INTERNATIONAL CIVIL AVIATION ORGANIZATION

ASIA AND PACIFIC OFFICE

REPORT OF

THE SEVENTH MEETING OF ATS INTER-FACILITY DATA COMMUNICATION TASK FORCE (APA TF/7)

Video Tele-Conference (VTC)
(07 to 09 June 2021)

The views expressed in this Report should be taken as those of the AIDC Task Force and not of the Organization. This Report will be presented to the APANPIRG/32 for consideration through ACSICG and CNS Sub-group of APANPIRG.

Approved by the Meeting
And published by the ICAO Asia and Pacific Office, Bangkok

History of the Meeting **Page**

Introduction i-2
Attendance i-2
Opening of the Meeting i-2
Officers and Secretariat i-2
Organization, Working arrangements, Language and Documentation i-2

Report of Agenda Items

Agenda Item 1: Adoption of Agenda 2

Agenda Item 2: Review of outcomes of relevant meetings 2

Agenda Item 3: Sharing of experience on AIDC implementation and update the implementation Status 2

Agenda Item 4: Review implementation issues reported and discuss recommended solutions 8

Agenda Item 5: Status of implementation plan focusing those connections identified with priorities 10

Agenda Item 6: Review Terms of Reference and the achievements of the Task Force 11

Agenda Item 7: Review the outstanding Action Items of APA Task Force and make recommendations for a way forward after the dissolution of the Task Force 11

Agenda Item 8: Any other business 13

List of Appendices:

Appendix A: Presentation of AIDC webinar on AIDC Implementation Benefits and Lessons Learnt
Appendix B: Updated ATN/AMHS and AIDC Implementation Status in the APAC Region
Appendix C: Updated Graphical Display on the AIDC implementation and planning status
Appendix D: List of identified issues consolidated from States/Administrations
Appendix E: Updated List of focal point on AIDC Implementation from APAC States
Appendix F: Updated Task/Action items for APA Task Force

List of Attachments:

Attachment 1: List of Participants
Attachment 2: List of Working and Information Papers

1. Introduction

1.1 The Seventh meeting of the ATS Inter-facility Data Communication Task Force (APA TF/7) was held from *07 to 09 June 2021*. The meeting was organised via Video Tele-Conferencing (VTC) using Microsoft TEAMS.

2. Attendance

2.1 The meeting was attended by 113 participants from 17 States and 2 International Organization from China, Hong Kong China, Fiji, India, Indonesia, Lao PDR, Malaysia, Mongolia, Nauru, Pakistan, Philippines, Republic of Korea, Singapore, Sri Lanka, Thailand, USA, Viet Nam, IATA and IFATCA. The list of participants is provided in **Attachment 1**.

3. Opening of the Meeting

3.1 The meeting was opened by Mr. Manjit Singh, Acting Regional Director, ICAO Asia and Pacific Office. Mr. Manjit Singh extended warm welcome to all participants and expressed his thanks to States/Administrations and International Organization for the continuous support to ICAO regional activities. He reminded the history of APA Task Force and its achievements with the highlight on the objective of the meeting and emphasized the need for the Task Force members to continue making efforts for the coordinated implementation and to work out solutions to the issues identified by the Task Force.

3.2 Mr. Kwek Chin Lin extended a warm welcome to all participants and noted that this will be the last meeting of AIDC Task Force. He recalled that the APA TF first met in June 2015 and meet yearly since except for this and the last one due to the COVID-19 situation and noted the completion of various objectives that the TF set out to achieve in accordance with the ToR , the most notable being the proliferation of AIDC implementation in the region and the completion of the ATS AIDC Implementation and Guidance Document in 2017. There were good progress in AIDC implementation reported in APA TF/6 and he look forward to another fruitful meeting, and noted that one of the tasks ahead will be how to continue to the work on AIDC implementation after APA TF dissolution. Mr. Anurag Sharma extended a warm welcome to all participants and expressed deep appreciation and gratitude to the efforts of all parties to make great achievements and expressed his thanks to the ICAO Secretariat for hard work. He congratulated the members for various achievements made by this group such as publication of Asia/Pacific AIDC Implementation and Guidance Document which is being used at international level. He extended his sincere gratitude to Mr. Kwek Chin Lin for chairing APA TF from its formation and Mr. Li Peng, retired ICAO APAC Regional Officer, CNS for providing support to the group.

4. Officers and Secretariat

4.1 Mr. Kwek Chin Lin, Chief ATC Specialist (Systems Development) of the Civil Aviation Authority of Singapore and Mr. Anurag Sharma, General Manager (CNS) of the Airports Authority of India acted as Co-Chairs of the meeting. Mr. Luo Yi, Regional Officer CNS and Ms. Soniya Nibhani, Regional Officer ANS (CNS) Implementation, ICAO Asia and Pacific Regional Office, acted as secretaries for the meeting with the support of Ms. Bhabhinan Sirapongkosit, the Programme Assistant of the same office.

5. Organization, Working arrangement, Language and Documentation

5.1 The APA TF/7 met as a single body during the meeting. The working language for the meeting was English inclusive of all documentation and this Report. The meeting considered **Eight** (8) Working Papers and **Sixteen** (16) Information Papers under its Eight Agenda Items. A List of Working Papers and Information Papers is provided at **Attachment 2.**

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Agenda Item 1: Adoption of Agenda

Adoption of Agenda- Sec (WP/01)

1.1 The agenda items presented in WP/01 were adopted without change.

Agenda Item 2: Review of outcomes of relevant meetings

2.1

Review of Relevant Meetings - Sec (WP/02)

2.1 The paper summarized relevant information and updates with the highlight on the reviewed outcomes of APA TF/6, CRV OG/7, ACSICG/7 and relevant discussions of other meetings of CNS SG/24 and APANPIRG/31 on AFS matters.

2.2 The CNS SG/24 meeting adopted **Eight** (8) Conclusions and **Five** (5) Decisions. In addition, based on the outcome of discussions on various agenda items, the CNS SG/24 meeting developed **four** (4) Draft Conclusions for consideration by APANPIRG/31 Meeting, which was adopted by APANPIRG/31. The meeting noted Conclusion/Decision adopted by CNS SG/24 and also reviewed the different Conclusions and Decisions adopted by APANPIRG/31 in December 2020 of interest to the group and discussed the follow-up.

Outcomes of AIDC Webinar- Sec (IP/05)

2.3 ICAO APAC office organised a webinar on AIDC Implementation Benefits and Lessons Learnt under ICAO APAC Webinars – *Safety and Air Navigation Services on 9 October 2020*. The webinar was triggered by the outcome of AIDC taskforce meeting (APA TF/6). Another objective was to increase participants' awareness and understanding of the ICAO requirements needed to support regional planning and implementation activities, including implementation of Regional Aviation Safety Plan 20-22, the Asia/Pacific Seamless ANS Plan, and the Beijing Declaration.

2.4 The webinar started with an introduction about AIDC and benefits of implementing AIDC. The webinar discussed various AIDC Implementation Issues and their mitigations. At the end of webinar, total 17 questions were asked by the participants with more than 100 interactions. 90% of Participants shared their satisfaction with the information provided by the webinar. The webinar presentation is attached in **Appendix A** to this report.

2.5 The meeting recommended to organise such webinars on AIDC in future even after dissolution of APA TF to facilitate and support APAC Member States for AIDC Implementation if required. The ICAO Secretariat will inform to Member States about the planning of next Webinar on AIDC Implementation.

Outcomes of Relevant Meetings - Sec (IP/04)

2.6 The paper summarized the relevant outcomes of CRV OG/8 meeting held via video tele-conference from *17 to 19 May 2021* and of SURSG/1 meeting held from *20 April - 22 April 2021*.

2.7 The paper discussed major Draft Conclusions/Decisions proposed by CRV OG/8 for consideration of ACSICG/8 on AFS matters. The CRV OG/8 meeting report, working papers, information papers, and other resources can be accessed by following link:
https://www.icao.int/APAC/Meetings/Pages/2021-CRV-OG8.aspx

2.8 The First meeting of the surveillance data study group (SURSG/1) was held from *20– 22 April 2021*, the meeting report, working papers, information papers, and other resources can be accessed by following link:
https://www.icao.int/APAC/Meetings/Pages/2021-SURSG-1.aspx

Agenda Item 3: Sharing of experience on AIDC implementation and update the implementation status

Update the AHMS/ATN Implementation Status Table and the AIDC Implementation Table- Sec (WP/03)

3.1 The Eighth Meeting of the Common aeRonautical Virtual Private Network Operations Group of APANPIRG **(CRV OG/8)** was held via video tele-conference from *17 to 19 May 2021*. The meeting reviewed and updated ATN/AMHS/AIDC table and the CRV implementation table in the APAC Region. The ATN/AMHS/AIDC implementation table and the CRV implementation table further updated by **CRV OG/8** was provided in Attachment A and Attachment B to the paper.

3.2 The ATN/AMHS/AIDC implementation table further updated by APA TF/7 is provided in **Appendix B** to this report.

3.3 The meeting recommended to remove AIDC and ATM System Implementation columns from the table provided in Appendix A to WP/03 and format it into a separate Excel Sheet. The ICAO Secretariat will take necessary action to create the new Excel sheet and will share with Member States focal point for future updates**.** India and Singapore volunteered to support the ICAO Secretariat for this Action Item. **ACTION ITEM 7-1**

3.4 Singapore provided an updated graphical display on the AIDC implementation and planning status based on the inputs provided to this meeting via the updates by States to AIDC implementation and is provided in **Appendix C** to this report. The meeting was requested to review and provide any comments or updates to the ICAO Secretariat for necessary actions.

AIDC Implementation in Singapore (IP/03)

3.5 Singapore shared some of the implementation and operational issues which could be taken into consideration by other States in their implementation of AIDC.

3.6 Singapore implemented AIDC with Ho Chi Minh ACC in July 2014 which contributed to improvements to the coordination process and reduction of errors associated with voice coordination. In November 2019 Singapore implemented AIDC with Manila ACC after a period of successful

operational trials. Singapore also shared details on various ATS routes for the AIDC trial and corresponding AIDC messages. Singapore progressively expanded the AIDC implementation with Kuala Lumpur ATCC and Kuching ATCC in November 2019 and February 2021 respectively. The next implementation will be with Kota Kinabalu ATCC in July 2021.

3.7 Singapore shared implementation issues about disruption of the connection links that would result in unsuccessful AIDC message transmission/exchanges due to message non-reception/timeouts. The first use of the APAC Regional Common aeRonautical Virtual Private Network (CRV) for AIDC was introduced and this is a step forward to address any existing latency issues associated with AFTN routing setups noted in some other connections.

3.8 The meeting was informed that most of the unsuccessful EST message exchanges have been attributed to 2 main reasons: Flight plan has been manually coordinated before EST message is received and missing FPL information in the ATM system of the receiving ACC. Regular user-training/and reminders will remain in place to handle these automation handling and flight planning issues.

AIDC Operational Trial in Manila FIR- Philippines (IP/07)

3.9 The paper presented updates on the AIDC trial implementation in Manila FIR. Philippines informed that Manila ACC's have been affected by COVID-19 due to manpower and health restrictions but have done full implementation of AIDC with some of neighboring FIRs. Philippines has done successful AIDC implementation with Singapore, Hong Kong, Taipei and Ujung Pandang ACCs using the new ATM system with no recurring major issues. Philippines shared the table with the results of AIDC tests and trial operations with six (6) adjacent centres.

3.10 The meeting was informed that Manila ACC already conducted AIDC tests with Kota Kinabalu and Ho Chi Minh and it will continue AIDC test until some issues are resolved. It was estimated that trial operations can be carried out commencing on the fourth quarter of 2021 (4Q 2021).

3.11 Furthermore, coordination with Oakland already started and Philippines is expecting an AIDC test with Oakland on end of June/early July timeframe. AIDC test for Fukuoka are still to be determined but Philippines already coordinated with the parameters to be used for AIDC test.

3.12 The meeting appreciated the efforts done by Philippines for AIDC Implementation and congratulated for the great progress made.

AIDC Implementation in Malaysia (IP/08)

3.13 Malaysia shared the status of AIDC implementation plan in Malaysia at Kuala Lumpur FIR and Kota Kinabalu FIR. It was informed that Kuala Lumpur FIR is adjacent with 5 FIRs whereas Kota Kinabalu FIR is adjacent with 4 FIRs.

3.14 The AIDC operational implementation between Kuala Lumpur ACC and Chennai OCC started since 1st April 2020 and TOC and AOC messages between Kuala Lumpur ACC and Chennai OCC came into effect on the 1st January 2021.

3.15 Kuala Lumpur ACC and Singapore ACC started the AIDC operational implementation since 1st November 2019 while Kuala Lumpur ACC and Bangkok ACC started AIDC operational implementation since 14th March 2020. For further enhancement on the successful AIDC message exchange rate, it was recommended to consider various factors related to Human factor, System, and others. The meeting was informed that Kuala Lumpur ACC will be relocated to a new centre From Subang to Sepang at Q3 2021.

3.16 It was informed that the AIDC Technical Tests between Kota Kinabalu ACC and Ujung Pandang ACC were completed in March 2020 while the AIDC Technical Tests between Kota Kinabalu ACC and Singapore ACC for phase 3 were extended till June 2021. AIDC will be operational on 1st July 2021.

