International Civil Aviation Organization

Twenty Fourth Meeting of the Communications/ Navigation and Surveillance Sub-group (CNS SG/24) of APANPIRG

Web-conference, 30 November – 4 December 2020

Agenda Item 3: Aeronautical Fixed Service (AFS)

3.3 Review Report of Sixth Meeting of the Asia Pacific AIDC Task Force (APA TF/6);

REVIEW THE REPORT OF THE SIXTH MEETING OF THE ASIA PACIFIC AIDC TASK FORCE

(Presented by the Secretariat)

SUMMARY

This papers presents the outcome of the Sixth Meeting of AIDC Implementation Task Force (APA TF/6) for review by the meeting.

1. INTRODUCTION

1.1 The Sixth meeting of the ATS Inter-facility Data Communication Task Force (APA TF/6) was held from 14 to 16 July 2020. The meeting was an on-line meeting using MS TEAMS.

1.2 The Meeting was attended by 75 participants from 13 States and 1 International Organization (Bangladesh, Cambodia, China, India, Indonesia, Lao PDR, Malaysia, Pakistan, Philippines, Singapore, Sri Lanka, Thailand, USA and IFATCA).

1.3 The meeting considered 5 working papers, 10 information papers. The papers and report of ACSICG/7 meeting are available at: https://www.icao.int/APAC/Meetings/Pages/2020-APA-TF6.aspx

2. DISCUSSION

Outcome of APANPIRG/30 on AIDC

2.1 The meeting briefly reviewed the outcome of APANPIRG/30 and CNS SG/23 meetings on ATS Inter-facility Data Communication (AIDC) related matters presented by the Secretariat.

2.2 The meeting reviewed the status of ATN/AMHS and AIDC in APAC Region resulted from latest report from relevant meetings. The latest implementation status updated by APA TF/6 meeting is provided in **Appendix A** to WP04.

Updates to the AIDC (ATSU) pairs identified by APANPIRG

2.3 The meeting then noted the AIDC implementation priorities and the target date of implementation against the hotspots identified by RASMAG and APANPIRG.

AIDC Implementation status updates by States

2.4 A number of information papers on the progress of AIDC implementation were presented by States including Malaysia (IP/02); Singapore (IP/03); India (IP/04): China (IP/05, IP/06); Indonesia (IP/08); Thailand (IP/09) and the Philippines (IP/10). The progress on implementation as reported in the IPs has been consolidated into **Appendix A** to WP04.

2.5 The meeting congratulated Thailand for two AIDC connections implemented recently between Bangkok/Kuala Lumpur and Bangkok/Vientiane, in particular for the one implemented on the same day of APA TF/6 meeting i.e. on 14 July 2020. Bangkok new ATM automation system was put into operation on 12 February 2020.

2.6 The meeting also congratulated the Philippines for successful implementation of AIDC connections with other three States. In addition, Manila ACC had already conducted AIDC tests with Kota Kinabalu and Ho Chi Minh. The AIDC trial operations with Ho Chi Minh ACC will commence in 4Q 2020. Indonesia confirmed that the LOA on AIDC between Kota Kinabalu and Manila had been signed and the target date for implementation is in September 2020.

Additional information on AIDC implementation provided by States verbally

2.7 Bangladesh informed the meeting that the AIDC project is delayed and now is under internal approval processes. Bangladesh will coordinate for necessary trials with concerned States after the approval by CAA. Bangladesh which is likely in 2023.

2.8 Sri Lanka informed the meeting that the testing with Maldives and Chennai (India) was suspended due to unprecedented impact of COVID pandemic. Sri Lanka will try to resume the trials soon with India and Maldives and will also initiate discussions with Jakarta, Indonesia for AIDC trials in 2021.

2.9 Pakistan inform the meeting of their AIDC implementation status. The AIDC ICD Version 2 is used by Pakistan. There is a successful domestic AIDC implementation between Lahore and Karachi. Pakistan is also keen to conduct testing with India (Mumbai and Delhi) once ready.

AIDC Connections implemented since APA TF/5 meeting

2.10 The meeting noted that AIDC implementation in South China Sea sub-region had been satisfactory while further efforts by States in the Bay of Bengal sub-region are required. The summary of the new AIDC connections implemented since the APA TF/5 meeting is listed below:

- Automatic handling over based on OLDI ICD between Shenyang ACC and Khabarovsk ACC implemented in October 2019 over a dedicated line;

- AIDC operational implementation between Kuala Lumpur ACC and Chennai OCC came into effect on 01 April 2020;

- Operational AIDC between Singapore ACC and Kuala Lumpur ATCC with limited messages set was implemented on 01 November 2019;

- Operational AIDC between Bangkok ACC and Kuala Lumpur ATCC with limited messages set was implemented on 14 March 2020;

- Operational AIDC between Bangkok ACC and Vientiane ACC with 5 messages set was implemented on 14 July 2020;

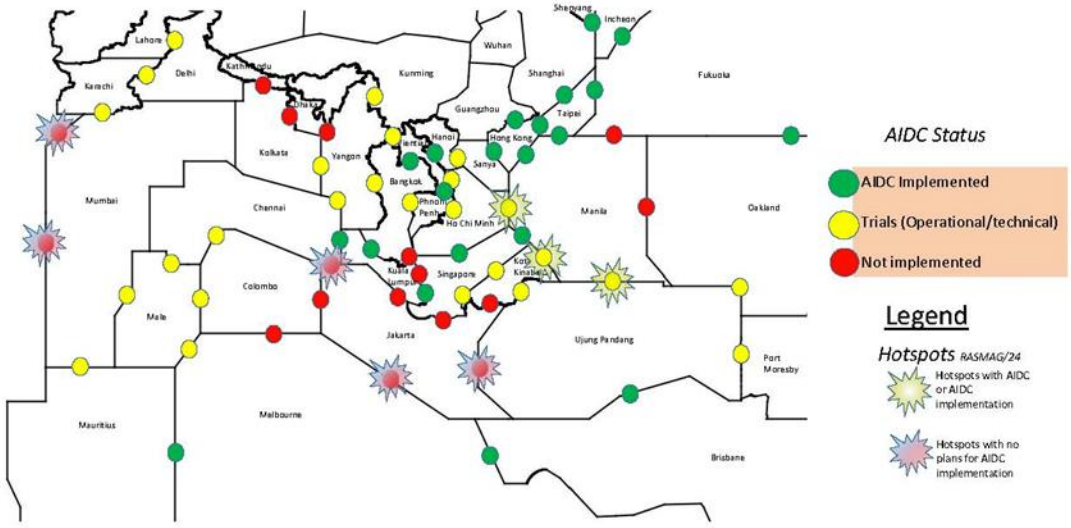
- AIDC service between Manila ACC and Hong Kong ACC implemented on 23 May 2019;

- AIDC service between Manila ACC and Singapore ACC implemented on 1 Nov.2019; and

- AIDC service between Manila ACC and Taipei ACC implemented on 5 December 2019.

2.11 The meeting encouraged the concerned States/Administrations to continue to work bilaterally to expedite implementation of planned AIDC connections.

2.12 The graphical map for quick and easy understanding of the regional AIDC implementation status initiated by CAA. Singapore and updated by the meeting is shown below:



APA AIDC Implementation Chart ver 2 (Jul 2020)

AIDC Implementation Issues

2.13 Under this Agenda, the meeting reviewed and discussed the consolidated implementation issues (**Appendix A** to this paper) collected and presented by Indonesia with support from India and Singapore. The identified issues are classified into three categories i.e. a) pertaining to Communication Infrastructure and Interfacing equipage; b) pertaining to ATM system parameters and Application Software; and c) pertaining to Design Procedures, SOP, Operator's Training. The AIDC reported issues till date were presented for review and discussion by the meeting. Totally 89 issues were

consolidated. The meeting considered that the issue table would continue to serve as a reference for other States. A summary of the identified issues is shown in the Table below:

Fault Categories	**APA TF/6 (2020)**		
	Issues Reported	**Closed**	**Open**
a. Communication Link	9	3	6
b. ATM System	50	20	30
c. AIDC Message	17	15	2
d. Airspace Design/Procedures	8	4	4
e. Other	5	2	3
Total	**89**	44	45

Some Implementation Issues reported by China

2.14 5-20 seconds of exchanged AIDC message could be generally achieved with adjacent ATSUs over AFTN while the ATC controller's preference is less than 5 seconds. With the increased traffic, the latency would be much longer. A number of failures of the AIDC process would grow and the benefits of AIDC would be compromised. Use of dedicated lines can improve the latency issue but the structure of the network would become more complicated. Optimizing the existing AFTN circuit and upgrading exchanges of AFTN messages over CRV, the latency could be improved.

2.15 Some issues were observed regarding the Optional Data Field missing in AIDC message headers, especially for ODF 2 and 3. According to the AIDC ICD Ver. 3, ODF 2 and 3 are defined to carry message/data unit identification and message/data unit reference information, respectively which should be used to improve the accuracy of AIDC message processing.

2.16 For AIDC application, normally the Transfer of Control Point (TCP) or the common FIR boundary shall be determined. For domestic use, China has formulated the standard for FDR data exchange to deal with this. Testing for verification between Kunming ACC and Xishuangbanna/Dali Airport were carried out. Additional function for allocation of Calculate Take-Off Time (CTOT) and SSR code is also specified in the FDR standard which could further reduce air/ground voice communication time.

2.17 The AIDC handover test between China and Laos PDR started in December 2018. While Kunming uses NUMEN-2000 test platform, Vientiane uses TopSky backup system. The test was carried out in a simple mode by using AFTN link.

2.18 ABI, EST and ACP messages are sent automatically in NUMEN-2000 system manufactured by LES company. TOC and AOC messages are sent manually. ABI message is sent 15 minutes before SAGAG, and EST is sent 80 km or 10 minutes before SAGAG. For outbound flights, Laos reported they couldn't deal with the metric altitude in ABI and EST messages. Later, LES company upgraded the system. By configuring the programs, the altitudes sent to Laos are imperial and other domestic areas are metric. Whereas, the altitudes displayed on controllers' positions are metric, which is convenient for the controllers. For outbound flights, Laos replied LRM after receiving EST sent by Kunming. Also, "FPL NOT PREAC" was displayed in LRM. At present, there is no ABI in the AIDC handover between Kunming and adjacent control areas, because the route in ABI could be modified wrongly by the opposite end system. However, due to the limitation from TopSky, ABI is indispensable to activate the flight plan. After that, LES company upgraded related programs and added routes in ABI.

2.19 Latency through AFTN link up to 320 seconds was one of the concerned issues. The average during the test was 68 seconds. Long latency would have caused handover failure. It was recommended to make joint efforts by China and Laos PDR to work out a solution to the problem of transmission latency.

2.20 The meeting encouraged States/Administrations to provide the identified issues with recommended solutions to Indonesia for consolidation into the issues form.

AIDC Issues Summary and Solutions

2.21 Indonesia proposed that the focal points for AIDC implementation should voluntarily contact each other to work jointly for solution of the outstanding issues identified in the table. States/Administrations were also urged to share the lessons learnt by providing identified issues and recommended solutions if any, for consolidation into the implementation issues table.

2.22 The Secretariat was then requested to distribute the issue form in excel format to all designated AIDC focal points for sharing and seeking updates from States/Administrations.

