



**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)

<b>SUMMARY</b>	
This working paper presents the updated action plan for the implementation of AIDC interconnections between adjacent ACCs in the Region.	
<b>REFERENCES:</b>	
<ul style="list-style-type: none"><li>• Eighteenth SAM workshop/implementation meeting (SAM/IG/18 Lima, Peru, 17-21 October 2016)</li><li>• Tenth Coordination Committee Meeting of Project RLA/06/901 (Lima, Peru, 25-26 August 2016)</li></ul>	
<b>ICAO strategic objectives:</b>	<i>A - Safety C- Environmental protection and sustainable development of air transport</i>

**1. Introduction**

1.1 The Tenth Coordination Committee Meeting of Project RLA/06/901 (RCC/10) reviewed the action plan for 2017 and approved to carry out the Third meeting on AIDC implementation, and to support it with 11 fellowships.

1.2 The SAM/IG/18 Meeting reviewed the activities of AIDC interconnection between adjacent ACCs foreseen for 2016 adjusting dates to testing activities, pre-operational and operational phases.

**2. Analysis**

2.1 In view of the activities carried out to date, those scheduled and approved for 2017, and those considered for implementation in the period 2017-2019, the Secretariat updated the action plan for the AIDC interconnection implementation presented as Appendix to this Working Paper.

**3. Suggested actions**

1.1 The Meeting is invited to:

- a) Take note of the information presented herein;
- b) review content of Section 2 and Appendix for approval; and
- c) discuss any other matter it may deem appropriate.

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## APPENDIX

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

	Start	End	Responsible party	Status
<b>1. Establishment of initial activities for completing the technical implementation of AIDC</b>	<b>10/10/2014</b>	<b>16/10/2014</b>	<b>ICAO</b>	<b>Completed</b>
<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>	10/10/14	16/10/14	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>
<b>2. Review of activities at the SAM/IG/14 meeting</b>	<b>09/10/14</b>	<b>13/11/14</b>	<b>ICAO and SAM/IG group</b>	<b>Completed</b>
2.1 Submission of the plan of activities and contents of the AIDC course at the SAM/IG/14 meeting	09/10/14	13/11/14	ICAO	
2.2 Review and approval for submission at the Eighth Coordination Meeting of Project RLA/06/901	09/10/14	13/11/14	SAM/IG	

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

	<b>Start</b>	<b>End</b>	<b>Responsible party</b>	<b>Status</b>
5.1 Mission to Santiago de Chile	13/04/15	17/04/15	3 automation experts ICAO	<b>Completed</b> Implementation of AIDC activities at the Santiago ACC <ul style="list-style-type: none"> <li>• AIDC practical course</li> <li>• AIDC interconnection tests between: <i>Santiago ACC and Lima ACC</i></li> </ul>
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	<b>Completed</b> Implementation of AIDC activities in the Lima ACC <ul style="list-style-type: none"> <li>• AIDC practical course</li> <li>• AIDC interconnection tests between:</li> </ul>

	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	<b>Completed</b> 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		<b>Completed</b> 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		<b>Completed</b> 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	<b>Completed</b> Implementation of AIDC activities at the Guayaquil ACC <ul style="list-style-type: none"> <li>• Practical course on AIDC</li> <li>• AIDC interconnection tests and pre-operational implementation:</li> </ul> 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	<b>Completed</b> AIDC technical

	<b>Start</b>	<b>End</b>	<b>Responsible party</b>	<b>Status</b>
			SAM Region	interconnection was completed, currently in the pre-operational phase.
5.3.2 Complete AIDC technical implementation between the Guayaquil ACC and the Bogota ACC	20/04/15	24/04/15		<b>Completed</b> AIDC technical interconnection was completed, currently in the pre-operational phase
5.3.3 Conduct AIDC course for ATS personnel of the Guayaquil ACC	20/04/15	24/04/15		<b>Completed</b> 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>	<b>27/04/15</b>	<b>01/05/15</b>	<b>3 automation experts</b>	<b>Completed</b> Implementation of AIDC activities in the Bogota ACC <ul style="list-style-type: none"> <li>• Practical course on AIDC</li> <li>• AIDC interconnection tests and pre-operational implementation:</li> </ul> <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	<b>Completed</b> The AIDC technical interconnection was completed, currently in pre-operational phase

	<b>Start</b>	<b>End</b>	<b>Responsible party</b>	<b>Status</b>
5.4.2 Complete AIDC technical implementation between the Bogota ACC and the Lima ACC	27/04/15	01/05/15		<b>Completed</b> The AIDC technical interconnection was completed, currently in pre-operational phase
<b>6. First meeting of the AIDC operational implementation working group during the SAMIG/15 meeting</b>	<b>11/05/15</b>	<b>15/05/15</b>	<b>RLA/06/901 member States</b>	<b>Completed.</b> 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.
<b>7. AIDC operational implementation</b>	<b>18/05/15</b>	<b>31/12/17</b>	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	<b>Completed.</b>
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	<b>Valid.</b> 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.