3.17 Furthermore, the AIDC Technical Tests between Kota Kinabalu ACC and Manila ACC were done in October 2019 whereas between Kuching ACC and Singapore ACC finished on 31 January 2021. Operational Implementation between Kuching ACC and Singapore ACC commenced on 1st February 2021.

3.18 The meeting appreciated the concise and complete summary presented in the paper and suggested that template for reporting used by Malaysia could be a reference.

3.19 Malaysia informed that the type of message exchanged among the FIRs are based on agreement among States. The number of types of messages may be amended after discussion with peer States.

3.20 India asked that as ICAO recommended to implement five types of AIDC messages i.e. Advanced Boundary Information (ABI), Coordinate Estimate (EST), Acceptance (ACP), Transfer of Control (TOC) and Assumption of Control (AOC) by Member States, so if any Member States have implemented less than five types of messages, if their status will be considered as AIDC Implemented State. The ICAO Secretariat informed that ICAO APAC Regional Air Navigation Plan suggest to implement the five AIDC messages as per **APANPIRG Conclusion 24/17**, and the five identified AIDC Messages should be *implemented as far as practicable.*

AIDC Implementation in Thailand (IP/09)

3.21 Bangkok FIR has four adjacent FIRs, including Kuala Lumpur FIR (Malaysia), Vientiane FIR (Lao PDR), Phnom Penh FIR (Cambodia), and Yangon FIR (Myanmar). In 2020, Thailand has successfully implemented AIDC communications with three out of four adjacent ATSUs excluding Yangon FIR (Myanmar). AIDC operational trial between Thailand and Myanmar needed to be suspended due to situations in Myanmar.

3.22 Thailand informed that a total number of 3,699 AIDC flights were recorded between 1st to 21st May 2021 periods. There were 3,242 flights success on EST/ACP message exchanges, equal to 87.65 percent of the total flights. For unsuccessful flights, as current AIDC communications do not implement ABI and CDN message exchanges, the issue could be estimated time at boundary differs from flight plan trajectory more than 45 minutes or Coordination point in EST is not relevant to flight plan route.

AIDC Implementation in India (IP/10)

3.23 India has four Flight Information Regions (FIRs and 13 adjacent International FIRs. India is currently using APAC AIDC ICD version 3 in all the automation systems currently installed at various ATS units. India informed that trials have been carried out between various domestic ATS units are already exchanging live AIDC messages.

3.24 Between *Chennai & Kuala Lumpur (Malaysia),* LOA signed on 26th May 2021 effective from 1st June 2021 and between *Chennai & Male (Maldives),* trials have been successful while LOA is in process and Safety Assessment conducted on 9th April 2021 for implementation. Between *Chennai & Colombo (Sri Lanka),* Colombo in process to address the syntax errors in ABI and LOA in progress. Between *Chennai & Yangon (Myanmar),* trials commenced in January 2018. Yangon has intimated that, they will inform Chennai for conducting the Test, as soon as Yangon is ready. Between *Mumbai & Male (Maldives),* Safety Assessment conducted on 9th April 2021 for implementation and final LOA to be signed shortly. Between *Mumbai & Mogadishu,* successful trials conducted in March 2021 while minor adaptation system issues with Mogadishu automation system have been identified.

3.25 Between *Mumbai & Muscat*, successful trials conducted in March 2021. System issues with Muscat's automation system identified and resolution awaited from Muscat ATCAS vendor. Between *Ahmedabad & Karachi (Pakistan),* Automatic message exchange happens for most of the East bound flights between Karachi & Ahmedabad but AIDC coordination of most of the west bound flights not possible due to Karachi Automation system not generating auto ACP message in response of EST messages. Same for *Delhi & Lahore (Pakistan)* test trials. Between *Kolkata & Yangon (Myanmar),* trials are under process.

3.26 The meeting was informed that India is keen to conduct operational trials between *Kolkata-Dhaka, Mumbai- Karachi (Pakistan), Chennai-Jakarta* and *Varanasi-Kathmandu* subject to readiness from the concerned states and India is engaged towards entering into contract with M/s PCCW for CRV in Q3 2021 and Service readiness by Q4 2021 in line with CRV contract and service readiness by counterpart BBIS states. This would provide with a robust and reliable medium for AIDC data interchange between the adjoining FIRs of neighbouring countries.

3.27 The ICAO Secretariat asked why for AIDC Implementation between *Chennai & Yangon (Myanmar),* India observed issues of incorrect reference number in Counter CDN from Yangon while between *Kolkata & Yangon (Myanmar),* trials are under process and most of the message exchanges were successful. India informed that Kolkata faced similar issues while implementing AIDC with Yangon in 2018 and the issues were resolved with the help of Automation system manufacturer INDRA for Kolkata. While in Chennai, the Automation system is from different manufacture named Raytheon. Raytheon has provided necessary support and India is waiting for the response from Myanmar for further resolution of this issues.

AIDC Implementation in Indonesia (IP/11)

3.28 Indonesia shared information related to the AIDC implementation status in Indonesia, particularly in Ujung Pandang FIR (Ujung Pandang ACC) with its adjacent Area Control Centres (ACCs) and other relevant matters during the implementation phase. Indonesia informed that Ujung Pandang ACC's has Implemented AIDC with Brisbane ACC in July 2017, with Manila ACC since October 10th, 2019, with Moresby ACC since October 8th, 2020, and informed that AIDC trial between

Ujung Pandang ACC and Kinabalu ACC will be initiated as soon as the trial period between Kinabalu ATCC and Singapore ACC will be accomplished.

3.29 It was further informed that Ujung Pandang ACC and Oakland ARTCC have completed AIDC testing in October and December 2018, and AIDC testing between Ujung Pandang ACC and Jakarta ACC have been done since November 2020. Furthermore, Currently, Ujung Pandang ACC and Jakarta ACC are being fulfilled the requirements to go to the operational trials. Target of implementation is in 4Q2021. Indonesia shared detailed information about each AIDC Implementation and testing.

3.30 India, Singapore, and Malaysia asked about the AIDC Technical Trial Plan of Indonesia with them. Indonesia informed that this year, Indonesia will concentrate on the AIDC Implementations in progress. The Technical Trial with Chennai (India) will be initiated after successful AIDC Trial with Ujung Pandang ACC, while Technical Trial with Singapore and Malaysia will be planned in future.

AIDC Implementation in China (IP/12)

3.31 China presented the AIDC implementation progress and plan in China with adjacent ATSUs, the issues and experience encountered during the implementation.

3.32 China informed that China has implemented AIDC operation with Incheon ACC and Vientiane ACC, and OLDI operation with Khabarovsk ACC, is conducting AIDC technical tests with three adjacent ATSUs, namely Ulaanbaatar ACC, Yangon ACC, and Hanoi ACC. As domestic implementation, more than 90% of ATM automation systems in China have AIDC V3.0 capability, and more than 75% of ATS units with regional handover relations have implemented AIDC handover. China plans to fully implement AIDC between the domestic regional ATS units by 2025.

3.33 China shared Implementation plan with Hong Kong ACC, Taipei ACC, Incheon ACC, Khabarovsk ACC and Vientiane ACC. Additionally, it shared implementation plan of Kunming ACC with Yangon ACC, Beijing ACC and Lanzhou ACC with Ulaanbaatar ACC, Sanya ACC with Hanoi ACC and Ho Chi Minh ACC, Shanghai ACC with Incheon ACC, Nanning ACC with Hanoi ACC, and Urumqi ACC with Novosibirsk ACC and summarized various implementation in tabular format.

3.34 China informed that in the technical tests, several issues occurred due to the ATM automation system's software defects that interrupted the AIDC handover process. Additionally, the transmission of AIDC messages between adjacent ATSUs under the AFTN network has significant latency, resulting in unsuccessful AIDC message transmission due to message timeouts. It was proposed that by setting up a dedicated line between the AFTN Data & Message Handling System (DMHS) of the ATSUs, the average delay of this link is reducing to less than 5 seconds, and the handover success rate is increasing to more than 95%.

3.35 USA asked that Russia Federation has AIDC capability or it can only support OLDI. It was informed by China that Russia Federation can only support OLDI. USA further informed that section 4.2 of IP on legacy issue is due to bandwidth limit. The USA is able to exchange AIDC with Indonesia and Papua New Guinea through Australia without legacy issue only after implemented CRV that provide enough bandwidth. USA further indicates that CRV could be a cost saving option when compared with dedicated circuit. This is due to China has already joined CRV.

China and Laos Started the AIDC Pre-Operational Trials - China (IP/13)

3.36 China informed that at present, Kunming FIR and Vientiane FIR are connected by an international route A581. Phased progress of AIDC technical test has been made between China and Laos after years of efforts. The AIDC pre-operational trials started on January 12, 2021 and the success rate reached above 90%. It was informed that daily summary and analysis of the failed AIDC handover via emails have been made by technical staff from both sides.

3.37 China informed that the problems mentioned last year has been successfully solved and shared the work experience. Firstly, it is recommended that both sides should strictly follow ICAO data standard when conducting AIDC handover test between adjacent ATSUs of Asia-Pacific member states, so as to reduce AIDC failure caused by non-compliance with ICAO data standard. Secondly, it is recommended that AIDC messages should be transmitted directly through the point-to-point ground link between the two side, so as to reduce the link transmission delay caused by too many intermediate nodes.

3.38 It was suggested that the FIRs of neighboring countries in the Asia Pacific region should actively adopt the cooperative work mode for communication shared in the paper, so as to improve the work efficiency and promote the implementation of AIDC in the Asia Pacific region. China informed that after negotiation between China and Laos, the relevant work plan for the next step to further promote the AIDC handover between these two sides has been achieved and discussed about the significance of the work.

Hybrid Application of AIDC and OLDI- China (IP/14)

3.39 China discussed the application of AIDC and OLDI between Shenyang ACC, Beijing and Khabarovsk air traffic control area, and illustrate the two protocol parameters settings and handover process in NUMEN3000 system. It was informed that at present, Shenyang ACC communicates with Beijing FIR through AIDC (Air Traffic Services Inter facility Data Communications) protocol that uses in Asian-Pacific region, and with Khabarovsk FIR through OLDI (On-Line Data Interchange) protocol of European standard, which improves efficiency of handover and lowers controllers' workload. The electrons handover promotes safety of flight and improves efficiency of operation.

3.40 Since using the AIDC handover between Shenyang and Beijing FIR formally, the success rate is over 98%. The delay of transmission link controlled within 1 second, which enhances the situation awareness of handover work between adjacent FIRs, and improves the safety and efficiency of air traffic control operation. Since using the OLDI handover between Shenyang and Khabarovsk FIR formally, the success rate is over 96%. The delay of transmission link controlled within 1 second, which improves the efficiency of handover work, and eases the work burden of controllers. It was further described that when the automatic system performs the electronic handover of the flight, it will first trigger judgment method of handover according to the relevant handover parameters of AIDC and OLDI configured in the system and then it performs the handover based on the corresponding handover process according to the triggered handover method (AIDC or OLDI).

Progress of AIDC Implementation in Lao PDR (IP/16)

3.41 Lao PDR informed that it had implemented AIDC system since 2016. It had successfully implemented on AIDC with Bangkok and Phnom Penh ACCs in 2020 and has stipulated AIDC operational trials with the adjacent ACCs. The paper presented the overview status on AIDC operation and AIDC operational trials plan with AIDC coordination partners. Lao PDR further informed that Lao

PDR has defined plan to perform AIDC operational trials with other adjacent ACCs by using AIDC messages and shared the plan with the meeting for information and further discussion.

3.42 Additionally, by WP/08 under Agenda Item 4 titled *Status update on AIDC system with adjacent units,* Lao PDR shared the Proposal of AIDC Implementation Plan Phase 2 for Lao PDR. The meeting was informed that the AIDC Implementation for Lao PDR has been conducted with some neighboring ACCs. The objectives to carry on AIDC Implementation Phase 2 are to strengthen the capacities of AIDC usage and improve the functionalities in more efficient ways. For these reasons, Lao PDR proposed that the AIDC Implementation Phase 2 should involve AIDC messages namely: CPL, PAC, MAC, CDN and REJ with the adjacent units and requested that the states concerned should be involved in the discussion of AIDC Implementation Phase 2 on additional AIDC messages discussed above.

Agenda Item 4: Review implementation issues reported and discuss recommended solutions

AIDC Implementation Issues Report- Indonesia, India, and Singapore (WP/04)

4.1 The Meeting reviewed and discussed the consolidated implementation issues collected and presented by Indonesia with supports by India and Singapore. The meeting was informed that in APA TF/5 meetings in the Appendix C to the Report titled List of Action Items for Asia/Pacific AIDC Task Force, all Members States/Administrations were encouraged to provide identified ISSUES for sharing and learning by filling in the AIDC Issues Form. The issues were categories into Issues pertaining to Communication Infrastructure and Interfacing equipage, Issues pertaining to ATM system parameters and Application Software, and Issues pertaining to Design Procedures, SOP, Operator's Training. In AIDC implementation issues form, the predetermined Fault Categories are Communication Link; ATM System; AIDC Message; Airspace Design/Procedures; and Others.