Future meeting of APA Task Force

2.23 There are also a number of AIDC connections planned for implementations in 4Q2020 or early 2021. Noting the achievements made in completion of tasks specified in the TOR and the discussions at CNS SG/23 meeting, the APA TF/6 meeting considered it necessary to continue the work of the Task Force for the meanwhile. The meeting agreed to have another meeting in the first half of 2021 to review the implementation status of those AIDC connections planned for completion by the end of 2020 and/or early 2021 before dissolving the AIDC Task Force.

2.24 Considering the impact of the COVID pandemic, the next meeting of the Task Force is not yet scheduled with a fixed date and is likely to be held in early 2021. The Secretariat will coordinate and inform member States about exact dates of the meeting in due course.

AIDC Webinar

2.25 Due to the significant achievements made by APA TF under such a difficult time, the key contributors of the task force were invited to make a webinar on AIDC to APAC region, titled *AIDC Implementation Benefits and Lessons Learnt*. The webinar was successfully conducted on 9 October 2020, which was moderated by Mr Kwek Chin Lin from CAAS, the other three speakers were Mr Anurag Sharma from AAI, Mr Joe Chua from CAAS, and Mr Arian Nurahman from DGCA Indonesia. The presentation used for this webinar is provided as **Appendix C** to this paper.

3. ACTION BY THE MEETING

3.1 The meeting is invited to

a) note the progress of AIDC implementation in the Asia Pacific Region, forthcoming implementation plans and the new issues identified by the AIDC Task Force.
b) review the AIDC Issues Report provided in **Appendix A**;
c) review the Action Items provided in **Appendix B**;
d) review the webinar presentation *AIDC Implementation Benefits and Lessons Learn*t provided in ***Appendix C***; and

e) discuss any relevant matter as appropriate.

Issue reference	Reporting State/ATSU	Pairing FIR1/FIR2	Date of Reported	Date of Occurrence	Fault Category	Description of Fault	Frequency	Priority (assessed by TF or RO)	ATSU/ Vendor	Actions Taken/ Updated Date	Status (Open/Closed)
1	2	3	4	5	6	7	8	9	10	11	12
AIDC-ISSUE-1	Australia / Brisbane ACC Australia / Melbourne ACC	Brisbane / Melbourne	2016-01-02	-	b. ATM System, or	Limited AIDC V3 compliance (partial compliance on block levels only, no weather deviations or other optional formats)	Frequent	Low	Brisbane ACC & Melbourne ACC/ THALES	Software limitation / 02Jan2016 Support for offsets and weather deviations expected to be delivered during Q1/Q2 2021	**OPEN**
AIDC-ISSUE-2	Australia / Brisbane ACC Australia / Melbourne ACC	Brisbane / Melbourne	2016-01-02	-	b. ATM System, or	LRM may contain incorrect field number	Occasionally	Low	Brisbane ACC & Melbourne ACC/ THALES	Software limitation / 02Jan2016	**OPEN**
AIDC-ISSUE-3	Australia / Brisbane ACC Australia / Melbourne ACC	Brisbane / Melbourne	2016-01-02	-	b. ATM System, or	Limited CDN capability. Limited ability to transmit CDN messages, and cannot always correctly process received CDN messages	Occasionally	Low	Brisbane ACC & Melbourne ACC/ THALES	Software limitation / 02Jan2016 software corrections expected to be delivered during Q1/Q2 2021	**OPEN**
AIDC-ISSUE-4	Australia / Brisbane ACC Australia / Melbourne ACC	Brisbane / Melbourne	2016-01-02	-	b. ATM System, or	Unable to process a received CPL message	Occasionally	Low	Brisbane ACC & Melbourne ACC/ THALES	Software limitation / 02Jan2016	**OPEN**
AIDC-ISSUE-5	Australia / Brisbane ACC Australia / Melbourne ACC	Brisbane / Melbourne	2016-01-02	-	b. ATM System, or	Only a limited number of characters (250) in Field 18 are supported.	Occasionally	Low	Brisbane ACC & Melbourne ACC/ THALES	Software limitation / 02Jan2016	**OPEN**
AIDC-ISSUE-6	Australia / Brisbane ACC Australia / Melbourne ACC	Brisbane / Melbourne	2016-01-02	-	b. ATM System, or	No support for AIDC messages developed in AIDC V2 and onwards (e.g. FAN, FCN, ADS, TRU etc.).	Frequent	Low	Brisbane ACC & Melbourne ACC/ THALES	Software limitation / 02Jan2016	**OPEN**
AIDC-ISSUE-7	India / Delhi ACC	Delhi / Lahore	2020-07-01	-	b. ATM System, or	Messages from Lahore to Delhi like ABI were rejected by Delhi system due to Error Message 61 (CRC Error). No AIDC messages being received from Lahore as per latest observation.	Frequent	High	Delhi ACC/ INDRA	Error is perhaps because Lahore System is generating extra spaces. Lahore should start the AIDC coordination with Delhi. There should be joint observation and exercise conducted to assess the status.	**OPEN**
AIDC-ISSUE-8	India / Delhi ACC	Delhi / Karachi	2020-07-01	-	b. ATM System, or	Messages from Karachi to Delhi like ABI were rejected by Delhi system due to Error Message 61 (CRC Error). Karachi has done changes through OEM. The problem still persists with majority of error message 61 and 57 as per latest observation.	Frequent	High	Delhi ACC/ INDRA	Error is perhaps because Karachi ATM system is generating extra spaces. Action is required at Karachi to avoid generation of extra spaces. Karachi should start the AIDC coordination with Delhi. There should be joint observation and exercise conducted to assess the status.	**OPEN**
AIDC-ISSUE-9	India / Delhi ACC	Delhi / Varanasi	2020-01-07	-	a. Communication Link, or	Two test trials were conducted with good results.Trial operations are going on. AFTN latency issues observed at times. TOC and AOC msg not successfully handled by INDRA ATM system at Delhi..Hardware and software issues with ATC automation system at Varanasi. Issues with Flightplan also observed.	Occasionally	Low	Delhi ACC/ INDRA Varanasi ACC/ INDRA	The Issues are being taken up with vendors.	**OPEN**
AIDC-ISSUE-10	India / Delhi ACC	Delhi / Nagpur	2020-07-01	-	a. Communication Link, or	Observational trials conducted in March 2020. AFTN latency issues observed at times. TOC and AOC message not successfully handled by INDRA ATM system at Delhi. Hardware and software issues with ATC automation system at Nagpur. Issues of missing FPL also observed.	Occasionally	Low	Delhi ACC/ INDRA Nagpur ACC/ INDRA	The Issues are being taken up with vendors.	**OPEN**
AIDC-ISSUE-11	India / Delhi ACC	Delhi / Ahmedabad	2020-07-01	-	a. Communication Link, or	New LOA signed. Coordination between Ahmedabad and Delhi happening mainly through AIDC. AFTN latency issues observed at times. TOC and AOC messages not successfully handled by INDRA ATM system at Delhi. For some flights AIDC messages not generated. Hardware and software issues with ATC automation system at Ahmedabad.	Occasionally	Low	Delhi ACC/ INDRA Ahmedabad ACC/ INDRA	The issues are being taken up with vendors.	**OPEN**
AIDC-ISSUE-12	India / Ahmedabad ACC	Ahmedabad / Nagpur	-	-	a. Communication Link, or	AFTN latency issues observed at times. AFTN (AMSS) to be upgraded to support unimpeded AIDC message handling.	Occasionally	High	Ahmedabad ACC/ INDRA	New AMSS installation at Nagpur has been proposed. Same is under process. / 30Jan2018	**OPEN**

Issue reference	Reporting State/ATSU	Pairing FIR1/FIR2	Date of Reported	Date of Occurrence	Fault Category	Description of Fault	Frequency	Priority (assessed by TF or RO)	ATSU/ Vendor	Actions Taken/ Updated Date	Status (Open/Closed)
AIDC-ISSUE-13	India / Ahmedabad ACC	Ahmedabad / Karachi	2014-06-04	-	c. AIDC Message, or	ABI messages exchanged between two system and messages were rejected due route error and mismatch in coordination timing. Modification in airways was required for Ahmedabad and Karachi DBM. On 12 June 2014 required modification were made in airways (like imaginary points) for effectively acceptance of AIDC messages. ABI messages of some of the aircrafts were not correlated with FPL available in ATS automation system. Karachi has done changes through OEM. Re-testing is in progress.	Frequent	High	Ahmedabad ACC/ INDRA	Coordination protocol dialogue timeout was observed. Karachi AMSS-AFTN system time was also synchronized. Automatic time synchronization through GPS server in AMSS-AFTN system at Ahmedabad and Karachi was done for smooth exchange of AIDC messages. Rejection of AIDC messages have reduced / 30Nov2015	CLOSED
AIDC-ISSUE-14	India / Varanasi ACC	Varanasi / Nagpur	-	-	b. ATM System, or	AFTN (AMSS) to be upgraded at Nagpur to support unimpeded AIDC message handling. Some HMI issues at both the stations.	Frequent	Low	Varanasi ACC/ INDRA Nagpur ACC/ INDRA	New AMSS installation at Nagpur has been proposed. Same is under process / 30Jan2018	OPEN
AIDC-ISSUE-15	India / Kolkata ACC	Kolkata / Varanasi	-	-	b. ATM System, or	Some HMI issues at Varanasi. AIDC has been suspended.	Frequent	Low	Kolkata ACC/ INDRA Varanasi ACC/ INDRA	Nil / 1July2020	OPEN
AIDC-ISSUE-16	India / Kolkata ACC	Kolkata / Nagpur	-	-	b. ATM System, or	AFTN (AMSS) to be upgraded to support unimpeded AIDC message handling. Some HMI issues at Nagpur. AIDC has been suspended	Frequent	Low	Kolkata ACC/ INDRA NagpurACC/ INDRA	New AMSS installation at Nagpur has been completed / 1July2020	OPEN
AIDC-ISSUE-17	India / Kolkata ACC	Kolkata / Chennai	-	-	a. Communication Link, or	LOA signed and AIDC Under trial phase. 1. The ICAO route truncation indicator is not supported by INDRA system. 2. Kolkata system does not support adaptation of multiple center name for one ACC. Therefore different AIDC parameters cannot be adapted for different sectors like OCC and ACC sectors posing operational problems.	Occasionally	Medium	Kolkata ACC/ INDRA Chennai ACC/ RAYTHEON	Chennai has supressed ABI transmission/reception processing.	OPEN
AIDC-ISSUE-18	India / Chennai ACC	Chennai / Nagpur	-	-	b. ATM System, or	The ICAO route truncation indicator is not supported by Aircon2100 system.	Occasionally	Medium	Chennai ACC/ RAYTHEON Nagpur ACC/ INDRA	New AMSS installation at Nagpur has been proposed. Same is under process. / 30Jan2018	OPEN
AIDC-ISSUE-19	India / Chennai ACC	Chennai / Colombo	2015-08-06 2015-10-06 2015-12-06	-	b. ATM System, or	Though the initial test in November 2014 was quite successful. The test in June 2015 were not successful, due to technical issues at Colombo. Re-testing have to be done after rectification at Colombo. The re-testing was done after rectification of identified technical issues at Colombo. Testing was successful. Will start trials for limited hours.	Rare	Low	Chennai ACC/ RAYTHEON	Nil / 30Jan2018	OPEN
AIDC-ISSUE-20	India / Chennai ACC	Chennai / Maldives	2014-11-25	-	c. AIDC Message, or	Trials were mostly successful barring some LRMs, like reference ID in ODF 3 is not as per ICD.	Rare	Medium	Chennai ACC/ RAYTHEON Maldives ACC/ SELEX	Message transaction rate is 100% and the message delivery was successful / 30Nov2015	CLOSED
AIDC-ISSUE-21	India / Chennai ACC	Chennai / Trivandrum	-	-	b. ATM System, or	Even after sending a rejection or counter coordination message by Chennai, the sending station continues to send the CDN message. The ICAO route truncation indicator is not supported by INDRA Aircon 2100 system.	Occasionally	Medium	Chennai ACC/ RAYTHEON Trivandrum ACC/ INDRA	Nil / 30Jan2018	OPEN
AIDC-ISSUE-22	India / Chennai ACC	Chennai / Mangalore	-	-	b. ATM System, or	Even after sending a rejection or counter coordination message by Chennai, the sending station continues to send the CDN message.	Occasionally	Medium	Chennai ACC/ RAYTHEON	Nil / 30Jan2018	OPEN
AIDC-ISSUE-23	India / Chennai ACC	Chennai / Trichy	-	-	b. ATM System, or	Even after sending a rejection or counter coordination message by Chennai, the sending station continues to send the CDN message.	Occasionally	Medium	Chennai ACC/ RAYTHEON	Nil / 30Jan2018	OPEN