	<b>Start</b>	<b>End</b>	<b>Responsible party</b>	<b>Status</b>
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 Teleconferences at the beginning of each month until end 2017 depending on the progress, teleconference will be conducted upon needs	Involved States ICAO	<b>Valid.</b> Teleconferences are been carried out on monthly basis since June 2014. On 2016 teleconferences were conducted on: 19 January 23 May 19 February 3 June 18 March 6 September  For 2017 teleconferences are foreseen for March, (made on 3 March) July, September and December.
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	<b>Completed.</b>
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	31/12/17	States involved	<b>Valid.</b> 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. Letter came into force on 31 March

	<b>Start</b>	<b>End</b>	<b>Responsible party</b>	<b>Status</b>
				<p>2016.</p> <p>Establishing of a pre-operational period completing the ATS staff training.</p> <p>Operational implementation. AIDC between ACC Lima - ACC Guayaquil in operational phase from August 3, 2015, became operative on 31 March 2016. AIDC operations interrupted on September 2016 due to AIRCON 2100 system problems in Lima ACC. Automated system of Lima is being updated, esteemed to be completed by the beginning of the second semester 2017.</p> <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 (2017-2019).</p>

	<b>Start</b>	<b>End</b>	<b>Responsible party</b>	<b>Status</b>
<b>8. Other AIDC implementations</b>  <b>Bogota ACC - Panama ACC</b> <b>Ezeiza ACC - Montevideo ACC</b> <b>Resistencia ACC - Asunción ACC</b> <b>Curitiba ACC – Resistencia ACC</b> <b>Iquique ACC – Lima ACC</b> <b>Cordoba ACC – Iquique ACC</b> <b>Amazonico ACC – Bogota ACC</b> <b>Amazonico ACC – Lima ACC</b> <b>Asuncion ACC – Curitiba ACC</b>	18/05/15	31/12/17	States involved	
8.1 Definition of parameters of the AIDC database for the operational interconnection of the AIDC		29/12/17	States involved	<b>Valid</b> Defined for AIDC between: Bogota ACC-Panama ACC, Iquique ACC-Cordoba ACC and Resistencia ACC-Asuncion ACC.
8.2 Amendment of letter of operational agreement to include the AIDC for coordination between ACCs.		31/10/16	States involved	<b>Valid</b>
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 begining of each month until the end of 2017 Depending on the progress tele-conferences will be	States involved ICAO	<b>Valid</b>  Teleconferences conducted 19 January      23 May 19 February      3 June 18 March      6 September  For 2017 teleconferences are foreseen for March, (made on 3 March) July, September and December.

	<b>Start</b>	<b>End</b>	<b>Responsible party</b>	<b>Status</b>
		conducted upon need		
8.4 Practical courses addressed to the ATS AIS CNS personnel of the ACC involved, interconnection AIDC		30/11/16	States involved OACI	<b>Completed</b> AIDC Course (Panamá 22 -26 June) 2015  AIDC Course (Paraguay 28 November to 2 December 2016).
8.5 Conduction of AIDC interconnection test between adjacents ACCs		30/11/16	States involved	<b>Valid</b> Successful AIDC interconnection tests between Bogota and Panama. (June 2015). Tests will continue during the first semester 2017 in view of the improvement made in the automated system of Panama ACC.  AIDC tests Iquique ACC and Lima ACC were successfully conducted on December 2015 and continued until October 2016. Tests will restart the second semester of 2017 with the Lima automated system update.  AIDC tests Iquique ACC and Cordoba ACC were made in February 2016 with positive results but the ABI message. Tests will continue one end-