4.2 The AIDC reported issues till date were presented for review and discussion by the meeting. Totally 105 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/7 (2021)		
	Issues Reported	Closed	Open
a. Communication Link	9	3	6
b. ATM System	61	29	32
c. AIDC Message	17	15	2
d. Airspace Design/Procedures	13	4	9
e. Other	5	2	3
Total	**105**	**53**	**52**

4.3 Issues pertaining to Communication Infrastructure and Interfacing Equipage reported in detailed as 6 cases of latency occurred among ACCs in India and with its adjacent ACC, 2 cases reported by Singapore, 1 case occurred between Ujung Pandang ACC and Brisbane ACC. The description of issues and current status were presented. Issues pertaining to ATM system parameters and Application Software reported as 6 cases reported by Australia, several Issues reported by India, Indonesia, Malaysia and Maldives and Philippines, and Singapore. The description of issues and current status were presented. Issues pertaining to Design Procedures, SOP, and Operator's Training reported in details by India Indonesia, Malaysia, and Singapore.

4.4 The meeting was informed that due to the limited explanation contained in the report, it should be considered to provide an opportunity to get further clarification in this meeting, if there are other countries that need to elaborate the issues. List of identified issues consolidated from States/Administrations after meeting review is attached in **Appendix D.**

4.5 The meeting appreciated the paper and discussed that sharing experience among Member States may help each other to resolved similar issues and it will expedite AIDC Implementation. India provided explanation to all concerns mentioned in the WP pertaining to India. Furthermore, India assured that it is working hard to resolve all the issues and most issues will be resolved soon. Lao PDR requested action taken by Maldives for Unformatted Lat/Long in the item 15 as Lao PDR is facing same issues. The meeting encouraged concerned members to discuss about detailed solutions by offline discussions with each other after the meeting.

Lessons Learnt From AIDC Implementation in India (WP/07)

4.6 India presented various technical and operational issues that may be encountered in the process of AIDC implementation and possible solutions. It was informed that India has taken commendable steps in implementation of AIDC between ATC centers within various FIRs within the country as well as with ATC Centers of other neighboring countries. Within the country itself different ATC Centers have ATM automation system of various make and models. During the process of implementation various technical and operational issues were encountered which may be of generic nature for all the states implementing AIDC.

4.7 India summarized various technical and operational issues faced in the process of AIDC implementation and its potential mitigations based on their experiences in tabular format. India proposed that a chapter with recommendation of qualitative requirement for the AIDC application in an ATM automation system including HMI may be contemplated to be included in the ICD or any other Guidance material by APAC so that all the states can be benefited while implementing ATM Automation System with AIDC application.

4.8 The meeting was proposed to consider Draft Conclusion for *General Qualitative Requirement of AIDC application in ATMS* that AIDC task force will recommend general qualitative requirement of AIDC application in an ATM automation system to bring uniformity and better interoperability for meeting endorsement.

4.9 The ICAO Secretariat informed that the WP presented three main issues related to Automation System functional requirements, HMI issues, Controller Working Position (CWP) Planning/Layout. The proposal for a Draft Conclusion is not appropriate this time and noted that there is a section on HMI in the AsiaPac IGD, which was noted by Thailand

4.10 Thailand suggested that necessary edition may be done in **CHAPTER 6:** *Harmonization Framework for AIDC Implementation* of AIDC Implementation and Operations Guidance Document Edition 1.0 - July 2017.

4.11 Mr. Kwek Chin Lin informed that AIDC Planning Team of ICAO HQ CP-OPDLWG is drafting the document for a AIDC Implementation and Guidance Document for all regions, which takes reference from some portions of ICAO APAC AIDC Implementation and Operations Guidance Document Edition 1.0 as well as other references. The document, will be applicable to all ICAO Member

States. Therefore, it may not be useful to propose or made further improvements or to add any new content into current ICAO APAC AIDC Implementation and Operations Guidance Document.

Agenda Item 5: Status of implementation plan focusing those connections identified with priorities

Updates from RASMAG/25- Sec (IP/06)

5.1 The Twenty-Fifth Meeting of the Regional Airspace Safety Monitoring Advisory Group (RASMAG/25) was held from *27 to 30 October 2020* by Video Teleconference (VTC). The RASMAG/25 meeting reviewed the outcome of Tenth Meeting of the FANS Interoperability Team-Asia (FIT-Asia/10) held by Video Teleconference from *03 to 06 August 2020*. The meeting also reviewed Vertical Safety Report on RVSM airspace risk by the Australia Airspace Monitoring Agency (AAMA), the China Regional Monitoring Agency (China RMA), the Japan Airspace Safety Monitoring Agency (JASMA), the Monitoring Agency for the Asian Region (MAAR), and the Pacific Approvals Registry and Monitoring Organization (PARMO) during 2019.

5.2 The ICAO secretariat provided a regional safety monitoring assessment summary, which highlighted the Hot Spot Summary in the **Table 3** in the meeting report as below to RASMAG/25:

Table 3: Comparison Summary of LHD Hot Spots

ID	Involved FIRs	Identified	Remarks
A1	Kolkata/Chennai/Dhaka – Yangon	2015	Potential non-hot spot
A2	Chennai – Kuala Lumpur	2015	LHDs increased
B	Incheon	2015	AKARA Corridor
D	Manila – all adjacent FIRs	2015	LHDs reduction
F	Mogadishu – Mumbai	2015	LHDs reducing
G	Sana'a/Muscat – Mumbai	2015	Cat. E LHDs (Sana'a improved)
J	Jakarta – Singapore/Kota Kinabalu	2018	Minor, Cat. E LHDs
M	Colombo - Melbourne	2019	Potential non-hot spot
N	Oakland USA – Hawaii CEP	2019	Cat. E LHDs

5.3 The RASMAG/25 meeting discussed other issues regarding Non-RVSM Approved Aircraft, Long Term Height Monitoring (LTHM) Burden Estimate, safety reporting, the APANPIRG ATM and Airspace Safety Deficiency List, etc.

5.4 APA TF/7 reviewed the summary of hot spots. India requested clarification on why some boundaries with AIDC implementation are designated as hotspots. The meeting was informed that AIDC is one of the many factors for the categorisation of Hot Spots defined by RASMAG but not the only factor. Therefore, there are Hot Spots where AIDC is implemented but they remain in the list of Hot Spots published by RASMAG/25. It was advised to APAC Member States to refer to RASMAG/25 meeting report to know description about each Hot Spots defined in the **Table 3**. The meeting report and other relevant information can be accessed by the link: https://www.icao.int/APAC/Meetings/Pages/2020-RASMAG25.aspx

Agenda Item 6: Review Terms of Reference and the Achievements of the Task Force

Review of the Terms of Reference and Achievements of APA Task Force- Sec (WP/05)

6.1 The paper presented the Terms of Reference of APA Task Force and main achievements for review by the meeting.

6.2 The meeting recalled that The Terms of Reference (ToR) of the AIDC Implementation Task Force was adopted by APANPIRG at its Twenty Fifth meeting through Decision 25/37. The APA/TF was established 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.

6.3 The meeting was informed that significant achievements have been made since the establishment of this task force, including the preparation of AIDC Planning Table in the Regional Air Navigation Plan, development of AIDC Implementation and Operations Guidance Document, maintenance of AIDC Issues Report, summary of AIDC focal points, the Implementation Status Chart as well as the sharing of the experience gained by States/Administration in the challenging process of AIDC implementation.

6.4 The requirements for AIDC implementation was listed as a priority in the APAC Seamless ANS plan. The APA TF/6 meeting highlighted that AIDC implementation in South China Sea sub-region was satisfactory while further efforts by States in the Bay of Bengal sub-region were required.

6.5 The implementation of AIDC is an ongoing task for ANSPs to enhance the ATS safety and efficiency, the tasks outlined in the ToR shall be continued to facilitate AIDC implementation at inter-regional, regional or sub-regional level.

6.6 The meeting was informed that the ToR will be reviewed based on the scope and work may be undertaken by ATMAS TF within available time and resources. The meeting updated the list of focal point for AIDC Implementation in the APAC Region. The updated list of focal point for AIDC Implementation is provided **Appendix E** to this report.

Agenda Item 7: Review the outstanding Action Items of APA Task Force and make recommendations for a way forward after the dissolution of the Task Force

Outstanding Tasks/Action Item and Recommendations for APA Task Force- Sec (WP/06)

7.1 The paper presented the outstanding Action Items of the APA Task Force and make recommendations for a way forward after the dissolution of the Task Force.

7.2 The APA TF/6 meeting noted there were a number of AIDC connections planned for implementations in 4Q2020 or early 2021, the APA TF/6 meeting considered it necessary to continue the work of the Task Force for a short period of time and agreed to have another meeting in 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.

7.3 The CNS SG/23 of APANPIRG in September 2019 made the **Decision CNS SG/23/13** for *Establishment of ATM Automation System Task Force (ATMAS TF).*

7.4 Considering that different States in the region are presently at different stages of AIDC implementation, necessity to maintain the functions of APA TF persists, to facilitate appropriate guidance for upcoming States and provide a coordination framework among States for wider and effective implementation of AIDC across the APAC region.

7.5 While major success has been recorded for AIDC implementation in the region, full scale action of the APA TF is not envisaged, henceforth. By comparing the Terms of Reference (ToR) of ACSICG and ATMAS/TF, it should be agreeable to identify ATMAS/TF as the contributory body under CNS SG to take over any outstanding action items of APA TF, and the expertise of APA TF experts should be retained through appropriate arrangement after the dissolution.

7.6 As the ATM automation system covered a wide spectrum of operational concepts, various technologies, projects implementation, the ATMAS/TF/1 meeting considered it necessary to kick off the group's future works with a well-defined plan and propose ad hoc groups to further progress action items. It was proposed that AIDC specialists may work as nominated members of an ad hoc expert group within ATMAS/TF to follow up the concerns and issues arisen from the AIDC implementation activities in the region.

7.7 With aforementioned, it is suggested to consider the following draft decision on the future of APA TF:

<table>
<tr><td colspan="2">Draft Decision APA TF/7/1 - Dissolution of APA TF</td></tr>
<tr><td>What: Noting that most of the tasks outlined in the ToR have been achieved and the completion of residual part of action items will be undertaken by ATMAS/TF.

That, the APA TF be dissolved.</td><td>Expected impact:
☐ Political / Global
☐ Inter-regional
☒ Economic
☐ Environmental
☒ Ops/Technical</td></tr>
<tr><td>Why: The APA TF terms of reference have been completed and pending action items will be undertaken by ATMAS/TF.</td><td>Follow-up:
☐Required from States</td></tr>
<tr><td>When: 4-October-21</td><td>Status: To be adopted by Sub Group</td></tr>
<tr><td colspan="2">Who: ☒Sub groups ☒APAC States ☒ICAO APAC RO ☐ICAO HQ ☒APANPIRG ☒Other: ATMAS/TF</td></tr>
</table>

7.8 The meeting was informed that the ICAO secretariat will forward draft decision, if agreed by the meeting, to ATMAS/TF for endorsement, propose appropriate action on the ToR and tasks/action items of ATMAS/TF, and then submit to CNS SG for adoption. The ATMAS/TF shall be requested to design future meeting structure to accommodate the AIDC related functions and maintain the effectiveness in promoting AIDC implementation.

7.9 The meeting reviewed and updated the list of tasks/action items and agreed for draft decision APA TF/7/1 to be considered by ATMAS TF/2. The Updated Task/Action items for APA Task Force for further action by ATMAS/TF is provided in **Appendix F** to the Report.

Agenda Item 8: Any other business

Application of Electronic Handover Technology between High Level and Low Level Sectors-China (IP/15)

8.1 China introduced a complicated operational situation of horizontal and vertical handover co-exist, taking the flight handover between upper and lower sectors in Chengdu and Chongqing of CAAC, and the complex operational environment between Chengdu, Chongqing and Xi'an solution based on using the application of MH/T 4029.3, to realize the vertical and horizontal electronic handover in the complex operational environment.

8.2 It was informed that Compared with the horizontal handover, the vertical handover between upper and lower sectors needs to coordinate the controller intention. For the handover between Chongqing and Chengdu, horizontal and vertical handover coexist. Although the horizontal handover can be realized by AIDC, the vertical handover can only be realized by telephone. In order to avoid the potential risks caused by different operation modes of handover between the same adjacent control units, horizontal handover between Chongqing and Chengdu also maintains the telephone handover mode and refine the process of flight electronic handover based on MH / T 4029.3.

8.3 The meeting was informed that till now, the application of MH/T 4029.3 has realized the electronic handover between Xiamen and Fuzhou, Lanzhou and Xining, due to the staggered horizontal and vertical handover between Chengdu and Chongqing, Chengdu and Guiyang, two phases including of coordination and transfer are needed, and the coordination trigger time is more flexible. At present, ATMB of CAAC has completed the technical scheme design according to the characteristics of Southwest airspace. There are follow-up plan of electronic handover based on application of MH/T 4029.3 that the functions of software will be deployed in Chengdu and Chongqing ATC automation systems according to the technical solutions and Carry out handover test.

Update on ICAO APAC Regional Webinars-Sec (IP/02)

8.4 The meeting was informed about the 18 webinars to be hosted by ICAO APAC office in the year 2021 as ICAO APAC series of webinars along with the objectives of webinars related to CNS i.e. ICAO APAC Cybersecurity Webinar, Webinar on Implementation of CRV in APAC region, SWIM workshop, and Webinar on Implementation of ADS-B. The meeting was invited to contribute individual practice and experience to the webinar of interest as a speaker and to take maximum advantages of the webinars by registering more participants from states.