Issue reference	Reporting State/ATSU	Pairing FIR1/FIR2	Date of Reported	Date of Occurrence	Fault Category	Description of Fault	Frequency	Priority (assessed by TF or RO)	ATSU/ Vendor	Actions Taken/ Updated Date	Status (Open/Closed)
AIDC-ISSUE-24	India / Chennai ACC	Chennai / Hyderabad	-	-	b. ATM System, or	The SSR Codes received through AIDC message are getting retained in Chennai FDPS for days and are not available for re-use. Controller have to use Chennai adapted pool of limited SSR codes for track correlation. As a result the adapted Chennai pool of SSR codes gets exhausted very soon. AIDC testing is temporarily suspended.	Frequent	High	Chennai ACC/ RAYTHEON Hyderabad ACC/ SELEX	SSR code issue at Chennai resolved / 29Mar2019	CLOSED
AIDC-ISSUE-25	India / Chennai ACC	Chennai / Bengaluru	2015-03-24	-	b. ATM System, or	The SSR Codes received through AIDC message are getting retained in Chennai FDPS for days and are not available for re-use. Controller have to use Chennai adapted pool of limited SSR codes for track correlation. As a result the adapted Chennai pool of SSR codes gets exhausted very soon. AIDC testing is temporarily suspended.	Rare	High	Chennai ACC/ RAYTHEON	SSR code issue at Chennai resolved / 29Mar2019	CLOSED
AIDC-ISSUE-26	India / Mumbai ACC	Mumbai / Ahmedabad	-	-	b. ATM System, or	Some HMI issues at Ahmedabad	Frequent	Low	Mumbai ACC/ RAYTHEON Ahmedabad ACC/ INDRA	Nil / 30 Jun 2020	CLOSED
AIDC-ISSUE-27	India / Mumbai ACC	Mumbai / Nagpur	-	-	b. ATM System, or	Some HMI issues at Nagpur.	Frequent	Low	Mumbai ACC/ RAYTHEON Nagpur ACC/ INDRA	Nil / 30 Jun 2020	CLOSED
AIDC-ISSUE-28	India / Delhi ACC	Delhi / Varanasi	-	-	b. ATM System, or	Some HMI issues at Varanasi.	Frequent	Low	Mumbai ACC/ RAYTHEON	New AMSS installation at Delhi in progress (OPEN). Likely by December 2016. / 30Jan2018 ***) Proposed to be REMOVED***	OPEN
AIDC-ISSUE-29	India / Delhi ACC	Delhi / Nagpur	-	-	b. ATM System, or	Some HMI issues at Varanasi.	Frequent	Low	Delhi ACC/ RAYTHEON	New AMSS installation at Delhi in progress (OPEN). Likely by December 2016 / 30Jan2018 ***) Proposed to be REMOVED***	OPEN
AIDC-ISSUE-30	India / Ahmedabad ACC	Ahmedabad / Nagpur	-	-	b. ATM System, or	Some HMI issues at Nagpur.	Frequent	Low	Ahmedabad ACC/ INDRA Nagpur ACC/ INDRA	Nil / 30Jan2018	OPEN
AIDC-ISSUE-31	India / Kolkata ACC	Kolkata / Chennai	-	-	e. Others.	Under trial phase. The acceptance of EST message is in manual mode.	Frequent	Low	Kolkata ACC/ INDRA Chennai ACC/ RAYTHEON	Nil / 30Jan2018	OPEN
AIDC-ISSUE-32	India / Chennai ACC	Chennai / Nagpur	-	-	b. ATM System, or	The ICAO route truncation indicator is not supported by INDRA Aircon 2100 system.	Frequent	Medium	Chennai ACC/ RAYTHEON Nagpur ACC/ INDRA	Nil / 30Jan2018	OPEN
AIDC-ISSUE-33	India / Chennai ACC	Chennai / Maldives	-	-	b. ATM System, or	Seconds field included in lat/long is received which is not as per ICD.	Frequent	Low	Chennai ACC/ RAYTHEON Maldives ACC/ SELEX	Message transaction rate is 100% and the message delivery was successful / 30Nov2015	CLOSED
AIDC-ISSUE-34	India / Chennai ACC	Chennai / Trivandrum	-	-	b. ATM System, or	The ICAO route truncation indicator is not supported by INDRA Aircon 2100 system.	Frequent	Medium	Chennai ACC/ RAYTHEON Trivandrum ACC/ INDRA	Nil / 30Jan2018	OPEN
AIDC-ISSUE-35	India / Chennai ACC	Chennai / Mangalore	-	-	b. ATM System, or	The ICAO route truncation indicator is not supported by INDRA Aircon 2100 system.	Frequent	Medium	Chennai ACC/ RAYTHEON	Nil / 30Jan2018	OPEN
AIDC-ISSUE-36	India / Chennai ACC	Chennai / Trichy	-	-	b. ATM System, or	The ICAO route truncation indicator is not supported by INDRA Aircon 2100 system.	Frequent	Medium	Chennai ACC/ RAYTHEON	Nil / 30Jan2018	OPEN
AIDC-ISSUE-37	India / Kolkata ACC	Kolkata / Chennai Kolkata / Nagpur Kolkata / Varanasi Kolkata / Guwahati	-	-	b. ATM System, or	The route truncation is not supported by INDRA system, hence there is a likelihood of wrong route modification by ABI message in the accepting ATCC.	Frequent	Medium	Kolkata ACC/ INDRA	Nil / 4Jan2019 ***) Proposed to be REMOVED***	OPEN
AIDC-ISSUE-38	India / Chennai ACC	Chennai / Nagpur	-	-	d. Airspace Design/Procedures, or	Airspace configuration issue.	Frequent	Medium	Chennai ACC/ RAYTHEON Nagpur ACC/ INDRA	Nil / 30Jan2018 25th April 2019	CLOSED

Issue reference	Reporting State/ATSU	Pairing FIR1/FIR2	Date of Reported	Date of Occurrence	Fault Category	Description of Fault	Frequency	Priority (assessed by TF or RO)	ATSU/ Vendor	Actions Taken/ Updated Date	Status (Open/Closed)
AIDC-ISSUE-39	India / Chennai ACC	Chennai / Trivandrum	-	-	d. Airspace Design/Procedures, or	Due to dynamic sectorization of UTV between Chennai and Trivandrum, no AIDC coodination is possible for overflying aircraft. But AIDC is possible for aircraft departing/arriving from/to destinations within the lateral limits of UTV. AIDC coordination not possible for level changes after the initial coordination. NOTIFIED (ABI), INITIAL COORDINATION (EST, CPL), TRANSFER OF CONTROL (TOC, AOC) is possible.	Frequent	Medium	Chennai ACC/ RAYTHEON Trivandrum ACC/ INDRA	The problem can be resolved by permanantly handing over UTV either to Chennai or Trivandrum / 30Jan2018	**OPEN**
AIDC-ISSUE-40	India / Chennai ACC	Chennai / Mangalore	-	-	d. Airspace Design/Procedures, or	Airspace configuration issue.	Frequent	Medium	Chennai ACC/ RAYTHEON	Nil / 30Jan2018	**OPEN**
AIDC-ISSUE-41	India / Chennai ACC	Chennai / Trichy	-	-	d. Airspace Design/Procedures, or	Airspace configuration issue.	Frequent	Medium	Chennai ACC/ RAYTHEON	Nil / 30Jan2018	**OPEN**
AIDC-ISSUE-42	India / Kolkata ACC	Kolkata / Chennai	-	-	a. Communication Link, or	AFTN latency issues observed at times.	Occasionally	Low	Kolkata ACC/ INDRA Chennai ACC/ RAYTHEON	Nil / 30Jan2018	**OPEN**
AIDC-ISSUE-43	Indonesia / Ujung Pandang ACC	Ujung Pandang / Brisbane	2015-12-03	2010-10-10	b. ATM System, or	The system does not rise notification or alert to Controller when the messages sent and not replied by LAM (no ULAM).	Frequent	Medium	Ujung Pandang ACC/ THALES Brisbane ACC/ THALES	It was a software issue and the software has been upgraded / 21Dec2015	**CLOSED**
AIDC-ISSUE-44	Indonesia / Ujung Pandang ACC	Ujung Pandang / Kinabalu	2015-12-28	2015-12-28	c. AIDC Message, or	Received wrong header of ODF3 from Kinabalu system	Occasionally	High	Ujung Pandang ACC/ THALES Kinabalu ACC/ LEONARDO	Investigation has been carried out by Ujung Pandang and Kinabalu and the issue has been solved since Kinabalu has completely upgrade their ATM system / 5Sep2019	**CLOSED**
AIDC-ISSUE-45	Indonesia / Ujung Pandang ACC	Ujung Pandang / Brisbane	2015-08-01	-	d. Airspace Design/Procedures, or	Ujung Pandang sent back some EST from Brisbane with different time of COP	Occasionally	Medium	Ujung Pandang ACC/ THALES Brisbane ACC/ THALES	It was a software issue and the software has been upgraded. And also there are some modifications in the dataset to solve this problem / 14Dec2015	**CLOSED**
AIDC-ISSUE-46	Indonesia / Ujung Pandang ACC	Ujung Pandang / Brisbane	2015-09-01	-	a. Communication Link, or	There are some AIDC messages between Ujung Pandang and Brisbane which have transit time more than 180 seconds (3 minutes). The AFTN line between Ujung Pandang and Brisbane is routing via Jakarta.	Occasionally	High	Ujung Pandang ACC/ THALES Brisbane ACC/ THALES	Since 10 March 2018 direct communication link (AFTN) has been connected. Need to test and trial in exchanging messages / 10Mar2018	**CLOSED**
AIDC-ISSUE-47	Malaysia / Kuala Lumpur ATCC	Kuala Lumpur / Chennai	2016-03-01	-	e. Others.	We received a lot of complains that Chennai controller didn't respond to CDN.	Frequent	Medium	Kuala Lumpur ATCC/ SELEX Chennai ACC/ RAYTHEON	Call Chennai Oceanic to respond the CDN request / 29Jul2016	**OPEN**
AIDC-ISSUE-48	Malaysia / Kuala Lumpur ATCC	Kuala Lumpur / Chennai	2016-03-01	-	c. AIDC Message, or	Received LRM on ABI for Item 18 (LRM-RMK/48/18/)	Frequent	Medium	Kuala Lumpur ATCC/ SELEX Chennai ACC/ RAYTHEON	SELEX still investigate this problem. The same AFTN message with item 18 received through FDP system but no error detected. Showing that the ABI-AFTN message format is correct but AIDC system unable to process it / 29Jul2016	**CLOSED**
AIDC-ISSUE-49	Malaysia / Kuala Lumpur ATCC	Kuala Lumpur / Chennai	2016-03-01	-	b. ATM System, or	AIDC system send more than three times CDN for time revision.	Frequent	Medium	Kuala Lumpur ATCC/ SELEX Chennai ACC/ RAYTHEON	This problem happen because we had set our AIDC system that CDN will send automatically if there is a time revision more than 3 minutes. Due to complain from Chennai, we stop the automatic send and instruct our Controllers to send all CDN message, including time revision manually / 29Jul2016	**CLOSED**

