16/10/2014	ICAO	Completed
<p>1.1 Based on the results of AIDC tests conducted from February 2014 to June 2014, the technical documentation of the automated systems installed in the Region, and the SAM AIDC implementation guide, develop:</p> <p>1.1.1 Plan of activities to complete technical feasibility tests for AIDC interconnection between:</p> <p style="padding-left: 40px;">Santiago ACC - Lima ACC Guayaquil ACC - Lima ACC Bogota ACC - Guayaquil ACC</p> <p>1.1.2 Contents of AIDC course for ATS controllers and programmers of AIDC automated system databases, to be conducted in Chile, Colombia, Ecuador and Peru.</p>	10/10	16/10	ICAO	<p>The initial plan of activities for AIDC implementation is scheduled for 2015. The plan of activities contemplates the conduction of AIDC courses for air traffic controllers working at ACCs and the operational implementation of AIDC between adjacent ACCs.</p> <p>These activities will be conducted in Chile, Colombia, Ecuador and Peru.</p> <p>Interconnection tests between the Lima and Bogota ACCs were added to the list shown in paragraph 1.1.1.</p>
2. Review of activities at the SAM/IG/14 meeting	09/10	13/11	ICAO and SAM/IG	Completed
2.1 Submission of the plan of activities and contents of the AIDC course at the SAM/IG/14 meeting	09/10	13/11	ICAO	
2.2 Review and approval for submission at the Eighth Coordination Meeting of Project RLA/06/901	09/10	13/11	SAM/IG	

	Start	End	Responsible party	Status
3. Approval of activities by the RCC/8 meeting	25/02/15	27/02/15	RLA/06/901 member States	Completed The RCC/8 meeting held in Lima on 25-27 February 2015 approved the activities for initial implementation of AIDC interconnection in Chile, Colombia, Ecuador and Peru.
3.1 Submission of activities, with their respective cost, for approval.	25/02/15	27/02/15	RLA/06/901 member States	
4. Search and selection of experts	24/11/14	28/01/15	ICAO	Completed For the performance of the initial activities, three SAM experts with experience in database programming and operation of ACC automated systems were selected: Rubén Silva of Argentina, Mauricio Ferrer of Colombia, and Jorge Merino of Peru.
4.1 Search and selection of 4 experts from SAM States participating in Project RLA/06/901, with experience in the installation, operation and programming of AIDC databases, to perform the activities listed in item 1.	24/11/14	28/01/15	ICAO	
5. Missions to complete AIDC interconnection between States that started tests during the first semester of 2014	06/04/15	01/05/15	3 automation experts ICAO	Completed Missions were conducted for training purposes and to complete tests for AIDC interconnection and operation Chile 6/4 to 10/4 2015 Peru 13/4 to 17/4 2015 Ecuador 20/4 to 24/4 2015 Colombia 27/4 to 1/5/2015

	Start	End	Responsible party	Status
5.1 Mission to Santiago de Chile	13/04/15	17/04/15	3 automation experts ICAO	Completed Implementation of AIDC activities at the Santiago ACC <ul style="list-style-type: none"> • AIDC practical course • AIDC interconnection tests between: <i>Santiago ACC and Lima ACC</i>
5.1.1 Complete AIDC technical implementation between the Santiago and Lima ACCs	13/04/15	17/04/15	3 automation experts ICAO	Two-way communication was established in the AIDC interconnection tests between the Thales Top sky system of the Santiago ACC and the INDRA Aircon 2100 of the Lima ACC. The operational tests did not have positive results due to the AIDC limitations in the Santiago ACC. The practical course on AIDC and database programming was conducted, providing training to 16 controllers of the Santiago ACC and 2 aeronautical technicians.
5.1.2 Conduct AIDC course for ATS personnel of the Santiago ACC	13/04/15	17/04/15		
5.2 Mission to Lima:	13/04/15	17/04/15	3 automation experts	Completed Implementation of AIDC activities in the Lima ACC <ul style="list-style-type: none"> • AIDC practical course • AIDC interconnection tests between:

	Start	End	Responsible party	Status
				<i>Lima ACC - Santiago ACC Lima ACC - Guayaquil ACC Lima ACC - Bogota ACC</i>
5.2.1 Conduct AIDC course for ATS personnel of the Lima ACC	13/04/15	17/04/15	3 Automation experts ICAO	The practical course on AIDC and database programming was conducted, providing training to 44 controllers of the Lima ACC.
5.2.2 Complete AIDC tests between the Lima ACC and the Guayaquil ACC	13/04/15	17/04/15		AIDC tests between the Lima and Guayaquil ACCs were successfully conducted.
5.2.3 Complete AIDC tests between the Lima ACC and the Bogota ACC	13/04/15	17/04/15		AIDC tests between the Lima and Bogota ACCs were successfully conducted.
5.3 Mission to Guayaquil	20/04/15	24/04/15	3 Automation experts of the SAM Region	Completed Implementation of AIDC activities at the Guayaquil ACC <ul style="list-style-type: none"> • Practical course on AIDC • AIDC interconnection tests and pre-operational implementation: Guayaquil ACC - Lima ACC Guayaquil ACC- Bogota ACC
5.3.1 Complete AIDC technical implementation between the Guayaquil ACC and the Lima ACC	20/04/15	24/04/15	3 automation experts of the SAM Region	AIDC technical interconnection was completed, currently in the