Note of appreciation

8.5 With the contributions from States/Administrations, the AIDC Task Force has completed most of the tasks outlined in its ToR, effectively facilitated the implementation of AIDC in APAC region and is dissolved after this meeting. The meeting expressed its appreciation and gratitude to the Civil Aviation Authority of Singapore (CAAS), Airport Authority of India (AAI) and Directorate General of Civil Aviation Indonesia (DGCA Indonesia) and all participants from the Asia / Pacific member states and international organizations for their commitment and continuous support on ICAO regional activities.

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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.

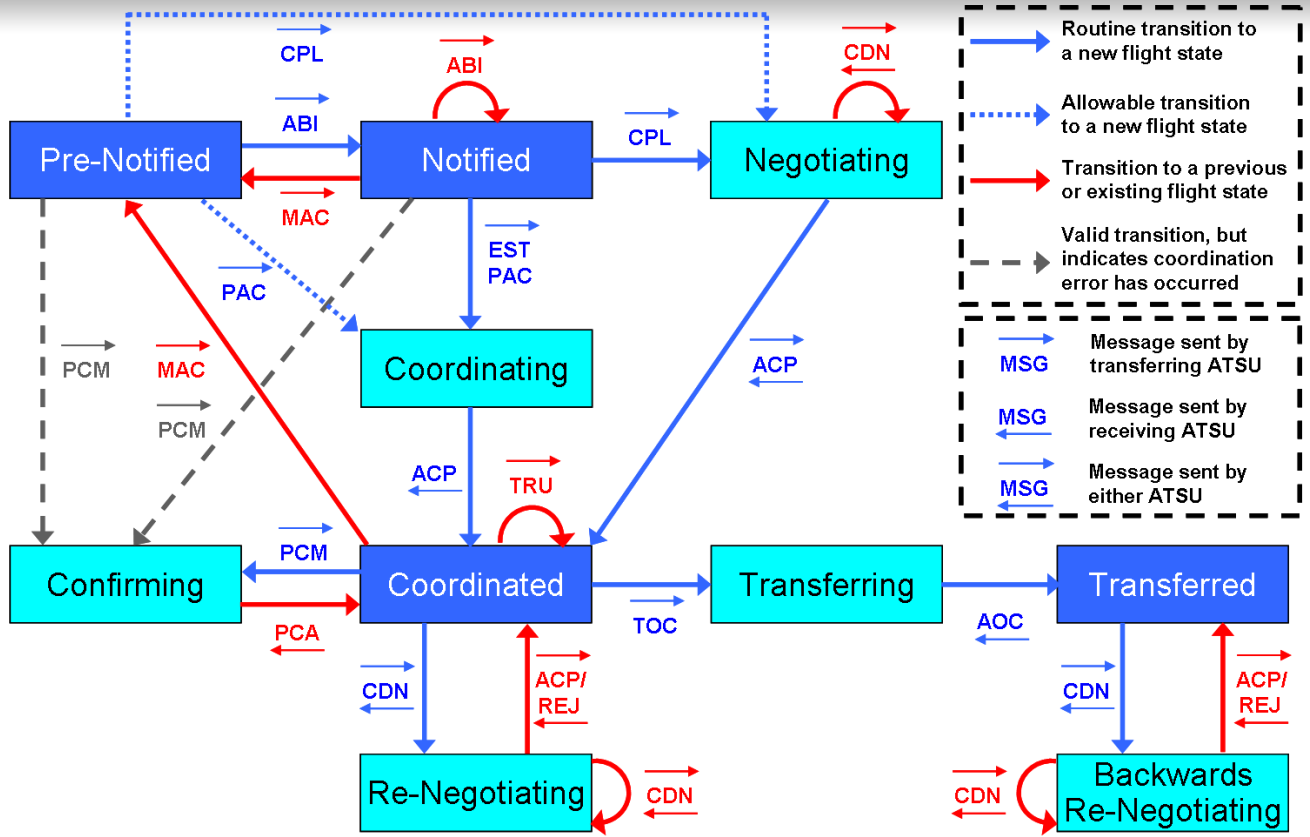
Agenda

- 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 24/17

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

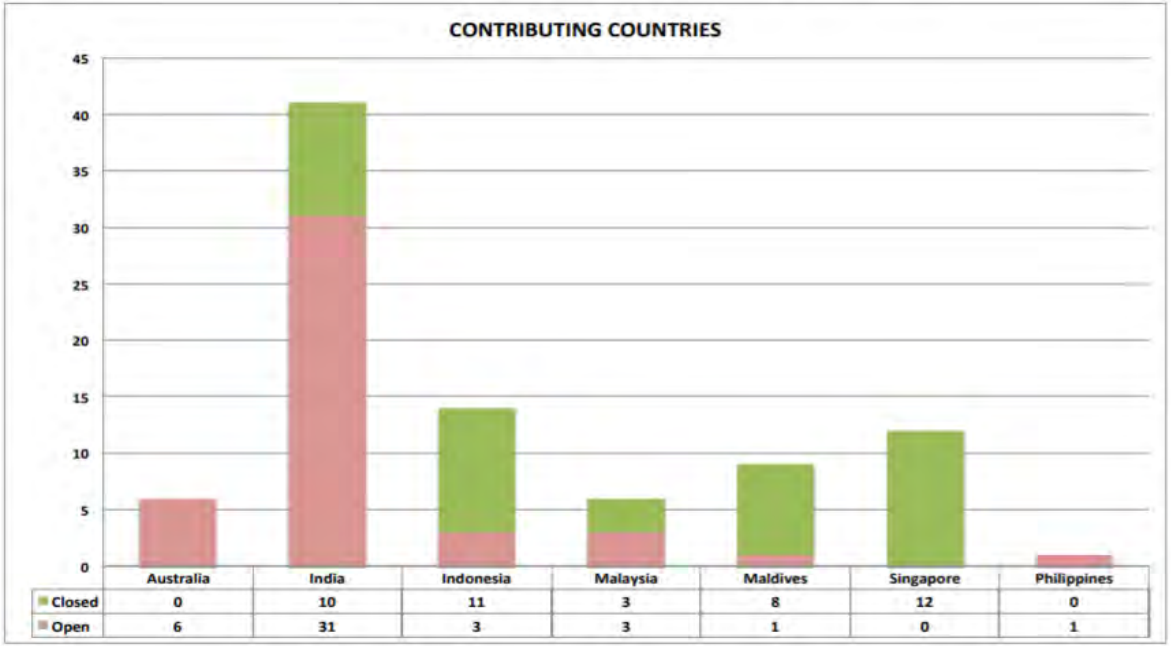
- ATM system parameters and Application Software:
  - Issues reported by Philippines (Manila ACC) received multiple ABI from KK ACC; Open/need further investigation by KK.
  - Issues reported by Singapore:
    - Rejection ABI due to unknown point; Closed/by updating dataset in ATM system.
    - Not reception 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

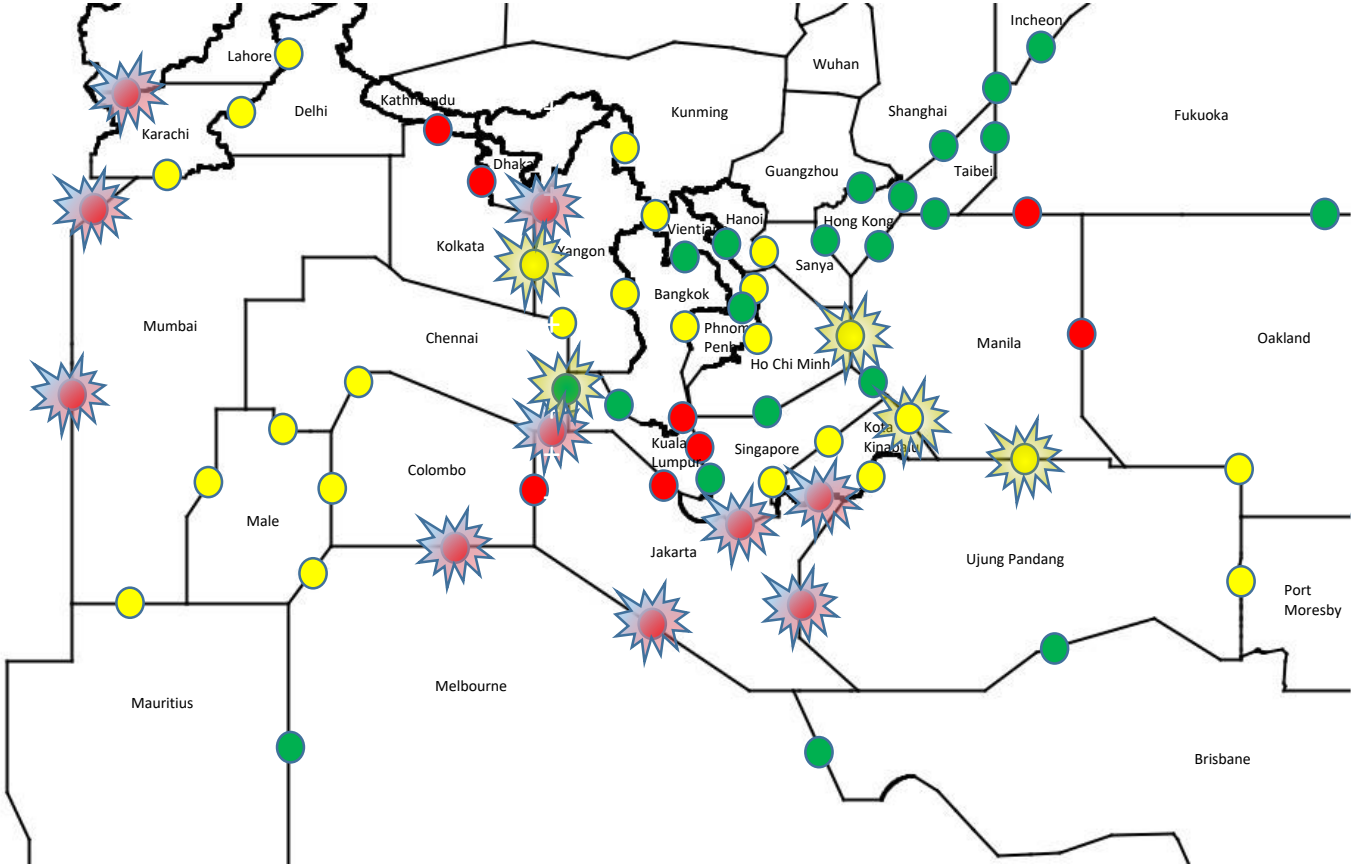
  Download link:
  https://www.icao.int/APAC/Pages/eDocs.aspx
  CNS tab

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

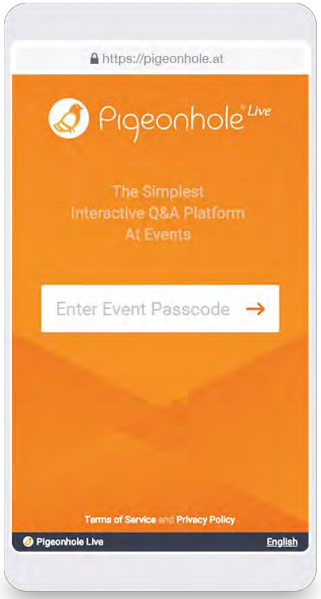
Hotspots *RASMAG/24*

- 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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ATN/AMHS/AIDC Implementation Status in the APAC Region

State/Organization	ATN G/G Boundary Intermediate System (BIS) Router/AMHS	AMHS Vendors Selected	AIDC	ATM System selected to support AIDC and Associated ICD (Implementation Status of the Basic 5 message set supported)	Remarks
AFGHANISTAN					
AUSTRALIA	ATN tests were conducted. BIS Router and Backbone BIS Router and AMHS implemented. AMHS has been migrated to CRV. Connection with Singapore using AMHS was implemented October 2016; Another AMHS connections pending CRV (target date by March 2020) including both connection with New Zealand and USA. AMHS connection with Indonesia pending on CRV implementation AMHS connection with South Africa has been established Plan to upgrade AMHS support IWXXM traffic from Nov. 2020.	COMSOFT	AFTN/AMHS based AIDC Implemented between Brisbane and Melbourne, Oakland, Nadi and Auckland; Implemented between Melbourne and Johannesburg; AIDC is also in use between Melbourne and Mauritius; Operational trial between Brisbane and Ujung Pandang since May 2013. Implementation in July 2017. LOA needs to be updated.		