Issue reference	Reporting State/ATSU	Pairing FIR1/FIR2	Date of Reported	Date of Occurrence	Fault Category	Description of Fault	Frequency	Priority (assessed by TF or RO)	ATSU/ Vendor	Actions Taken/ Updated Date	Status (Open/Closed)
AIDC-ISSUE-50	Malaysia / Kuala Lumpur ATCC	Kuala Lumpur / Chennai	2016-03-01	-	c. AIDC Message, or	Did not receive ACP on EST. After 180 seconds system triggered LRM	Frequent	Medium	Kuala Lumpur ATCC/ SELEX Chennai ACC/ RAYTHEON	This was due to latency of receiving the ACP message. Change the ACP parameter from 180 seconds to 255 seconds / 29Jul2016	CLOSED
AIDC-ISSUE-51	Maldives / Maldives ACC	Maldives / Melbourne	2014-09-17	-	c. AIDC Message, or	Melbourne reported a small number of messages contain a route designator in Field 15 prior to entry COP.	Occasionally	Medium	Maldives ACC/ SELEX Melbourne ACC/ THALES	Vendor investigated and provided updated software / 22May2015	CLOSED
AIDC-ISSUE-52	Maldives / Maldives ACC	Maldives / Colombo	2014-03-13	-	c. AIDC Message, or	Colombo reported Message ID out to VCCC had wrong ID sent from our system.	Frequent	High	Maldives ACC/ SELEX	Configuration corrected / 15Mar2014	CLOSED
AIDC-ISSUE-53	Maldives / Maldives ACC	Maldives / Colombo	2014-04-06	-	b. ATM System, or	When Male sends ABI message within Colombo domestic squawk range, it causes complication in their system.	Frequent	High	Maldives ACC/ SELEX	Colombo changed their domestic SSR code allocation / 16Mar2015	CLOSED
AIDC-ISSUE-54	Maldives / Maldives ACC	Maldives / Melbourne	2014-09-17	-	c. AIDC Message, or	Melbourne reported that Field 15 route information contains seconds in the latitude/longitude information generated from our system.	Occasionally	Medium	Maldives ACC/ SELEX Melbourne ACC/ THALES	Vendor investigated and provided updated software / 22May2015	CLOSED
AIDC-ISSUE-55	Maldives / Maldives ACC	Maldives / -	2014-11-25	-	c. AIDC Message, or	Reference ID of Optional Data Field 3 (ODF) is incorrect in message received by VOMM.	Frequent	Medium	Maldives ACC/ SELEX	Vendor investigated and provided updated software / 22May2015	CLOSED
AIDC-ISSUE-56	Maldives / Maldives ACC	Maldives / -	2014-11-25	-	c. AIDC Message, or	Chennai automation system rejected latitude/longitude represented with seconds (041627N0733138E).	Occasionally	Medium	Maldives ACC/ SELEX	Vendor investigated and provided updated software / 22May2015	CLOSED
AIDC-ISSUE-57	Maldives / Maldives ACC	Maldives / Colombo	2015-11-19	-	c. AIDC Message, or	Colombo reported LRM received from VRMM saying invalid SSR equipment in FPL.	Occasionally	Medium	Maldives ACC/ SELEX	Configuration changed / 23Feb2016	CLOSED
AIDC-ISSUE-58	Maldives / Maldives ACC	Maldives / Colombo	2015-11-19	-	c. AIDC Message, or	ABI and CPL message in ICAO 2012 FPL format sent from Colombo rejected.	Occasionally	High	Maldives ACC/ SELEX	Software updated / 23Feb2016	CLOSED
AIDC-ISSUE-59	Singapore / Singapore ACC	Singapore / -	2015-11-11	-	c. AIDC Message, or	Rejection of ABI message due to unknown point in route	Occasionally	Low	Singapore ACC/ THALES	Need to update ATMS dataset to include SIDs-STARs that may be filed by operator / 17Nov2015	CLOSED
AIDC-ISSUE-60	Singapore / Singapore ACC	Singapore / -	2015-11-11	-	d. Airspace Design/Procedures, or	Rejected EST message due to invalid flight plan state (coordinated) were queued in erroneous folder.	Occasionally	Low	Singapore ACC/ THALES	Air Traffic Control Support Officer would verify the information on the EST message against the coordinated flight plan. To follow up with the upstream ATSU if any discrepancies were discovered / 12Nov2015	CLOSED
AIDC-ISSUE-61	Singapore / Singapore ACC	Singapore / -	2015-11-11	-	a. Communication Link, or	Message time out parameter set too short whereby ACP messages from downstream ATSU were not processed. More prevailing with network was busy.	Occasionally	High	Singapore ACC/ THALES	Need to update ATMS dataset to increase the timeout parameter / 17Nov2015	CLOSED
AIDC-ISSUE-62	Indonesia / Ujung Pandang ACC	Ujung Pandang / Brisbane	2018-01-11	-	b. ATM System, or	Received abnormal EST message (sent back EST) from Brisbane for southbound traffic that previously Ujung Pandang has already sent the EST	Rare	Low	Ujung Pandang ACC/ THALES Brisbane ACC/ THALES	Brisbane has been modified dataset parameter / 12May2018	CLOSED
AIDC-ISSUE-63	Indonesia / Ujung Pandang ACC	Ujung Pandang / Brisbane	2018-01-11	-	b. ATM System, or	Received MAC message from Brisbane for flight from YSSY to YMML	Rare	Low	Ujung Pandang ACC/ THALES Brisbane ACC/ THALES	Brisbane has been modified dataset parameter / 12May2018	CLOSED
AIDC-ISSUE-64	Indonesia / Ujung Pandang ACC	Ujung Pandang / Brisbane	-	-	b. ATM System, or	No response messages LAM or LRM were received (blank) from receiving unit as a reply for previous sent messages.	Frequent	High	Ujung Pandang ACC/ THALES Brisbane ACC/ THALES	There was a poor (unstable) connection in Jakarta's AMHS in that period occurrence date. Had been solved / 16Nov2019	CLOSED
AIDC-ISSUE-65	Indonesia / Ujung Pandang ACC	Ujung Pandang / -	2017-03-10	-	b. ATM System, or	ACP message does not process correctly. Coordination status field of the strip remains "S" and the ACP message is displayed in "Message_In" window	Frequent	High	Ujung Pandang ACC/ THALES	Investigation has been carried out by Ujung Pandang and categorized this problem as software issue / 11Feb2017	OPEN

Issue reference	Reporting State/ATSU	Pairing FIR1/FIR2	Date of Reported	Date of Occurrence	Fault Category	Description of Fault	Frequency	Priority (assessed by TF or RO)	ATSU/ Vendor	Actions Taken/ Updated Date	Status (Open/Closed)
AIDC-ISSUE-66	Indonesia / Ujung Pandang ACC	Ujung Pandang / Manila	2016-03-10	-	c. AIDC Message, or	AOC message format from Ujung Pandang does not contain ODF 3	Frequent	Medium	Ujung Pandang ACC/ THALES Manila ACC/ THALES	Since Manila used new ATM System (TopSky-HE) last year there was no AOC issue related to ODF3. Last AIDC test with Manila used TopSky-HE was generally good / 21Mar2018	CLOSED
AIDC-ISSUE-67	Indonesia / Ujung Pandang ACC	Ujung Pandang / Manila	2017-05-17	-	c. AIDC Message, or	ABI message from Manila's Topsky-C contained incomplete route of flight	Frequent	High	Ujung Pandang ACC/ THALES	Since Manila used new ATM System (TopSky-HE) last year there was no ABI issue. Last AIDC test with Manila used TopSky-HE was generally good / 21Mar2018	CLOSED
AIDC-ISSUE-68	Indonesia / Ujung Pandang ACC	Ujung Pandang / Manila	2017-05-17	-	b. ATM System, or	Manila's Topsky-C was continuously sending unnecessary ABI and EST messages	Frequent	High	Ujung Pandang ACC/ THALES	Since Manila used new ATM System (TopSky-HE) last year there was not current issue anymore. Last AIDC test with Manila used TopSky-HE was generally good / 21Mar2018	CLOSED
AIDC-ISSUE-69	India / Trivandrum ACC	Trivandrum / Mangalore	-	-	e. Others.	AIDC coordination not possible for Level changes after the initial coordination. ABI, EST, CPL, TOC and AOC is possible.	Frequent	High	Trivandrum ACC/ INDRA	Nil / 30Jan2018	OPEN
AIDC-ISSUE-70	India / Trivandrum ACC	Trivandrum / Cochin	-	-	b. ATM System, or	AIDC coordination not possible for level changes after the initial coordination. ABI, EST, CPL, TOC and AOC is possible.	Frequent	High	Trivandrum ACC/ INDRA	Nil / 30Jan2018	OPEN
AIDC-ISSUE-71	Singapore / Singapore ACC	Singapore / Manila	2018-03-15	2018-03-12	b. ATM System, or	Link to ATMS is disabled after erroeous service message was received from message center	Frequent	Medium	Singapore ACC/ THALES Manila ACC/ THALES	Fault localized to physical link connection problem / 15Mar2019	CLOSED
AIDC-ISSUE-72	Singapore / Singapore ACC	Singapore / Kuala Lumpur	2018-03-15	2018-03-13	b. ATM System, or	Received *"LRM with error code"* upon transmission of messages	Occasionally	Low	Singapore ACC/ THALES Kuala Lumpur ATCC/ LEONARDO	Observation shared with Kuala Lumpur ACC for investigations / 15Mar2019	CLOSED
AIDC-ISSUE-73	Singapore / Singapore ACC	Singapore / Manila	2018-03-15	2018-03-12	b. ATM System, or	ABI message requirement for subsequent EST message processing	Frequent	High	Singapore ACC/ THALES Manila ACC/ THALES	Observation shared with Manila ACC for investigations / 15Mar2019	CLOSED
AIDC-ISSUE-74	Singapore / Singapore ACC	Singapore / Kuala Lumpur	2019-03-25	2018-12-14	b. ATM System, or	LRM messages recived 2 hours after initial AIDC message transmission	Occasionally	-	Singapore ACC/ THALES Kuala Lumpur ATCC/ LEONARDO	Observation shared with Kuala Lumpur ACC for investigations / 25Mar2019	CLOSED
AIDC-ISSUE-75	Singapore / Singapore ACC	Singapore / Kuala Lumpur	2019-03-25	2019-01-18	e. Others.	Invalid EST sent by ATMS	Rare	-	Singapore ACC/ THALES Kuala Lumpur ATCC/ LEONARDO	Fault traced to incorrect flight plan routing, causing FDP to designated the arrival flight as an re-entry flight / 25Mar2019	CLOSED
AIDC-ISSUE-76	Singapore / Singapore ACC	Singapore / Kuala Lumpur	2019-03-25	2019-01-22	b. ATM System, or	Non reception of EST messages	Occasionally	-	Singapore ACC/ THALES Kuala Lumpur ATCC/ LEONARDO	Investigations ongoing / 25Mar2019	CLOSED
AIDC-ISSUE-77	Singapore / Singapore ACC	Singapore / Kuala Lumpur	2019-03-25	2019-03-06	a. Communication Link, or	Unable to exchange AIDC messages	Occasionally	-	Singapore ACC/ THALES Kuala Lumpur ATCC/ LEONARDO	AFTN link outage / 25Mar2019	CLOSED
AIDC-ISSUE-78	Singapore / Singapore ACC	Singapore / Manila	2019-03-25	2019-02-20	b. ATM System, or	AOC/TOC message tranmission constraint	Frequent	-	Singapore ACC/ THALES Manila ACC/ THALES	Dataset settings on Manila ATMS for AOC/TOC messages / 25Mar2019	CLOSED
AIDC-ISSUE-79	Singapore / Singapore ACC	Singapore / Manila	2019-03-25	2019-03-11	b. ATM System, or	EST and ACP messages exchanged successfully but not reflected on controller display	Rare	High	Singapore ACC/ THALES Manila ACC/ THALES	Manila ATMS vendor has been informed on the observed issue. Investigations ongoing / 25Mar2019	CLOSED
AIDC-ISSUE-80	Indonesia / Ujung Pandang ACC	Ujung Pandang / Oakland	2019-04-10	2018-12-11	b. ATM System, or	REJ message was accepted but unable to display to Controller HMI and become rejected message in Flight Data HMI (filled in *AIDC_OTHER_QUE* window)	Rare	Medium	Ujung Pandang ACC/ THALES	Investigation has been carried out by Ujung Pandang and categorized this problem as software issue / 21Feb2020	OPEN