	Start	End	Responsible party	Status
				pre-operational phase.
5.3.2 Complete AIDC technical implementation between the Guayaquil ACC and the Bogota ACC	20/04/15	24/04/15		AIDC technical interconnection was completed, currently in the pre-operational phase
5.3.2 Conduct AIDC course for ATS personnel of the Guayaquil ACC	20/04/15	24/04/15		The practical course on AIDC and database programming was conducted, providing training to 31 controllers of the Guayaquil ACC.
5.4 <i>Mission to Bogota</i>	27/04/15	01/05/15	3 automation experts	Completed Implementation of AIDC activities in the Bogota ACC <ul style="list-style-type: none"> • Practical course on AIDC • AIDC interconnection tests and pre-operational implementation: <i>Guayaquil ACC - Lima ACC</i> <i>Guayaquil ACC - Bogota ACC</i>
5.4.1 Complete AIDC technical implementation between the Bogota ACC and the Guayaquil ACC	27/04/15	01/05/15	3 automation experts of the SAM Region	The AIDC technical interconnection was completed, currently in pre-operational phase
5.4.2 Complete AIDC technical implementation between the Bogota ACC and the Lima ACC	27/04/15	01/05/15		The AIDC technical interconnection was completed, currently in pre-operational phase

	Start	End	Responsible party	Status
6. First meeting of the AIDC operational implementation working group during the SAMIG/15 meeting	11/05/15	15/05/15	RLA/06/90 member States	In progress As a result of AIDC technical implementation, the SAM/IG/15 established a group of activities to migrate from the pre-operational phase to the operational between the ACC Bogota, Guayaquil and Lima.
6.1 It is proposed that, as a matter of priority, the SAM/IG/15 meeting do the follow-up of AIDC implementation. Accordingly, the AIDC operational implementation working group will hold its first meeting.	11/05/15	15/05/15	RLA/06/901 member States	Additionally the AIDC messages to be used were defined.
7. AIDC operational implementation	18/05/15	31/12/15	Involved States	
7.1 Definition of the parameters of the AIDC database for the to AID operational interconnection between Colombia, Ecuador and Peru	25/05/15	29/05/15	Involved States	Completed.
7.2 Amend letter of operational agreement to include the AIDC for the coordination between the ACC Lima with AAC Bogota, ACC Bogota with ACC Guayaquil and ACC Lima with ACC Guayaquil	15/06/15	31/03/16	Involved States	Valid. Only letter of operational agreement between the ACC Guayaquil and ACC Lima was amendent and signed. (October 2015). Pending final review and sign letter of operational agreement between ACC Lima and ACC Bogota, ACC Bogota and ACC Guayaquil.
7.3 Teleconferences to coordinate and follow-up the migration from the AIDC pre-operational phase to the operational for Colombia, Ecuador and Peru	June 2014	Monthly Tele-conferences at the	Involved States ICAO	Valid. Teleconferences are been carried out on monthly basis since June 2014.

	Start	End	Responsible party	Status
		beginning of each month until end 2016		On 2016 teleconferences were conducted on: 19 January 23 May 19 February 3 June 18 March 6 September
7.4 Complete courses for the ACC Lima and Guayaquil, Bogotá ATS staff as well as staff ARO/AIS	18/05/15	29/02/16	Involved States	Completed.
7.5 Preoperational and operational Implementation of AIDC Guayaquil ACC - Lima ACC Bogota ACC - Guayaquil ACC Lima ACC - Bogota ACC Lima ACC – Santiago ACC*	18/05/15	31/07/16	States involved	Valid. Letter of operational agreement with corrections on AIDC between ACC Colombia, Ecuador, Panama and Peru were amended (October 2015). Letter of operational agreement between AAC Lima and Guayaquil with the inclusion of AIDC was signed on 23 October 2015. Establishing of a pre-operational period completing the ATS staff training. Operational implementation. AIDC between ACC Lima - ACC Guayaquil in operational phase from August 3, 2015, becoming operative on 31 March 2016.