State/Organization	ATN G/G Boundary Intermediate System (BIS) Router/AMHS	AMHS Vendors Selected	AIDC	ATM System selected to support AIDC and Associated ICD (Implementation Status of the Basic 5 message set supported)	Remarks
BANGLADESH	In Q1/2013, Bangladesh installed ATN/AMHS and BIS Router at Dhaka (VGHS) with User Agents at Chittagong (VGEG) and Sylhet (VGSY).	COMSOFT	Tentative date of implementation of AIDC is Q4 of 2023 with Kolkata and Yangon.		Implementation of AIDC is included in the "Modernization of CNS-ATM System of CAAB" project which is going on G2G agreement with French Government and likely to be implemented by the end of 2023.
BHUTAN	ATN/AMHS circuits, using IP over VPN, with Thailand (Bangkok) and India (Mumbai) commissioned in June and July 2017 respectively. IOT and POT with Mumbai completed on 27th June 2017. IOT and POT with Thailand completed on 2nd May 2017. TMC signing with both countries signed.	AEROTHAI'S AMHS System	Currently not applicable. If required in the future, will decide after CRV implementation.		
BRUNEI DARUSSALAM	ATN BIS Router planned for 2015 and AMHS planned for 2015				

State/Organization	ATN G/G Boundary Intermediate System (BIS) Router/AMHS	AMHS Vendors Selected	AIDC	ATM System selected to support AIDC and Associated ICD (Implementation Status of the Basic 5 message set supported)	Remarks
CAMBODIA	BIS Router and AMHS installed. Cambodia (CATS) AMHS connected with Bangkok via VSAT IP link since 10 December 2013	AVITECH	AIDC function and capability made available. Ready for testing with neighbors ATS Facilities starting from 2017 and target date of implementation with Bangkok in 4Q2019	THALES which supports AIDC ICD Version 1.	
CHINA	ATN Router and AMHS including NCC deployed in 2008 which is being upgraded to support ATN/IPS with target date of completion in December 2013. The Beijing-Hong Kong AMHS link was put into operation in 2018; With Thailand was put into operation in Q12020 AMHS/ATN technical tests with Macau completed in 2009. Plan for ATN/AMHS implementation with Macao China is TBD. ATN/AMHS circuit with ROK has been put into operation since June 2011.	IN-HOUSE (Aero-Info Technologies Co., Ltd)	AIDC between some of ACCs within China has been implemented. AIDC between several other ACCs are being implemented. AIDC between Sanya and Hong Kong China put into operational use since 8 Feb 2007. AIDC between Dalian and Incheon implemented in Nov. 2016;	ATN Router and AMHS including NCC deployed in 2008 which is being upgraded to support ATN/IPS with target date of completion in December 2013. The Beijing-Hong Kong AMHS link was put into operation in 2018; With Thailand is completed POT, after sign the TMC circuit	IN-HOUSE (Aero-Info Technologies Co., Ltd)

State/Organization	ATN G/G Boundary Intermediate System (BIS) Router/AMHS	AMHS Vendors Selected	AIDC	ATM System selected to support AIDC and Associated ICD (Implementation Status of the Basic 5 message set supported)	Remarks
	ATN/AMHS tests with India has been put into operation since 2016. ATN and AMHS IOT with Mongolia is completed in May 2018. Plan for commissioning after POT completion in 2021 Connection tests with Nepal is TBD. AMHS testing with Japan was completed in March 2021.It will put into operation after TMC is signed. AMHS testing with Russia in 2021.		AIDC between Sanya and Hong Kong China put into operational use since February 2007. AIDC between Shanghai/Guangzhou and Tapei China put in to operational use since 2013. AIDC between Dalian and Incheon put into operational use since October 2016. AIDC between Guangzhou and Hong Kong China put into operational use since May 2018. OLDI between Shenyang and Khabarovsk put into operational use since Oct.2019. AIDC between Kunming and Vientiane put into pre-operational trails since January 2021.	and was put into operation in Q12020 AMHS/ATN technical tests with Macau completed in 2009. Plan for ATN/AMHS implementation with Macao China in 2019. ATN/AMHS circuit with ROK has been put into operation since June 2011. ATN/AMHS tests with India has been put into operation since 2016. ATN and AMHS IOT with Mongolia is completed in May 2018. Plan for commissioning after POT completion in 2021 Connection tests with Nepal is TBD.	

State/Organization	ATN G/G Boundary Intermediate System (BIS) Router/AMHS	AMHS Vendors Selected	AIDC	ATM System selected to support AIDC and Associated ICD (Implementation Status of the Basic 5 message set supported)	Remarks
			AIDC technical test between Beijing ACC and Ulaanbaatar ACC conducted since 2018. Kunming/Yangon under test and progress since May 2017 AIDC technical test between Sanya ACC and Hanoi ACC conducted since 2019.	with the Beijing - Japan AMHS link was put into operation in in 2020. AMHS testing with Russia in 2021	
HONG KONG, CHINA	**Manila / Philippines** CRV/AMHS circuit was put into operation in May 2019. **Beijing / China** CRV/AMHS circuit was put into operation in April 2021 Macao / China ATN/AMHS circuit was put into operation in December 2009. Wait for Macao to join CRV. **Bangkok / Thailand** ATN/AMHS circuit was put into operation use in 2014. Wait for Thailand to join CRV.	COMSOFT	AFTN-based AIDC with Sanya put into operational use in Feb 2007. AIDC with Taibei put into operational use in Nov 2012. AIDC with Guangzhou put into operational use in May 2018. AIDC with Manila put in operational use in May 2019.	Raytheon ATM system Support AIDC ICD Version 3 commissioned in November 2016.	Already support exchange of IWXXM messages based on FTBP. Support of IHE is planned since November 2020.

State/Organization	ATN G/G Boundary Intermediate System (BIS) Router/AMHS	AMHS Vendors Selected	AIDC	ATM System selected to support AIDC and Associated ICD (Implementation Status of the Basic 5 message set supported)	Remarks
	Fukuoka / Japan CRV/AMHS circuit was put into operation in September 2020. **HoChiMinh / Vietnam** Currently on AFTN. Simple AMHS IOT was conducted in Dec 2019. Wait for Vietnam to join CRV. **Taibei** CRV/AMHS circuit was put into operation in June 2020.				
MACAO, CHINA	ATN/AMHS interoperability test with Beijing commenced in March 2009. ATN/AMHS circuit with Hong Kong put into operational use in end Dec 2009. Upgrade of ATN/AMHS to support IPS and IWXXM planned with tentative target date of Q3 2021.	COMSOFT	[Not applicable for using AIDC, looking into the possible application between TWR and ACC/APP]		

State/Organization	ATN G/G Boundary Intermediate System (BIS) Router/AMHS	AMHS Vendors Selected	AIDC	ATM System selected to support AIDC and Associated ICD (Implementation Status of the Basic 5 message set supported)	Remarks
COOK ISLANDS					
DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA	The ATN BIS Router and AMHS planned for in 2011.		With neighboring ACCs to be implemented		
FIJI ISLANDS	ATN BBIS IPS router and AMHS implemented over CRV for connection to USA in April, 2019 with Australia planned for June, 2019. . For connections with sub-regional centers: For New Caledonia using AMHS since 2017; For connection with Kiribati using UA/AMHS implemented in 2015.	COMSOFT	AFTN based AIDC implemented between Nadi/ Brisbane, Auckland and Oakland.	- Support and implemented AIDC messaging: ABI, EST, CPL, CDN, ACP, TOC, AOC with all three centers - AIDC ICD version 2.0 implemented with Auckland and Oakland. - AIDC ICD Version 1.0 implemented with Brisbane	B2B connection between Nadi AMHS and Brisbane AMHS planned for Q3, 2021 as backup for CRV.

State/Organization	ATN G/G Boundary Intermediate System (BIS) Router/AMHS	AMHS Vendors Selected	AIDC	ATM System selected to support AIDC and Associated ICD (Implementation Status of the Basic 5 message set supported)	Remarks
FRANCE *(French Polynesia Tahiti)*	Planned for implementation of AMHS in 2022 (T1). Using IP with New Zealand since 2017.		Implementation of AIDC (based on Version 3) with adjacent centers (Oakland and Auckland) since 2009.	THALES EUROCAT for AIDC	Alternate routing for backup between Tahiti and Christchurch via Tahiti/New Caledonia IP link
INDIA	Dual stack ATN/IP router and AMHS implemented at Mumbai in 2011. Operational AMHS connections with Bangkok, Dhaka, Singapore, Kathmandu, Karachi implemented. With Beijing implemented in 2016; With Colombo implemented in May2017; With Bhutan implemented in July 2017; IOT was planned in July with Muscat, however it was cancelled due to technical problems at Muscat end. Muscat will intimate readiness after resolution. IOT with Nairobi in September 2020 failed due to compatibility issues noticed at Nairobi, which has Thales system, Messages from Mumbai did not go out of the transmit queue. System software level compatibility problems need to be resolved by Nairobi taking the OEMs on board.	COMSOFT	Initially-15-May-2017, AIDC implemented between Chennai and Kuala Lumpur with ABI and EST messages. India is currently using APAC AIDC ICD version 3. **A. Implementation within India:** Trials have been carried out between various ATS units listed below I Delhi: Ahmedabad, Varanasi, Nagpur I. Chennai: Mumbai, Kolkata, Trivandrum, Mangalore, Trichy, Hyderabad, Bengaluru	Mumbai: Raytheon Auto track-III Chennai- Raytheon Auto track-III + Delhi: INDRA Aircon Kolkata: INDRA Aircon Bengaluru: SELEX Hyderabad: SELEX Ahmedabad: INDRA Aircon 2100 Nagpur: INDRA Aircon 2100 Varanasi: INDRA Aircon 2100 Guwahati: INDRA Aircon 2100 Trivandurm: INDRA Aircon 2100 Mangalore: INDRA Aircon 2100	

State/Organization	ATN G/G Boundary Intermediate System (BIS) Router/AMHS	AMHS Vendors Selected	AIDC	ATM System selected to support AIDC and Associated ICD (Implementation Status of the Basic 5 message set supported)	Remarks
			II. Kolkata: Chennai, Nagpur, Varanasi, Guwahati III. Mumbai: Chennai, Ahmedabad, Nagpur Operational: Chennai-Mumbai; Delhi-Nagpur; Delhi-Ahmedabad, Ahmedabad – Nagpur, Kolkata-Chennai Functional: Delhi-Varanasi, LOA to be signed shortly. **B: Implementation with Neighbouring States:** The status on AIDC implementation with following ATSUs of neighboring FIRs is as under: I. **Chennai & Kuala Lumpur** (Malaysia) – ABI, EST successful. CDN is done with voice confirmation. TOC/AOC is implemented w.e.f. 1st Jan 2021. LOA signed on 26th May 2021 effective	Trichy: INDRA Aircon 2100 All these systems follow APAC AIDC ICD Ver 3.0 of 2007	

State/Organization	ATN G/G Boundary Intermediate System (BIS) Router/AMHS	AMHS Vendors Selected	AIDC	ATM System selected to support AIDC and Associated ICD (Implementation Status of the Basic 5 message set supported)	Remarks
			from 1st June 2021. II. **Chennai & Male (Maldives)** –Trails have been successful. LOA in process. Safety Assessment conducted on 9th April 2021 for implementation III. **Chennai & Colombo** (Sri Lanka) - Colombo in process to address the syntax errors in ABI. Thereafter, trails will be conducted. LOA in progress. IV. **Chennai & Yangon** (Myanmar) – Trials commenced in January 2018. Issues of incorrect reference number in Counter CDN from Yangon persists. Yangon has intimated that, they will inform Chennai for conducting the Test, as soon as they are ready V. **Mumbai & Male (Maldives)** – Safety Assessment conducted on 9th April		

State/Organization	ATN G/G Boundary Intermediate System (BIS) Router/AMHS	AMHS Vendors Selected	AIDC	ATM System selected to support AIDC and Associated ICD (Implementation Status of the Basic 5 message set supported)	Remarks
			2021 for implementation. Final LOA to be signed shortly. **VI. Mumbai & Mogadishu** - Successful trials conducted in March 2021. Minor adaptation system issues with Mogadishu automation system identified. Resolution awaited from Mogadishu. **VII Mumbai & Muscat** - Successful trials conducted in March 2021. System issues with Muscat's automation system identified. Resolution awaited from Muscat ATCAS vendor **VIII. Ahmedabad & Karachi (Pakistan) –** Automatic message exchange (e.g. ABI, EST) happens for most of the East bound flights between Karachi & Ahmedabad. Karachi Automation system not		

State/Organization	ATN G/G Boundary Intermediate System (BIS) Router/AMHS	AMHS Vendors Selected	AIDC	ATM System selected to support AIDC and Associated ICD (Implementation Status of the Basic 5 message set supported)	Remarks
			generating auto ACP message in response of EST messages. Pakistan is currently doing technical trials between Lahore and Delhi ACCs in first phase. Pakistan will take up test trials between Karachi and Mumbai & Karachi and Ahmedabad in second and third phase respectively. **IX. Delhi & Lahore (Pakistan)-** Under test trails. During the first test trials during the March'2021 it was identified that Lahore Automation system not generating automatic ACP messages. Also Delhi system is rejecting the AIDC messages because of the extra space in messages from Lahore. **X. Kolkata & Yangon (Myanmar)** – Initial trials were conducted in Q4 of 2018 in which		

State/Organization	ATN G/G Boundary Intermediate System (BIS) Router/AMHS	AMHS Vendors Selected	AIDC	ATM System selected to support AIDC and Associated ICD (Implementation Status of the Basic 5 message set supported)	Remarks
			some ABI and message reference errors were encountered. Vendor at both ends modified the software and issues were mitigated. In the next trials in Q1 of 2020 most message exchanges were successful. LOA to be negotiated and signed. **C. Under Planning** I. To conduct operational trials between Kolkata-Dhaka, Mumbai-Karachi (Pakistan), Chennai-Jakarta and Varanasi-Kathmandu subject to readiness from the concerned states. D. Seychelles and Sana ATSU do not have a compatible ATM Automation system in place for AIDC coordination with Mumbai ATSU		

State/Organization	ATN G/G Boundary Intermediate System (BIS) Router/AMHS	AMHS Vendors Selected	AIDC	ATM System selected to support AIDC and Associated ICD (Implementation Status of the Basic 5 message set supported)	Remarks
INDONESIA	ATN BIS Router and AMHS with Singapore implemented since February 2018; AMHS Trial (IOT) with Brisbane pending for CRV implementation.	IDS	AIDC implementation in Ujung Pandang ACC conducted as follows: 1) Ujung Pandang ACC – Brisbane ACC: Implemented since July 2017. 2) Ujung Pandang ACC – Manila ACC: Implemented since 4Q 2020; 3) Ujung Pandang ACC – Kota Kinabalu ACC: - Successfully tested and target date for operational trial in 4Q2020; - Target date for implementation 4Q2021. 4) Ujung Pandang ACC – Oakland ARTCC: - Successfully tested and target date for implementation in 4Q2021. 5) Ujung Pandang ACC – Port Moresby ACC: - Successfully tested on 7 July 2020; - Target date for operational trial in	Thales TopSky in Makassar able to support ICD version 3 since December 2015.	For CRV, target of contract in 3Q2021 and implementation in 4Q2021.