Issue reference	Reporting State/ATSU	Pairing FIR1/FIR2	Date of Reported	Date of Occurrence	Fault Category	Description of Fault	Frequency	Priority (assessed by TF or RO)	ATSU/ Vendor	Actions Taken/ Updated Date	Status (Open/Closed)
AIDC-ISSUE-81	India / Chennai ACC	Chennai,Hyderabad / Chennai,Bengaluru	-	-	e. Others.	The SSR Codes received through AIDC message are getting retained in Chennai FDPS for days and are not available for re-use. Controller have to use Chennai adapted pool of limited SSR codes for track correlation. As a result, the adapted Chennai pool of SSR codes gets exhausted very soon.	Frequent	High	'RAYTHEON-CHENNAI, SELEX-BENGALURU,SELEX-HYDERABAD	SSR code issue at Chennai resolved 29-03-2019	CLOSED
AIDC-ISSUE-82	India / Kolkata ACC	KOLKATA-Nagpur, Varanasi, Guwahati, Chennai	-	-	d. Airspace Design/Procedures, or	The route truncation is not supported by INDRA system , hence there is a likelihood of wrong route modification by ABI message in the accepting ATCC.	Frequent	High	KOLKATA-INDRA, RAYTHEON-CHENNAI, INDRA-NAGPUR/VARANASI/GUWAHATI		OPEN
AIDC-ISSUE-83	Maldives / Maldives ACC	Maldives/ Colombo	-	-	b. ATM System, or	Colombo had an issue with their ABI message which was unsuccessful in all 7 AIDC test FPLs. Also, their EST showed Error code 62. Rest of the other messages CPL, CDN, TOC, AOC are working perfectly.	Frequent	High	Maldives ACC/ SELEX	Colombo informed that they are consulting with their ATM vendor for the above errors.	OPEN
AIDC-ISSUE-84	India / Kolkata ACC	Kolkata / Yangon	2019-04-10	-	b. ATM System, or	Yangon trials in which ABI (from Kolkata to Yangon only) EST, TOC, AOC were successful. Kolkata system was not sending AIDC reference number in ACP messages for which Yangon system was rejecting it. But Kolkata rectified the issue with the support of vendor and ACP was successful. ABI from Yangon system sends the route from COP instead of one point before COP for which Kolkata system rejects the ABI from Yangon.	Frequent	Medium	Kolkata ACC/ INDRA Yangon ACC/ THALES	Yangon has been advised to rectify the issue through vendor/1Apr2019. Yangon has rectified the issue in last quarter of 2019. Further tests successful.	CLOSED
AIDC-ISSUE-85	Indonesia / Ujung Pandang ACC	Ujung Pandang / Manila	2020-05-25	2020-04-02	b. ATM System, or	Multiple EST message transmitted from Ujung Pandang to Manila	Occasionally	High	Ujung Pandang ACC/ THALES Manila ACC/ THALES	EST was transmitted more than one time only to Manila. Volume sector configuration parameter was checked and no issue was found. It's happened in March - May. In Juni, it happened very rare. Ongoing to analyze log file from ATM System to find the problem / 26Jun2020	OPEN
AIDC-ISSUE-86	Indonesia / Ujung Pandang ACC	Ujung Pandang / Manila	2020-07-09	2019-11-02	d. Airspace Design/Procedures, or	Ujung Pandang's controller activated flight data record prior to AIDC EST message transmitted by Manila. This occurrence happened due Manila verbally coordinated FL which is not accordance with FLAS (Flight Level Allocation Scheme).	Frequent	High	Ujung Pandang ACC/ THALES Manila ACC/ THALES	Published temporary SOP for Controller not to manually activate flight data record for which an AIDC EST is expected / 1Dec2019	CLOSED
AIDC-ISSUE-87	Malaysia / Kuala Lumpur ATCC	Kuala Lumpur / Chennai	2020-07-07	2020-01-02	c. AIDC Message, or	ACP for Chennai EST & CDN were responded timely but Chennai responded with LRM-RMK/5/3.	Frequent	Medium	Kuala Lumpur ATCC/ LEONARDO Chennai ACC/ RAYTHEON	-	OPEN
AIDC-ISSUE-88	Malaysia / Kuala Lumpur ATCC	Kuala Lumpur / Chennai	2020-07-07	2020-01-02	c. AIDC Message, or	Chennai responded LRM-RMK/57/ (invalid message) for ABI/EST messages though ABI/EST sent were valid.	Frequent	Medium	Kuala Lumpur ATCC/ LEONARDO Chennai ACC/ RAYTHEON	-	OPEN
AIDC-ISSUE-89	Philippines / Manila ACC	Manila / Kinabalu	2019-10-22	2019-10-22	b. ATM System, or	Manila received multiple ABI of RBA635 and JAL720 during AIDC test with Kinabalu	Rare	Low	Manila ACC/ THALES Kinabalu ACC/ LEONARDO	Kinabalu has been advised this issue. Will be observed again in the next AIDC test / 22Oct2019	OPEN

UPDATED ACTION ITEMS FOR ASIA/PAC AIDC TASK FORCE

a) Members States/Administrations of the Task Force to provide identified ISSUES for sharing/learning by filling in AIDC Issues Form which is provided in AIDC Implementation Guidance Document (AIDC IGD):

ACTION BY: All Member States/Administrations and to be consolidated by Indonesia supported by India and Singapore for review by each meeting of the Task Force. Issues have been put into categories and groups for easy reference and analysis. Contribution by member States – on going

- **To encourage Member States of the Task Force for timely report and updating attached to meeting report and provided in database (portal site) for sharing by States/Administrations**

b) Identification of common issues as an ACTION PLAN which small working groups to be established when necessary and possible with invitation to aviation industry for input. Develop an action plan for the identified ATSUs with priorities for implementation; Go-teams to assist when required (subject to funding available and requirement in place);

ACTION BY: by the Task Force
Status: Small working group (based on TOR) is considered not practical. Bilateral parties to address some of the issues and established the target date of implementation. (in most case two parties).

On-going

c) Development of AIDC IGD Edition 1.0 in accordance with item C of TOR. Also need to maintain the AIDC IGD to current and update the consolidated list of issues.

This task link with item c), work has been done by the ad hoc WG and endorsed by the Task Force adopted by CNS SG/21 in July 2017 on behalf of APANAPIRG. It may require maintaining the document by the Task Force as necessary. The updated list of consolidated issues is indicators for implementation progress and the list should be updated with items closed or open.

ACTION BY: APA TF. The development of AIDC IGD completed and maintenance of the IGD - On-going –APA TF/6: States/Administrations may wish to provide recommendation for updates if necessary.

d) The issues collected need to be classified into groups with common problem in nature. The successful solution should be recorded in a database (portal site) for consideration by other States/Administrations. Indonesia agreed to take the lead for analysis and grouping and Singapore/India to support this task. (Similar to action item A)

ACTION BY: APA TF and ICAORO on-going

e) The Secretariat was requested to coordinate with ICAO HQ to create the dedicated AIDC Implementation portal site to keep AIDC related information and documents.

ACTION BY: All member States/Administrations

Need more effectively use: https://portal.icao.int/AIDC/SitePages/Home.aspx group name: AIDC (Completed-jointly use the portal site for "Developing a NAT and APAC AIDC ICD) . The portal is considered available.

f) Singapore and India to update the graphical presentation on the regional AIDC implementation status as shown in **Appendix D** to the APA TF/6 meeting report for review by CNS SG/24 meeting in December 2020.

ACTION and CONTRIBUTION BY: Singapore and India

g) All members are requested to further review the TOR of APA Task Force to prepare comments for readily discussion at APA TF/6 meeting in 2020 to determine whether further extension of the Task Force work is required and whether the on-going tasks can be transferred to other contributory of APANPIRG.

ACTION BY: All member States/Administrations

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ICAO APAC Webinars – Safety and Air Navigation Services

AIDC Implementation *Benefits and Lessons Learnt*

Mr. Kwek Chin Lin

Moderator

Co-chair APA AIDC Implementation Task Force

Objectives of this Webinar

- To improve the understanding of AIDC
  - Provide impetus for implementation of AIDC in AsiaPac
  - For the information of all stakeholders including who would not normally be able to attend ICAO's regular meetings and events.