	Start	End	Responsible party	Status
				<p>The AIDC between the ACC Bogota and the ACC Lima and ACC Guayaquil is in pre-operational phase since May, 2015.</p> <p>* The AIDC operational implementation between the ACC Lima and ACC Santiago has postponed in view of the delay in the modernization of the ACC Santiago automated Center (2017).</p>
<p>8. Other AIDC implementations</p> <p>Bogota ACC - Panama ACC Ezeiza ACC - Montevideo ACC Resistencia ACC - Asunción ACC Curitiba ACC – Resistencia ACC Iquique ACC – Lima ACC Cordoba ACC – Iquique ACC Amazonico ACC – Bogota ACC Amazonico ACC – Lima ACC</p>	18/05/15	31/12/16	States involved	
8.1 Definition of parameters of the AIDC database for the operational interconnection of the AIDC		29/07/16	States involved	Valid Defined for AIDC between: Bogota ACC-Panama ACC and Iquique ACC-Cordoba ACC.
8.2 Amendment of letter of operational agreement to include the AIDC for coordination between ACCs.		31/10/16	States involved	Valid

	Start	End	Responsible party	Status
8.3 Carry out teleconferences for coordination and follow-up to the migration from the AIDC pre-operational to operational fase		Monthly tele-conferences at the beginning of each month until the end of 2016	States involved ICAO	Valid Teleconferences conducted 19 January 23 May 19 February 3 June 18 March 6 September
8.4 Practical courses addressed to the ATS AIS CNS personnel of the ACC involved, interconnection AIDC		30/11/16	States involved OACI	Valid AIDC Course (Panamá 22 -26 June) 2015 AIDC Course (Paraguay 17-21 October 2016). AIDC Course (Curitiba 10 - 16 October 2016).
8.5 Conduction of AIDC interconnection test between adjacents ACCs		30/11/16	States involved	Valid Successful AIDC interconnection tests between Bogota and Panama. (June 2015). AIDC tests Iquique ACC and Lima ACC were successfully conducted on December 2015. AIDC tests Iquique ACC and Cordoba ACC were made in February 2016 with positive results but the ABI message.

	Start	End	Responsible party	Status
				<p>AIDC test Brazil Peru had problems in ABI message.</p> <p>Tests Ezeiza ACC and Montevideo ACC (May 2016).</p> <p>Tests Asuncion ACC and Resistencia ACC (June 2016).</p> <p>Tests Curitiba ACC and Resistencia ACC (October 2016).</p> <p>Remaining test between adjacent ACCs (November 2016).</p>
<p>8.6 Implantation of pre-operational and operational AIDC</p>		<p>31/12/16</p>	<p>States involved</p>	<p>Valid</p> <p>AIDC between Bogota ACC and Panama ACC is in pre-operational phase since October 2015. Operational phase foreseen by the second-half of 2016.</p> <p>AIDC between Ezeiza ACC and Montevideo ACC in pre-operational phase on June 2016. Operational phase foreseen by the third trimester of 2016.</p>

	Start	End	Responsible party	Status
				<p>AIDC between Asuncion ACC and Resistencia ACC in pre-operational phase on July 2016. Operational phase foreseen by September 2016.</p> <p>AIDC between ACC Iquique and ACC Lima will be in pre-operational phase on June 2016 and operational on September 2016.</p> <p>Remaining interconnections Pre-operational: September 2016 operational: December 2016.</p>
9. Workshop on implementation of ATM automation, ADS B, and multilateration	22/09/15	25/09/15	ICAO	Concluded NAN/CAR/SAM workshop held in Panama (22-25 September 2015). The implementation of inter-regional AIDC interconnections was analysed at the workshop.
10. Second meeting of the AIDC operational implementation working group during SAMIG/16	19/10/15	23/10/15	ICAO	Concluded
10.1 It is proposed, as a matter of priority, the SAM/IG/16 meeting do the follow-up of AIDC implementation. Accordingly, the second meeting of the AIDC operational implementation working group will be held.	19/10/15	23/10/15	ICAO	Concluded Follow-up was made on the operational implementation and programming of activities for operational implementation in 2016.

	Start	End	Responsible party	Status
11. AIDC Implementation meetings	01/01/2017	31/12/2019	Involved States ICAO	Valid
11.1 Implementation of 12 AIDC interconnections at inter-regional level and 9 interconnections distributed as follows: Colombia (3), Ecuador (1), Panama (1) and Venezuela (4).	01/01/2017	31/12/2019	Involved States ICAO	Valid
11.2 Inter-regional AIDC interconnections between SAM and AFI Regions: Argentina (1), Brazil (2), French Guiana (1) and Uruguay (1)	01/01/2017	31/12/2019	Involved States ICAO	Valid
12. Monitoring to the AIDC interconnection implementation	2015	2019	ICAO	
12.1 AIDC Implementation Meeting ✓ First AIDC Implementation Meeting ✓ Second AIDC Implementation Meeting ✓ Third AIDC Implementation Meeting ✓ Fourth AIDC Implementation Meeting ✓ Fifth AIDC Implementation Meeting	March 2016	September 2019	ICAO	Valid AIDC/1 (Lima, Peru, 28-30 March 2016) AIDC/2 (Lima, Peru, 21-23 September 2016) AIDC/3 (Lima, Peru, June 2017) Approved by RCC/10 AIDC/4 (Lima, Peru, September 2018) AIDC/5 (Lima, Peru, September 2019)