State/Organization	ATN G/G Boundary Intermediate System (BIS) Router/AMHS	AMHS Vendors Selected	AIDC	ATM System selected to support AIDC and Associated ICD (Implementation Status of the Basic 5 message set supported)	Remarks
			3Q2020. - Target date for implementation 2Q2021. 6) Ujung Pandang ACC – Jakarta ACC; - Target date for operational trial in 3Q2021. - Target date for implementation 4Q2021; AIDC implementation in Jakarta ACC will be carried out with the following priorities: 1) Jakarta – Ujung Pandang (4Q2021); 2) Jakarta – Chennai (2Q2022); 3) Jakarta – Melbourne (3Q2022); 4) Jakarta – Colombo (4Q2022); 5) Jakarta – Singapore (2Q2023); 6) Jakarta - Kuala Lumpur (3Q2023); 7) Jakarta – Kota Kinabalu (4Q2023).		Priority is in accordance with Hot Spot identified by RASMAG/23

State/Organization	ATN G/G Boundary Intermediate System (BIS) Router/AMHS	AMHS Vendors Selected	AIDC	ATM System selected to support AIDC and Associated ICD (Implementation Status of the Basic 5 message set supported)	Remarks
JAPAN	ATN BBIS router and AMHS installed at **USA** in 2000. Connection tests with USA in 2000 - 2004 and put into operational use in 2005. ATN BBIS router (to apply to Dual Stack) and AMHS (to upgrade in 2015. The connection test with each country which is not currently connecting is started after update. Upgrading connection with Hong Kong and Singapore using VPN will be implemented in 2020 after implementation of CRV. Coordinating for all other circuits upgrading. Connection tests with Hong-Kong and Singapore using AMHS/FTBP over CRV since Dec 2019 and testing is going. AMHS/FTBP over CRV implementation with Beijing/China in 4Q2020, and with Incheon/Korea in 1Q2021. Connection AMHS over CRV as below: - Singapore from Oct. 2020 - Hong Kong from Sep. 2020 - Beijing from Mar. 2021	NEC	AIDC implemented between Fukuoka ATMC and Oakland ARTCC in 1998. AIDC implemented between Fukuoka ATMC and Anchorage ARTCC in 2005. AIDC implemented between Tokyo ACC/Fukuoka ACC and Incheon ACC in 2010. Implemented between Fukuoka and Incheon since June 2009. AIDC implemented between Fukuoka ACC/Naha ACC and Taibei ACC implemented. AIDC between Fukuoka ACC and Shanghai ACC under negotiation.		Japan and USA conducting testing AIDC over AMHS and cutover date is 5 May 2017.

State/Organization	ATN G/G Boundary Intermediate System (BIS) Router/AMHS	AMHS Vendors Selected	AIDC	ATM System selected to support AIDC and Associated ICD (Implementation Status of the Basic 5 message set supported)	Remarks
KIRIBATI	Connection with Nadi using UA/AMHS implemented in 2015.				
LAO PDR	- ATN BIS Router and AMHS Implemented with Bangkok and Phnom Penh. - AFTN used with Hanoi and Kunming. - For Yangon we have no direct link the connection is used via Bangkok.	THALES	- Vientiane ACC AIDC used for coordination between Bangkok and Phnom Penh ACCs since 2020. - Operation trials are on going with Kunming, Hanoi and Yangon ACCs.	THALES which is able to support ICD Version 2.	
MALAYSIA	ATN BIS Router completed 2007. AMHS for Malaysia – Singapore implemented in March 2020. AMHS for Malaysia – Thailand implemented in Dec 2019.	FREQUENTIS	**Kuala Lumpur ACC and Bangkok ACC** AIDC technical test between Kuala Lumpur ACC and Bangkok ACC conducted since November 2016 (ABI/EST/ACP/LAM/LRM/CDN/REJ/TOC/AOC). The operational trial commenced in August 2019 (EST/ACP/LAM/LRM).	SELEX which is able to support ICD Version 3.	

State/Organization	ATN G/G Boundary Intermediate System (BIS) Router/AMHS	AMHS Vendors Selected	AIDC	ATM System selected to support AIDC and Associated ICD (Implementation Status of the Basic 5 message set supported)	Remarks
			The operational implementation commenced on 14th March 2020 (EST/ ACP/LAM/LRM). **<u>Kuala Lumpur ACC and Chennai OCC</u>** AIDC technical test between Kuala Lumpur ACC and Chennai OCC conducted since 31st July 2013. The operational trial implemented in phases from September 2016 (ABI/EST/MAC/LAM/LRM/ACP). Review on the CDN message implementation conducted in August 2017. SOP signed 26 April, 2017. The MOU signed on March 2020. The operational implementation		

State/Organization	ATN G/G Boundary Intermediate System (BIS) Router/AMHS	AMHS Vendors Selected	AIDC	ATM System selected to support AIDC and Associated ICD (Implementation Status of the Basic 5 message set supported)	Remarks
			commenced on 1st April 2020 (ABI/EST/ ACP/LAM/LRM/CDN/REJ/MAC). The operational trial for TOC/AOC started on 1st July until 1st August 2020. The operational implementation for TOC/AOC commenced on 1st January 2021. The updated LOA signed on 26th May 2021. **Kuala Lumpur ACC and Singapore ACC** AIDC technical test between Kuala Lumpur ACC and Singapore ACC conducted since April 2015 (ABI/EST/ ACP/LAM/LRM/CDN/REJ). The operational trial started on September 2018 (EST/ACP/LAM/ LRM).		

State/Organization	ATN G/G Boundary Intermediate System (BIS) Router/AMHS	AMHS Vendors Selected	AIDC	ATM System selected to support AIDC and Associated ICD (Implementation Status of the Basic 5 message set supported)	Remarks
			The operational implementation commenced on 1st November 2019 (EST/ ACP/LAM/LRM). **Kuala Lumpur ACC and Ho Chi Minh ACC** AIDC technical test between Kuala Lumpur ACC and Ho Chi Minh ACC To Be Discussed (TBD). **Kuala Lumpur ACC and Jakarta ACC** AIDC technical test between Kuala Lumpur ACC and Jakarta ACC TBD. **Kota Kinabalu ACC and Manila ACC** AIDC Technical Test 1 between Kota Kinabalu ACC and Manila ACC started on 21 – 22nd May 2019 (ABI / EST / ACP / LAM / LRM / TOC / AOC / MAC).		

State/Organization	ATN G/G Boundary Intermediate System (BIS) Router/AMHS	AMHS Vendors Selected	AIDC	ATM System selected to support AIDC and Associated ICD (Implementation Status of the Basic 5 message set supported)	Remarks
			Technical Test 2 was conducted on 21 – 22nd October 2019 (ABI / EST / ACP / LAM / LRM / TOC / AOC / MAC). Upcoming AIDC Technical Test between Kota Kinabalu ACC and Manila ACC to be conducted in Q32021 **Kota Kinabalu ACC and Ujung Pandang ACC** AIDC Technical Test 1 between Kota Kinabalu ACC and Ujung Pandang ACC started on 7 – 8th August 2019 (ABI / EST / ACP / CDN / LAM / LRM / REJ / MAC). Technical Test 2 was conducted on 23 – 24th October 2019 (ABI / EST / ACP / LAM / LRM / TOC / AOC / MAC). Technical Test 3 was conducted on 11th March 2020 (EST / ACP / LAM / LRM).		

State/Organization	ATN G/G Boundary Intermediate System (BIS) Router/AMHS	AMHS Vendors Selected	AIDC	ATM System selected to support AIDC and Associated ICD (Implementation Status of the Basic 5 message set supported)	Remarks
			Upcoming AIDC Technical Test between Kota Kinabalu ACC and Ujung Pandang ACC to be conducted in Q32021 **Kota Kinabalu ACC and Jakarta ACC** AIDC Technical Test between Kota Kinabalu ACC with Jakarta ACC is to be discussed. **Kota Kinabalu ACC and Singapore ACC** AIDC Technical Test between Kota Kinabalu ACC and Singapore ACC started on 22nd September 2015 (ABI / EST / ACP / CDN / LAM / LRM / REJ / MAC). AIDC Technical Test 1 was conducted on 18 – 19th November 2019 (ABI / EST / ACP / CDN / LAM / LRM / REJ / MAC).		

State/Organization	ATN G/G Boundary Intermediate System (BIS) Router/AMHS	AMHS Vendors Selected	AIDC	ATM System selected to support AIDC and Associated ICD (Implementation Status of the Basic 5 message set supported)	Remarks
			Technical Test 2 was conducted on 16th January 2020 (EST / ACP / LAM / LRM). AIDC Operational Trial started since 16th November 2020 and to be extended until 30th June 2021. Agreement on Operational Implementation has been materialized on 3rd June 2021. Operational Implementation is agreed to be conducted on 1st July 2021 (EST / ACP / LAM / LRM) **Kuching ACC and Singapore ACC** AIDC Technical Test (First and Second) between Kuching ACC and Singapore ACC was conducted both on 11 November 2015 and 24-25 November 2015 (ABI, EST, LAM, CDN, ACP, REJ, and LRM).		

State/Organization	ATN G/G Boundary Intermediate System (BIS) Router/AMHS	AMHS Vendors Selected	AIDC	ATM System selected to support AIDC and Associated ICD (Implementation Status of the Basic 5 message set supported)	Remarks
			However, it was discontinued until November 2019. The AIDC Technical Test (Third and Fourth) was conducted both on 20-21 November 2019 and 14 January 2020 (ABI, EST, LAM, CDN, ACP, REJ, and LRM) AIDC Operational Trial was started on 20 July until 18 October 2020. Then it was continuing until 31 January 2021. Agreement on Operational Implementation has been materialized on 12 January 2021 via videoconference. The operational implementation was on 1 February 2021. The AIDC messages included for exchange are EST, LAM, LRM and ACP.		

State/Organization	ATN G/G Boundary Intermediate System (BIS) Router/AMHS	AMHS Vendors Selected	AIDC	ATM System selected to support AIDC and Associated ICD (Implementation Status of the Basic 5 message set supported)	Remarks
			<u>Kuching ACC and Jakarta ACC</u> AIDC between Kuching ACC and Jakarta ACC TBD.		
MALDIVES	In the process of replacing the existing operational AFTN system by AMHS. It is expected to complete the installation before the end of 2019. With the new AMHS, it is planned to establish a new IP connection between an additional neighboring ATSU as the current link is an X.25 connection between Colombo. Also will look for the possibility of implementing the CRV network to use with AMHS and AIDC during the same phase.		Connection established with all the adjacent ATSUs. Interoperability tests successfully completed in 2017. LOA signed for operational trials between Mumbai, Chennai, and Trivandrum. Operational trials were also successful with these ATSUs, while several issues were resolved from both ends. Ready to sign LOA with Melbourne and is expected during the 2nd quarter of 2019. Trials with Colombo had few issues, which	SELEX which is able to support ICD Version 3.	

State/Organization	ATN G/G Boundary Intermediate System (BIS) Router/AMHS	AMHS Vendors Selected	AIDC	ATM System selected to support AIDC and Associated ICD (Implementation Status of the Basic 5 message set supported)	Remarks
			Colombo is working to resolve it on their end with the automation system supplier. Connections between all 5 ATSUs are turned ON in the ATS automation system to conduct pre-notified operational trials.		
MARSHALL ISLANDS					
MICRONESIA (EDERATED STATES OF)					
Chuuk					
Kosrae					
Pohnpei					
Yap					
MONGOLIA	AMHS/AFTN gateway implemented 2012. ATNBIS router implemented in 2014. ATN and AMHS IOT with China was completed in May 2018. Plan for	COMSOFT	ATM automation system supports both AIDC and OLDI.	INDRA Aircon 2100 supporting AIDC ICD Version 2.	