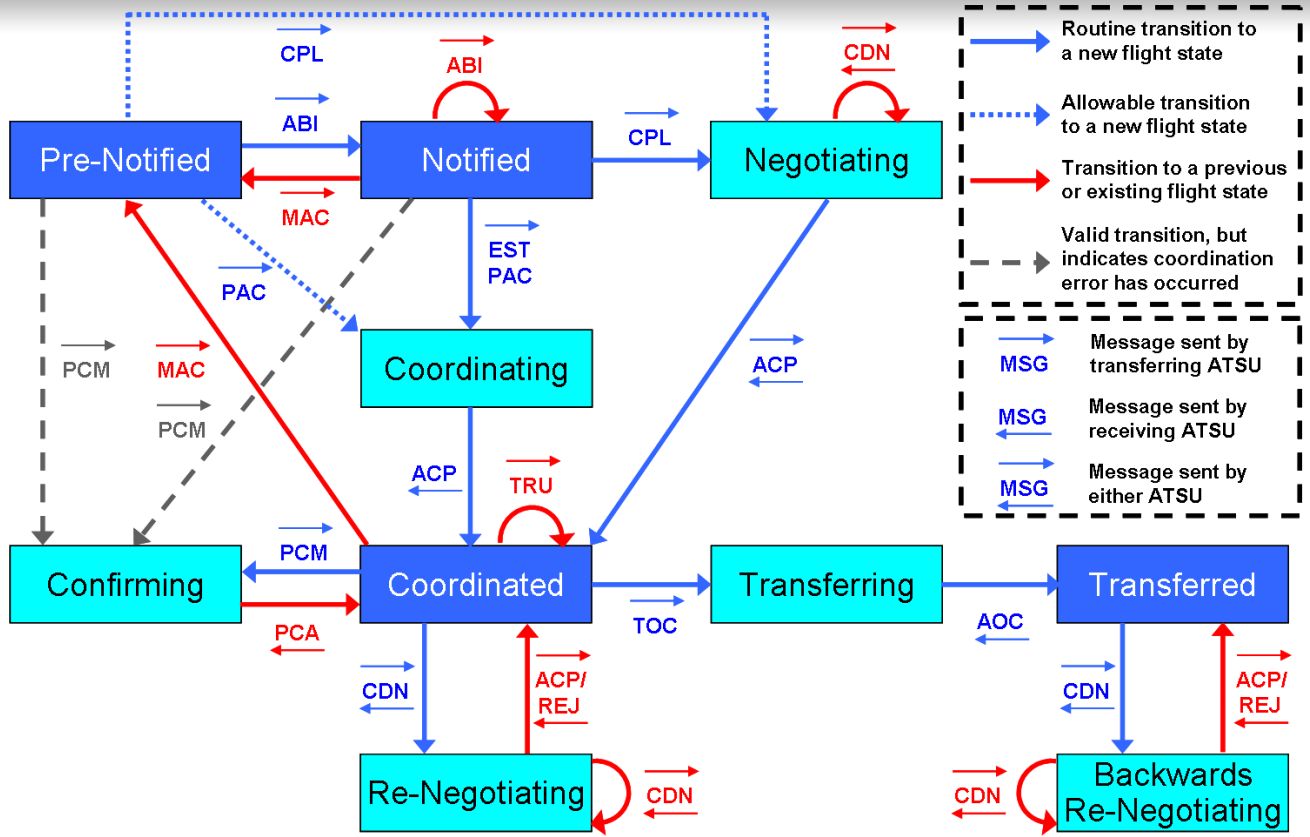
Agenda

- A brief introduction to AIDC
- Benefits of AIDC
- APAC AIDC Implementation Task Force
- AIDC Implementation Issues
- Overcoming challenges together in AIDC implementation
- Status of AIDC implementation in APAC region
  (focus area South China Sea and Bay of Bengal)
- Conclusion
- Q&A session

- Moderator: Mr Kwek Chin Lin
- Speaker: Mr Anurag Sharma
- Speaker: Mr Joe Chua
- Speaker: Mr Arian Nurahman

A brief introduction to AIDC

- ATS Inter-Facility Data-Communication
  - an effective tool to reduce manual intervention and ground-ground coordination errors
  - A data link application that provides the capability to exchange data between air traffic service units during the notification, coordination and transfer of flight between flight information regions.



Graphics courtesy of Adam Watkins

Benefits of implementing AIDC

- An automated system that facilitates routine coordination by providing a reliable and timely data exchange between ATSUs in which accurate information can be derived directly from the system, reducing controller's workload and human errors.
- An important means to minimize large height deviation

Safety benefits

- Reduction of coordination errors
  - Coordination data should be extracted automatically from flight data processing system
  - Coordination should occur automatically
- Controller workload is reduced
  - Less reliance on voice coordination
  - More time to complete other task
- Increased efficiency

APANPIRG/24 CONCLUSION 24/16

Recognizing that States implementing AIDC messaging may be doing so without previous knowledge or experience, and significant safety, ATC capacity and workload benefits arise from implementation of an appropriately selected initial suite of AIDC messages;

States should:
a) engage as soon as possible in AIDC trials to develop knowledge and address any related ATM or communications system issues;
b) implement operational AIDC messaging as a matter of priority, in accordance with APANPIRG Conclusion 19/191 ; and
c) implement as far as practicable, the following AIDC messages:
Advanced Boundary Information (ABI), Coordinate Estimate (EST), Acceptance (ACP), Transfer of Control (TOC) and Assumption of Control (AOC).

APANPIRG/24 CONCLUSION 24/27

Considering that **ATS Inter-facility Data Communications (AIDC) is an important means of minimizing Large Height Deviations (LHD**), Asia/Pacific States should support the expedition of AIDC through collaborative projects at the following significant LHD interface areas:

a) **Indonesia**: between Jakarta and Chennai/Ujung Pandang/Brisbane/Melbourne FIRs;
b) **India**: between Chennai and Kuala Lumpur FIRs;
c) **Philippines**: between Manila and Fukuoka/Taipei/Hong Kong/Ho Chi Minh/Singapore/Kota Kinabalu/ Ujung Pandang FIRs; and
d) **China**: between – i. Urumqi and Lahore FIRs; and ii. Beijing and Ulaan Baatar FIRs

APAC AIDC IMPLEMENTATION TASK FORCE

TF/1 TO TF/6 - 2015 – 2020

The Asia/Pacific ATS Inter-Facility Data-Link Communication (AIDC) Implementation Task Force (APA/TF) shall be responsible for overseeing the expedition of AIDC implementation in accordance with the Asia/Pacific Seamless ATM Plan within the Asian Region, with a particular focus on the Bay of Bengal (BOB) and South China Sea (SCS) areas.

APA Adhoc Working Group for AIDC Guidance Material 2015-2017

AIDC IGD was published in 2017

AIDC Implementation Issues

- Administrative Issues
- Technical Issues
- Procedural/Operational Issues

AIDC Administrative Issues

- Letter of Agreement
- Bilateral issues between the ATSUs
- Inadequate exchange of information

Technical Issues

- ATM Systems
- Communication Links
- AIDC Versions
- Syntactical Errors
- Training

Procedural / Operational Issues

- Airspace Design & Procedures
- AIDC Messages
- Training

Mitigation for Implementation Issues

- Appropriate and workable LOA
- Graded (Phased) Implementation approach
- Vendor Contract Management for suitable resolution of ATM System issues
- Unhindered bilateral cooperation and communication for gap analysis and resolution of issues.
- Adoption of AIDC Implementation and Guidance Document (AIDC IGD)
- Efficient Communication Network.
- Adequate training for technical and operational staff.

Issues & Mitigations

- Adaptation of data in FDPS e.g. Modification of COP, Route Truncation Compatibility with pairing ATSU, CDN messages
- Application Software issues resolution for ATM Systems e.g. Auto ACP messages in response to EST messages.
- Optimization of AMSS to reduce latency issues.
- Time synchronization for all interconnected systems

AIDC IGD

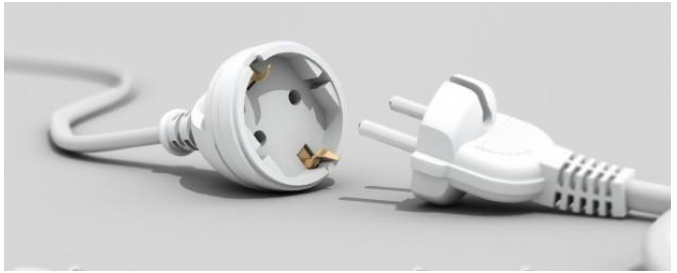
- Objective: to provide guidance, complementing relevant ICAO standards, on AIDC implementation within the APAC region.
- Document Coverage:
  - AIDC Message sets to facilitate Implementation
  - AIDC Implementation Considerations
  - Pre-implementation Checklist
  - Handling Implementation Issues
  - HMI Considerations
  - Harmonization Framework (LOA/Procedures/Routes/Version/Message Set/ Communication Network)
  - Performance Monitoring and Validation (Success Rate Determination)
  - AIDC Training to enhance awareness and skill sets

Overcoming challenges together

- States are encouraged from the start of the TF to provide identified issues, including closed issues, by updating them in **AIDC Issues Form**, which is then shared amongst States
- The objective to provide states implementing AIDC a quick reference and avoid repeating the similar mistakes. This sharing of information assisted States and accelerated the implementation of AIDC

AIDC Issues Form

- The issues were originally categorized into 9 fault categories, later simplified into 4:
  - Communication Link
  - ATM System
  - AIDC Message
  - Airspace Design / Procedures
  - Others
- Some examples are indicated in the following slides



Some common AIDC Issues

No.	Fault Category	Fault Description	Cause
i.	**ATM Automation system**	Rejection of AIDC messages by receiving system due to Error message 61, Cyclic Redundancy Check (CRC) Error.	Error is likely because sending ATM automation system is generating extra undesirable spaces
ii.	**ATM Automation /AFTN system**	Coordination protocol dialogue timeout	Likely non-synchronization of time in the pairing ATM automation/AFTN systems
iii.	**Communication Network**	a) Latency in communication network (AFTN link), resulting in message time-out errors b) Message timeout errors due to possible re-routing of messages in case of failure of direct AFTN link.	If due to network latency, no automatic system response is received by the sender system in a fixed time, then the sender system generates a LTO (time out response).

No.	Fault Category	Fault Description	Cause
iv.	**Airspace Design/ Procedures**	a) ABI messages of some of the aircrafts are not correlated with Flight plan available in ATM automation system	a) Rejection of ABI messages exchanged between system due to route error and mismatch in coordination timing. ATM automation system may reject the incoming ABI message because of unrecognized route portion (depends on how common airways are defined in the pairing systems Some airways may be defined up to a certain extent in next FIR, while others may be defined only up to the FIR boundary)

No.	Fault Category	Fault Description	Cause
v.	**AIDC message format**	AIDC messages in pre-2012 format	
vi.	**AIDC message format**	Some ATM automation systems rejected latitude/longitude represented upto seconds (041627N0733138E).	As per AIDC-ICD seconds is not part of the standard LAT/LONG format
vii.	**AIDC message format /training**	Incorrect route truncation. Truncated routes are not getting accepted by receiving ATSU.	ICAO route truncation indicator is not supported by many receiving ATSUs. The Asia/Pacific ICD clearly states the rules required for truncating a route after the last known significant route point.

No.	Fault Category	Fault Description	Cause
viii.	**AIDC message flow**	Non-receipt of ACP messages within designated time span results in unnecessary LRM messages	In some of the ATM automation systems, there is no provision of automatic acceptance of EST messages and messages are accepted manually at receiving ATSU.
ix.	**AIDC message flow**	Even after sending a rejection (REJ) or counter coordination message (CDN) by receiving ATSU, the transmitting ATSU continues to send the CDN message	Unnecessary/ multiple generation of automatic CDN messages by transmitting ATSU, without waiting for an acknowledgement, might be due to system getting into some loop or may be due to some other system problem

Summary of AIDC Issues Reported

- Communication Infrastructure and Interfacing Equipage:
  - 6 cases of latency occurred among ACCs in India and with its adjacent ACC. These issues are still Open, and being taken up by communications provider.
  - 2 cases reported by Singapore; message time out parameter set too short whereby ACP messages from downstream ATSU were not processed, and link outage. The status of these issues is Closed.
  - 1 case occurred between Ujung Pandang ACC and Brisbane ACC. It happened occasionally; the transmission has a transit time more than 180 seconds; Closed by communications provider.