	<b>Start</b>	<b>End</b>	<b>Responsible party</b>	<b>Status</b>
				<p>2017 since Argentina reported that AIDC domestic operations will be completed first.</p> <p>AIDC tests Amazonico ACC and Lima ACC were conducted in March 2016 with problems with ABI messages at the beginning which were overcome by Atech. Tests will continue on second semester 2017.</p> <p>AIDC tests Ezeiza ACC and Montevideo ACC (first semester 2017).</p> <p>AIDC tests Asuncion ACC and Resistencia ACC were made during the week of 28 November 2016 and will restart at the end of 2017.</p> <p>AIDC tests Curitiba ACC and Resistencia ACC (end of the second semester 2017).</p> <p>AIDC tests Curitiba ACC and Resistencia ACC (end of second semester 2017).</p> <p>AIDC tests Curitiba ACC and Asuncion ACC (second</p>

	Start	End	Responsible party	Status
				semester 2017). AIDC tests Bogota AAC and Amazonico ACC (Second semester 2017)
8.6 Implantation of pre-operational and operational AIDC		31/12/17	States involved	<p><b>Valid</b></p> <p>AIDC between Bogota ACC and Panama ACC is in pre-operational phase since October 2015. Operational phase foreseen by end of the first semester 2017.</p> <p>AIDC between Ezeiza ACC and Montevideo ACC in pre-operational phase foreseen by first semester 2017.</p> <p>AIDC between Asuncion ACC and Resistencia ACC in pre-operational phase foreseen by the second semester 2017 and operational by second semester 2017.</p> <p>AIDC between Iquique ACC and Lima ACC will be in pre-operational and operational phases on the second semester 2017.</p> <p>AIDC between Iquique ACC</p>

	<b>Start</b>	<b>End</b>	<b>Responsible party</b>	<b>Status</b>
				<p>and Cordoba ACC will be in pre-operational and operational phases by the second semester.</p> <p>AIDC between Curitiba ACC and Resistencia ACC in pre-operational and operational phases by the second semester 2017.</p> <p>AIDC between Amazonico ACC and Lima ACC will be in pre-operational phase by October 2016 and operational by December 2016.</p> <p>AIDC between Amazonico ACC and Bogota ACC foreseen operational by December 2016.</p> <p>Remaining interconnections foreseen pre-operational by first semester 2017 and operational by the second semester 2017.</p>

	<b>Start</b>	<b>End</b>	<b>Responsible party</b>	<b>Status</b>
<b>9. Workshop on implementation of ATM automation, ADS B, and multilateration</b>	<b>22/09/15</b>	<b>25/09/15</b>	ICAO	<b>Concluded</b> NAN/CAR/SAM workshop held in Panama (22-25 September 2015). The implementation of inter-regional AIDC interconnections was analysed at the workshop.
<b>10. Second meeting of the AIDC operational implementation working group during SAMIG/16</b>	<b>19/10/15</b>	<b>23/10/15</b>	ICAO	<b>Concluded</b>
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.	<b>19/10/15</b>	<b>23/10/15</b>	ICAO	<b>Concluded</b> Follow-up was made on the operational implementation and programming of activities for operational implementation in 2016.
<b>11. AIDC Implementation meetings</b>	01/01/2017	31/12/2019	Involved States ICAO	<b>Valid</b>
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	<b>Valid</b>
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	<b>Valid</b>
<b>12. Introduction of FF ICE concept</b>  Analysis of the application of B1-FICE Module in the Region: Increasing interoperability, efficiency and capability through FF ICE. First stage of application before exit.	24/04/17	31/12/2018	SAM Region States and ICAO	<b>Valid</b>

	<b>Start</b>	<b>End</b>	<b>Responsible party</b>	<b>Status</b>
<b>13. Monitoring to the AIDC interconnection implementation</b>	<b>2015</b>	<b>2019</b>	ICAO	
<b>13.1 AIDC Implementation Meeting</b> ✓ First AIDC Implementation Meeting ✓ Second AIDC Implementation Meeting ✓ Third AIDC Implementation Meeting ✓ Fourth AIDC Implementation Meeting ✓ Fifth AIDC Implementation Meeting	<b>March 2016</b>	<b>September 2019</b>	ICAO	<b>Valid</b> AIDC/1 (Lima, Peru, 28-30 March 2016) AIDC/2 (Lima, Peru, 21-23 September 2016) AIDC/3 (Lima, Peru, 24-26 April 2017) Approved by RCC/10 AIDC/4 (Lima, Peru, June 2018) AIDC/5 (Lima, Peru, September 2019)