State/Organization	ATN G/G Boundary Intermediate System (BIS) Router/AMHS	AMHS Vendors Selected	AIDC	ATM System selected to support AIDC and Associated ICD (Implementation Status of the Basic 5 message set supported)	Remarks
	commissioning after POT completion in 2019.		Coordinating with Russia on OLDI connection in target date 2016. Coordinating with China on AIDC connection between Beijing/Ulaanbaatar technical trials in progress. Planned date of testing in 2019.		
MYANMAR	AMHS including AFTN/AMHS gateway implemented in Nov 2011. Connection with Thailand implemented in 4Q2016. Planned for AMHS connection with Beijing. Target date TBC.	THALES	AIDC connection pre-operation test with Thailand conducted in 4Q2017 and Target date of implementation 4Q2020; AIDC testing with Chennai, Kolkata and Vientiane conducted in 2020. Myanmar improved ATS Surveillance Coverage at coordination point with China and will start AIDC test again with Kunming ACC in 2020.	THALES Automation system (Topsky ATC) supports APAC AIDC ICD Ver. 2.	AMHS including AFTN/AMHS gateway implemented in Nov 2011. Connection with Thailand implemented in 4Q2016. Planned for AMHS connection with Beijing. Target date TBC.
NAURU					

State/Organization	ATN G/G Boundary Intermediate System (BIS) Router/AMHS	AMHS Vendors Selected	AIDC	ATM System selected to support AIDC and Associated ICD (Implementation Status of the Basic 5 message set supported)	Remarks
NEPAL	AFTN/AMHS Gateway implemented in 2012. AMHS implemented with India since June 2014. AFTN connection with China. Plan to test AMHS connection soon.	COMSOFT	Nepal uses custom built ATM system from NEC. Some issues regarding ICD need to be resolved in order to proceed ahead with AIDC testing with India and China.		
NEW CALEDONIA	New router and AMHS commissioned December 2016	COMSOFT			
NEW ZEALAND	AMHS connection with the USA over CRV was implemented in April 2019. AMHS connection to Australia over CRV is scheduled for June 2019.	COMSOFT	AIDC implemented between New Zealand, Australia, Fiji, Tahiti, Chile and USA.	Supported the Basic 5 message set. ATM systems are LEIDOS and ADACEL	
PAKISTAN	ATN/AMHS connections with Mumbai and Kuwait since 2015 and 2018 respectively. AMHS connection with Beijing, Kabul, Tehran and Muscat will be provided after up gradation of existing AMHS at Karachi which is already in progress.	Existing COMSOFT After up gradation ISD	Implemented between Karachi and Lahore ACCs. Lahore/Delhi ACC AIDC trials are being carried out which started in March 2021 (Phase-1), Karachi/Mumbai & Karachi/Ahmedabad are planned in Phase-2.	ATM system from Indra AIRCON 2100 version-2 in Lahore and Karachi ACC, Si-ATM version-3 in Islamabad ACC	Existing ATM system are likely to be upgraded in Lahore and Karachi ACC.

State/Organization	ATN G/G Boundary Intermediate System (BIS) Router/AMHS	AMHS Vendors Selected	AIDC	ATM System selected to support AIDC and Associated ICD (Implementation Status of the Basic 5 message set supported)	Remarks
			After modification of Lahore/Karachi FIRs boundaries, trials between Karachi/Delhi ACC are not required.		
PAPUA NEW GUINEA	Currently AFTN over IP. AMHS implementation is planned for after successful implementation of CRV this year. AMHS implementation planned for 2020.	COMSOFT is the supplier of PNG AFTN/AMHS system	AIDC using AFTN operational with Australia, testing/trial with Oakland (USA) started late last year and in progress. AIDC implementation with Indonesia to happen after CRV implementation this year.	New ATM System from Thales (TopSky-ATC) implemented and operational now supports AIDC V3.	
PHILIPPINES	ATN/AMHS Boundary Intermediate System was installed at the new Manila CNS/ATM Center; • Site Acceptance, Oct. 2015 • Commissioned & operational, March 2018 AMHS implementation over CRV with; • **HONG KONG** - May 2019	**Frequentis - Comsoft**	AIDC implementation status/update over AMHS with the following FIR's; **HONG KONG** – Implemented, May 2019	THALES which is able to support ICD Version 2.	The New ATN/AMHS of Manila CNS/ATM center has been in domestic operations since March 2018. And with the implementation

State/Organization	ATN G/G Boundary Intermediate System (BIS) Router/AMHS	AMHS Vendors Selected	AIDC	ATM System selected to support AIDC and Associated ICD (Implementation Status of the Basic 5 message set supported)	Remarks
	• **TAIPEI** - Sept. 2019 • **SINGAPORE** - Dec. 2020 • **OAKLAND** - April 2021		**SINGAPORE** – Implemented, December 2020 **TAIPEI** – Implemented, December 2019 **UJUNG PANDANG** – Implemented, December 2020 via **BBIS** **HO CHI MINH** – Next progress AIDC test to be scheduled, target 2Q2021 **KOTA KINABALU** – Next progress AIDC test to be scheduled, target 3Q2021 **OAKLAND** – 1st test to be scheduled, target 2Q2021		of CRV, AMHS connection has been implemented with the following adjacent FIR's; **-HONG KONG** **-TAIPEI** **-SINGAPORE** **-OAKLAND**

State/Organization	ATN G/G Boundary Intermediate System (BIS) Router/AMHS	AMHS Vendors Selected	AIDC	ATM System selected to support AIDC and Associated ICD (Implementation Status of the Basic 5 message set supported)	Remarks
REPUBLIC OF KOREA	Plan to upgrade AMHS support IWXXM from 2023 over CRV Frequentice 1) AMHS/CRV IOT with China and Japan in 4Q of 2021 2) AMHS/CRV POT with China and Japan in 4Q 2022 3) Cutover to AMHS/CRV with Chi na and Japan in Q1 2023 after POT 4) Implementation of AMHS/CRV with Japan Q1 2023	FREQUENTIS	AIDC implemented between ACC and Fukuoka ATMC in 2010 AIDC between Incheon and Dalian implemented in Nov. 2016.	Rockheed Martin System	
SINGAPORE	AMHS implemented with: 1) AMHS circuit with India put into operational use in Mar 2011. 2) AMHS circuit with UK put into operational use in Mar 2012. 3) AMHS circuit with Thailand put into operational use in Dec 2014. 4) AMHS circuit with Australia put into operational use in Oct 2016. 5) AMHS circuit with Indonesia put into operational use in Feb 2018. 6) AMHS circuit with Malaysia put into operational in Mar 2020. 7) AMHS circuit with Japan put into operational in Dec 2020. 8) AMHS circuit with Philippines put into operational in Dec 2020.	FREQUENTIS COMSOFT	1) Operational with Ho Chi Minh implemented Jul 2014. 2) Kuala Lumpur operational trial started since Sep 2018 and is implemented Nov 2019. 3) Implemented with Kuching ATCC in Feb 2021. 4) Operational trial ongoing with Kota Kinabalu ATCC since Nov 2020 and	THALES supports ICD Version 3 since December 2018	

State/Organization	ATN G/G Boundary Intermediate System (BIS) Router/AMHS	AMHS Vendors Selected	AIDC	ATM System selected to support AIDC and Associated ICD (Implementation Status of the Basic 5 message set supported)	Remarks
	Inter-Operability Test (IOT) with Vietnam started in 2019. IOT with Sri Lanka, Bahrain and Brunei to be confirmed.		implementation date on 1st July 2021. 5) Manila operational trial started in Feb 2019. Implementation Nov 2019. 6) Technical trials with Jakarta ACC will be initiated once the Jakarta ACC ATMS renewal is completed.		
SRI LANKA	ATN BIS Router Planned for 2013. IP based AMHS implemented by Oct. 2017. - Mumbai tested May 2017 operational planned for Q4 2017; - Singapore testing in Q4 2017 operational for 2018; - Male testing and operational date TBD.	IDS	Trials with Male planned for in 3Q2019. Trial with Chennai on-going. Plan for implementation in 2018 and with Melbourne plan for 1Q2018.	INTELCAN which is able to support ICD Version 3.	
THAILAND	BBIS/BIS Routers already implemented. AMHS has been implemented since July 2011. Connection with Bangladesh, Bhutan, Cambodia, China, India, Lao PDR, Myanmar, Singapore, Hong Kong China, and Malaysia implemented.	AEROTHAI's AMHS System	The implementation with · Malaysia has done since 14th March 2020 · Lao PDR has done since 14th	THALES which supports AIDC feature, APAC AIDC ICD V.3.	

State/Organization	ATN G/G Boundary Intermediate System (BIS) Router/AMHS	AMHS Vendors Selected	AIDC	ATM System selected to support AIDC and Associated ICD (Implementation Status of the Basic 5 message set supported)	Remarks
	Bangkok -Viet Nam Circuit · IOT Test: Done · POT Test: Planned for end of 3Q2021 Bangkok - Rome Circuit · IOT Test: Planned for 3Q2021 Connection with SITA (SITA AMHS Gateway inter-connections) implemented.		July 2020 · Cambodia has done since 1st October 2020 The AIDC implementation with Myanmar is during operational trial.		
TONGA	AMHS planned for 2008. The provider is linked to the New Zealand AFTN				CPDLC and ADS-C is not considered for lower airspace
UNITED STATES	- Australia - Fiji - New Zealand - Japan - Philippines - Papua New Guinea (2021) - Indonesia (2022) - Russia (Planned)	IN-HOUSE	- Fiji, Japan, New Zealand - Tahiti (via New Zealand), - Papua New Guinea via Australia (Direct planned for 2021) - Philippines (2021)	IN-HOUSE which is able to support APAC and NAT ICDs currently Version 2.	

State/Organization	ATN G/G Boundary Intermediate System (BIS) Router/AMHS	AMHS Vendors Selected	AIDC	ATM System selected to support AIDC and Associated ICD (Implementation Status of the Basic 5 message set supported)	Remarks
			- Indonesia via Australia (Direct planned for 2022) - Russian Federation (pending joining CRV)		
VANUATU					
VIET NAM	AMHS (basic) implemented from 4Q/2018. Plan AMHS extended from Q4 2022 IOT with Singapore from 10/2019 to 8/2020 IOT with Hong Kong 12/2019 IOT with Thailand 6/2020, POT 8/2020.	IN-HOUSE	Operational between Ho Chi Minh and Singapore since July 2014. Operational trial for additional messages sets on-goning. Technical testing between Ho Chi Minh with Philippines on going Technical testing with Cambodia already done; Technical testing between Hanoi and Vientiane, Lao. PDR. already done with Malaysia TBC	Support ICD Version 1.0 with THALES at Ho Chi Minh ATM system. Support ICD Version 3.0 with Selex at Hanoi ATM System.	

State/Organization	ATN G/G Boundary Intermediate System (BIS) Router/AMHS	AMHS Vendors Selected	AIDC	ATM System selected to support AIDC and Associated ICD (Implementation Status of the Basic 5 message set supported)	Remarks
			For operation trial TBC. Operation trial between Ho Chi Minh and Hanoi ongoing.		
Wallis and Futuna (FRANCE)	AMHS implementation planned for end of 2017			COMSOFT	

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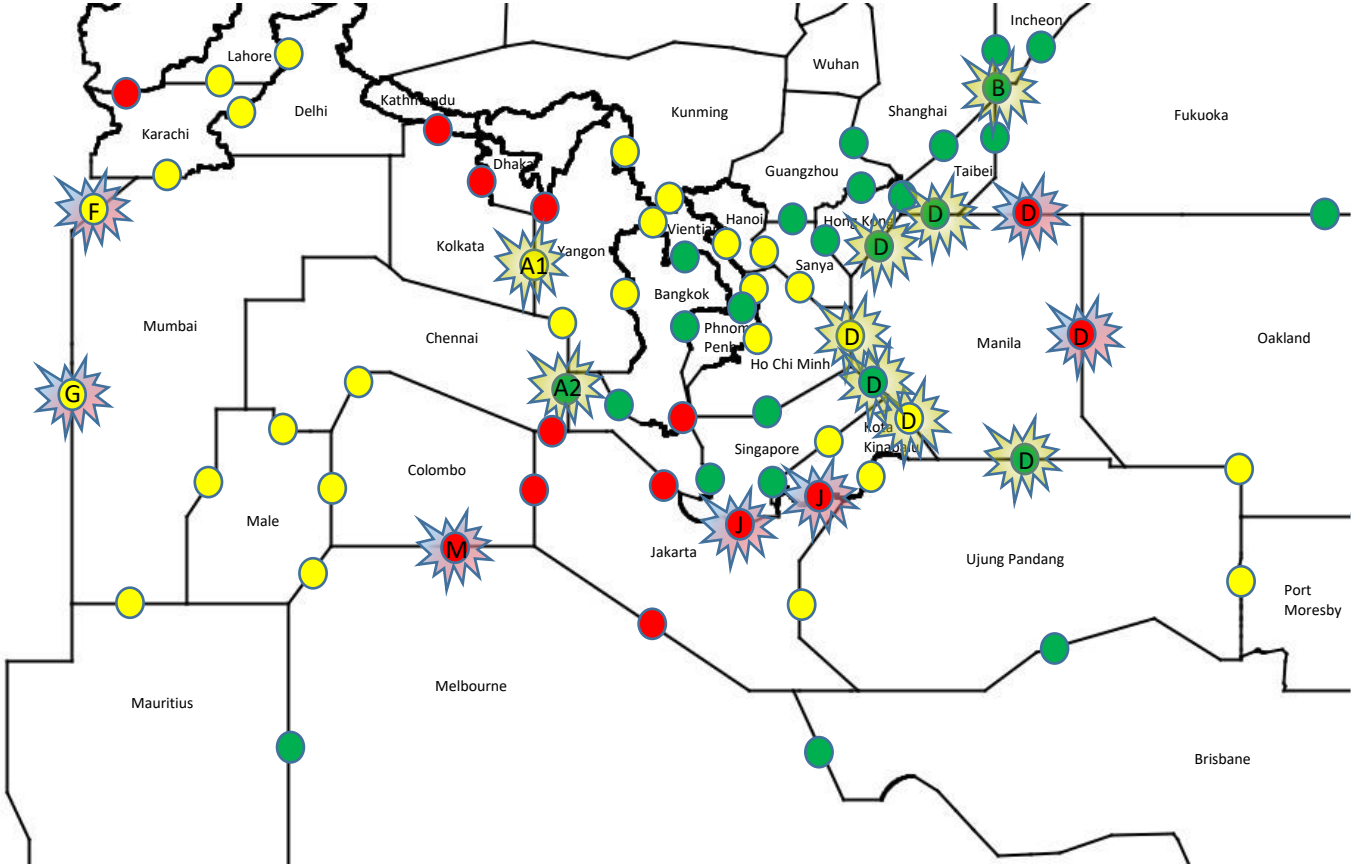