Summary of AIDC Issues Reported

- ATM system parameters and Application Software:
  - 6 cases reported by Australia (Brisbane ACC and Melbourne ACC). The status is still recorded as Open, since 2016.
  - Issues reported by India:
    - Error message 61 (CRC Error) caused by extra space in the ABI message; Open/need join observation by Delhi ACC and Lahore ACC
    - Aircon2100 not support truncation indicator; Open/need software upgrade.
    - ID on ODF3 is not per ICD; Closed/more information by contributor, if any.
    - Unexpected CDN message sending; Open/more information by contributor, if any.
  - (continued…)

Summary of AIDC Issues Reported

- ATM system parameters and Application Software:
  - Issues reported by Indonesia (Ujung Pandang ACC):
    - No ULAM notification; Closed/by software upgrade.
    - Received ODF3 issues from KK ACC & MNL ACC; Closed/by software upgrade in KK & MNL.
    - Received unexpected EST from BNE ACC; Closed/by modifying dataset in BNE.
    - Received false MAC from BNE ACC; Closed/by modifying dataset in BNE.
    - No response of LAM/LRM. After investigation was done, the cause of the problem was unstable connection in Jakarta AMHS. Closed/by communication provider.
    - ACP reception indicator does not appear in the electronic strip; Open/need software upgrade in UPG.
    - False route in ABI message from MNL ACC; Closed/by software upgrade in KK.
    - REJ message from OAK ACC and KK ACC could not be processed; Open/need software upgrade in UPG.
    - Occasionally sending multiple EST to Manila; Open/occurred during March – May 2020, but no more case since June 2020. It needs more analysis.
  - (continued…)

Summary of AIDC Issues Reported

- ATM system parameters and Application Software:
  - Issues reported by Malaysia (Kuala Lumpur ACC):
    - Received LRM on ABI (item 18/RMK); Closed/more information by contributor, if any.
    - Unexpected CDN message sending; Closed/by modifying dataset in KL.
    - LRM from Chennai against ABI and EST from KL; Open/more information by contributor, if any.
  - Issues reported by Maldives:
    - Conflict SSR code on ABI message with SSR Colombo domestic; Closed/by modifying dataset in Colombo.
    - ODF3 issue; Closed/by software upgrade.
    - Unformatted Lat/Long in the item 15; Closed/by software upgrade.
    - ABI and CPL rejected due ICAO FPL 2012 format; Closed/by software upgrade.
  - (continued…)

Summary of AIDC Issues Reported

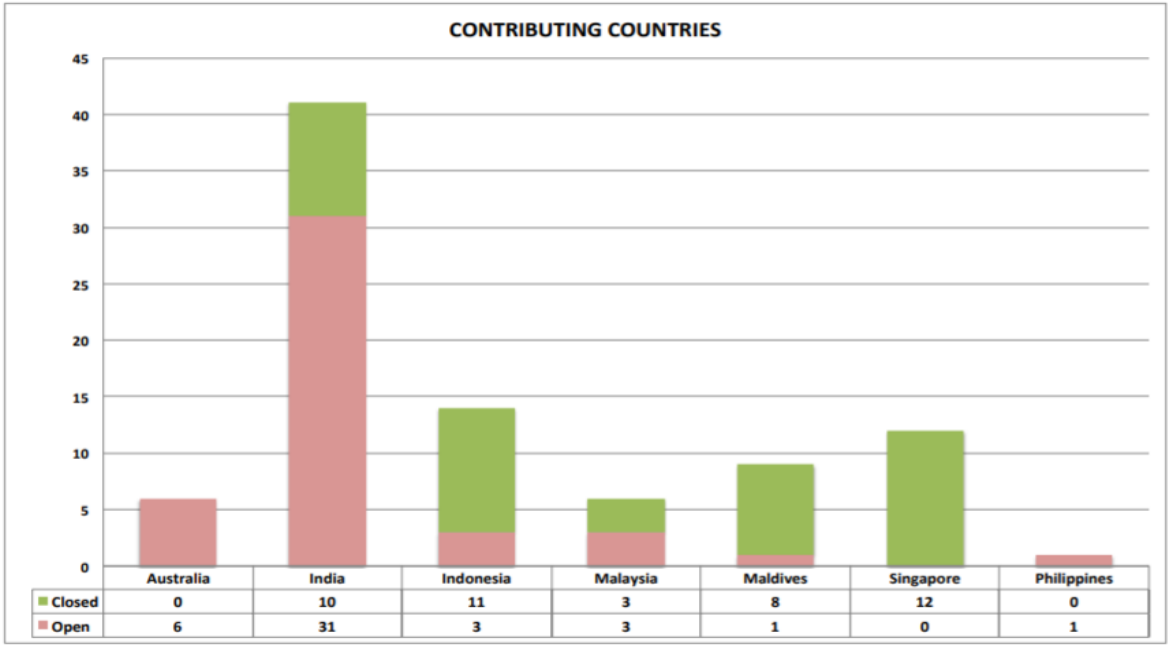
- ATM system parameters and Application Software:
  - Issues reported by Philippines (Manila ACC) received multiple ABI from KK ACC; Open/need further investigation by KK.
  - Issues reported by Singapore:
    - Rejection ABI due to unknown point; Closed/by updating dataset in ATM system.
    - Not reception of EST messages; Closed/more information by contributor, if any.
    - AOC/TOC message transmission constraint; Closed/by modifying dataset in MNL.
    - Invalid EST sent by ATM system; Closed/by modifying dataset.

Summary of AIDC Issues Reported

- Design Procedures, SOP, Operator's Training:
  - India reported:
    - Airspace configuration issue; Closed/more information by contributor, if any.
    - Dynamic sectorization of UTV between Chennai and Trivandrum; Open/ more information by contributor, if any
    - Under trial phase, the acceptance of EST message is in manual mode; Open/more information by contributor, if any.
  - Indonesia reported that Ujung Pandang activated flight data record prior to AIDC EST message transmitted by Manila. This occurrence happened when Ujung and Manila verbally coordinate flight level, which not in accordance with FLAS (Flight Level Allocation Scheme); Closed/by temporary SOP and deliver more training to operator at the related sectors.
  - Malaysia reported that controller in Chennai did not respond to CDN from KL; Open/need to evaluate the application of LOCA and SOP in respective ACCs.
  - Singapore reported that there was the rejected EST message due to invalid flight plan state (coordinated) were queued in erroneous folder; Closed/by creating SOP in the ATC Support Officer to handle this case.

Summary of AIDC Issues reported

Contributing Countries of AIDC Issues Report Chart



	Australia	India	Indonesia	Malaysia	Maldives	Singapore	Philippines
Closed	0	10	11	3	8	12	0
Open	6	31	3	3	1	0	1

Status of AIDC Implementation

- Presenting 2 sets for comparison
- First set is from updates presented at 1st APA TF in 2015
- Second set is from 6th APA TF in Jul 2020
- Yellow denotes trials
- Green denotes operational

States Implementation Progress (2015 APA TF meeting – 1/2)

State	ATSU	Partner ATSU	Activity Schedule			Remarks
			Technical	Trials	Operational	
India	Ahmedabad ACC	Pakistan/Karachi ACC	---	TBA		
	Chennai ACC	Maldives/Male ACC	---	TBA		
		Malaysia/Kuala Lumpur ATCC	Jul 2013	TBA		ABI, ACP, CDN, EST, MAC, REJ
Indonesia	Jakarta ACC	India/Chennai ACC	TBA			ATM system upgrade
		Indonesia/Ujung Pandang ACC	TBA			ATM system upgrade
		Malaysia/Kuala Lumpur ATCC	TBA			ATM system upgrade
		Singapore/Singapore ACC	TBA			ATM system upgrade
		Sri Lanka/Colombo ACC	TBA			ATM system upgrade
	Ujung Pandang ACC	Australia/Brisbane ACC	--	2013	**4Q 2015**	
		Indonesia/Jakarta ACC	TBA			
		Malaysia/Kota Kinabalu ATCC	TBA			
Malaysia	Kota Kinabalu ATCC	Brunei	TBA			
		Indonesia/Ujung Pandang ACC	Apr 2015	4Q 2015	TBA	
		Philippines/Manila ACC	3Q 2015	2Q 2016	TBA	
		Singapore/Singapore ACC	Dec 2014	Dec 2015	TBA	ABI, ACP, EST, AOC, TOC
	Kuala Lumpur ATCC	India/Chennai ACC	Jul 2013	1Q 2016	TBA	
		Indonesia/Jakarta ACC	TBA			
		Singapore/Singapore ACC	Jan 2014	Jan 2016	TBA	
		Thailand/Bangkok ACC	4Q 2015	2Q 2016	TBA	
		Viet Nam/Ho Chi Minh ACC	3Q 2015	1Q 2016	TBA	
	Kuching ATCC	Brunei	TBA			
		Singapore/Singapore ACC	Dec 2014	Feb 2016	TBA	

States Implementation Progress (2015 APA TF meeting – 2/2)

State	ATSU	Partner ATSU	Activity Schedule			Messages
			Technical	Trials	Operational	
Philippines	Manila ACC	Hong Kong, China/Hong Kong ACC	TBA			Planned for 4Q 2016
		Malaysia/Kota Kinabalu ATCC	TBA			Planned for 2Q 2016
		Singapore/Singapore ACC	Dec 2014	Dec 2015	TBA	
		Taibei ACC	TBA			Planned for 2Q 2016
		USA/Oakland ACC	TBA			Planned for 2017
Singapore	Singapore ACC	Indonesia/Jakarta ACC	TBA			
		Malaysia/Kota Kinabalu ATCC	Dec 2014	Dec 2015	TBA	ABI, ACP, EST, AOC, TOC
		Malaysia/Kuala Lumpur ATCC	Dec 2014	Jan 2016	TBA	ABI, ACP, EST, AOC, TOC
		Malaysia/Kuching ATCC	Dec 2014	Feb 2016	TBA	ABI, ACP, EST, AOC, TOC
		Philippines/Manila ACC	Dec 2014	Dec 2015	TBA	ABI, ACP, EST, AOC, TOC
		Viet Nam/Ho Chi Minh ACC	Dec 2013	Feb 2014	24 July 2014	ACP, EST
Sri Lanka	Colombo ACC	Australia/Melbourne ACC	2014	TBA		ABI, EST, FAN, FCN, PAC, TOC
		India/Chennai ACC	2013	TBA		ABI, ACP, CDN, EST,REJ, AOC, TOC
		Indonesia/Jakarta ACC	TBA			
		Maldives	2013	TBA		
Viet Nam	Ho Chi Minh ACC	Cambodia	--	1Q 2015	TBA	
		Lao PDR	--	1Q 2015	TBA	
		Malaysia/Kuala Lumpur ATCC	--	1Q 2015	TBA	
		Singapore/Singapore ACC	Dec 2013	Feb 2014	24 July 2014	ACP, EST

States Implementation Progress (2020 APA TF meeting – 1/3)

State	ATSU	Partner ATSU	Activity Schedule			Remarks
			Technical	Trials	Operational	
India	Ahmedabad ACC	Pakistan/Karachi ACC	---	2Q 2020	TBA	
	Chennai ACC	Maldives/Male ACC	---	Sep 2017	TBA	
		Malaysia/Kuala Lumpur ATCC	Jul 2013	Sep 2016	1 Apr 2020	ABI, ACP, CDN, EST, MAC, REJ
		Myanmar/Yangon ACC	---	2018	TBA	
		Sri Lanka/Colombo ACC	2Q 2020	TBA		
	Kolkata ACC	Myanmar/Yangon ACC	2Q 2020	TBA		
	Mumbai ACC	Maldives/Male ACC	---	---	**2Q 2020**	
Indonesia	Jakarta ACC	India/Chennai ACC	TBA			ATM system upgrade
		Indonesia/Ujung Pandang ACC	TBA			ATM system upgrade
		Malaysia/Kuala Lumpur ATCC	TBA			ATM system upgrade
		Singapore/Singapore ACC	TBA			ATM system upgrade
		Sri Lanka/Colombo ACC	TBA			ATM system upgrade
	Ujung Pandang ACC	Australia/Brisbane ACC	--	2013	Jul 2017	ABI, ACP, EST, AOC, TOC
		Indonesia/Jakarta ACC	TBA			
		Malaysia/Kota Kinabalu ATCC	Aug 2019	1Q 2020	TBA	ABI, ACP, CDN, EST, MAC, PAC, REJ, TOC, AOC
		Philippines/Manila ACC	---	Oct 2019	**3Q 2020**	ACP, EST, AOC, TOC
		PNG/Port Moresby ACC	Jul 2020	TBA		ABI, ACP, EST, AOC, TOC
		USA/Oakland ARTCC	Oct 2018	Dec 2018	**4Q 2020**	ABI, ACP, CDN, EST

States Implementation Progress (2020 APA TF meeting – 2/3)

State	ATSU	Partner ATSU	Activity Schedule			Messages
			Technical	Trials	Operational	
Malaysia	Kota Kinabalu ATCC	Brunei	TBA			Planned for 4Q 2016
		Indonesia/Ujung Pandang ACC	Aug 2019	4Q 2020	TBA	ACP. EST
		Philippines/Manila ACC	May 2019	4Q 2020	TBA	ACP. EST
		Singapore/Singapore ACC	Nov 2019	Oct 2020	TBA	ACP. EST
	Kuala Lumpur ATCC	India/Chennai ACC	Jul 2013	Sep 2016	1 Apr 2020	ABI, ACP, CDN, EST, MAC, REJ
		Indonesia/Jakarta ACC	TBA			
		Singapore/Singapore ACC	Dec 2014	Sep 2018	1 Nov 2019	ACP, EST
		Thailand/Bangkok ACC	Nov 2016	Aug 2019	14 Mar 2020	ACP. EST
		Viet Nam/Ho Chi Minh ACC	4Q 2019	2Q 2020	TBA	
	Kuching ATCC	Brunei	Dec 2014	Dec 2015	TBA	ABI, ACP, EST, AOC, TOC
		Singapore/Singapore ACC	Nov 2019	Jul 2020	4Q 2020	ACP, EST
Philippines	Manila ACC	Hong Kong, China/Hong Kong ACC	Mar 2019	Mar 2019	23 May 2019	ACP, EST
		Indonesia/Ujung Pandang ACC	May 2019	Oct 2019	4Q 2019	ABI, ACP, EST, AOC, TOC
		Malaysia/Kota Kinabalu ATCC	May 2019	Oct 2019	4Q 2019	ABI, ACP, EST, AOC, TOC
		Singapore/Singapore ACC	Dec 2014	Feb 2019	1 Nov 2019	ACP. EST, AOC, TOC
		Taibei ACC	Apr 2019	Jun 2019	5 Dec 2019	ACP, EST, AOC, TOC
		USA/Oakland ACC	TBA			
		Viet Nam/Ho Chi Minh ACC	May 2019	TBA		ABI. ACP, EST, MAC, PAC, AOC, TOC

States Implementation Progress (2020 APA TF meeting – 3/3)

State	ATSU	Partner ATSU	Activity Schedule			Messages
			Technical	Trials	Operational	
Singapore	Singapore ACC	Indonesia/Jakarta ACC	---	1Q 2015	TBA	
		Malaysia/Kota Kinabalu ATCC	Nov 2019	Oct 2020	TBA	ACP. EST
		Malaysia/Kuala Lumpur ATCC	Dec 2014	Sep 2018	1 Nov 2019	ACP. EST
		Malaysia/Kuching ATCC	Nov 2019	Jul 2020	**4Q 2020**	ACP. EST
		Philippines/Manila ACC	Dec 2014	Feb 2019	1 Nov 2019	ACP. EST
		Viet Nam/Ho Chi Minh ACC	Dec 2013	Feb 2014	24 July 2014	ACP. EST
Thailand	Bangkok ACC	Cambodia/Phnom Penh ACC	---	Jun 2020	**3Q 2020**	ABI, ACP, EST, AOC, TOC
		Malaysia/Kuala Lumpur ATCC	Nov 2016	Aug 2019	14 Mar 2020	ACP. EST
		Myanmar/Yangon ACC	---	Jun 2020	**4Q 2020**	ABI, ACP, EST, AOC, TOC
		Lao PDR/Vientiane ACC	---	---	14 July 2020	ABI, ACP, EST, AOC, TOC

Summary of AIDC Implementation Status

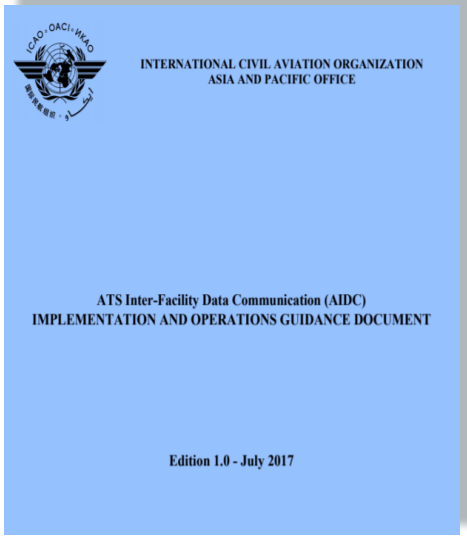
2015 1st AIDC Task Force Meeting	2020 6th AIDC Task Force Meeting
➢ **Operational trials ongoing/planned** • 5 States • 19 ATSU/ACCs	➢ **Operational trials ongoing/planned** • 6 States • 32 ATSU/ACCs
➢ **Implemented AIDC** • 2 States • 2 ATSU/ACCs	➢ **Implemented AIDC** • 6 States • 13 ATSU/ACCs

Deliverables of AIDC TF

- Completion of ATS AIDC Implementation and Operations Guidance Material in 2017

  Download link:
  https://www.icao.int/APAC/Pages/eDocs.aspx
  CNS tab

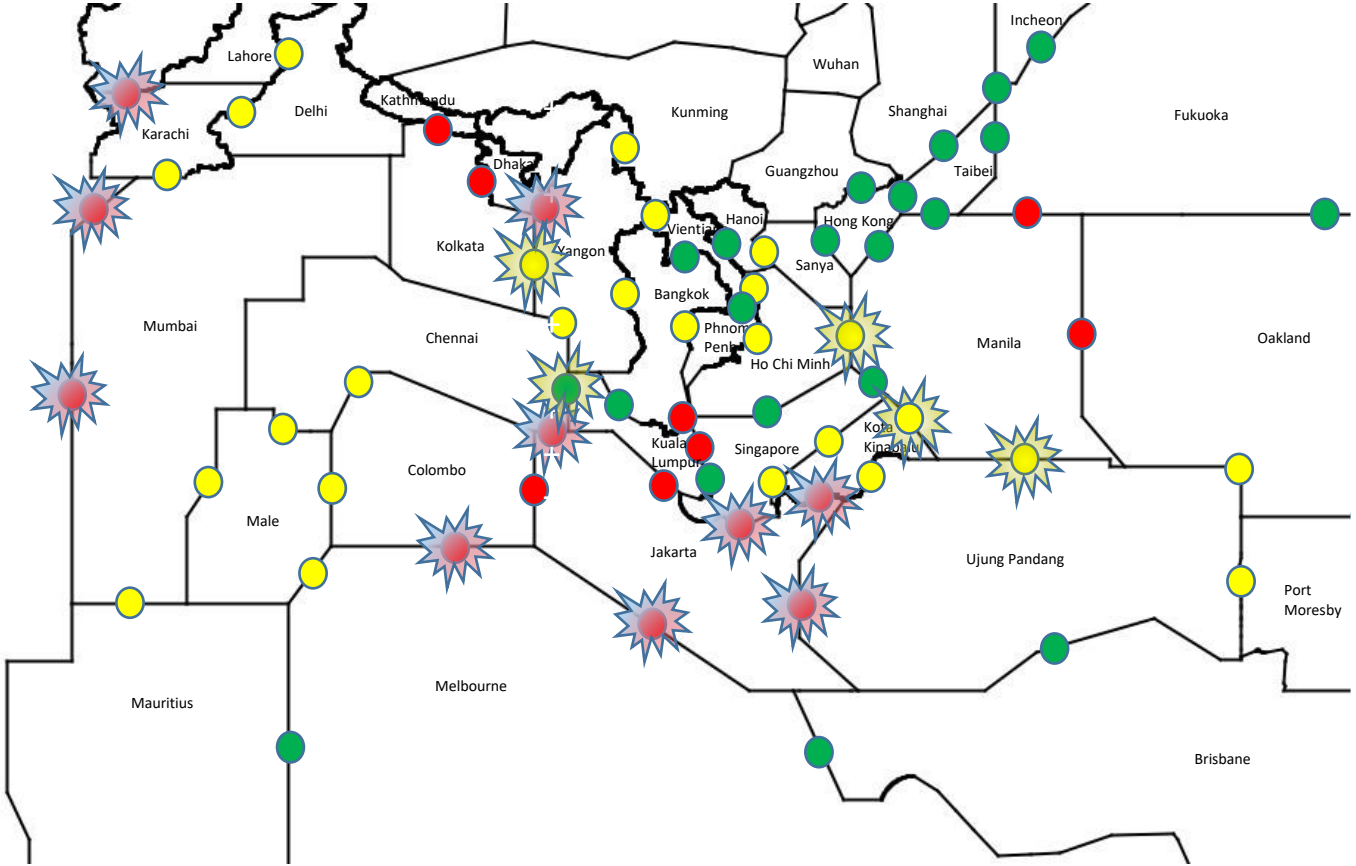
AIDC IGD



- Improved coordination and cooperation between States via the TF for AIDC implementation leading to successful implementation

Deliverables of AIDC TF

- Made significant strides in AIDC implementation in APAC
  - Currently 32 ATSUs conducting trials / planned operational trials by 2020/21 [19 at TF/]
  - 13 ATSUs implemented AIDC [2 at TF/1]
- Contributed to reduction in LHD in Asia-Pac as reported by RASMAG



AIDC Status

- AIDC Implemented
- Trials (Operational/technical)
- Not implemented

Legend

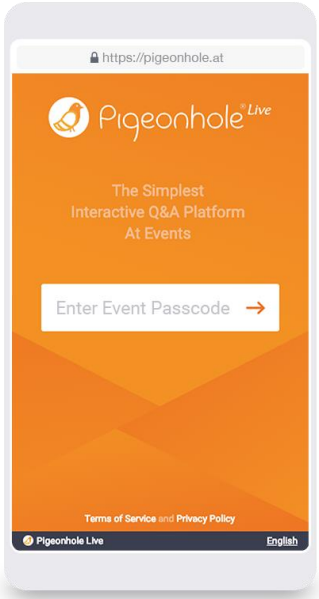
Hotspots *RASMAG/24*

- Hotspots with AIDC or AIDC implementation by 2021
- Hotspots with no plans for AIDC implementation

APA AIDC Implementation Status (Jul 2020)

Q&A SESSION

Q&A session



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