AIDC Status

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

Legend

Hotspots ***RASMAG/25 Hotspot table 5***

A1/A2, B (Akara Corridor), D (Manila all adjacent FIRs), F, G, J, M

- Hotspots with AIDC or AIDC implementation by 2022
- Hotspots with no plans for AIDC implementation

AsiaPac AIDC Implementation Status (Jun 2021)

AIDC ISSUES FORM - APA TF/7 (2021)

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	
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	**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	**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**

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	
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**
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 Nagpur ACC/ 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**

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	
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**
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 / 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-29	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-30	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-31	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-32	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-33	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-34	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-35	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**
AIDC-ISSUE-36	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-37	India / Chennai ACC	Chennai / Mangalore	-	-	d. Airspace Design/Procedures, or	Airspace configuration issue.	Frequent	Medium	Chennai ACC/ RAYTHEON	Nil / 30Jan2018	**OPEN**
AIDC-ISSUE-38	India / Chennai ACC	Chennai / Trichy	-	-	d. Airspace Design/Procedures, or	Airspace configuration issue.	Frequent	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	
AIDC-ISSUE-39	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-40	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-41	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-42	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-43	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-44	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-45	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-46	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**
AIDC-ISSUE-47	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-48	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-49	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**

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	
AIDC-ISSUE-50	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-51	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-52	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-53	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-54	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-55	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-56	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-57	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-58	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-59	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-60	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-61	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-62	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
AIDC-ISSUE-63	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

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	
AIDC-ISSUE-64	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-65	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-66	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-67	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-68	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-69	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-70	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-71	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-72	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-73	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-74	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-75	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-76	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-77	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	
AIDC-ISSUE-78	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	Chennai ACC/ RAYTHEON Bengaluru ACC/ SELEX Hyderabad ACC/ SELEX	SSR code issue at Chennai resolved 29-03-2019	CLOSED
AIDC-ISSUE-79	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 ACC/ INDRA Nagpur ACC/ INDRA Varanasi ACC/ INDRA Guwahati ACC/ INDRA Chennai ACC/ RAYTHEON		OPEN
AIDC-ISSUE-80	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-81	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-82	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	Investigation has been carried out by Ujung Pandang. Some modifications in dataset parameter related to message transmition value and condition has been changed / 22Nov2020	CLOSED
AIDC-ISSUE-83	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-84	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-85	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-86	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 /	OPEN
AIDC-ISSUE-87	Singapore / Singapore ACC	Singapore / Kinabalu	2021-02-01	2021-05-28	b. ATM System, or	Multiple FDRs exist, unable to complete AIDC transaction	Occasionally	Medium	Singapore ACC/ THALES Kinabalu ATCC/ LEONARDO	Ensure flightplan records in ATMS is up to date	CLOSED
AIDC-ISSUE-88	Singapore / Singapore ACC	Singapore / Kinabalu	2021-03-01	2021-05-28	b. ATM System, or	Message not compatible with FP state	Occasionally	Medium	Singapore ACC/ THALES Kinabalu ATCC/ LEONARDO	Ensure flightplan state is updated correctly	CLOSED
AIDC-ISSUE-89	Singapore / Singapore ACC	Singapore / Kinabalu	2021-04-01	2021-05-28	b. ATM System, or	ACT entry time outside window	Occasionally	Medium	Singapore ACC/ THALES Kinabalu ATCC/ LEONARDO	ATMS parameter reconfiguration/software change	OPEN
AIDC-ISSUE-90	Philippines / Manila ACC	Manila / Singapore	2020-01-27	2020-01-27	b. ATM System, or	No AIDC transfer was made due negative FPL (other aircraft)	Occasionally	Medium	Manila ACC/ THALES Singapore ACC/ THALES	Provide appropriate FPL entry	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	
AIDC-ISSUE-91	Philippines / Manila ACC	Manila / Singapore	2020-02-26	2020-02-26	b. ATM System, or	No TOC was received from Singapore ACC for CEB538	Occasionally	Medium	Manila ACC/ THALES Singapore ACC/ THALES	Correcting time discrepancies on system FPL	CLOSED
AIDC-ISSUE-92	Philippines / Manila ACC	Manila / Singapore	2020-09-21	2020-09-21	b. ATM System, or	No EST message received	Occasionally	Medium	Manila ACC/ THALES Singapore ACC/ THALES	Provide appropriate FPL entry	CLOSED
AIDC-ISSUE-93	Philippines / Manila ACC	Manila / Hong Kong	2020-08-03	2020-08-03	b. ATM System, or	Failed EST for CPA104, CPA198 and CSN306. Voice transfer was made to Hong Kong.	Occasionally	Medium	Manila ACC/ THALES	Correcting time discrepancies on system FPL	CLOSED
AIDC-ISSUE-94	Philippines / Manila ACC	Manila / Hong Kong	2020-09-19	2020-09-19	b. ATM System, or	No AIDC transfer was made due negative FPL (Qatar Airlines)	Frequent	Medium	Manila ACC/ THALES	Corresponded with air operator to supply Manila with FPL	CLOSED
AIDC-ISSUE-95	Philippines / Manila ACC	Manila / Hong Kong	2020-10-13	2020-10-13	b. ATM System, or	Failed EST ACT entry time outside window	Occasionally	Medium	Manila ACC/ THALES	Correcting time discrepancies on system FPL	CLOSED
AIDC-ISSUE-96	Malaysia / Kuala Lumpur ATCC	Kuala Lumpur / Chennai	2021-05-28	2021-01-11	b. ATM System, or	Calculated CRC was not tally with received CRC.	Frequent	High	Kuala Lumpur ATCC/ LEONARDO Chennai OCC/ RAYTHEON	-	OPEN
AIDC-ISSUE-97	Malaysia / Kuala Lumpur ATCC	Kuala Lumpur / Chennai	2021-05-28	2021-01-13	d. Airspace Design/Procedures, or	Late response by Chennai for CDN messages. Agreed response time by controller is 300 seconds.	Frequent	High	Kuala Lumpur ATCC/ LEONARDO Chennai OCC/ RAYTHEON	-	OPEN
AIDC-ISSUE-98	Malaysia / Kuala Lumpur ATCC	Kuala Lumpur / Chennai	2021-05-28	2021-02-14	b. ATM System, or	Chennai transmit second EST or ACP after a complete process cycle of first EST.	Occasionally	High	Kuala Lumpur ATCC/ LEONARDO Chennai OCC/ RAYTHEON	-	OPEN
AIDC-ISSUE-99	Malaysia / Kuala Lumpur ATCC	Kuala Lumpur / Chennai	2021-05-28	2021-04-06	b. ATM System, or	LRM transmitted in response to AOC received from Chennai.	Occasionally	High	Kuala Lumpur ATCC/ LEONARDO Chennai OCC/ RAYTHEON	-	OPEN
AIDC-ISSUE-100	Malaysia / Kuala Lumpur ATCC	Kuala Lumpur / Singapore	2021-05-28	2021-01-11	d. Airspace Design/Procedures, or	Singapore transmit TOC/AOC message although TOC/AOC is not included in operational implementation	Occasionally	Low	Kuala Lumpur ATCC/ LEONARDO Singapore ACC/ THALES	-	OPEN
AIDC-ISSUE-101	Malaysia / Kuala Lumpur ATCC	Kuala Lumpur / Singapore	2021-05-28	2021-04-05	b. ATM System, or	Singapore transmit second EST after a complete process cycle of first EST.	Rare	Medium	Kuala Lumpur ATCC/ LEONARDO Singapore ACC/ THALES	-	OPEN
AIDC-ISSUE-102	Malaysia / Kuala Lumpur ATCC	Kuala Lumpur / Bangkok	2021-05-28	2021-01-14	d. Airspace Design/Procedures, or	Bangkok transmit TOC/AOC message although TOC/AOC is not included in operational implementation.	Occasionally	Low	Kuala Lumpur ATCC/ LEONARDO Bangkok ACC/ THALES	-	OPEN
AIDC-ISSUE-103	Malaysia / Kuala Lumpur ATCC	Kuala Lumpur / Bangkok	2021-05-28	2021-04-06	d. Airspace Design/Procedures, or	Bangkok transmit MAC message although MAC is not included in Operational Implementation.	Rare	Low	Kuala Lumpur ATCC/ LEONARDO Bangkok ACC/ THALES	-	OPEN
AIDC-ISSUE-104	Malaysia / Kuala Lumpur ATCC	Kuala Lumpur / Bangkok	2021-05-28	2021-01-14	b. ATM System, or	Bangkok transmit second EST after a complete process cycle of first EST.	Rare	Medium	Kuala Lumpur ATCC/ LEONARDO Bangkok ACC/ THALES	-	OPEN
AIDC-ISSUE-105	Malaysia / Kuala Lumpur ATCC	Kuala Lumpur / Bangkok	2021-05-28	2021-04-10	d. Airspace Design/Procedures, or	Bangkok transmit EST with incorrect COP due to incorrect FPL route was filed by the airline operator (Not following the Flight Planning)	Occasionally	High	Kuala Lumpur ATCC/ LEONARDO Bangkok ACC/ THALES	-	OPEN

LIST OF FOCAL POINT FOR AIDC IMPLEMENTATION

No.	States	Name/Title/Address	Tel/Fax/E-mail
1.	**Australia**	Mr. Adam Watkin	Tel: Fax: E-mail: Adam.Watkin@AirservicesAustralia.com
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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

h) The ICAO secretariat, India and Singapore to develop a MS Excel format sheet to monitor the AIDC implementation status in APAC region, based on the information recorded in the *ATN/AMHS/AIDC Implementation Status in the APAC Region* table. All members are requested to update the relevant implementation status continuously to maintain the currency of the sheet.

ACTION BY: All member States/Administrations

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LIST OF WORKING AND INFORMATION PAPERS

WP/IP No.	Agenda	Subject	Presented by
		WORKING PAPERS	
WP/01	1	Provisional Agenda	Secretariat
WP/02	2	Review of Relevant Meetings	Secretariat
WP/03	3	Update the AMHS/ATN Implementation Status Table and the AIDC Implementation Table	Secretariat
WP/04	4	AIDC Implementation Issue Report	India, Indonesia and Singapore
WP/05	6	Review of the Terms of Reference and Achievements of APA Task Force	Secretariat
WP/06	7	Outstanding Tasks/Action Item and Recommendations for APA Task Force	Secretariat
WP/07	4	Lessons Learnt from AIDC implementation in India	India
WP/08	4	Status Update on AIDC System with Adjacent Units	Lao PDR
		INFORMATION PAPERS	
IP/01	1	Meeting Bulletin	Secretariat
IP/02	8	Update on ICAO APAC Regional Webinars	Secretariat
IP/03	3	AIDC Implementation in Singapore	Singapore
IP/04	2	Outcomes of Relevant Meetings	Secretariat
IP/05	2	Outcomes of AIDC Webinar	Secretariat
IP/06	5	Updates from RASMAG/25	Secretariat
IP/07	3	AIDC Operational Trail in Manila FIR	Philippines
IP/08	3	AIDC Implementation in Malaysia	Malaysia
IP/09	3	AIDC Implementation in Thailand	Thailand
IP/10	3	AIDC Implementation in Thailand	India
IP/11	3	Update of AIDC Implementation Status	Indonesia
IP/12	3	Progress AIDC Implementation Updates in China	China

WP/IP No.	Agenda	Subject	Presented by
IP/13	3	China and Laos Started the AIDC Pre-operational Trails	China
IP/14	3	Hybrid Application of AIDC and OLDI	China
IP/15	8	Research on Electronic Handover Technical Solutions between Upper and Lower Sectors	China
IP/16	3	Progress of AIDC Implementation in LAO PDR	Lao PDR

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